I am Daniela O’Neill, a professor of Child Development in the Department of Psychology at the University of Waterloo. In my graduate seminar this term, I wanted to provide my students with an opportunity to apply knowledge of child development and the learning of language, socio-emotional, thinking and problem-solving, and motor skills to an applied context in order to foster these types of learning in a fun and engaging way for children and parents.

I decided to focus on the farmstead and how its features could be enhanced to promote these kinds of learning, especially via talk and communication between adults and children as oral language ability is foundational to later developments in language, literacy, socio-emotional, scientific thinking and problem-solving skills.

In order to give the project more of a “real world” application, I got in touch with Anna Lee Sangster to see if there might be a possibility to present our ideas to those involved in the Master Plan for Waterloo Park, and that’s how we’ve arrived at presenting to you today. We are thrilled to be here!

My four students presenting today are Ashley Avarino, Madeline Crichton, Emily Shiu, and Siobhan Sutherland and each of them will present their section.
Waterloo Park is known as the “Jewel in the City”. We began our exploration by looking at descriptions of Waterloo in order to retain these descriptions in mind as we began to think about new features for the farmstead that would be in keeping with the character of the city of the Waterloo and Waterloo Region.

Descriptions of Waterloo obtained from:
Smart Waterloo Region https://www.engagewr.ca/SWR
Region of Waterloo https://www.regionofwaterloo.ca
Immigration Waterloo Region

Photo credit:Unless otherwise stated, all pictures from farmstead taken by Daniela O’Neill
There is currently a global interest in creating cities where children can thrive. This initiative has been spurred by a UNESCO study and continued by a UNICEF Child Friendly Cities Initiative.


Photo credit: Daniela O’Neill
A city of learning opportunities

- If we make a city great for children, we make it better for all of us. (McLennan, 2011)
- Abundance of recognized teaching opportunities in both the natural and constructed environment...
  - help to address “language and knowledge gaps“ that exist among some children entering school
  - impact the ability of children to thrive long-term

Renowned architect James McLennan has argued that when we make a city great for children, we make it better for everyone. A child-friendly city can incorporate an abundance of recognized teaching opportunities in the natural and constructed environment.  


In Waterloo Region, we know that children in some of our neighbourhoods are more vulnerable and weaker on foundational (e.g., language) as assessed by the Early Development Instrument completed by kindergarten teachers (results compiled by Holliday, C. (2016). A community fit for children: A focus on young children in Waterloo Region.3rd Ed. Ontario Early Years Waterloo Region.  
Currently in the USA in particular there are very innovative, state-of-the-art initiatives taking place to transform and create outdoor city spaces where play and exploration are possible and fostered via talk that happens very naturally and in a fun way between adults and children. One such example, is the Urban Thinkscape Project in Philadelphia which is an innovative initiative to activate public spaces for playful learning.

We have been exploring initiatives like this when gathering ideas for the farmstead. Many of these projects are more geared to playgrounds, but we found aspects that could be incorporated into a farmstead setting (the archways you will hear about are derived from this particular Thinkscape project in Philadelphia.).

(And in the future, students in other classes could work on aspects more related to playgrounds as we know you have new playground and splashpad spaces are in the Master Plan and such a playground could be an interesting complement to the more traditional and the new natural playground that already exist..)

Photo credits: https://youtu.be/PkXQjkJqBJc Urban Thinkscape Project
A more interactive farmstead

- Elements of play and other features integrated with the animal exhibits
  - Talk and play leads to learning while having fun
- Year-round features
- Accessible for a diverse population

In considering a more interactive farmstead we sought to include:
Elements of play and other features integrated with the animal exhibits
  - Talk and play leads to learning while having fun
Year-round features
Features that are accessible for a diverse population (e.g., multi-generational, multi-cultural, different physical ability levels)

We did so largely for the areas in the map shown here from the Master Plan document that are numbered 6 and 3.
There are 6 features we will present today.

**Elements of our proposal**

1. Animal tracks and sculptures
2. Signage
3. Entrance archways
4. Pathways
5. Seating
6. Outdoor classroom
Animal tracks and sculptures

Presented by Ashley Avarino

Photo credit: https://kaboom.org/play_everywhere/gallery/animal_tracks
One great way to add interactive play to any neighborhood space is painting animal tracks on paths or sidewalks. This was done in Kenilworth-Parkside, a neighborhood in DC. This picture is a concept sketch for what the sidewalks would look like, and how children would use these tracks to play. You can see that children are hopping and stomping in similar ways that the animals would. Not only are they able to use their imagination, but they are able to make connections between the prints on the sidewalks and the animals they represent.


