Between Fields and Meadows:
A Strategy for Naturalistic Sport Landscape Across Liminal Urban Spaces

by
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Author’s Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

Abstract

This thesis explores the productive intersection between often-separated "sport landscapes" and "landscapes of biodiversity" through the redesign of the Strachan Street general open space in the city of Hamilton, Ontario, as a biodiverse sport landscape. The site of an abandoned road expansion, the open space connects two major urban parks (Bayfront Park, Jackie Washington Park) but divides the waterfront-adjacent North End neighbourhood from downtown-adjacent Central and Beasley neighbourhoods. As the urban core of Hamilton is set to double over the next five decades, the development of this underutilized threshold to the invaluable waterfront is inevitable.

The city of Hamilton has stated two critical needs: 1) enhanced public engagement with biodiversity by introducing forest-garden types (wild-growing, uninterrupted "meadows") into urban areas, and 2) the continued development of a robust recreation network that is responsive of proximity, access, and amenity-related needs (maintained, well-groomed "fields"). The incorporation of public space into reclaimed post-industrial landscapes has precedent in Hamilton, but a key challenge is how design can resolve the incorporation of these seemingly conflicting public space typologies within increasingly confined urban space.

The sports-driven "field" type alone cannot satisfy the multi-faceted ways that Hamiltonians participate in play, though a fully biodiversity-driven "meadow" approach negates the intense need for formal play spaces. These types also pose limits: the systematization of sport has degraded the play quality, and the forest-garden is a relatively new type that often lacks the amenities to invigorate use beyond a singular program. Therefore, the thesis explores how architecture can mediate between outdoor sport and biodiversity using the common theme of play. Case studies explore dimensions of "sport landscapes" and "landscapes of biodiversity'" that correspond to existing site conditions as a method of informing design.

The thesis explores three typologies that bring "sport landscapes" and "landscapes of biodiversity" into close friction: 1) Woodland Sport-scape: a linear forest-garden, containing native perennials and low growing shrubs, with simplistic structures that mingle play and vegetation growth; 2) Orchard Sport-scape: multi-purpose sports areas and niches of sun-loving berry guilds, mediated by a pavilion for climbing, sitting, harvesting, cultivating; 3) Nursery Sport-scape: the adaptive re-use of post-industrial sites for seed and tree production with flexible sport areas created amidst the shuffling of potted plants and seasonal growth.

A set of design guidelines reflective of Hamilton's network of environmental and recreation stewards is produced to offer guidance in two dimensions: for the City and for the citizen. This enables aspects of top-down design that fulfils the critical needs identified while enabling bottom-up design rooted in citizen engagement at the scale of the neighbourhood. Future iterations of the guidelines should present methods for addressing environmental and social challenges posed by adapting post-industrial or liminal sites. Though Strachan Street open space was selected for its urban connectivity, the proximity to the active railway presents considerable hazards that require further study of air, noise, and soil pollution; likewise, additional research must be directed towards understanding community social dynamics to ensure the project effectively mediates and equitably represents the holistic "public." Thus, this architectural thesis presents a basis for questioning the role of the public park in everyday life.

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Between Fields and Meadows

The City of Hamilton has stated two critical needs: 1) enhanced public engagement with biodiversity by introducing forest-garden types (wild-growing, uninterrupted “meadows”) into urban areas,[1] and 2) the continued development of a robust recreation network that is responsive of proximity, access, and amenity-related needs (maintained, well-groomed “fields”).[2] As the urban core of Hamilton is set to double over the next five decades, spatial limits challenge the achievement of these goals. The prevalent “field” type alone cannot satisfy how Hamiltonians participate in play, though a full “meadow” approach negates the intense need for formal play spaces. Thus, parks must do both. Parks must offer traditional play forms and a genuine dimension of biodiversity, thereby supporting multi-faceted social dimensions of contemporary outdoor recreation in Hamilton.

The redesign of Strachan Street General Open Space in the city of Hamilton, Ontario is selected as a sample site. The open space serves as an active transit corridor and relates to existing and proposed recreational resources (i.e., existing waterfront, proposed temporary use of post-industrial sites). The thesis aims to bring together “sport landscapes” and “landscapes of biodiversity” into close friction using free play as an overarching theme to generate a set of design guidelines. The guidelines inform top-down design by the City (i.e., provision of amenity) that is supported with bottom-up design led by citizens (i.e., maintenance and expansion of amenity). The following literary exploration of the relationship between urban outdoor sport and biodiversity preludes site and precedent analysis that, together, serve to inform the design guidelines.

Un-bound boundaries

The spatial categorization of many existing urban parks in Ontario implies that programmed zones – playgrounds, sport areas, naturalized areas, gardens – must be separated. Eastwood Park (Fig. 1) and Land Nature’s Inlet Sanctuary (Fig. 2) exemplify the contrasting characteristics and physical separation between a multi-field city park and a dense naturalized area abutting a neighbourhood boundary. This presents a societal preference for a “clean” or “edited” nature in park spaces, but it must be questioned. Though spaces may be designed with order in mind, the maintenance of these boundaries is a challenge often observed: teens use handrails for skateboard tricks; the asphalt court cracks fill with wildflowers; raccoons scavenge park trash cans for a scrap meal; toxins from the nearby dump leech into the creek. Outdoor



Fig. 1 **Eastwood Park, North End, Hamilton.**

An example of a “field” type in reference to urban outdoor sport. Once a city park, Eastwood Park is a spacious neighbourhood park in the northeast corner of the North End. The majority of the footprint is dedicated to its four baseball fields and a soccer field. By author.



Fig. 2 **Land Nature’s Inlet Sanctuary, North End, Hamilton.**

An example of a “meadow” type in reference to urban biodiversity. Located on the peripheral edge of the North End neighborhood and abutting the Hamilton Industrial Area, the density of the vegetation is impenetrable for play-purposes. By author.

sport and biodiversity are not truly restrained by the dimensions that designers impose.

Free play and natural systems bring the seemingly opposing aspects of sport and biodiversity into contact regardless of design intent. The unstructured, unregulated dimensions of play is an aspect practiced by people of all ages. I refer to “free play” as a spectrum of play that ranges from adapted, goal-oriented games (i.e., pick-up games) to creative manipulation of materials (i.e., building, crafting) to imaginary forms (i.e., playing make-believe). In relation to outdoor sport, the temporary appropriation of a landscape or site for play can subvert predicted boundaries and mingle with biodiversity in ways that designers perhaps did not intend. Likewise, biodiversity seeks an agenda dedicated to survival and growth that may conflict with desired boundaries or divisions. This mingling can be regarded as positive or negative, beautiful or a nuisance.

It is therefore the responsibility of the designer to question the boundaries we aim to set between the two. Otherwise, contemporary design practice will reinforce the existing narratives (Fig. 3). Rather than struggling to keep divisions between outdoor sport and biodiversity, consideration of a symbiotic relationship can help to overcome each of their respective challenges. Free play can happen in unexpected places, but it can come with elements of rule-breaking and risk that are not universally sought after.[3] Can a biodiverse landscape offer a designed dimension of curiosity or risk, while granting a reasonable degree safety and resilience to spatial appropriation? Biodiversity is all around us, yet it is hard work – or as author Daniel Coleman metaphors, “yardwork” – to find the subliminal qualities of escapism and to re-learn connection to the natural world when left to our own devices in urban space.[4] Can familiar urban forms such as the sport court lead visitors to explore the new worlds of a didactic forest garden?

