

UNIVERSITY  
of GUELPH

Master of Landscape Architecture  
**MLA Thesis Abstracts 2014-2018**



**School of Environmental Design and  
Rural Development (SEDRD)**

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Ontario Agricultural College

# 2014-2018 MLA Thesis Abstracts

## Overview

The abstracts in this publication are from the thesis work of students in the Master of Landscape Architecture program at the University of Guelph during the last five years. These abstracts indicate the range of interests and the breadth and depth of research in landscape architecture at Guelph.

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## Additional Information

For more information regarding the MLA program in Landscape Architecture, University of Guelph please contact:

Diana Foolen, Graduate Program Assistant  
Landscape Architecture Program, SEDRD  
University of Guelph  
Guelph, Ontario N1G 2W1  
tel: 519-824-4120, ext. 56576  
email: [dfoolen@uoguelph.ca](mailto:dfoolen@uoguelph.ca)

Robert Corry, Graduate Coordinator  
Landscape Architecture Program, SEDRD  
University of Guelph  
Guelph, Ontario N1G 2W1  
tel: 519-824-4120, ext. 58034  
email: [rcorry@uoguelph.ca](mailto:rcorry@uoguelph.ca)

Additional information regarding the Master of Landscape Architecture at the University of Guelph can be obtained from the following websites:

[School of Environmental Design and Rural Development](#)  
[Office of Graduate and Postdoctoral Studies](#)

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## Landscape Architecture Faculty - Research and Practice Interests

**Nadia Amoroso**, Assistant Professor. BLA, MUD (Toronto), PhD (The Bartlett, UCL, London, UK). Room: LA 144, Ext. 53192, Email: [nadia.amoroso@uoguelph.ca](mailto:nadia.amoroso@uoguelph.ca). Areas of interest: visual communication in landscape architecture (traditional, digital and hybrid), data visualization, creative cartography, geodesign, parametric design, urban design, contemporary design, digital design, 3D printing and fabrication.

**Robert Corry**, Professor. BLA (Guelph), MLA (Minnesota), PhD (Michigan). Room: LA 113, Ext. 58034, Email: [rcorry@uoguelph.ca](mailto:rcorry@uoguelph.ca). Areas of interest: landscape ecology, landscape pattern indices, design scenarios, habitat quality, spatial analysis, rural landscapes and GIS.

**Larry B. Harder**, Associate Professor. BES (Manitoba), MLA (Harvard). Room: LA 115, Ext. 52406, Email: [lharder@uoguelph.ca](mailto:lharder@uoguelph.ca). Areas of interest: urban ecology, landscape restoration and rehabilitation, naturalization, community planning, aboriginal community development.

**Martin Holland**, Assistant Professor. BA (Dalhousie), MLA (U. Virginia), PhD (Illinois). Room: LA 123, Ext. 58688, Email: [martin.holland@uoguelph.ca](mailto:martin.holland@uoguelph.ca). Areas of interest: Landscape history and theory, cultural landscapes, landscape conservation and preservation, landscapes of commemoration and memorialization, contemporary design practice.

**Sean Kelly**, Associate Professor and SEDRD Director. BLA (Guelph), MSc (Guelph). Room: LA 104, Ext. 56870, Email: [sean.kelly@uoguelph.ca](mailto:sean.kelly@uoguelph.ca). Areas of interest: resort, destination and amenity landscapes, design implementation and landscape construction, rural community design.

**Karen Landman**, Professor. BLA (Guelph), MSc (Guelph), PhD (Queen's). Room LA 105, Ext. 53748, Email: [klandman@uoguelph.ca](mailto:klandman@uoguelph.ca). Areas of interest: urban greening, urban agriculture, planting design, green infrastructure, landscape stewardship.

**Brendan Stewart**, Assistant Professor. BLA (Guelph), MLA (California-Berkeley). Room LA 117, Ext. 53483, Email: [brendan.stewart@uoguelph.ca](mailto:brendan.stewart@uoguelph.ca). Areas of interest: heritage conservation planning and design, cultural landscape theory, design history and service learning and participatory design.

**Nathan Perkins**, Associate Professor. BLA, MLA (Illinois), PhD (Wisconsin-Madison). Room LA 146, Ext. 58758, Email: [nperkins@uoguelph.ca](mailto:nperkins@uoguelph.ca). Areas of interest: landscape aesthetics, environmental psychology, research methods, therapeutic and participatory design.

## 2018 MLA Abstracts

**Birks, Elizabeth. Toronto's Ravine Network: Overcoming the Stigmatization of Ravine Environments Through Design. Master of Landscape Architecture Thesis. 2018. Advisor: S. Kelly.**

Uniquely among North American cities, Toronto possesses an extensive ravine network representing 17% of Toronto's land area. This thesis will examine the underlying reasons for historical ravine stigma and how design can overcome it. This perception is represented by a combination of environmental degradation, perceived risks and undesirable activities or persons. This exploration included key informant interviews, survey of ravine users, site observation with GIS mapping. Ravines are commonly regarded as either unsafe or not user-friendly. Unlike manicured city parks, ravines are irregular, wild and largely hidden and thus potentially misused and underappreciated. This thesis will be built around the premise that with Toronto's growing population and subsequent pressures on available and/or under-utilized lands, ravines will be at increased risk without efforts to ameliorate the effects of associated stigmas. The challenge of overcoming the multiple stigmas associated with ravines can only be achieved through engaged design and policy guidance in conjunction with the involvement of community and education initiatives.

**Cooper, Matthew. Urban Park Street Edges: Enhancing Functionality for the Performance of the 21st Century City. Master of Landscape Architecture Thesis. 2018. Co-Advisor: S. Kelly and B. Stewart.**

Parks within the City of Toronto's urban core are currently facing increased public pressure. "The edge zone" of the park, located at the interface of the street and the park interior, represents an underutilized space with potential to provide alternative park functions and increase the overall performative service of urban parks. Cities in the United States and Canada have launched planning initiatives which have strategized numerous design policies aimed to increase park services. These initiatives include improving edge conditions. This study aims to explore, identify and categorize contemporary edge zone typologies, which can inform design solutions for underperforming urban street park edges. A comparative case study analysis was conducted to identify and highlight a series of these typological forms and functions, as well as illuminate the potential benefits these new edge zone design strategies could provide for the urban park.

**French, Emily L. Designing Public Open Space to Support Seismic Resilience: A Systematic Review. Master of Landscape Architecture Thesis. 2018. Advisor: K. Landman.**

In the wake of major earthquakes, public open spaces become hubs for both short-term disaster response efforts and support longer-term recovery needs. At present, few open spaces are actually designed to support these intermittent but critical uses. Currently, there is no consolidated body of knowledge or resource for landscape architects designing for areas of high seismic risk. This thesis identifies ways in which landscape architects can proactively plan and design open space to support seismic resilience. A systematic review of both grey literature and peer-reviewed academic papers was conducted. The results of the systematic review identified ten key themes. These themes contribute to developing a foundation for landscape architecture and allied design disciplines to better incorporate seismic resilience into the planning and design of public open spaces.

**Ibey, David. Evidence-Based Landscape Architecture through Education in North America. Master of Landscape Architecture Thesis. 2018. Advisor: R. Corry.**

In order to understand whether landscape architects are adequately equipped with the skills to apply research findings to solve practical design problems, this study explores research education in landscape architecture curricula. Phased questionnaires were used to acquire general

program information from program contacts and then to generate more specific research course information. Graduate programs were more likely to require students to complete at least one research course, however 325 of 706 of all students represented in the sample were required to take a research course. Research coursework responses revealed a significant, positive correlation between difficulty level of instruction and minimum required competency. The relationship between research instruction level, competency, and ability to practice evidence-based landscape architecture is discussed.

**Lamirande, Nicole. An Exploration of Landscape Architects' Perceptions of Trees. Master of Landscape Architecture Thesis. 2018. Advisor: N. Perkins.**

This thesis is an exploration into how trees are perceived by professionals associated with landscape architecture. It is argued that perceptions influence the decisions that we make, therefore the aim of this study was to explore the range of perceptions of notable landscape architects selected for their varied expertise. Fifteen participants across North America were interviewed using a semi-structured interview method. Interview transcripts were analyzed using content analysis and responses were categorized into three themes: influence, perceptions, and action. The results suggest that participants have a wide-range of perceptions of trees in their scholarship and practice. Most notably, perceptions ranged from a tree as a tool, to a tree as a living thing, to a tree as something personal. Based on the results of this study, it can be concluded that a range of perceptions of trees may influence professional practice in the planting design decisions that landscape architects make.