Image credit: https://kaboom.org/play_everywhere/gallery/animal_tracks
Here you can see that the materials they used were simple and inexpensive. All that is needed are stencils of different types of animal tracks, and sidewalk/outdoor paint. In Kenilworth-Parkside, they even had the community come together and pitch in. Since this is not an labour intensive job, volunteers were able to help complete it.

Photo credits: https://kaboom.org/play_everywhere/gallery/animal_tracks
Another element of play that we already see in Waterloo park is sculptures. This is a picture of a mother duck and her ducklings in the Boston Commons. The sculpture is based on the picture book Make Way for Ducklings. You’ll be surprised to know that this is actually the number one attraction in the park! Tourists and children and families love to come and play with the ducklings, sitting on each of their backs, observing the details of their feathers, and even feeling the smoothness of their beaks. All of these things are aspects of play, that without these sculptures would otherwise be absent.

Photo credit: https://www.boston-discovery-guide.com/boston-public-garden.html
Currently, Waterloo Park has sculptures of pigs, which act as an element of play similar to the ducks. We also noticed that in future plans for Waterloo Park there is space set aside for a “sculpture garden.” While we agree this is a great idea, we are proposing a different layout for the sculptures that goes hand-in-hand with the animal tracks mentioned previously.

Photo credit left: https://www.boston-discovery-guide.com/boston-public-garden.html
Photo credit right: https://kaboom.org/play_everywhere/gallery/animal_tracks
The walkways in the Farmstead are relatively bare, and as seen previously an inexpensive way to both brighten the walkways and add an element of play is to bring animal tracks to the park. Each animal will have a set of tracks and each set of tracks will be painted in a different color—this allows the tracks to be easily discriminable even if they look similar. These tracks will begin at the entrance of the Farmstead, but will diverge in different directions and patterns so that children can choose an animal to “follow” and stick to this path. At the end of the path, the children will meet the animal they have been following.

- Each animal will have a set of tracks, and each set of tracks will be painted in a different color—this allows the tracks to be easily discriminable even if they look similar.

- These tracks will all begin at the entrance of the Farmstead, but will immediately diverge in different directions and patterns so that children can choose and animal to “follow” and stick to this path.

- At the end of the path, the children will meet the animal they have been following.
For Waterloo Park, we are proposing to have both the tracks of the animals in the farmstead, as well as tracks of other animals children would see within the park typically such as rabbits, squirrels, and, of course, Canadian Geese.

The tracks for the farmstead animals will end at that animal’s location. The animals that are not in the farmstead will still have a “meeting point” at the end of the tracks. This is where we want to integrate the tracks and sculptures. If the animal is not present in the farmstead then its “meeting point” will be a sculpture of that animal. This gives children an idea of what the animal looks like and adds an element of play, as seen with the Boston Commons ducks. According to our proposal, rather than there being a “sculpture garden” there will be sculptures throughout the Farmstead area that children can actively seek out. We are also proposing that each animal has an information sign,

We will have the tracks of the animals in the Farmstead (e.g. pig, chicken and Llama tracks) but we also want to include tracks of other animals children may see in the park (e.g. Canadian geese, rabbits, squirrels). We thought the Canadian geese sculpture could be fashioned along the lines of the one in Boston Commons and perhaps it will also become a beloved tourist and community attraction!
Example of a chicken; note here that Siobhan will go more in depth about the design of the signage.

Example of a Canada Goose
Boston Commons Make way for ducklings - #1 attraction in park for tourists

Example of a rabbit
Signage

Presented by Siobhan Sutherland.
One way to enhance learning in parks is to use signage as talking points for parents and children to encourage conversation.

https://stateofopportunity.michiganradio.org/post/these-playgrounds-are-designed-get-kids-and-parents-talking

Sign on slide is from the Officer Willie Wilkins Park in Oakland, California

Image: Credit to Too Small to Fail on website where accessed

https://stateofopportunity.michiganradio.org/post/these-playgrounds-are-designed-get-kids-and-parents-talking


For this reason, a good sign combines images and simple words that children can associate with one another. Speaking with children about signs helps them to hear new words and make these connections.
Currently, Eby Farmstead has several signs that offer a lot of information about the animals, but they could be enhanced in the following ways to allow for greater access and engagement.
Move closer

Signs moved closer to walkways

Moved closer to the walkways to enhance visibility.
Lowered to allow greater access to children and people with diverse accessibility needs.
Simplify

Simplified text and larger images so that people from diverse age groups and backgrounds can easily understand the sign’s meaning, such as newcomers to Canada who may be newly learning English.