The near atrophy of play

This thesis premises that play is a key program that architectural designers can design. Though play is commonly associated with sport,[5] the features of outdoor sport facilities in public park can limit it. Facility design is structured towards specific uses and for specific users, often a singular purpose that is readily identifiable and catalogable by the City: basketball courts, tennis courts, soccer fields, baseball diamonds, and so on. The



Fig. 3 **Park Projects Pier 4 Tugboat the Sailor Concept, 2023.**

This park improvement plan was submitted for public survey in 2023, with construction planned in 2024. Gardens are included, but remain ornamental and peripheral. Play features are designed for age 18 months to 12 years old. (Source: City of Hamilton.)

landscape of these sites utilizes homogeneous materials (i.e., asphalt, turf), reducing environmental spontaneity and possibilities of human-nature connection. Finally, the regimentation of organized sports consists of barriers (i.e., financial, skill level, age requirements) and creates hierarchies (i.e., recreational, representative) that organize players for better or worse. Is the sport court too instructive by design? (Fig. 4)

Johan Huizinga, author of “Homo Ludens: A study of play element in culture,” posits that play is characteristically voluntary and therefore is freedom.[6] Therefore, play is no longer play when it becomes ideological, or work driven.[7,8] As early as 1944, Huizinga expresses how the homogeneous nature of sport promotes a division of players ultimately threatens play itself:

> “Now, with the increasing systematization and regimentation of sport, something of the purely play-quality is inevitably lost… The spirit of the professional is no longer the true play-spirit; it is lacking spontaneity and carelessness. This affects the amateur too, who begins to suffer from an inferiority complex… it remains sterile. The old play-factor has undergone almost complete atrophy.”[9]

Later, John Bale, author of "Parks and Gardens as Places of Sport," states that liminal boundaries in sport allow for a release from normative practices and spatial rules that attract playfulness.[10] In this case, Bale is referring to the spectators of a sports game, who they themselves take on free play (i.e., cheer, shout, and gesture) while the game plays out before them.[11] (Fig. 5) Similarly, outdoor urban sport must make room for this release from the norm: sport *needs* biodiversity. The spontaneity and dynamics of biodiversity injects a new set of rules – or rather, non-rules – to the greater arena of the public park. The question remains: how can this be achieved?

'Transplanting' as method

Bringing urban outdoor sport and biodiversity into spatial discourse has not only intrigued the design discipline but has revealed critical challenges in this marriage. One example of inserting sport into nature conservation is in the early days of Canada's national park system. Architect and Landscape Architect Ron Williams recounted how between the 1910s and 1940s, the construction of golf courses, alpine ski slopes, tennis courts, and vacation communities within national park boundaries[12] epitomized the paradox of sport facilities and nature preservation.[13] Today, rather than bringing urban forms of sport to distant natural settings, the re-introduction of biodiversity to urban spaces has been of interest in the landscape discourse: re-wilding, guerrilla gardening, urban agriculture.

"Nature play" is a concept that can merge play with biodiversity and builds on theory presented by Huizinga. Based on the work of the Children and Nature Network that has been referenced by other scholars and governing bodies in the field,[14] "nature play" is defined as free-form, unstructured, and child-led play that includes interactions with natural elements. "Nature play" is connected to the spatial city in that access to green spaces can increase children's engagement in it.[15] Thus, the promotion of "nature play" is a social driver for introducing biodiversity spaces into urban sites. Though many green spaces work, spaces with ecological functionality ("wild") allows for "nature play" to be publicly available: natural elements and soft surfaces for movements; loose items for manipulation (i.e., stacking, digging); natural materials with unique sensory characteristics. (Fig. 6)

In urban cities such as Hamilton, "natural playgrounds" often have an abstract or "loosened" organization relative to their counterparts, and exchange familiar



Fig. 4 **Children play at post-war playground.**

Playgrounds designed by Aldo van Eyck during the post-war period in Amsterdam featured simple structures that afforded a variety of ways to play: climb, hang, sit, gather. He provisioned loose materials, such as sand, granted opportunity for unscripted play. (Source: Fotopersbureau Holland.)



Fig. 5 **Exterior facade detail of the Rogers Centre, Toronto.**

Statues of spectators illustrate various modes of free play at a baseball game. By author.

playground materials (i.e., metal, plastic, asphalt) for natural materials, such as wood, sand, and water. An example is the East Chapel Parkette, constructed in 2015. While not necessarily as "wild" and sometimes lacking biodiversity and loose parts, these playground structures begin to introduce concepts of risky play to the public. These playgrounds highlight that in order for "nature play" to contribute to merging sport and biodiversity in public parks, it must: 1) surpass the impression of nature to make way for a functional ecosystem the also prioritizes habitat; 2) expand child-focused play to include play for all ages.

Between fields and meadows

The design challenge arises to create something between a "sport landscape" and a "landscape for sport." These are terms borrowed from Sonja Dümpelmann's "Landscapes for Sport: Histories of Physical Exercise, Sport, and Health," the former meaning sites designed for the purpose of sport (i.e., a "field"), the later meaning sites temporarily used for the purpose of sport (i.e., a "meadow").

"Landscapes for sport" encourage a search for new possibilities in how the environment can be interpreted, explored, and play with, in, or on.[16] In this way, the landscape and its components (i.e., ecosystems, species) often influences the sport at hand: "leisure follows landscape."[17] These spaces demand creativity and curiosity to navigate their dynamic nature, offering an experience akin to a "nature play" opportunity regardless of age. Additionally, the specificity of these habitats – a riverbank, a forest, a river, a beach – create a much stronger sense of place than the synthetic sport landscape. In this way, the relationships between sport and biodiversity can become reciprocal. There is immense potential to generate environmental empathy within the player; sport can offer its typical dimensions of social connectedness and environmental connectedness in this context.[18] Biodiversity, in an anthropocentric society, *needs* sport.

With the benefits of "landscapes of sport" come challenges in proximity, access, and fragility. These landscapes are often located in urban peripheries, where most city residents do not access them locally for everyday use. The degradation or destruction of these sites due to human intervention pushes the nearest proximity further. The temporary use implies that modifications that allow for accessible participation may not be typically present (once



Fig. 6 **Nature play.**

Natural elements and loose items enable child-led, unstructured play. (Source: Virginia State Parks.)

modification are permanently fixed, the "landscape of sport" becomes a "sport landscape").[19] Further, and perhaps ironically, the more heavily these landscapes are used, the more their unique environmental qualities are at risk. This is where "sport landscapes" are a useful evolution that provide a higher capacity for use by people with a range of abilities and a higher degree of predictability to ensure safe and maximum use. Consider for example, seasonal swimming in the ocean compared to year-round, monitored swimming in an indoor pool. Where nature is not readily available, a synthetic experience is.

However, it is suggested by Vinathe Sharma-Brymer, Tonia Gray, and Eric Brymer that "sport landscapes" cannot stand in place of "landscapes for sport" when it comes to helping develop an individual connection to the environment. Authors suggest surpassing "traditional" sport forms (they too use the example of a manicured field) and transitioning into more outdoor adventure and sport.[20] What does this transition between everyday, prevalent, familiar "fields" to less-formal, risky play, nature-centric "meadows" look like for urban cities like Hamilton? And rather than merely a transition between the two, can design settle in the middle?

Methodology & Structure

This thesis is structured into four sections. The first introduces the intersection of sport and biodiversity that grounds the primary research question. The second section provides context to the urban transformation and social dimensions of the Strachan Street and Hamilton sites, resulting in the formation of design criterion that apply the lessons of the case studies to the needs of the contemporary city. The third gathers case studies that address approaches to sport, biodiversity, and linear park design, offering key takeaways for the design of these types. The fourth section presents the proposal, a series of design guidelines. Though this book is organized as described above for communication purposes, the following describes my process in more chronological order that reflects the cyclical nature the design thesis process.

Uncovering Site

Hamilton, Ontario is a port city situated on the southern shore of Lake Ontario. Major geographical and hydrological features – the Niagara Escarpment, Lake Ontario, Hamilton Harbour, and its tributary wetlands – have greatly informed its urban development. The presence of industry dominates the southern shoreline of the harbour, but Hamilton is much more than this often first impression.[21] Robust dimensions of the city include the many conservation areas and nature sanctuaries, like Cootes Paradise marsh, a migratory bird stop, and long-held sporting and cultural events, like the Race around the Bay, the oldest road race in North America.