**Laszczuk, Michal. Fencerows: Reinforcing Regional Identity in Urban Design. Master of Landscape Architecture Thesis. 2018. Advisor: C. Paine.**

Fencerows constitute dominant visual elements of the historic rural landscape and hold potential to be applied in the design of urban and suburban sites to reinforce regional identity in Southern Ontario. A survey of fencerows was developed through fieldwork resulting in a typology that summarizes the visual and functional characteristics of these linear features. The typology was applied in the design of a high-density development site in Mississauga, Ontario through an interpretive design strategy that translates the functional and visual principles of fencerows into designed planting assemblages. An assessment of the characteristics and feasibility of the designs demonstrates that they contain a series of defining features which reference the principal components of fencerows. Furthermore, the assessment demonstrates that the designs can be adapted in the urban environment in accordance to several municipal and urban design guidelines from the Greater Toronto and Hamilton Area.

**Nikola, Katie. Mycology Applications for Landscape Architecture. Master of Landscape Architecture Thesis. 2018. Advisor: K. Landman.**

Recent advancements in mycology have led to revolutionary discoveries of underground fungi that form essential symbiotic relationships with plants, connecting nutrients and communicating between root systems. Knowing how to utilize fungi to our benefit through mycorestoration and mycology applications might allow landscape architects to become ecological balancers for both human and natural environments. There is a lack of understanding of the complex systems of mycology. Bridging this gap between mycologists and landscape architects is essential to create a healthy mycorrhizal network in designed landscapes, especially distressed urban soils. This exploratory research investigates how mycology can be applied within the practise of landscape architecture, in order to propose applications of mycology and mycorestoration techniques, through a review of key literature and key informant interviews. Applications of mycology and mycorestoration in urban environments that contribute to healthier myco networking are proposed.

**O'Neill, Stephen. Measuring Urban Forest Canopy Effects on Stormwater Runoff in Guelph, Ontario. Master of Landscape Architecture Thesis. 2018. Advisor: R. Corry.**

Cities are complex and contribute to urban stream degradation due to increased stormwater runoff volumes and velocities and ineffective stormwater management infrastructure. Trees provide measurable benefits to cities including rainfall interception which can decrease stormwater runoff, demonstrating their effectiveness as a stormwater management tool. This study quantifies the effects of urban forest canopy on stormwater runoff to assess proportions of canopy cover required to effectively reduce runoff levels. i-Tree Hydro, a semi-distributed hydrological model, was used to measure hydrologic effects of the City of Guelph's urban forest. Varying proportions of canopy cover were used to compare Guelph's current and potential urban forest. Results show that increasing canopy cover in plantable spaces decreased overall flow within the City, however, runoff over impervious surfaces increased. The findings can inform design decisions related to urban stormwater management and improve urban forest management measures, however, impervious surfaces remain a design challenge.

**Rotzstain, Daniel. Enhancing Strip Mall Landscapes in Toronto's Inner Suburbs. Master of Landscape Architecture Thesis. 2018. Advisor: K. Landman.**

Strip malls are a common form of commercial architecture lining arterial roads in Toronto's inner suburbs. Originally designed to accommodate the automobile, strip malls and the neighbourhoods surrounding them are increasingly home to low-income and new immigrant populations who have low rates of car ownership. With affordable rents, strip malls within walking and transit distance of these communities have become vibrant gathering places, exhibiting characteristics of Oldenburg's "Third Place". However, the landscapes adjacent to strip malls are underutilized, with few amenities for pedestrians, e.g., seating and shade. After recognizing their role as inner suburban Third Places, the aim of this research is to identify and evaluate programs to implement landscape enhancements for pedestrians at strip malls in Toronto. "Landscape enhancements" is defined based on interviews with strip mall patrons, business- and property-owners. Document analysis and interviews with key informants inform an evaluation of the applicability of existing streetscape improvement programs to strip mall landscapes while recommending a new program — plazaPOPS — to address their public-private nature. Results are synthesized into an easy-to-use guidebook that facilitates citizen-initiated strip mall landscape enhancement projects.

**Xie, Luo zijie. Urban Heat Islands as Opportunities to Extend the Use of Open Spaces. Master of Landscape Architecture Thesis. 2018. Advisor: R. Corry.**

Urban heat islands (UHIs) are a consequence of city design and population growth. Negative impacts of UHIs have been discussed, but the opportunity for UHIs to create thermally-comfortable outdoor spaces through their warming effect during cool times has not been studied. By taking advantage of UHI and by using microclimate design principles for increasing outdoor thermal comfort, citizens might use public open spaces under broader weather conditions, including cool springtime and autumn evenings. A public plaza in Toronto was designed using microclimate design principles to enhance outdoor thermal comfort using UHI effects, and evaluated for human thermal comfort with the COMFA model. In most locations within the design the thermal comfort increased during cool times, but for a few locations this increased summer heating too. Findings provide new directions for landscape architects suggesting how UHI can be used as an opportunity under certain conditions in city design.

**Zakharova, Tatiana. Place Empathy and Environmental Education. Master of Landscape Architecture Thesis. 2018. Advisor: N. Perkins.**

Ministry of Education documents define environmental education as education about, for, and in the environment. But how does formal curriculum actually describe "environment" in different subject areas and what does this say about students' relationship with it? Relying on hermeneutics for foundation and methodology, I analyse and interpret the Ontario Grade 2 and

Grade 3 environmental education curriculum and identify themes of damaged connectivity and fear of complexity that can be addressed with place empathy. Having defined place empathy as a cognitive and affective representation process in which an observer simulates another's interpretations of place in order to deepen her understanding of place, and developed a place empathy framework, I identify a number of learning practices which could be used by teachers to engage students in place empathy to encourage, as I hypothesize, deeper understanding of and relationship with place. Ministry of Education documents define environmental education as education about, for, and in the environment. But how does formal curriculum actually describe "environment" in different subject areas and what does this say about students' relationship with it? Relying on hermeneutics for foundation and methodology, I analyse and interpret the Ontario Grade 2 and Grade 3 environmental education curriculum and identify themes of damaged connectivity and fear of complexity that can be addressed with place empathy. Having defined place empathy as a cognitive and affective representation process in which an observer simulates another's interpretations of place in order to deepen her understanding of place, and developed a place empathy framework, I identify a number of learning practices which could be used by teachers to engage students in place empathy to encourage, as I hypothesize, deeper understanding of and relationship with place.

## 2017 MLA Abstracts

**Bohner, Nadine. Landscape effects on turtle road trauma. Master of Landscape Architecture Thesis. 2017. Advisor: R. Corry.**

Roads in Southern Ontario have a detrimental effect on turtle populations. Due to complex habitat requirements and migratory movements, turtles are especially impacted by vehicular trauma. Past research indicates vehicular trauma is aggregated both spatially and temporally. For mitigation to be effective, it should focus on locations and times of concentrated trauma. This study used a geographic information system (ArcGIS) to map six years of turtle trauma data from the Ontario Turtle Conservation Centre, identify trauma clusters, and examine fine-scale landscape characteristics correlated with these clusters. Data for three turtle species (*Emydoidea blandingii*, *Chrysemys picta marginata*, and *Chelydra serpentina*) were combined with classified landscape imagery to analyze landscape pattern characteristics associated with trauma clusters by species, sex and season. By targeting locations with specific landscape characteristics and moments of peak potential, results can be used to guide species- and sex-specific mitigation efforts.

**Boyd, Leah. Opportunities for Landscape Architects in the Facilitation of Public Art. Master of Landscape Architecture Thesis. 2017. Advisor: K. Landman.**

The field of landscape architecture has become more complex through increased social and ecological implications, requiring a greater need for landscape architects to work with other professionals such as horticulturalists, ecologists, engineers, and planners. Artists also rely on the skills of other professionals when creating outdoor and permanent public art due to issues such as environmental exposure, human interaction and lack of technical experience. This project explores opportunities for the involvement of landscape architects in establishing public art. Case studies in combination with literature review, document review of public art policies, and key informant interviews of public art professionals were analyzed to find recurring challenges during the development of public art from initial concept to construction and reveal how landscape architects may be able to resolve such issues.