Photo squirrel sign: https://kaboom.org/play_everywhere/gallery/animal_tracks
Simple informational signs

This is an example of the type of sign that could be used at the end of the animal tracks activity or at the animal enclosures. Notice that it uses large images and simple text to describe the animal, combined with one interesting feature of the animal - the shape of its paws. The text is simple enough for a young child to associate with the animal and can serve as a discussion point between parents and children.

Children of different ages can engage with the signs in different ways for example, a parent might ask a one year old “what colour is the skunk?”, while a 3 year old could be asked if they notice any differences in the front and back paws.” an older child could even try to walk like a skunk.

Photo: https://kaboom.org/play_everywhere/gallery/animal_tracks
Intermediate informational signs

This is an example of a sign at the Cincinnati zoo where they are trying to promote literacy through signs. This sign has some additional features for added interest and engagement. Along with large text and images, it includes simple phrases that convey an interesting fact about the animal as well as an activity relevant to the animal that children can try.

Enhanced activity

- “Can you match the orangutan’s snacks?”

A sign with a more enhanced activity is shown here where children have to find the 2 matching tiles for the snacks eaten by orangutans.

Photo credit: https://kingdomproductions.net/portfolio_page/cincinnati-zoo-jungle-trails/
Using an example from the Eby Farmstead, an activity could be included that incorporates one fun fact or activity about each animal.

Image credit: https://www.dreamstime.com/royalty-free-stock-photography-peacock-raise-his-feathers-image19036647
Using an example from the Eby Farmstead, an activity could be included that incorporates one fun fact or activity about each animal (e.g., Llamas can grow as tall as 6 feet!) or children can be asked to spot the differences between a llama and an alpaca (a list of key differences could be provided).

Photo credit: https://forums.enmasse.com/tera/discussion/4894/the-new-mount
One important key feature of the elements for the farmstead that we’ve been considering is that they present children with many different learning opportunities across different ages as a result of how children can interact and use the features.

For example, here we show some of the ways that the animal tracks and signage could provide different learning opportunities for motor, language, social, problem-solving and literacy skills across ages for children. For example, the youngest 1-2 year old children may interact in largely motor ways, trying out different ways of moving with different tracks.

Older toddler age children will be able to notice the shapes, begin to guess the animal, pretend to be the animal, and ask questions about the colours, shapes. Older preschool age children will be able to try to remember which animal they lead to, try to read the signs, or remember the fun facts. And even older children can pass this knowledge on to younger children. But all, at all ages, can have fun with the “hide and seek” and following nature of the hunt for animals.
Pathways and Archways

Presented by Emily Shiu
Even something as simple as the shape of pathways is something that children can find to be very novel. There’s something about curves that children find very novel and attractive and that promotes discovery and exploration. Curved and circular pathways also help very young children to develop motor skills, because it requires a sense of balance to be able to make turns while walking!


Photo credit right: https://www.externalworksindex.co.uk/entry/121818/URBASTYLE/Architectural-concrete-park-seating-LOre-du-Bois-F/
Curved pathways are a simple way to add more physical activity and stimulation for children. When there are curved or looped pathways present, there are actually higher levels of physical activity in children compared to straight paths. Even if pathways need to be straight for planning purposes, there are options you can do, such as making a more curved pathway with cobblestone or animal footsteps patterns within the straighter paths.


Photo credit left: https://fitt.co/dallas/articles/ride-best-bike-trails-paths-dallas
Photo credit right: https://www.yelp.com/biz_photos/select-paving-clontarf?select=4pm-Xpm9T3oxghVajfGjpA
Another simple structure type that could be installed is creatively-styled archways. The archway in blue is from the Philadelphia Urban Thinkscape project and provides parents and children an opportunity to look for hidden figures and play with the shadows created.

For the Eby Farmstead such archways could be placed at the entrance gates, or just a single one somewhere within the farmstead space. It could have animal shapes or silhouettes hidden in the design of the archway that pertain to the farmstead or even Waterloo Region. Like hidden picture colouring pages, children could seek out the animals in the wireframe!