This thesis focuses on Lower Hamilton, which is located between the harbour and the escarpment. (Fig. 7) The urban city extends further south of the escarpment (Hamilton Mountain) and in either direction along the shoreline. It was indicated in a recent growth-related development strategy conducted by the city (GRIDS) that almost half of the total population growth over the next three decades will occur in Lower Hamilton.[22] Major urban transition is already evidenced by the development of projects as large multi-building residential communities on land previously sanctioned for industry. Closer observation reveals the transformations of individual land parcels, blocks, and communities. (Fig. 8)

This thesis began with a street. In 2019, I lived just south of Strachan Street in the neighbourhood of Beasley for a period of four months. Much of my leisure time in the city was spent on foot and bicycle, wandering through the

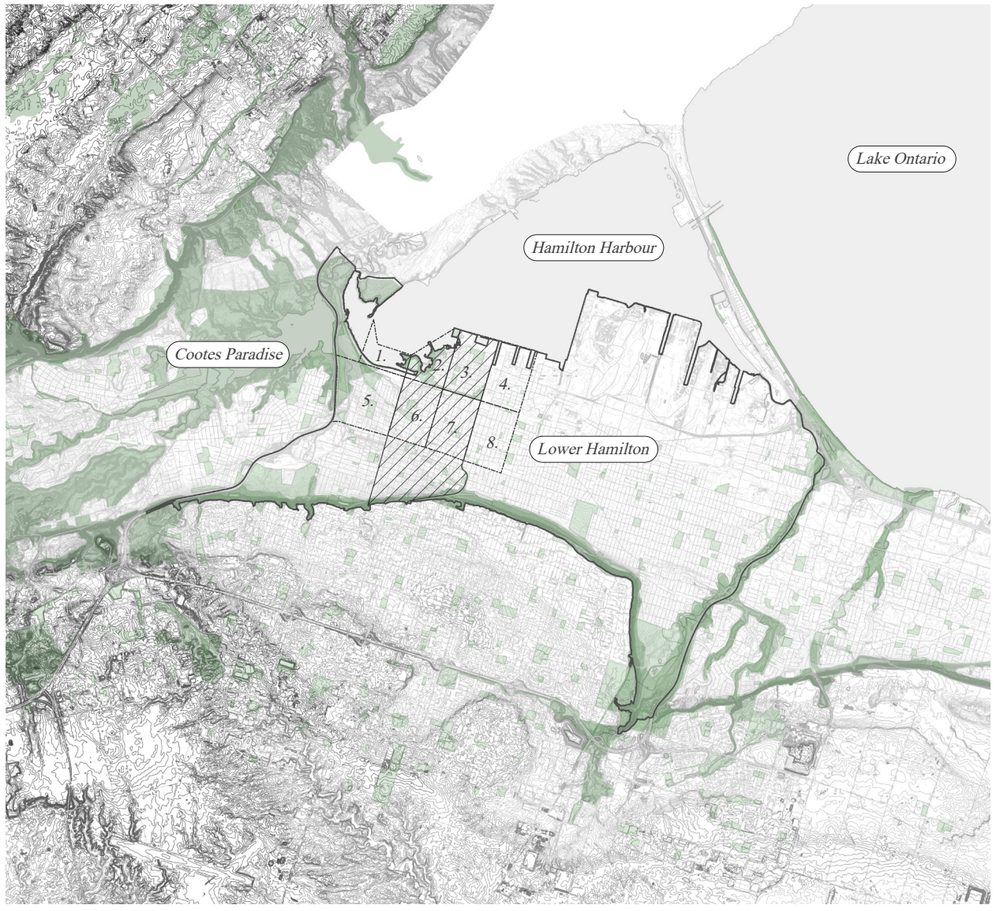


Fig. 7 **Map of Hamilton.**
Assembled by author.
(Source: City of Hamilton OpenData).



(Caption on next page.)

Fig. 8 **Map of the Strachan Street Area.**

Assembled by author. Names, existing boundaries, and key sites are introduced. (Source: City of Hamilton OpenData)

North End, Bayfront Park, and to Cootes Paradise by way of the Harbour. This area of Hamilton presented curious tensions in its urban formation: private waterfront properties that re-route the waterfront trail; a prison between a grocery store and a children's hospital; a vacant and overgrown 1960s housing project; a railway yard beside a waterfront trail that reaches into the city. (Fig. 9, 10, 11)

This railway corridor dominates the North End neighbourhood boundary. It serves as both a connector (Fig. 12) and a divider (Fig. 13). Hamilton residents must cross the recessed right-of-way to access the public portion of the harbour, a major recreational site. Parallel to the right-of-way, the Strachan Street open space expands the width of this gateway. The thesis study focuses on this site and draws from the broader contexts, referring to various urban boundaries, including:

North End, Beasley, and Central: three individual neighbourhoods that share the common border of the right-of-way.

Ward 2: an electoral boundary containing North End, Beasley, Central, Corktown, Durand, and Stinson. (There are 15 Wards total.)

West Harbour: a planning boundary (defined within the West Harbour Secondary Plan) that the contains North End, the northern most parts of Central and Beasley, and the Canadian National railyard.

Hamilton Bayfront Industrial Area: a planning boundary (defined within the Bayfront Industrial Area Strategy) that contains the portions of Ward 3 and Ward 4 zoned for industrial uses.

Lower Hamilton: a geographical boundary bordered by Hamilton Harbour, Cootes Paradise, the Niagara Escarpment, and the Red Hill Valley Parkway that contains Ward 2, Ward 3, Ward 4, and a portion of Ward 1.

Initial site research sought to undercover major past and planned changes to the urban form and fabric within the West Harbour area. This research included the study of past and current planning documents, reports, maps, and zoning;[23] the tracing and layering of historical mapping;[24] the layering and analysis of spatial data;[25] the review of satellite imaging, including City



Fig. 9 **Pier 8.**

As part of the multi-building Pier 8 project, new roads and landscaping winding around a vast construction zone is open and well-travelled by people walking, running, skating, and rolling. Wildlife (birds) contribute sounds and spectacle. By author.



Fig. 10 **Strachan Street parking lot.**

A parking lot on the corner of Strachan Street and James Street North. One of the first views of the North End when crossing the railway on James Street North. By author.



Fig. 11 **Jamesville development site.**

Existing buildings remain, vegetation on the site is left to grow. The vacant site spans two city blocks off of James Street North. By author.

of Hamilton historic aerials, and Google Earth; and the review of proposed developments' architectural drawings and presentations.[26]

The research evolved to incorporate social dimensions of recreation, environmentalism, and public space in Hamilton. Local scholars granted an influential knowledge base on the intersectionality of these topics. Prof. Ken Cruikshank and Prof. Nancy Bouchier provided extensive information on environmental activism and public space in their co-authored book, "The People and the Bay;" meanwhile, Prof. Daniel Coleman wove together cohesive narratives of often intangible natural processes and urban systems interconnectedness in the City.

Newspaper articles, particularly the Hamilton Spectator,[27] conveyed detail accounts of past events as they played out in real-time. I referenced archived city meetings and meeting minutes to gather additional information, including recreation budgets, initiative statuses (i.e., year-round public washrooms), building permits, and NGO presentations. Writing was a powerful tool in making meaning from both spatial and social dimensions as a collective set.

Seasonal visits to the site permitted observation and documentation through photography, sketches, voice recording to understand more temporary aspects of the site, such as occupant use, traffic patterns, noise pollution, views, and presence of non-human species (i.e., trees, animals, insects). Visiting museums, such as the Worker's Arts & Heritage Centre, and exhibitions, such as Lesia Mokrycke's "Trees Talking," has brought a constant source of inspiration and urgency to the project. Following local social media accounts, such as Environment Hamilton and Ward 2 Hamilton, not only provided insight on active issues, but confirmed the relevancy of the project at the Strachan Street site specifically within the discourse of addressing issues such as underutilized green space and air pollution.

Sport or biodiversity?

From early in the thesis process, sport and biodiversity were a compelling duo, but their combination in a singular design was challenging to resolve. Developing a hierarchy amongst the two seemed to be much more manageable. However, building a foundational knowledge of sport and biodiversity design separately helped to understand not only their opposing aspects, but their complimentary aspects. The work of Architect Rodrigo Perez



Fig. 12 (left) **The CN rail yard.**

Visible from the Bay Street bridge, the CN rail yard is located between the Barton-Tiffany development area and the waterfront trail. By author.