**Bullock, Erika. Increasing Winter Bikeability in Toronto Through Improved Bicycle Network Design. Master of Landscape Architecture Thesis. 2017. Advisor: C. Paine.**

Cycling, a sustainable mode of transportation, is often discredited as a four-season option as it is perceived as being dependent on weather conditions. This research presents the concept of winter cycling and its impact on, and how it is impacted by, bicycle network design. Winter

bikeability criteria were synthesized from the literature and applied to four case study cities known for their bikeability and year-round maintenance of cycling infrastructure, including Montréal (Canada), Minneapolis (USA), Copenhagen (Denmark), and Oulu (Finland). Through analysis of the applied criteria, a set of best practices from each city was created based on safety, ease of use, and improved bikeability. The best practices were supported by current literature and active transportation guidelines. The best practices were then applied to Toronto (Canada) as design recommendations to improve the City's bicycle network design. The results provide direction for planning of bicycle networks in cities with winter climates.

**Ferguson, Andrew. Identifying Municipal Barriers Preventing the Adoption of Green Infrastructure Stormwater Management in Ontario, Canada. Master of Landscape Architecture Thesis. 2017. Advisor: N. Perkins.**

Green infrastructure (GI) has emerged as a strategic landscape approach to aid in creating more sustainable communities that benefit both people and wildlife. Despite the well-known social, economic and environmental benefits of GI in managing stormwater, many municipalities have been slow to adopt GI. To understand some of the factors impeding GI adoption this study conducted a comparative case-study analysis between two municipalities and two Conservation Authorities in southern Ontario with a focus on stormwater management (SWM). Interviews were conducted with four key informants and were analyzed using coding and theming. Results indicate a number of significant barriers including: a lack of experience by contractors in constructing GI projects, maintenance costs and complexities of GI, and the need for a cultural modernization within municipalities. The knowledge revealed through this study can benefit municipalities in overcoming barriers similarly experienced in municipalities in southern Ontario.

**Gauvreau, Patrick. How Mechanical Disturbances Affect Soil Respiration Rates in Urban Forests Five to Eleven Years After Development. Master of Landscape Architecture Thesis. 2017. Advisor: R. Corry.**

Urban forests are a valuable resource which provide ecological services and functions. The integrity of an urban forest patch can be affected long-term by soil disturbances associated with urban land development, such as: topsoil clearing and soil compaction. The purpose of this exploratory study is to analyze soil microbial activity of forested urban areas following land development with known disturbance histories. Three sites in Guelph, ON, with soil disturbance histories between 5 and 11 years ago were used to compare soil microbial activity. Soils from forests after mechanical disturbance and controls were measured for respiration rates in forest patches using a 24-hour soil CO<sub>2</sub> test. Disturbed soils from 5, 7, and 11 years after disturbance had lower respiration values compared to controls. Impacted soil biology can be easily tested for and should be considered by landscape architects to plan for more resilient urban forests.

**Lee, Alice. Integrating Urban Soil Management within Landscape Architecture in Southern Ontario. Master of Landscape Architecture Thesis. 2017. Advisor: K. Landman.**

Urban soil is the foundation for many landscape architectural projects; however, urban conditions may challenge optimal soil functions. Despite the importance of soils, literature suggests that landscape projects may fail due to poorly-managed soils throughout the stages of design, implementation, and maintenance. This study explores how urban soil management can be improved within the profession of landscape architecture in Southern Ontario. Semi-structured interviews were conducted to collect qualitative data from key informants who possess an understanding of urban soils and how they are managed. Key informant interviews identified how urban soils are currently viewed, what challenges exist, and what resources have been developed to guide urban soil management decisions throughout the design process. This research will strengthen the role for landscape architects to value urban soils and ensure that they are being properly managed on project sites.

**Li, Jianye. Revitalizing Cities Through Design of Waterfront Brownfields. Master of Landscape Architecture Thesis. 2017. Advisor: C. Paine.**

Post-World War II, large-scale city expansion associated with rapid urbanization has rendered many urban waterfronts in city centres as obsolete brownfield landscapes. Upon being remediated, these sites have the potential to be converted from underutilized land to vibrant urban waterfront neighbourhoods. A remediated waterfront site in the Port Credit neighbourhood of Mississauga, Ontario provided the opportunity to develop a design for revitalizing the site in response to concerns expressed by the public. Two waterfront brownfield case studies, one in downtown Toronto and the other along the lakeshore of Mississauga, were analyzed within the framework of principles of New Urbanism to ascertain how relevant issues had been addressed. The proposed design responds both to public concerns and the goal to integrate the site into the surrounding community. This research will contribute to a better understanding of socially and environmentally sensitive approaches to waterfront brownfield revitalization, as well as providing urban planners and landscape architects with tools for creating dynamic possibilities for accommodating emerging public demands in the heart of cities.

**Livingstone, Aislin. The Use of Citizen Science in the Landscape Design Process: Opportunities for Monitoring and Evaluation. Master of Landscape Architecture Thesis. 2017. Advisor: K. Landman.**

The field of Landscape Architecture faces increasing demand to apply design processes that are evidence-based and informed by sound research. As a participatory approach to monitoring and evaluation, citizen science engages the public in the production of localized scientific knowledge across temporal and spatial scales. Although citizen science is a popular programmatic element in Landscape Architecture, little research explores how it can be incorporated elsewhere in the design process. This research uses a focussed literature review and data from a cross-case comparison to gain insights about how citizen science can increase capacity for monitoring, evaluation, and participatory design in Landscape Architecture. Long-term and coarse-scale data collected through participatory research have positive implications for landscape architects. Findings report on key considerations to include citizen science in design to promote collaboration between the public, researchers, and designers that is essential to furthering evidence-based landscape architecture.

**Lockwood, Amanda. Balancing Perceived Sensory Dimensions and Biotopes in Urban Green Space Design. Master of Landscape Architecture Thesis. 2017. Advisor: R. Corry.**

Eight Perceived Sensory Dimensions (PSDs) were identified from previous studies to describe user preferences of park qualities and characteristics: nature, culture, prospect, social, space, rich-in-species, refuge, and serene. Recently, PSDs and biotopes have been integrated to enhance park users' preferences and vegetation structure. Usable green space needs to balance social aspects (PSDs) and environmental aspects (biotopes) at the design stage. This study assesses urban green spaces through experimental design based on the inclusion of the biotope 'green space' and PSDs. Designs were created based on market squares in Guelph and London, Ontario, by including biotope characteristics for plazas and PSDs. Designs were critically analyzed to determine that PSDs and the biotope category 'plaza' had a positive relationship aside from the PSD 'nature'. This research contributes to the understanding of socially and environmentally cohesive urban green spaces, providing landscape architects with tools for creating usable green spaces in Southern Ontario cities.

**Pierre, Adele. Using Geodesign to Communicate the Effects of Bioswales on Urban Stormwater Management. Master of Landscape Architecture Thesis. 2017. Advisor: S. Kelly.**

With increases in storm frequency and intensity, municipalities need to find new ways of managing stormwater. Solutions require collaboration across planning disciplines and input from an informed public. This study uses geodesign to model how green infrastructure, specifically a system of bioswales, can ease the burden on an aging, combined sewer system. A case-study is

explored using a section of Ottawa Street North in Hamilton, Ontario. Key Informant Interviews were conducted to inform choice of site and quantitative, geospatial information was collected through GIS. Parametric modelling was used to generate a design, and scenarios created to show resulting impacts on stormwater runoff. The model was posted online as an interactive presentation, accessible to all stakeholders for review and comment. The results of the study demonstrate powerful new tools that can assist landscape architects in designing, collaborating and communicating stormwater strategies.

**Shlemkevich, Karen. The influence of a greenwall on residents' eating habits in a long-term care facility dining room. Master of Landscape Architecture Thesis. 2017. Advisor: N. Perkins.**

Residents in Long-Term Care (LTC) facilities often experience poor mood and malnutrition concurrently, both of which can be exacerbated by an inadequate dining experience. A growing body of research suggests that natural environments can improve mental well-being and plants alone might enhance the dining experience. This research hypothesized that a plant wall could influence residents' length of stay at the dining table and consequently improve food and drink consumption. Nutritional intake and length of stay data were collected before the installation, during and post-installation of a greenwall. Data were analyzed using a series of paired t-tests. Analysis revealed that residents who directly faced the greenwall had a statistically significant increase in fluid intake ( $p=0.03$ ) and a non-statistically significant increase in food intake ( $p=0.21$ ). Results suggest that enhancements to the dining room can influence eating habits among residents.