Photo credit left: https://youtu.be/PkXQjkqJBjc Urban Thinkscape Project
This is another example of a creative archway from the University of Wisconsin. It’s a pretty interesting one in that you can see these trees, and some animals among the plants. Something like this for children can actually foster a variety of different skills, such as language skills, spatial skills, and their sense of curiosity. For example, a child might see an archway like this, and imagine a story involving the trees and animals in the scene, fostering storytelling skills.

As mentioned earlier, one important key feature of the elements for the farmstead that we’ve been considering is that they present children with many different learning opportunities across different ages as a result of how children can interact and use the features.

For example, here we show some of the ways that the archways could provide different learning opportunities for motor, language, social, and problem-solving across ages for children and promote curiosity and discovery.

Photo credit left: https://youtu.be/PkXQjkq1BJc Urban Thinkscape Project
Presented by Madeline Crichton

Seating

• Benches give caregivers a place to sit and watch children play
• More accessible
• Benches can be play elements in themselves
  • Benches could double as sculpture elements related to park themes

Seating and benches can give parents and other caregivers such as grandparents a place to sit. For those with more limited mobility, benches and seating provide a nearby place for them to sit and watch children, and for children to be able to see them (a secure base) and yet explore on their own from a little ways away.

Benches and seating can even provide an element of play coinciding with park themes or doubling as sculpture. Instead of a swan, perhaps imagine a llama, peacock or goose!

Photo credit: https://ebuild.in/innovative-urban-park-benches-outdoor-seating
Seating

- Benches could have intricate designs with things to find and talk about
- Integrated with park themes

Benches could have more traditional design augmented with detail. The designs could include hidden animals from the farmstead for families to talk about work together to find and relate to real life. This provides an activity to do even when stopping for rest or snack or for adults with more limited physical abilities to engage in with children,

Seating

- Benches can encourage play and motor development

A curved design can encourage play & motor development. Child love to walk along curves and raised benches/walls and in doing so would be practicing balance & coordination. So benches and seating could do triple duty of function, developing motor skills, and encouraging learning through talk and discovery.

In the master plan, is a proposal for an outdoor classroom, we’re calling imagination station, based on an example in Burnside Park in Providence.

This area would include a smaller shed-like or simple structure along with a small stage area (that doubles as seating) and further seating (benches or portable chairs, cushions).

It would be a place for community engagement & programming on a smaller more intimate scale (to the larger bandshell area in the park). Some possibilities might be:

- Smaller music or dance events (e.g., trio or duo), children’s music (e.g., Eric Traplin), informal, spontaneous events (e.g., piano available to all)
- Dramatic events (small plays, children’s spontaneous plays)
- Library events such as storytime
- Poetry slams
- Smaller talks on topics of interest to the community
- Use by summer camps or education/school programming
• Anything promoting creativity and self-expression!

Photo credits: Project for Public Spaces: https://www.pps.org/places/greater-kennedy-plaza
Even when not in use for formal programming, taking inspiration from Burnside Park, a very popular activity for the community has been using it as a reading area for families. Beanbags are supplied from the shed structure, and there is a take a book/leave a book type program similar to Little Libraries which are dotted around Waterloo Region.

The stage area would also lend itself to impromptu and spontaneous creative and self-expressive activities, such as a group of children making up a play on the spot; musicians playing, etc.

http://provparksconservancy.org/visit/family-programming/
The future of the farmstead

Our proposal addresses the following goals outlined in the master plan:

- Children’s play and learning
- Healthy living
- Address needs of diverse groups
- Support local art & culture
- Educational opportunities

Based on master plan section 2: Vision, Guiding Principles & Objectives, our proposal addresses several of the goals mentioned.

For example:

Goal:

- Children’s Play and Learning: the whole park becomes an integrated area for play and learning rather than just a few designated play areas
- Healthy Living: the animal tracks activity, curved benches & imagination station activities promote healthy living through physical activity
- Address needs of diverse groups: by making signs more accessible to different ages and heights lower English literacy levels
- Support local arts and culture: many different smaller types of arts events, planned and impromptu, could be performed at the imagination station
- Educational opportunities: Signs will educate visitors about animals, reading area and imagination station would support general education, activities and exhibits (e.g., animal tracks) promote many learning opportunities
We learned a lot in preparing this material and Daniela O’Neill and students would be willing to continue to work on ideas presented or new ones. Just get in touch!
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