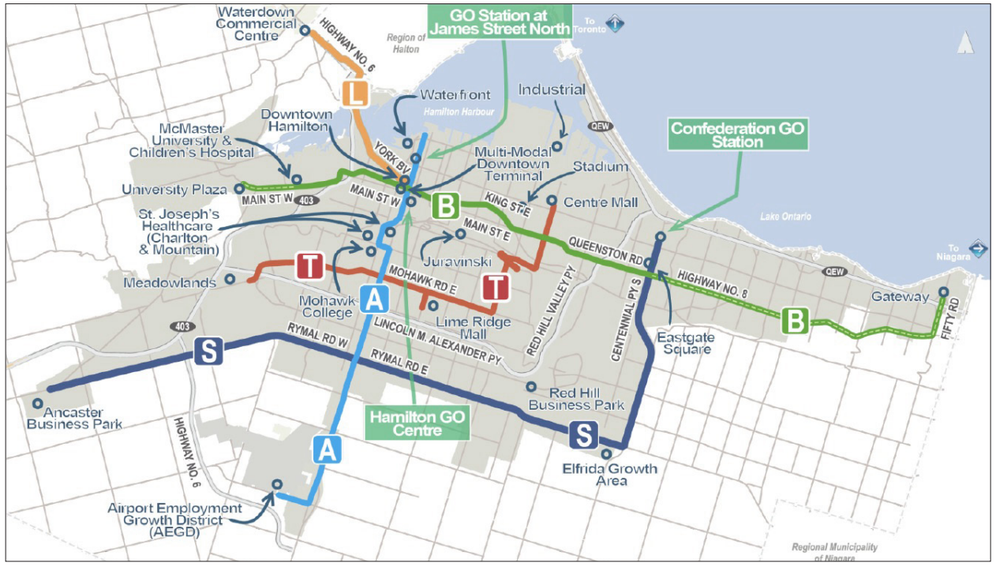


Fig. 13 (below) **Hamilton Long Term Rapid Transit System "B.L.A.S.T" (Conceptual). 2015.**

West Harbour GO and the additional proposed routes demonstrate Strachan Street as a threshold for access to the harbourfront via rapid transit. (Source: City of Hamilton.)

de Arce, Sport and Leisure Theorist John Bale, and Landscape Historian Sonja Dumpelmann provided context for urban sport evolution, while “Planting in a Post-Wild World” by Noel Kingsbury and Claire Takacs, “Wild: The Naturalistic Garden” by Claudia West and Thomas Rainer, and “Landscape Architecture in Canada” by Ron Williams were critical in informing design concepts as well.

Sport and biodiversity were initially researched as one type, but of the precedents found – Bridgefoot Street Park, Dublin, Ireland, for example – there was not many traditional sport areas, nor a wealth of information on the species, maintenance processes, and seasonal cycles that could be translated to the site conditions in Hamilton, Canada. Though the project appeared successful in mingling the sport and biodiversity, it was challenging to read and learn from. This division of types in the case studies made the design elements and respective processes for each type much clearer, allowing for a more informed reading of the case studies.

Guidelines as design

I am developing design guidelines that present key strategies that engage with the Strachan Street site, but also offers a dimension of adaptability that enable the guidelines to inform a city-wide approach to re-using post-industrial, liminal, or open spaces as part of the biodiverse recreation network. During this process, I studied existing agendas on public space, biodiversity, and recreation that pertained to the immediate Strachan Street neighbourhoods, as well as governance dedicated to Hamilton at large. This research revealed that citizen-driven (or “grassroots”) initiatives have precedent in advancing change in the West Harbour area, but that government support can also enable and stabilize collective transition. Therefore, I propose the design guidelines to be created for use by two groups: the citizen and the City.

Based on site and precedent research, three approaches are presented to bring together “sport landscapes” and “landscapes of biodiversity” into close friction: 1) Woodland Sport-scape, 2) Orchard Sport-scape, 3) Nursery Sports-cape.Within each, principles related to high-level planning reflect City intervention, while a “kit of parts” approach enables more adaptable design by the citizen. For example, a broad agenda item is to develop a demonstration garden in each neighbourhood (per the Biodiversity Action Plan);

implementing an edible forest garden partnered with Neighbour to Neighbour (N2N) is a site-specific suggestion.

Due to the limited scope of the thesis, direct community involvement in the design process was not explored. To supplement, information was sourced through surveys conducted by others. In practice, this would not be sufficient for the implementation of a public project where success is closely related to the direct and long-term involvement of the community: more research is needed. Similarly, the proposal aims to reflect Hamilton’s network of environmental and recreational stewards (both professional and volunteer) by drawing upon existing planning, studies, strategies, and guidelines, but further understanding of potential stakeholder relationships and funding structures is needed.

Endnotes

1 See item 4.10. “Hamilton Biodiversity Action Plan: Draft for Consultation,” April 2023, 48, https://engage.hamilton.ca/biodiversityplan.

2 Monteith Brown Planning Consultants, Tucker-Reid & Associates, and The JF Group., “Recreation Master Plan” (City of Hamilton, July 21, 2022), https://www.hamilton.ca/sites/default/files/2022-11/recreation-master-plan.pdf; “Recreational Trails Master Plan” (City of Hamilton), accessed January 15, 2024, https://www.hamilton.ca/sites/default/files/2022-08/masterplan-recreational-trails-network-maps1.pdf.

3 Lynda H. Schneehloth, “Unruly and Robust,” in *Loose Space: Possibility and Diversity in Urban Life* (Abingdon, Oxon: Routledge, 2007), 259–60.

4 Daniel Coleman, *Yardwork: A Biography of an Urban Place* (Hamilton: James Street North Books, 2017), 39, 246–49.2017

5 The term ‘sport’ was used to described amusement as early as the 15th century. See: Sonja Dumpelmann, *Landscapes for Sport: Histories of Physical Exercise, Sport, and Health* (Washington, D.C: Dumbarton Oaks Research Library and Collection, 2022), 3.

6 Johan Huizinga, *Homo Ludens: A Study of the Play Element in Culture* (Chicago: The Beacon Press, 1955), 8.

7 As Huizinga puts it, “It is never a task.” See: Huizinga, 8.

8 John Bale, “Parks And Gardens: Metaphors for the Modern Places of Sport,” in *Leisure/Tourism Geographies* (Routledge, 1999), 48.

9 Huizinga, *Homo Ludens: A Study of the Play Element in Culture*, 197–98.

10 Bale, “Parks And Gardens,” 56.

11 Bale, 57.

12 Ron Williams, *Landscape Architecture in Canada* (Montreal, QC: McGill-Queen’s University Press, 2014), 252–53.

13 Williams, 240.

14 Jasmine B MacDonald, Kylie Butler, and Kristel Alla, *Engaging Young Children (0–5 Years) in Nature Play (Practice Guide)* (Melbourne: Child Family Community Australia, Australian Institute of Family Studies, 2023); Thomas Beery, “Exploring Access to Nature Play in Urban Parks: Resilience, Sustainability, and Early Childhood,” *Sustainability* 12, no. 12 (January 2020): 4894; Austin Parks & Recreation, “Nature Play Guidelines 2nd Edition,” 2023, https://www.austintexas.gov/sites/default/files/files/Planning/CCCN/NaturePlayGuidelines_v2_2023_reduced.pdf.

15 MacDonald, Butler, and Alla, *Engaging Young Children (0–5 Years) in Nature Play (Practice Guide)*.

16 Rodrigo Pérez de Arce, *City of Play: An Architectural and Urban History of Recreation and Leisure* (London, UK: Bloomsbury Visual Arts, Bloomsbury Publishing Plc, 2018), 4–5, 9–10.

17 LOLA Landscape Architects, *Lost Landscapes* (Rotterdam: nai010, 2013), 104.

18 Sharma-Brymer, Gray, and Brymer, “Sport Participation to Create a Deeper Environmental Identity,” 335.

19 Dumpelmann, *Landscapes for Sport: Histories of Physical Exercise, Sport, and Health*, 3–5.

20 Sharma-Brymer, Gray, and Brymer, “Sport Participation to Create a Deeper Environmental Identity,” 335.

21 Coleman, *Yardwork*, 9.

22 City of Hamilton, “GRIDS 2 and Municipal Comprehensive Review – Final Land Needs Assessment and Addendum and Peer Review Results,” November 9, 2021, 2, April 27, 2024, https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=295582.

23 Available through the City of Hamilton website (https://www.hamilton.ca/).

24 Available through McMaster University Digital Archive (https://digitalarchive.mcmaster.ca/).

25 Available through OpenData Hamilton (https://www.hamilton.ca/city-council/data-maps/open-data) and special request from McMaster University Library (https://library.mcmaster.ca/maps/geospatial/hamilton-tree-inventory).

26 Development permits identified through OpenData and access to presentations through City of Hamilton website.

27 Accessed through Factiva.

Public Space, Biodiversity, and Sport in West Harbour

The scope of site research focuses on the area of Strachan Street for local insights, but at times expands to include the study of neighbourhood and city networks to ensure fluency with broader municipal shifts. (Fig. 15) This three-part study of the site includes the exploration of public space, biodiversity engagement, and recreation needs, with the aim of understanding how a new set of design guidelines might engage with existing frameworks. Following this method, the "green linkage" is revealed as a type in the Strachan Street that is underdeveloped. Concepts from existing guidelines – the Hamilton Bayfront Industrial Plan, the Biodiversity Action Plan, and the Hamilton Master Recreation Plan – are then suggested to be either engaged with or expanded on based on the needs identified, resulting in three sets of "key takeaways."