**Tarbush, Emma. Exploring Strategies for Soundscape Design in Landscape Architecture. Master of Landscape Architecture Thesis. 2017. Advisor: C. Paine.**

Landscape architects have a visual approach to design and consequently, sonic environments are seldom acknowledged. This study aims to bring more awareness to the importance of the acoustic environment in landscape architectural practices. Steps for approaching soundscape design were devised through a literature review and a soundscape design for Day Park Beach, Cape Breton, Nova Scotia. The literature review provided context for the design by examining research related to sound. Data were collected through soundwalks, two focus groups, and on-site observations. Using a sound recorder, the researcher collected perceptions of three people residing in Cape Breton and six visitors regarding existing soundscapes during one day at Day Park Beach. Results show the importance of soundscape evaluation and the value of understanding the viewpoints of both residents and visitors during the design process. This thesis offers useful information for landscape architects interested in developing soundscape designs.

**Taucer, Julia. Design for Citizen-Generated Urban Interventions: Understanding the Relationship Between Formal and Informal Urban Design in Toronto. Master of Landscape Architecture Thesis. 2017. Advisor: K. Landman.**

Citizens' urban practices that intentionally alter a public setting challenge privatization of open spaces, as well as exclusion from design processes and public spaces of the city. Research on the spatial context of these practices, referred to as citizen-generated urban interventions, is limited. This project identifies spatial conditions that are associated with the emergence of citizen-generated urban interventions. From the literature, I developed a site assessment to evaluate the spatial conditions that are theoretically related to the occurrence of citizen-generated urban interventions. Using wandering as a method, I identified and evaluated sites of interventions found in publicly accessible areas throughout Toronto. After analyzing the data, I describe commonalities among the spatial conditions of the observed sites. Based on the results, I created a working typology of citizen-generated urban interventions and preliminary design recommendations for landscape architects.

**Trendle, Chelsey. The Influence of Adaptive Management Practices on the Success of Ecological Landscapes in Southern Ontario: Lessons for Landscape Architecture. Master of Landscape Architecture Thesis. 2017. Advisor: K. Landman.**

Ecological design projects face many challenges in intensively modified landscapes that threaten the long-term integrity of natural systems. Intensification of surrounding land uses and increasing recreational pressures present numerous obstacles for conservation land managers. This research investigates the existing land management strategies of public and private agencies in Southern Ontario. The goal is to determine how adaptive management and ecological design principles contribute to the long-term success of conservation and habitat enhancement projects in intensively modified landscapes. Six case studies form the basis of this investigation; a review of existing management plans and semi-structured interviews inform a comparative analysis of current land management regimes. Results are used to determine how metrics for land management, informed by ecological design goals, contribute to the adaptive management process and the ability of landscape architects to achieve long-term success in their ecological design projects.

**Viola, Cyrille. Applying green infrastructure to treat Escherichia coli polluted stormwater runoff at Bayfront Beach, Hamilton, Ontario. Master of Landscape Architecture Thesis. 2017. Advisor: K. Landman.**

In beach environments heavily populated by waterfowl, E.coli from feces can cause major impairments to beach water. During rainfall events, feces are carried into receiving waters, which can elevate E.coli concentrations above the regulatory recreation water quality standard. When waters do not meet the standard, the beach environment becomes unsafe for human contact and must close to public use. This research explores green infrastructure as an alternative treatment for E.coli pollution at the case study site, Bayfront Beach, Ontario. A site inventory, design concepts, and analysis on suitabilities/capabilities were developed based on data collected through municipal reports and semi-structured interviews with key informants. The findings in the background research informed a framework for green infrastructure design. A final design concept implementing the framework was developed to demonstrate the application of green infrastructure to treat E.coli polluted runoff. Finally, both the framework and concept was evaluated by the key informants.

**Zhang, Junyi. Assessing the Application of Sponge City to Downtown Guelph. Master of Landscape Architecture Thesis. 2017. Advisor: C. Paine.**

“Sponge City” is a concept already applied in many cities around the world. The aim of this new concept is to create a city that absorbs rainfall and releases rainwater when required – similar to a sponge. The goal of this research was to understand whether the concept can be effectively applied to medium-sized cities in Canada, with a particular focus on Guelph, Ontario. Design strategies were gleaned from precedent analyses of well-known stormwater management cases. Case studies were investigated, demonstrating three different applications of the Sponge City concept, including waterfront design, community planning, and urban rooftop garden design. Principles derived from the three case studies were applied through the conceptual design of part of a recent intensification proposal for Downtown Guelph, Ontario. Data, including site areas and annual precipitation, were collected through geographic information systems. A comparison of collected precipitation data and calculation of water absorption was used to verify the absorption ability of the proposed design. Results indicate the benefits and limitations of applying this concept. Redesign recommendations for Downtown Guelph are provided to assist landscape architects and urban planners interested in implementing the Sponge City stormwater management concept.

**Bartolo, Alasandro. Resorts as Cities. Master of Landscape Architecture Thesis. 2016. Advisor: S. Kelly.**

This document assesses physical aspects of themed environments, specifically pertaining to resort developments, through city design theory. The evaluation builds on the speculative study of built themed environments and their physical characteristic's ability to alter an individual's experience through design. The experiential elements concentrate on the influence of physical features effect on perception and memorability based on past research. This document aimed to discover if physical elements of design are present in resort development and to study how clear these elements are. Data collection involved an analyzed photo-survey questionnaire. The findings show most design elements in the case study of Blue Mountain Village were not obvious. Results were studied and organized to create recommendations and provide knowledge on how to design themed environments in several situations.

**Cafarella, Scott. Urban Open Space Planning in Southern Ontario: Lessons from the Red Hill Valley Project. Master of Landscape Architecture Thesis. 2016. Advisor: K. Landman.**

Urban open space systems are interconnected networks of green spaces, waterways, and undeveloped lands that link regional ecological corridors to the city. In Ontario, a structure of related land-use policies informs urban open space planning and development. In this study, a policy analysis, a case study, and an evaluation of policy development were undertaken to investigate the outcomes of the Red Hill Valley Parkway Project in Hamilton, Ontario. The methods employed were a document analysis, key informant interviews, and a policy analysis using an established policy evaluation framework. This study identified institutional learning by Project stakeholders and investigated if this learning had informed policy development at the provincial level. Results show that the Open Space Replacement Strategy and the creation of the Joint Stewardship Board are evidence of institutional learning. Lessons from this Project have improved Hamilton's planning practices, but have not directly influenced provincial policy development to date.

**Chorley, Paul. Exploring a Model for Sustainable Design: An Urban Agriculture Autoethnography. Master of Landscape Architecture Thesis. 2016. Advisor: R. Brown.**

As a model for landscape design, this paper explores urban agriculture practices in student off-campus housing. Food is a basic human need, the foundation of modern civilization and many of us take it for granted. In addition, industrial agriculture is the primary cause of transforming Earth's environment and a catalyst for separating humans from nature. Individuals, societies and cultures must adapt with ecologically designed landscapes and climate-smart food systems. Through my lived experiences as a student, landlord, researcher and the creator of a memorial garden, I explain how meaning in our landscapes engages our communities and encourages pro-environmental behaviours. Institutions, landscape architects, and their clients, have the power to develop communities of sustainable practice and inspire stewardship at a neighbourhood scale. This paper concludes that student rental properties, like many unexplored opportunities, can contribute to urban resilience, by integrating ecological principles into places of economic, social, political and intellectual activity.

**Coupland, Kearney. Accessible Design: Private Practice Landscape Architects as Public Interest Designers. Master of Landscape Architecture Thesis. 2016. Advisor: K. Landman.**

As a profession, Landscape Architects have a responsibility to design for the good of the public and are equipped with the skills to engage communities and translate ideas into physical reality. This research aims to increase the effectiveness of private practice Landscape Architects as contributors to public interest design through a better understanding of the organizational models and methods being used in practice. Through an analysis of the literature and data collected from interviews, this research articulates the challenges and opportunities of Landscape Architecture firms formalizing design initiatives and developing non-profits. The research identifies processes

and resources that differ from traditional commercial practice, and presents the value that public interest design can add to the future of Landscape Architecture.

**Cutten, Keith. Exploring the History of Golf Course Design. Master of Landscape Architecture Thesis. 2016. Advisor: R. Brown.**

Golf's future is in question. Fewer people are participating, environmental restrictions are altering construction and maintenance practices, and improved equipment technologies have necessitated longer golf holes increasing management and playing costs. There is a lack of research examining the influence that golf course architecture has had on the evolution, and current state, of the game of golf. This study explored connections between the evolution of golf architecture and external influences such as technology, media, social trends, the economy and allied professional fields. A decade-by-decade breakdown revealed 10 eras and 8 schools of design. This process led to the recognition of two high points in the evolution of golf course architecture, one pre-WWII and one on-going since 1995. Questionnaires were sent to 35 leading designers, from which aggregate findings were compared to writings of 35 pre-WWII designers. Themes were distilled which suggested a correlation between both high points of design practice.

**Dawson, Corey. Evaluating Landscape Architectural Grading Designs with a Terrain Complexity Index. Master of Landscape Architecture Thesis. 2016. Advisor: R. Corry.**

Natural landform shapes efficiently organize materials and functions with slope forms evolving towards stable states called equilibrium. Slopes have linear, convex, and concave forms with concave being the most stable and linear the least. More complex, heterogeneous shapes control runoff, allow biodiversity and are attractive. Landscape designs can alter terrains with surface geometry for drainage and safety objectives based on grading standards. Landforming designs diversify slopes while conventional grading implements more simple, homogeneous shapes. My project evaluated alterations from grading designs by comparatively analyzing existing and proposed terrains. A data sample of 17 landscapes were gathered from landscape architects, analyzed with a Compound Terrain Complexity Index (CTCI) that calculates surface area ratio, curvature, elevation variance, and relief, generating a proportional terrain complexity change. Results identified the CTCI as a useful measure of terrain complexity change, showing samples of increased and decreased values. Total curvature was influenced most by grading tendencies.

**Hamelin, Calen. The Potential of Lost Space: A New Model for Identifying, Classifying and Transforming Urban Void Space. Master of Landscape Architecture Thesis. 2016. Advisor: L. Harder.**

Urban void space, or lost space, has been discussed within landscape architecture, planning and urban design for centuries, but often goes unnoticed and underutilized. With city populations growing, there is increased pressure to provide outdoor spaces for inhabitants. This study aims to identify and categorize the Downtown Guelph Urban Growth Centre's void spaces, while highlighting their potential for possibly becoming new public space. Furthermore, various intervention strategies, pop-up, pilot or permanent (PPP), are demonstrated as a transformation framework for these challenging spaces. A gap analysis was used to identify the spaces and to highlight their potential, while the categories were formed using a morphological analysis. Finally, three case studies demonstrated the intervention strategies of the PPP Framework. The analyses showed that most void spaces have potential and that there are benefits to using a PPP Framework for transforming them into public spaces within our cities, both temporarily and permanently.

**Maxwell, Alison. Investigating the Performance of Simple Rain Gardens Created in Existing Soils: An assessment of 5 case study rain gardens in Guelph, Ontario. Master of Landscape Architecture Thesis. 2016. Advisor: L. Harder.**

Rain gardens are a form of sustainable stormwater management which detain stormwater and facilitate its infiltration. Many studies on rain garden optimization have led to guidelines for the

creation of highly technical rain gardens (TRGs) being widely available from authorities on LID construction. However, these requirements are often unrealistic for small-scale projects and present barriers to their implementation. An alternative to TRGs are simple rain gardens (SRGs) that have no underdrain and are often created in existing soils. Many municipalities now provide guidelines for SRG design, but little research on their functioning has been reported. This investigation measures infiltration rates, soil composition, and sizing of five case study SRGs in Guelph, ON and assesses their performance via percentages of influent stormwater detained, and total volumes detained annually. Analysis reveals three of the five case studies to be performing at full capacity and positive contributions to stormwater management from all.

**Maicantis, Phaedra Maria. Gender and Sexuality in Design: Discourses on Gender, Sexuality and Inclusivity in Community Design and Analysis of Theoretical Frameworks for Gender-Neutral and Gender-Sensitive Design. Master of Landscape Architecture Thesis. 2016.**

**Advisor: C. Paine.**

Exploring issues of gender and sexuality in landscape architecture is lacking in theory and practice. The purpose of this research is to reconcile the role of landscape architecture with socio-political facets and its role in community design, with a focus on gender and sexuality. The intent is to examine and challenge ingrained design assumptions about how spaces are perceived, used and designed in landscape architecture. As issues regarding gender and sexuality increasingly become visible and demographics change, with it arises new opportunities as values and needs experience a dynamic shift. It is within this new paradigm that landscape architecture can share an influential and relevant role in shaping and designing spaces to create greater inclusion, through an examination and compilation of available data and gender-neutral and gender-sensitive frameworks, case studies, and a comparative analysis of existing design guidelines in landscape architecture.

**O'Brien, Tim. Small Unmanned Aerial Vehicles as Remote Sensors: An Effective Data Gathering Tool for Wetland Mapping. Master of Landscape Architecture Thesis. 2016.**

**Advisor: C. Paine.**

This research compares an Unmanned Aerial Vehicle (UAV)-facilitated wetland data collection technique to conventional methods using measures of convenience, cost-effectiveness, and precision. The increasing risk surrounding Ontario's wetlands is due in part to the inefficiencies of current data collection techniques. A small UAV was deployed to survey and collect imagery data from a wetland complex in Wellington County, Ontario. Orthomosaic imagery, and digital model samples were generated using spatial analysis software. Collected imagery displayed finer data resolution than conventional aerial imagery, and can be considered more comprehensive and precise in collecting delineation data, including ground water, vegetation patterns, and habitat. The single user approach demonstrated time and accessibility convenience over labour-intensive field studies, and at a competitive cost. For landscape architects and related professionals, this remote sensing approach advances landscape comprehension and provides a precise, accessible, and affordable wetland data collection method.

**Palmer, Luc. A Critique of the Planting Design of Corktown Common Based on Principles of Ecologically-Informed Plant Communities in the Urban Core. Master of Landscape Architecture Thesis. 2016. Advisor: C. Paine.**

Informing planting design with ecological principles can develop plant communities that require less maintenance and resources in cities. This thesis relates contemporary literature to practice to build an understanding of the limitations and potential for ecologically-informed plant communities in the urban core. A critical review of contemporary literature surrounding ecologically-informed plant communities uncovered principles that balance form and function in the urban core. These principles were used to critique the planting design of Corktown Common located in Toronto, Ontario. While the critique revealed that Corktown Common provides multiple benefits both environmentally and socially, the ecological realities of the urban core are in

opposition to the plant selection, which was based on regional habitats. Results support that designing plant communities in line with the social and environmental context of the urban core will create more efficient and culturally significant public greenspaces.

**Shantz, Stephanie. Environmental stewardship via landscape conservation planning, yields beneficial results for water quality in an agricultural watershed. Master of Landscape Architecture Thesis. 2016. Advisor: R. Corry.**

Agriculture is one of the largest non-point source polluters contributing to the degradation, toxicity, and damage of the Great Lakes. Trends in agricultural management practice have shifted over the decades to a more holistic system of conservation agriculture that functions on the tenets of landscape conservation planning, protecting the environment for future generations, while also protecting revenues and lifestyles of the people that work in agriculture. This study uses geophysical characteristics to reconfigure land cover in an agricultural watershed known to have water quality issues, while maintaining field boundaries and management, composition proportions, and it takes no land out of production. Using AnnAGNPS a base and designed scenario were created, run, compared, and analysed. The design resulted in a decrease of estimated parenthetical values of pollutants. Empirical results show that this design approach reduces the impact of agriculture on the environment while maintaining profitable production land. Working at this scale while using and producing empirical data, suggests water quality improvements are possible through evidence-based landscape architecture that maintains agricultural land covers changing only some of their locations.

**Stewart, Christian. PATH as Place: Exploring the Concept of Place in Toronto's Grade-Separated Pedestrian Network. Master of Landscape Architecture Thesis. 2016. Advisor: N. Perkins.**

This thesis is an investigation of the concept of place in relation to Toronto's PATH network. Toronto's extensive grade-separated PATH network is devoted entirely to pedestrians but is often derided as an example of a landscape that is disorienting and devoid of identity. Despite its heavy use, it is said to lack "place". This exploration seeks to determine the extent of the PATH's quality of place. To discover this a review of the literature was undertaken to define established place models and determine limitations in their applicability to this study. Themes derived from the literature were then applied to a photographic and historical analysis of the PATH. After a synthesis of the findings was performed the results showed the PATH's sense of place is measurable, but its definition is nuanced and complex.