Strachan Street Open Space

Selected as a sample site, the 1-km long Strachan Street general open space is lost in a state of placelessness. The site has low-activity immediate context: the railway corridor to the south, single- and multi-family residential buildings, and a vacant public housing complex to the north. A preliminary design goal is to redesign the site to be distinctly "public," with more specific adaptations to the sport and biodiversity capacities. Within a 1-block radius, there are several existing sports, biodiverse, and cultural sites that are hosts to activity: Bayfront Park, Jackie Washington Park, Workers Arts & Heritage Centre, and the Sunset Cultural Gardens. Engaging with these sites and their users is intentioned to enliven Strachan Street and build out the site as a true urban armature that spans neighbourhoods. Additional key observational information is summarized below.

Sport: Signage warns "no ball playing" and "no dogs off leash," so although the site is 25m in width, these regulatory and societal barriers suppress common forms of free play. (Fig. 14) There is no internal programming to invite occupation or use of the space. (Fig. 16, Fig. 18) Nonetheless, it was observed that children found rest under the shade of trees and dog walkers consistently let their pets roam free.

Biodiversity: The landscape of the site has two aspects: manicured grass and deciduous trees, and a naturalized ROW corridor. (Fig. 17, Fig. 19) The grassy area of the site is dotted with trees: the majority are mature, but some are recently planted saplings. The south-facing naturalized area slopes towards the



Fig. 14 **Strachan Street GOS sketch overlay.**

Observations of textural naturalization along the ROW fence line, overlaid with samples of deterrent signage posted within the GOS. By author.

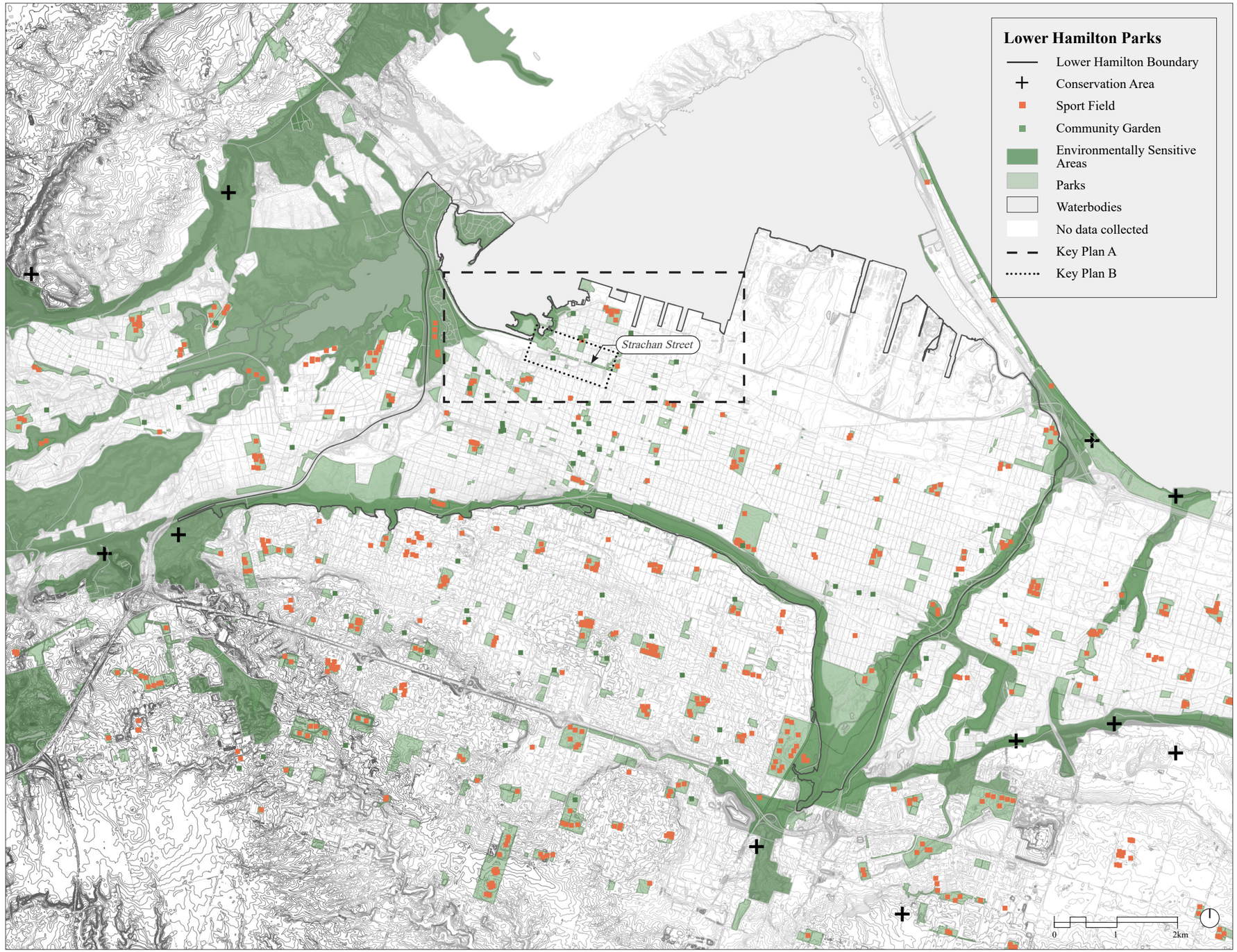


Fig. 15 **Lower Hamilton parks map.**

All conservation areas, major sites that support biodiversity, are located beyond the Lower Hamilton boundaries. The largest sports fields as well. Assembled by author. (Source: City of Hamilton OpenData).

railway and contains the largest of the mature trees and a shrubby understory. The most significant numbers of birds and insects were observed at the Land Nature's Inlet Sanctuary, a dedicated naturalized area to the south of the site.

Public: At the site, it was observed that current users are primarily single and small groups of adults and dog walkers, though occasionally, children were also present, usually accompanied by adult(s). Once or twice, users stopped to have conversations on the trail, but most often, all visitors were in motion. Evidence of extended use of the site was present through dog tracks in the mud at the east end of the site, suggesting games of fetch or play despite signage warning against it.

Throughout the duration of the thesis study, individuals experiencing homelessness have also used portions of the site, as well as Bayfront Park and Jackie Washington Park, for encampment. Screws in trees and modifications to the fence suggest appropriation of the site as an encampment and node in an informal trail system prior to the study prior as well. (Fig. 16)

Negotiating the Strachan Street site as a public space has been a challenge in the past. Increased socialization in the North End would require intervention to release tensions that have built up between residents and people encamped nearby. According to Journalist Bobby Hristova, some North End residents have presented aggression towards unhoused people in recent years. A proposal to house several individuals in tiny house units on site (Hamilton Alliance for Tiny Homes) was quickly snuffed out at a community meeting. On the other hand, "safety" is often cited as a concern related to the presence of encampment residents.

Public space is indeed limited in its ability to mediate the fear and societal stigma present between two groups. However, the redesign of Strachan Street to incorporate amenities that support both groups can presents an opportunity for mediation. The site is not fulfilling its role as "public" until it incorporates program that supports the "public," whether directly or indirectly. Amenities such as public washrooms and warming spaces or food security initiatives are examples. It is also not "public" until other residents feel safe playing and exploring the space as well.

Fig. 16 (above) **Strachan Street open space (1).**

An empty parking lot on the corner of James Street N; the bike path is located to the immediate left. Tall trees and dense vegetation growing along the ROW shades the south. By author.

Fig. 17 (below) **The ROW near James Street North.**

Peeking through one of the many areas where the fence is cut, a woodland habitat is visible. By author.

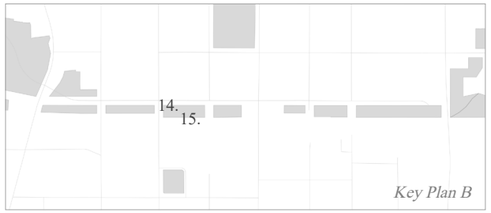






Fig. 18 (above) **Strachan Street open space (2).**

Near Wellington Street, a mowed lawn with various varieties of deciduous trees; the bike path is set back from the road. Direct views to the other side of the ROW here. By author.

Fig. 19 (below) **The ROW near Wellington Street.**

In this portion of the corridor, grasses thrive. By author.