**Thomas, Megan. Connecting Youth to Nature: Exploring the Plausibility of a Nation-Wide Youth Conservation Program for Canada. Master of Landscape Architecture Thesis. 2016. Advisor: S. Kelly.**

Canada's national parks are faced with the dual-mandate of providing recreational opportunities without compromising ecological integrity. In an era of unprecedented global environmental change and excessive electronic attachment, today's youth are experiencing disconnect from nature. At the same time, parks are challenged with malefic financial constraints and limited human resources. Though independent issues, this study sought to find an integrated solution by exploring the plausibility of a sustainable conservation program that provides opportunity for both youth and Canadian parks through an untapped workforce. Strengths of the U.S. based Student Conservation Association were embraced to develop criteria to analyze additional youth engagement programs. Review of literature and key informant interviews framed programmatic recommendations that inform development of a nation-wide youth conservation program suitable for the Canadian context. Through hands-on service to the land, the experience could foster Canada's next generation of environmental stewards serving, and ultimately protecting, Canada's park system.

**Waffle, Alexander. Urban Agricultural Hot-Spots: Taking Advantage of the Urban Heat Island for Production of Warmer-Climate Crops. Master of Landscape Architecture Thesis. 2016. Advisor: R. Brown.**

Much attention has been placed on reducing the Urban Heat Island (UHI) effect but few have proposed taking advantage of it. This thesis investigates the potential for growing food crops

in hot urban microclimates even though they would not grow successfully in the surrounding rural area. Growing degree days (GDDs) and grapevine winter hardiness illustrate how the UHI might affect plant growth in Toronto, Ontario, using local climate data. Modelled leaf temperature is used to analyze urban microclimate variability and the added implications for plant growth. GDDs in Toronto have increased from an average around 1000 in the mid-1800's to an average around 1500 today, remaining unchanged in a rural control. The urbanization of Toronto has caused longer, hotter growing seasons, and warmer winters. Given the appropriate microclimate combined with UHI effects Toronto could likely support the growth of warmer-climate crops that would not otherwise grow successfully in Ontario.

**Williams, Laura. *Floral Lawns: Developing and Evaluating a Residential Lawn Alternative for Southern Ontario*. Master of Landscape Architecture Thesis. 2016. Advisor: R. Brown.**

Residential landscapes in Canada and the U.S. are dominated by turfgrass. The consequences of this include diminished biodiversity, reduced rainwater infiltration, increased irrigation and widespread overuse of fertilizers and pesticides that degrade water quality and impact wildlife populations. This study develops and evaluates a lawn alternative that achieves functional and aesthetic performance similar to turfgrass while addressing the limitations of lawns. Floral lawns – designed and developed using a selection of low-growing herbaceous perennials adapted for the conditions of southern Ontario – were displayed at Canada Blooms 2016 and evaluated by a questionnaire administered at the event. Results of the study found no significant relationships between demographics and preference for the floral lawn. 77.6% of respondents preferred the appearance of the floral lawn over turfgrass and artificial turf; 75.4% would consider installing a floral lawn. This study could help alter the North American reliance on turfgrass lawns in residential applications.

## 2015 MLA Abstracts

**Brommer, Jessica L. *Developing a Spatial Form Model to Assess Canopy Cover and Other Urban Forestry Metrics for Guelph, Ontario*. Master of Landscape Architecture Thesis. 2015. Advisor: R. Corry.**

Canopy cover is used as one of many indicators of urban forest management success. This study developed a spatial form model to determine whether Guelph's canopy cover target of 40% is achievable given various planning considerations. The model used a geographic information system (ArcGIS 10.2) and leaf-on SPOT 6 satellite imagery to determine existing land covers; it applied a variety of spatial analysis tools to land cover data and existing infrastructure to determine the spatial extent and/or quantity of a variety of urban forest metrics. Results found that a 40% canopy cover is achievable if 52% of the available plantable space becomes canopy cover. Industrial and employment, institutional, low-density residential, commercial, and parkland should be targeted for future planting efforts due to their large plantable space areas and/or low relative canopy cover.

**Chan, Stuart. *Dilemmas and Delights of Designing with Terrain Vague and Postmodern Concepts*. Master of Landscape Architecture Thesis. 2015. Advisor: L. Harder.**

Solà-Morales's terrain vague reconceptualises underused and derelict lands using a postmodernist lens concluding their worth is in their contrast to conventional space. However, this stands in opposition to the traditional modernist thought, which perceive these spaces as detritus, whose only value lies in its redevelopment. As postmodern thought gains traction in landscape architecture, the question of how designers respond and utilize the terrain vague context is becoming more relevant. Through a case study of three spaces that utilize their respective terrain vague conditions "as material" in their reimagining, this thesis explores the strategies and results of designers referencing this oft dismissed phase of neglect. Using a structured case study approach, this study finds that sites invoking terrain vague as context to their design invariably destroys the

terrain vague condition, make temporality explicit in their new design, and employ an inclusive, multi-stakeholder design process.

**Chao, Ku Wing. Symbiotic Urban Parks: Exploring Design Aesthetics, User Experiences and Ecological Services. Master of Landscape Architecture Thesis. 2015. Advisor: S. Kelly.**

Increasing ecological awareness and the availability of green technologies are transforming the contemporary urban park landscape. This research explored new design innovations that incorporate ecology to create new values and experiences of urban parks. A literature review helped to understand the design evolution of urban parks. The High Line and Brooklyn Bridge Park located in New York City were selected as case study sites to analyze their approach to design and innovation, and questionnaires were conducted to further understand visitors' experiences, behaviours and expectations. Interviews were conducted with four key informant landscape architects to identify the demands, challenges, and approaches to public green space design. The findings revealed that programming variety and connectivity, free-flowing design aesthetics, and designed wildness for biodiversity were key relationships for creating resilient and high performance green spaces. Future research could include measuring the performance of park ecology, resource metabolism, and park maintenance strategies.

**Christy, Elena R.A. Developing a Framework for Designing "Resilient Citylands" through Community Participation. Master of Landscape Architecture Thesis. 2015. Advisor: K. Landman.**

The Resilient Citylands concept proposes a new approach to designing landscapes to address issues related to climate change, peak resources, habitat loss, and urbanization. This new approach emphasizes interactions of green-blue and built infrastructure and a reintegration of urban-rural areas. The goal of this research was to operationalize the Resilient Citylands concept into a working framework. A participatory design (PD) case study was completed to evaluate the framework. The framework was developed using key literature, key informant interviews, a site visit, and observations and reflections of the PD process. Results were analyzed for strengths and weakness of the framework, and opportunities and threats of applying this framework using PD. Preliminary results demonstrate the framework is helpful to inform design decisions in a PD setting. Further consideration is required to explore means of increasing community buy-in. Additional application of the framework is recommended.

**Chow, Anna. Exploring Public Perceptions of the Guelph Humane Society Facilities as a Centre for Human-Animal and Community Interaction. Master of Landscape Architecture Thesis. 2015. Advisor: N. Perkins.**

While humane shelters are multi-functional centres for animal-human activities, many are not designed to capitalize on community engagement, education and interaction. This research gathered public opinion about the Guelph Humane Society (GHS) and features that would enhance not only animal welfare but also community engagement and activities. An online survey was conducted to gather information on community members' perceptions and opinions regarding the GHS. Results indicated that the respondents preferred features that aided in human-animal interaction, as well as those that would provide comfort to the animals and enhance shelter programming. The findings from this survey highlighted outdoor play spaces, walking trails, and shelter from weather as preferred features. For indoor space, natural light, auditory quality (noise protection or calming music), and indoor play spaces were rated highly. These results will help inform the design of future GHS facilities, and better enable it to become a centre in the community.

**Collins, Natasha. Deadwood in the Suburban Landscape: Resident preferences for woody debris management in suburban woodlands and woodland edges in Southern Ontario. Master of Landscape Architecture Thesis. 2015. Advisor: R. Corry.**

Deadwood or woody debris is a key element for biodiversity and ecosystem productivity; offering habitat and improving soil health. It is removed by residents and forest managers due to

negative preferences for it, leading to a reduction in forest biodiversity. Introducing deadwood into suburban woodland edges and woodlands offers a chance to improve forest ecosystems adjacent to urban sprawl development in Southern Ontario. A photographic questionnaire completed by residents living on or near suburban edges was used to evaluate if different forms of deadwood at a high or low quantity produced unique preferences based on its location within a suburban woodland edge or a woodland. Results suggest deadwood adding cohesion due to size and arrangement are preferred. This suggests that retention of cohesive pieces of deadwood is a preferred way to integrate deadwood into the suburban landscape.

**William Nathan Langley. Exploring the Relationship Between Academic Knowledge & Practice in Landscape Architecture. Master of Landscape Architecture Thesis. 2015. Advisor: R. Corry.**

Academic knowledge serves specific functions within a profession, and can affect the relationship between a profession and its work. Due to a reliance on other disciplines, a specialized body of knowledge within landscape architecture is difficult to identify. Is there a specialized body of knowledge in landscape architecture, and if so, what is it? A mixed methods strategy was used where data from two pre-existing self-administered surveys, university curricula, and two comprehensive review articles published in 'Landscape Journal' were gathered to identify knowledge domains through content analysis. The results were analyzed to identify a specialized body of knowledge. Only two out of ten knowledge domains were consistently identified within each data set - design and natural. Each knowledge domain's importance also changed depending on the perspective used, as well as over time. These results highlight the importance of academic knowledge to landscape architecture and its ability to conduct work.

**Osborne, Sarah C. Meaning and Imagined Memories: Exploring Literary Landscape Theory Through the Aesthetics of Lucy Maud Montgomery. Master of Landscape Architecture Thesis. 2015. Advisor: C. Paine.**

This thesis explores the theory of literary landscapes. The research is composed primarily of an interdisciplinary literature review that draws on landscape architectural theory, tourism studies, literary criticism, and landscape history and cultural geography, as well as archival research and site visits. It positions literary landscapes in relation to the landscape meaning discourse, and argues that they are an essentially experiential way of perceiving landscape through the use of "imagined memories" by the literary visitor. Using the example of L.M. Montgomery, the research explores how understanding an author's landscape aesthetic can reveal past and present meaning in the landscape, and how this aesthetic—understood formally, thematically, and as embodied experience—allows us to understand the range of literary visitor motivations and expectations, as well as encouraging the exploration of how landscape architects might design, manage, and interpret literary landscapes based on an author's aesthetic.

**Pavan, Stephanie. Interpreting the Values of Urban Watershed Renewal Projects: Better Understanding the Opportunities and Barriers. Master of Landscape Architecture Thesis. 2015. Advisor: K. Landman.**

Historically, cities have blocked and buried streams and watersheds to meet the increasing demands for public safety, sanitation and stormwater management at the cost of urban watershed health. To determine the goals, opportunities and barriers to urban watershed renewal, an urban watershed case study report, a focused literature review and key informant interviews were conducted. Key informants from a range of disciplines were selected: an architect, an urban designer, a natural systems engineer and landscape architect, a community-organization communications representative and a stormwater management engineer. The key values identified were ecological, functional, recreational, economical, cultural, historical, recreational and aesthetic. Results revealed many alternative solutions, opportunities for implementing strategies or projects and the barriers associated them.

**Schibli, Heather. Bioregional Design for Multiple Aggregate Extraction Site Rehabilitation in the Oak Ridges Moraine, Ontario. Master of Landscape Architecture Thesis. 2015. Advisor: K. Landman.**

A collaborative project between industry, environmental groups, and government resulted in a bioregional plan for the rehabilitation of multiple aggregate sites in the Township of Uxbridge, Ontario. The research aims were to extract the industry's best practices from the grey literature and to apply these practices, along with the bioregional plan goals, to conceptual landscape designs that were then used as an engagement tool for landscape stakeholders. The best practices, the bioregional plan goals, and inventory and analysis of the landscape were synthesized to develop alternative landscape scenarios. Stakeholders reviewed and discussed these scenarios, revealing different values and perspectives. Discussion and assessment lead to increased common ground and continued development of bioregional landscape solutions. This process can be a model for rehabilitation planning in other aggregate-rich municipalities.

## 2014 MLA Abstracts

**Affum, Mark. Modernism in the Canadian Landscape: James Austin Floyd's Gardens and the Emergence of Modern Landscape Architecture in Canada, 1950-1970. Master of Landscape Architecture Thesis. 2014. Advisor: L. Burcher.**

This thesis explores the career of Canadian landscape architect James Austin Floyd (1910-1981). To date, despite Floyd's status as one of Canada's first modern landscape architects, there exists no comprehensive study of his work. Through concentrated literature review, archival study, and key informant interviews, this thesis explores Floyd's residential and institutional gardens—designed between 1950 and 1970---in the context of the emergence of modern landscape architecture in postwar Canada. The thesis concludes that Floyd had considerable influence on the evolution of modern landscape architecture in Canada through his garden designs and writings, and that his design philosophy, merging functionalism with aesthetic, owed much to his professional training and influences in Canada and the United States. This thesis offers valuable information for further exploration of Canada's landscape architectural history in the postwar modern era.

**Barrett, Jeffrey. Towards Net Zero: An Analysis of Building Orientation in the Reduction of Energy Load Requirements in High Latitudes. Master of Landscape Architecture Thesis. 2014. Advisor: S. Kelly.**

A net-zero energy community localizes its energy creation and distribution. Such a community does not rely on outside influences to power itself. Further, through new design techniques, at both the individual home and neighbourhood scale, the load requirements needed to power itself can be significantly reduced, while increasing the comfort level of living in an extreme environment. These elements would have profound effects in the improvements of the well-being of communities in high latitudes. This paper is an investigation of what the literature deemed to be the most effective means of achieving a net zero community: reduction of a building's energy load. Specifically it focuses on the effects of passive solar and uses simulation modeling to measure the effects that building orientation has in the reduction of energy load requirements in high latitudes. The results indicate that orientation does effect a building's energy load reductions especially in newer, better-insulated homes. However, it was shown to be relatively minimal from a cost savings perspective.

**Briggs, Andrew. Effects of Facial Cooling on Thermal Comfort in Windy Winter Conditions. Master of Landscape Architecture Thesis. 2014. Advisor: R. Brown.**

Winter winds can strongly reduce the thermal comfort of visitors to urban plazas yet there is little guidance in the literature as to what can be done to improve the situation. This study explored how wind affects the thermal comfort of people in winter and used that information to provide guidance for how urban plazas can be designed to increase the thermal comfort of visitors.

A thermal camera recorded the face temperatures of volunteers over time in a range of winter conditions. An energy budget model of a person's face (COMFA FACIEM VENTOSUS) was developed and applied to vignettes of evidence-based windbreak designs to illustrate the effects of a windbreak on winter thermal comfort.

**Brown, Sarah. Reading Meaning in Designed Landscapes. Master of Landscape Architecture Thesis. 2014. Advisor: C. Paine.**

Landscape architects may use artistic expression to create landscapes intended to be not only functional, but meaningful. This thesis was an exploratory study into how different groups read designed landscapes. A literature review was used to trace how meaning has become a consideration in landscape architecture, and how professionals communicate through design choices. The Village of Yorkville Park in Toronto, Ontario was used to explore this topic because it was designed to convey meaning associated with the history and identity of the site. On-site interviews of park visitors and questionnaires with two groups of design students were used to examine ways that a landscape designed with intentional meaning is interpreted. The results revealed that motivation and knowledge of design intent influenced understanding of meaning. The findings presented heightened awareness of the legibility of landscape architects' design decisions in the expression of intentional meaning, and identify areas for future research.

**Corey, Kathleen. Making Space: An Exploration of Parklets in North America and Vancouver. Master of Landscape Architecture Thesis. 2014. Advisor: N. Perkins.**

In the last few decades many municipalities have temporarily closed streets to vehicular traffic to open them to people and foster community. More recently, New York and San Francisco introduced pop-up parks to street rights-of-way, initially as plazas reclaimed from excess road space. On a smaller scale, 'parklets' are a response to people's desires to repurpose parking stalls for community spaces. In June 2013, VIVA Vancouver launched its stand-alone Parklet Pilot Program. The parklet application and design process was examined using an action research case study method for one of the first parklets to be built under the program by PWL Partnership. San Francisco and Vancouver parklets were mapped and compared. Findings reveal that parklets begin as business sponsored projects and over time evolve into community partnerships. Recommendations have been developed for emerging and established programs across North America.

**Fraser, Christine. Design Solutions that Encourage Golfer Participation. Master of Landscape Architecture Thesis. 2014. Advisor: R. Brown.**

The sport of golf has experienced a decline in number of participants over the past ten years due to social, cultural, and economic factors. An in-depth literature review and key informant interviews identified the amount of time required to play, high costs, and level of difficulty as the principal contributors to this decline. Design guidelines were developed to directly address these limitations and increase participation. The time required for a game of golf and the cost of construction and maintenance of courses can both be reduced by minimizing the number and severity of hazards, and locating them so they will be a challenge only for expert golfers. The level of difficulty and the pace of play can be remedied by a return to strategic golf design. Strategic design emphasizes risk and reward scenarios, and provides variation in shot values that appeal to all skill levels of golfers.