Reclaiming: the public space agenda

Public space in Hamilton has been in constant flux, impacting the availability of recreational, biodiverse sites. One example of this is the development of industrial area, which previously served as an access point to Hamilton harbor as a recreational, natural landscape of play. The industrial area was not only privatized but prioritized through much of the 19th and 20th centuries. While an example of industrial land reclamation for this purpose (i.e., Bayfront Park), the greater story in Lower Hamilton is a complete shift in government duty to provide recreational amenities through artificial means such as the architectural spaces of indoor pools, manicured fields, and so on. The characteristically temporal nature of industrial lands, particularly periods of vacancy, presents an opportunity to re-invite public use and contribute to mending the biodiversity and the recreation network access.

No more nature, no more play

The southern shore of Hamilton Harbour[1] has been a place of public recreation that established a close relationship between home, play, and landscape. However, the bountifulness of these seasonal recreational areas that afforded casual pastimes and organized sports alike – swimming, fishing, rowing, sailing, and ice hockey (Fig. 20) – began to dissipate by the early 1850s.[2] Lot by lot, the shoreline was sold and developed for port activities under the supervision and guidance of the City. The soft and shallow boundaries of the riparian inlets were hardened with concrete retaining walls and the decimation



Fig. 20 **“Kids swimming at the Bay Street Beach.” 1927.**

Hamilton kids crowd a dive structure at Bay Street Beach in the North End. Others avoid the crowd and swim freely. The CN railyard can be seen in the left distance. Referenced by Cruikshank and Bouchier. (Source: Hamilton Port Authority).







Fig. 21 (above) **Infilling at Pier 14. 1955.**

Just beyond a residential neighbourhood, the harbour undergoes the process of infilling to create a new Pier. Studebaker Factory can be seen on the left; Strachan Street not pictured. Referenced by Cruikshank and Bouchier. (Source: Hamilton Port Authority).

Fig. 22 (left) **Princess Point Skating. 1955.**

Places to play, explored with availability of automobile. (Source: https://www.rbg.ca).

of aquatic habitats intensified.[3] Cruikshank and Bouchier recount that access to the harbour continued in areas of light industry but became impossible once heavy industry took over the shoreline.[4] (Fig. 21)

“Landscape of Sport” to “Sport Landscapes”

On the west end of industrial district, the North End, formerly called Port Hamilton, also experienced dramatic shifts in public recreational spaces. The North End has cultural foundations as a community of workers with common ethic roots. Like work, play in the neighbourhood occurred collectively.[5] A popular sport and leisure space was the Wellington Street inlet. (Fig. 23) The inlet served as a fishing hole and hockey rink until it was filled in 1908. A new city park, Eastwood Park, enabled swimming, promenading, waterfront celebrations, as well as additional organized sport (baseball, rugby, hockey).[6] It seems that here, “landscape of sport” (the harbour) and “sport landscapes” (baseball fields, rugby fields) began to mingle. Activities were multi-scalar, formal and informal, ranging from watching fireworks to illegal betting.[7]

North End was not immune to the growth, sale, and fill of the industrial area. Eastwood Park was landlocked by the construction of the HMSC Star naval base during WWII, a change that altered the character of the park and contributed to the thinning of harbour access. Other private waterfront owners in the North End began to construct fences to discourage informal use.[8] Not only was public access to the harbour marginal, the diminishing health of the harbour due to private, industrial activities deemed the once popular pastime of swimming undesirable and unsafe. Across Lower Hamilton, there was an increased public reliance on civic services to provide alternative amenities to those that the harbour no longer could, such as arenas and swimming pools. The public demand led to the creation of a permanent Recreation Council in 1946.[9]

Leaving public space behind

The changes to the urban landscape left many people, including urban planners, wondering what was next for areas like the North End. Like many of the neighbourhoods impacted by the industrial developments, the North End was declared “blighted” through the 1960s, and public space was not a top priority in its “renewal.”[10] A 1968 urban renewal plan illustrates the



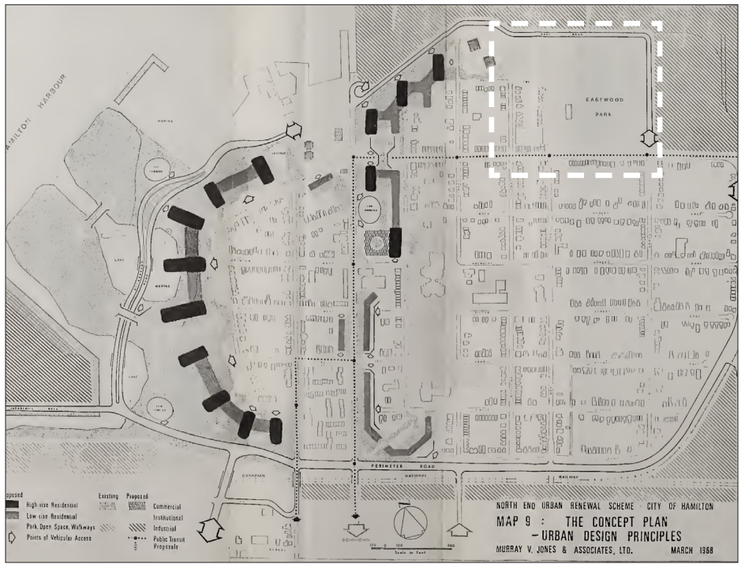


Fig. 23 (above) **Portion of a “Bird’s eye view of the City of Hamilton” with Wellington Street Inlet callout. 1893.**

Local, everyday harbour access for business and sport. Wellington Street inlet before Eastwood Park will be constructed there in the next century. (Source: McMaster Digital Archive).

Fig. 24 (left) **“The Concept Plan - Urban Design Principles” from the North End Urban Renewal Scheme. 1968.**

The diagonal hatching that surrounds the neighbourhood indicates industrial zoning; Eastwood Park is landlocked. New perimeter roads alter harbour access.

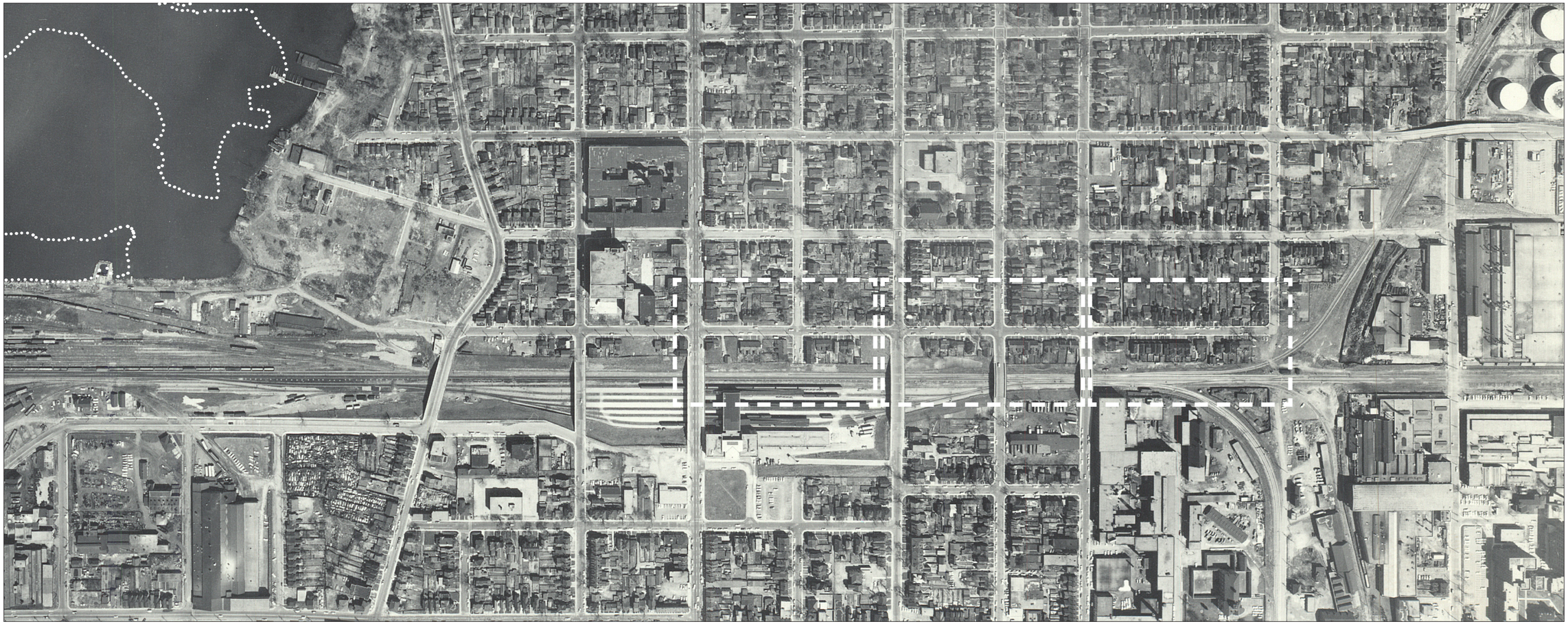


Fig. 25 (above) **Aerial photograph of West Harbour. 1968.**

Prior to the construction of Lax Lands/Bayfront Park (dotted outline) and the demolition of the Strachan Street residential homes.