**Forbes, Alexander. Alternatively Designed Golf Courses: Improving Accessibility for Novice and Intermediate Golfers. Master of Landscape Architecture Thesis. 2014. Advisor: R. Brown.**

The majority of golfers are at a novice or intermediate skill level, but most golf courses are designed for experts. Golf course architects and golf experts were interviewed to gain professional insight on golf course design principles and golfer demographic trends. Fifteen novice and intermediate golfers were interviewed, and their preferences and displeasures of golf course design

were obtained. It was found that too many forced carries and difficult water-hazards deter golfers from the game. Most golf courses are too long and do not have appropriately located tee decks. Deep bunkers and greens surrounded by rough are also highly difficult design elements. A golf course with a more interesting and variable layout accommodating all skill levels is more likely to succeed than a course of high difficulty and increased length. The recommendations provide guidance for future golf course design and renovation opportunities.

**Golaszewski, Maciej. Adapting the Renewable Energy Program to the Conservation Authority Campground Context. Master of Landscape Architecture Thesis. 2014. Advisor: S. Kelly.**

The evolution of campground experiences associated with small-scale camping (tents), to those accommodating larger, fully equipped recreational vehicles, motor homes etc. is challenging the Conservation Ontario's (CO) mandate and the Conservation Authorities (CA) camping industry. This research explores obstacles and opportunities to adopt available "green" techniques and programs into the CAs camping industry. Using the case study of the Energy-Camp model in Austria as a precedent, a semi-structured questionnaire was designed in order to collect data concerning Ontario's CAs camping trends, and its current status. It was determined that renewable energy programs such as those incorporated within the Energy-Camp support CO's "Strategic Direction Report," help sustain a character of a small-scale camping by "greening" their current offers and allow new learning opportunities, and opens the possibility for a new tourism group. Potentially useful new outdoor activities incorporating innovative approaches for environmental stewardship contribute to user experiences and reinforce CO's mandates.

**Hodder, Kelly. Walk, Run or Fetch: Designing Social Spaces in Shelters. Master of Landscape Architecture Thesis. 2014. Advisor: N. Perkins.**

Approximately 22,000 dogs are admitted to Ontario Society for the Prevention to Cruelty to Animals (OSPCA) branches and affiliates annually. These dogs require stimulation and enrichment in their daily routine to maintain physical and mental health. However, many shelters have not been designed to foster these interactions, leading to potentially reduced dog welfare. The goal of this research was to examine the outdoor stimulation needs of dogs and their handlers at OSPCA branches and affiliates by reviewing shelter environments and determining how existing spaces fulfill the needs of humans and dogs. Facility assessments, along with employee and volunteer interviews were used to create design guidelines that enhance human-dog and conspecific interactions. Alternative design guidelines were developed, focusing on the comfort of people and variability of environment for dogs, which may help improve the welfare and adoptability of shelter dogs and quality of experience of those who work with them.

**Neufeld, Chad. Exploring Wilderness Design Through the User Experience in Chilliwack Lake Provincial Park. Master of Landscape Architecture Thesis. 2014. Advisor: S. Kelly.**

This research explored the human relationship with wilderness through the recreational activities of hiking and backcountry camping in Chilliwack Lake Provincial Park located in southwestern British Columbia. A case study and questionnaire completed by 119 visitors was used to determine the ideal backcountry wilderness experience as identified by using the Recreation Experience Preference (REP) scales. Results indicated that the highest priority wilderness design features included viewing scenery, having a sense of remoteness, and reduction of litter and waste. Conclusions suggest that the user experience can be improved by designing for scenic views, protecting the remote feel of an environment, and ensuring an adequate mix of trail and backcountry facilities while reducing litter and waste. Findings are specific to Chilliwack Lake Provincial Park but may aid landscape architects in the design of similar wilderness parks through the further understanding of the user experience in wilderness areas.

**Nowatschin, Elizabeth A. Educational Food Landscapes: Developing Design Guidelines for School Gardens. Master of Landscape Architecture Thesis. 2014. Advisor: K. Landman.**

This study was a qualitative exploratory investigation into the use of gardening as a teaching tool in schools. In addition to educational motivations, school gardening is being driven by public health concerns about rising rates of obesity and diabetes in children; the local food movement and sustainable agriculture; increased interest in children's environmental awareness; and social and community development. This inductive research followed a non-linear path, utilising grounded theory. Data from a focused literature review, a school garden web scan, School Garden Network profiles, school garden guides and manuals, photographs and key informant interviews were analysed using Nvivo software. Analysis of the data led to design guidelines such as: employing timed irrigation systems, bed designs that aid in group instruction, and consideration of the community beyond the school staff and students. These guidelines will aid schools, stakeholders and landscape architects in improving existing school gardens and the design of future successful, multifunctional, inclusive, and educational food landscapes.

**Semeniuk, Kent. Gazing Up: An Exploration of Municipal Night Lighting Practices Amongst Six Canadian Municipalities. Master of Landscape Architecture Thesis. 2014. Advisor: N. Perkins.**

Light pollution is broadly defined as the unnecessary illumination of the nocturnal environment. Light pollution is a pervasive phenomena shown to have harmful consequences for both the biotic and abiotic components of an ecosystem. While some municipalities have begun to address the environmental and economic costs of light pollution, most have not. The goal of this study was to investigate current municipal night lighting practices for six selected Canadian municipalities with the aim of determining their policies and practices for night lighting. Semi-structured interviews with key informants were conducted and analyzed using a mixed methods approach that included a thorough literature review. The results indicate that rising energy costs, aging infrastructure and the lighting industry are driving the majority of changes taking place in adapting municipalities while most municipalities remain content with status quo. The research conducted led to guideline improvements for municipal night lighting in today's municipalities.

**Taslimi, Sarah. Arrested Development: A Deep Map Exploration of Community Building in Ontario and Spain. Master of Landscape Architecture Thesis. 2014. Advisor: N. Perkins.**

Residents of incomplete planned communities suffer social isolation and a surplus of fragmented infrastructure. Because these communities failed to achieve population goals, and lack historical layers of habitation that inspire restoration investment, they are branded as "ghost towns" by the media. Nonetheless, residents perceive the success of their communities largely in relation to the maintenance of planned features like public parks. Criticism from the media also inspires reactionary community bonding. This thesis used deep mapping to tell the stories of Townsend, Ontario and Valdeluz, Spain, two similarly disregarded developments. A literature review of the causes and consequences of unsuccessful urban design informed a holistic exploration of life in these communities through on-site observation and informal interviews. The data was analyzed for qualitative correlations and detailed narratives were produced. This study provides designers with a deeper understanding of incomplete planned communities, and identifies challenges that planners of new communities will face.

**Vander Veen, Benjamin. An Interactive Plant List Model for Bio-retention Facilities: Using the Happy Plant Model to Predict Preferred Plant Species. Master of Landscape Architecture Thesis. 2014. Advisor: K. Landman.**

Bio-retention facilities are becoming an important component of stormwater best management practices. Vegetative health directly affects bio-retention facility success. Bio-retention facilities have characteristically harsh moisture conditions. Credit Valley Conservation is developing bio-retention construction guidelines. Identifying suitable plant species for bio-retention conditions is imperative in doing so. This study aims to use the Happy Plant Model (HPM),

an Excel-based model that predicts moisture conditions in bio-retention facilities based on construction design, to predict preferred plant species pre-construction. Through a focused literature review, drought and saturation tolerances were found or estimated. Outputs from the HPM influence the plant species list that is generated. Results show that a preferred plant list can be produced for various moisture conditions based on facility design. With the HPM and Interactive Plant List Model, bio-retention facility designers can predict preferred plant species for pre-construction bio-retention facilities. This study provides a step towards effective bio-retention planting.

**Zhang, Zenan. Landscape Infrastructure Works as Catalyst in Urban Design: A Case Study Exploration of the Corktown Common Park in West Don Lands, Toronto. Master of Landscape Architecture Thesis. 2014. Advisor: L. Burcher.**

The process of designing new urban infrastructure in an established urban context is described as “embedded process” in “plug-in” urban design. Due to the potential of urban infrastructure design to directly influence the quality of urban environments, embedded processes in “plug-in” urban design has become an issue worthy of consideration by landscape architects. Using an in-depth literature review of urban design theories--from both cultural and ecological perspectives-- and interviews as research methods, this thesis analyzed the effectiveness of landscape infrastructure in acting as a catalyst in “plug-in urban design.” A set of design principles was deduced from the study and tested on the award winning Athletes Village for the 2015 Pan-American games at West Don lands, Toronto. The results of this thesis provide guidance for future improvement in landscape infrastructure and “plug-in urban design” projects.