Fig. 26 (right) **Aerial photograph of Strachan Street. 1969. (1)**

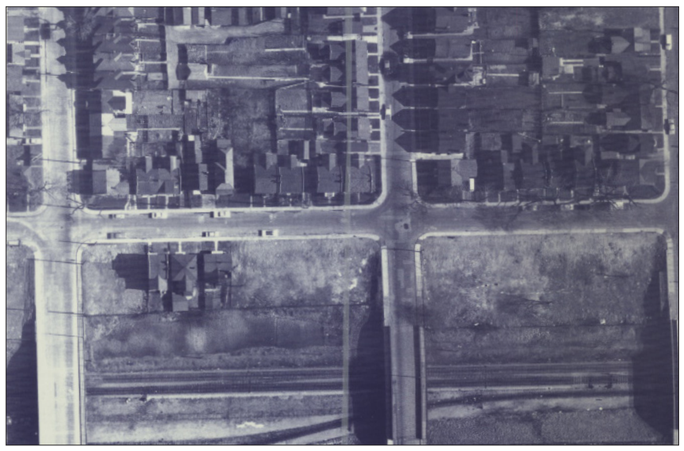


Fig. 27 (right) **Aerial photograph of Strachan Street. 1969. (2)**



Fig. 28 (right) **Aerial photograph of Strachan Street. 1969. (3)**

neighbourhood as a residential “island” surrounded by industry that consumes all existing land frontage and over half of the historic waterfront.[11] (Fig. 24)

Perimeter Road was conceptualized to condense heavy truck use while an additional road straddles the residential area and a proposed waterfront park. The connections to the park suggest that intended users would access this space occasionally, and by vehicle. Though this proposal was not fully enacted, historical aerial imagery traces the refinement of zoning in the 1960s: a clear delineation between residential, commercial, industrial, as well as the demolition of the houses along the south side of Strachan Street in preparation for the Perimeter Road project.[12] (Fig. 25-28) Never built, this is the liminal site of post-industrial planning that this thesis engages.

Industrial and Post-industrial Takeover

The overtake of the harbour for private use is a critical issue that affects public space, recreation, and biodiversity: activism surrounding it began to rally in late 1960s. This citizen-led activism grew from community groups, such as Save Our Bay, and from the campus of McMaster, such as Clear Hamilton of Pollution. With aims of raising public awareness for the issues of pollution and shrinking availability of a once shared natural amenity, a major focal point in their campaign was the Lax Lands industrial park in the North End.[13] The Save Our Bay committee presented that the privately-owned harbour fill be reallocating for public use and recreational waterfront access. [14] After over a decade of persistent debate and negotiations, Hamilton’s city council expropriated the Lax Lands: Bayfront Park opened in 1993 and remains a city park to this day.

Public space, recreation, and biodiversity continue to be viewed as assets in both West Harbour and in the Hamilton Bayfront Industrial area (HBIA) to its immediate east, marking a major shift in thought from previous decades. This is evidenced in the redevelopment and planning guidance to continue to develop the HBIA public space network, inclusive of multiple expansions and new connections via the recreational trail network. The urban forest coverage is also to be an increased (per the Urban Forest Plan) to reverse the significant detriment HBIA sees currently – 3% coverage.[15] Lastly, potential locations for public space incorporation following redevelopment have been identified throughout the area.[16] (Fig. 29-30)

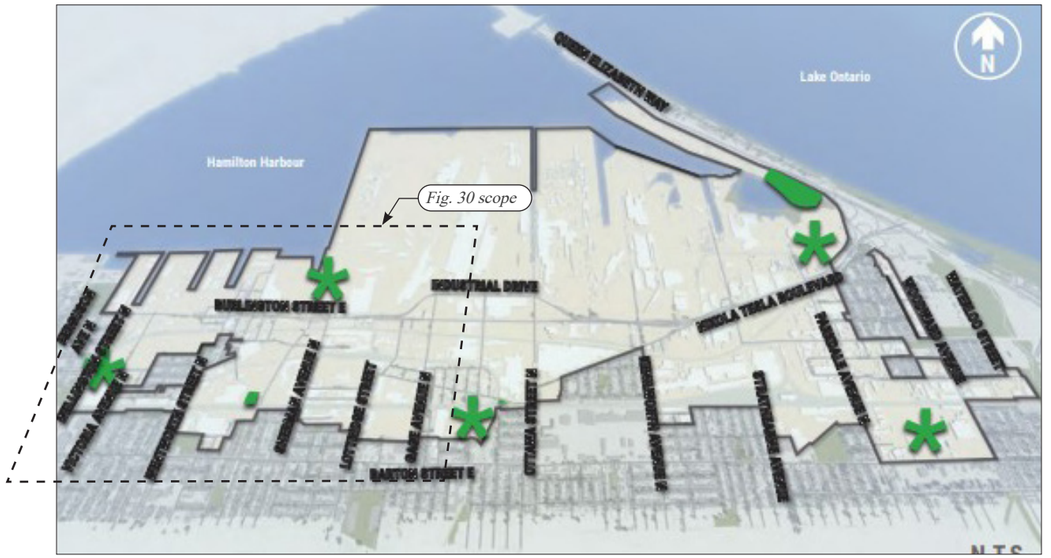
Fig. 29 (top) **Potential public open space improvements. 2022.**

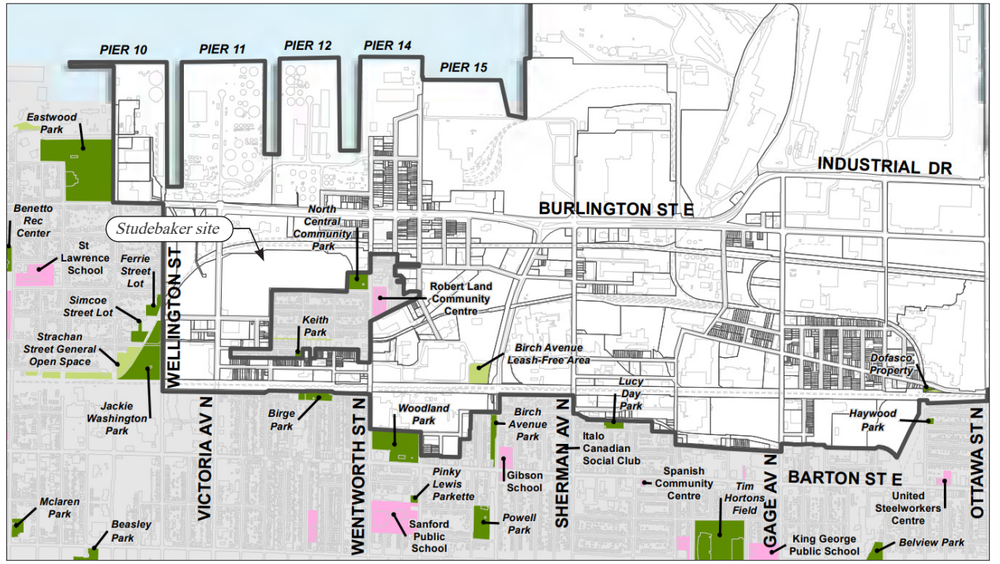
Future public use to be developed in peripheral zones usually related to redevelopment projects and existing neighbourhoods. (Source: HBIA strategy)

Fig. 30 (bottom) **Redevelopment zone between Jackie Washington and North Central parks. 2022.**

The Studebaker site is currently undergoing redevelopment. (Source: HBIA strategy)







The Hamilton Bayfront Industrial Area strategy (2022) addresses public space a gradation of ways. “Quick wins” are streetscaping, public realm improvements in existing buffer zones (related more to the trails), while long-term, the guidelines flag entire new spaces for public use (related more to site-scale redevelopments).[17] The industrial area is generally buffered by these light industrial and/or transitional lands that are already adjacent to residential neighbourhoods and are positioned to become increasingly relevant through new recreational trail network connections (by City). Therefore, this thesis proposes leveraging these near-by post-industrial sites in the Strachan Street area to meet the goals of sport and biodiversity in the medium term via temporary use. The Studebaker property is selected.

The scale of post-industrial sites brings new dimensions to the thesis project in how biodiversity and sport may be integrated, though the temporary nature of the development is certainly a challenge. Temporary use can entail the adaptation of the existing site features (i.e., structures, loose materials) towards the desired program, while new design features are also somewhat “loose” in nature. For example, to increase urban forest coverage, potted trees can be introduced in the interim and provide environmental and aesthetic benefits, but only planted once the site is redeveloped. A space of biodiversity production that focuses on native vegetation (i.e., trees, seeds) can temporarily increase the biodiversity on site, but ultimately enable distribution of the vegetation to other low-coverage neighbourhoods and monoculture public spaces and parks across Hamilton for decades to come. Further, the goal of recreation could be met through temporary sport amenities. Liminal industrial sites offer the spatial resources for large field games such as cricket, football, soccer – wide dimensions, relatively flat ground, lack of existing vegetation. To create a dynamic public space, these typical requirements of the nursery and the field should be challenged: Can sport use affect the appearance, products, and growth of a temporary, experiential nursery? Can a temporary nursery be reconfigured to create new ways to play sport? (Fig. 31-32)





Fig. 31 **Soccer net.**
Recreation and industry in close proximity has long been a part of Hamilton’s urban fabric. By author.



Fig. 32 **Vacant lot.**
Vegetation as large as medium-sized shrubs grow unkempt on a sunny site under development. Unidentified loose parts are dispersed in clusters. By author.

Reclaiming: Conclusion

In reflection, key takeaways from this site analysis that can influence design guidelines are: 1) While the waterfront was and remains to be a critical “landscape of sport,” the reclamation public space involves more than the shoreline alone; therefore, retain multi-modal connections to the waterfront, such as the bike path, and provide additional pathways for movement at various speeds. 2) Transitioning industrial lands that buffer neighbourhoods and heavy industry are a common “type” with optionality for future public use, but are in a state of liminality, sometimes for years; therefore, catalyst this potential now with temporary, adaptive re-use. 3) The urban forest coverage is a challenge in the HBIA; therefore, prioritize biodiversity production that will benefit both the development and maintenance of Strachan Street, but of the temporary site itself and the surrounding HBIA as client. Suggested is a tree nursery or meadows that support production and flexible sport activity that supports public access and education of this production site.

Regrowing: Toward actionable goals for biodiversity

The innovation in industry, manufacturing, and public works during the 18th century in Hamilton relied on the exploitation of labour, people, and nature alike. Unlivable wages, poor working conditions, and 72-hour work weeks plagued the working class[18] and triggered the first workers union activity by 1833.[19] The natural environment was burdened with habitat destruction and pollution, but remained a voiceless entity that was impacted by the ever-changing relationship the people of Hamilton – particularly those with agency – had with it. Though nature was often perceived as a resource to aid in economic expansion, beautification, or recreation, citizen-led environmental activism grew over time.[20] These transitions were sequentially reflected in the governance of both the municipal government and local non-for-profit organizations. In 2023, a consolidated focus on biodiversity formerly emerged. This section looks at the formation and key actions of select environment-driven groups (particularly, ones that continue to influence the landscape of environmental action today) in Hamilton as tangible realizations of complex social, cultural, and environmental changes. How can the site design engage with these efforts?

Nature, conserved (1900s-1950s)

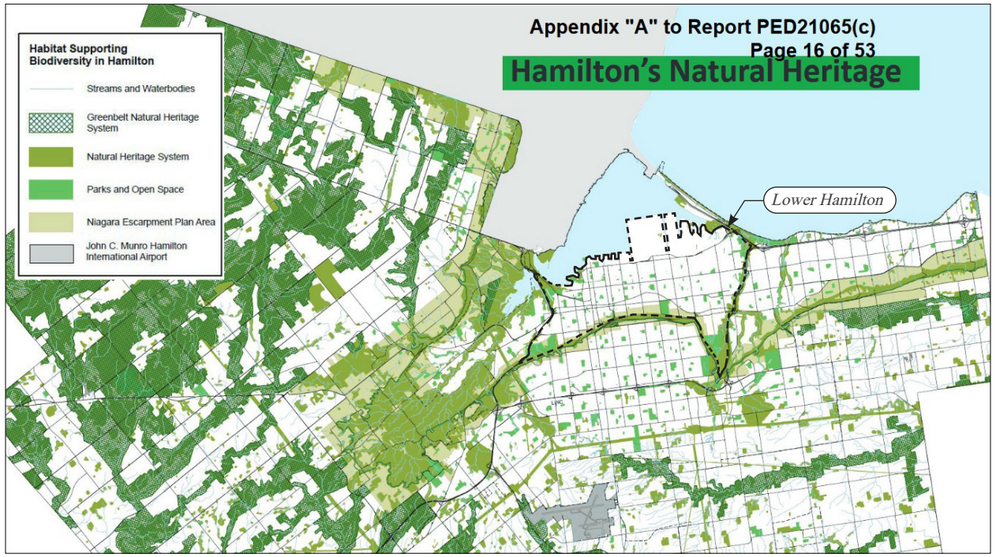
The research presented thus far has aimed to avoid romanticising the Canadian industrial past;[21] the same must be done with the conservation movements that followed. Like industrial practices, key aspects of conservation movements serve as an extended practice of land control by governmental (colonizing) bodies. The early year of nature conservation included the creation of the National Parks Act and the Commission of Conservation,[22] commencing the designation of select land as national parks. Author of "Landscape Architecture in Canada," Ron Williams discusses the intentions of the movement as being to preserve nature's beauty and slow intensive material extraction processes.[23] Journalist Robert Jago reflects upon this designation of "protected" land as "green colonialism" outright.[24] The designation of this new parkland equated to the dispossession and impoverishment of Indigenous peoples, in addition to the upheaval of traditional rights and practices, such as hunting and fishing, that did not align with enforced perspective on what protectionism means.[25] While this thesis focuses primarily on urban Hamilton, and biodiversity engagement in the context of urban settings, it is stationed within a framework of conservation areas, nature sanctuaries, on land governed by the Dish with One Spoon Wampum Belt Covenant.

Fig. 33 (top) **Habitat Supporting Biodiversity in Hamilton.**

Parks and open spaces are patches, contrasting their natural system counterparts. Lower Hamilton annotated (dashed line). (Source: City of Hamilton.)

Fig. 34 (bottom) **Portion of Cootes to Escarpment EcoPark System Vision Map.**

Stewarded by a nine-agency collective; the system boundaries interlock urban Hamilton at the bottom left of the image. Bayfront Park annotated (dashed line).





In the early 1900s, nature-related organizations began to form, without specific governance over land. The biologically rich Cootes Paradise at the west edge of the city intrigued locals' interest and the Hamilton Bird Protection Society (HBPS) – today, the Hamilton Naturalists' Club – was created in 1919.[26] HBPS was a not-for-profit organization made up of citizens, students, and educators who diligently studied and documented birds for scientific objective, and personal enjoyment.

A couple of decades later in 1941, however, the Province of Ontario initiated that the beginnings of a beautification project at Burlington Heights be transformed into the Royal Botanical Garden. Key focuses of "conservation, education, horticulture, and science,"[27] the not-for-profit display garden was developed into a headquarters of national significance. By 1946, the Hamilton municipality became more involved in conservation practices via the federal Conservation Authorities Act in 1946. The Hamilton Conservation Authority was formed to manage and protect the local watersheds and foster "connection between people and nature."[28]

Nature, polluted (1960s-1990s)

Pollution rose to the level of international, public alarm in the 1960s.[29] At the national level, architectural developments within the National Park system were reeled back to focus on access to nature, not extravagant resorts. Changes were also made in the federal government structure: the Ministry of the Environment was created in 1971, absorbing the few existing related branches,[30] and the Great Lakes Water Quality Agreement was signed in 1972.[31]

In Hamilton, pollution was visibility present before the turn of the 20th century, but now citizens began to take action to raise public awareness, led community clean-up events, and meet with municipal government. Water quality data collected under the Agreement in 1987 confirmed Hamilton Harbour to be an Area of Concern. The Hamilton Harbour Remedial Action Plan was created alongside the Bay Area Restoration Council, which consists of a multi-disciplinary board of professionals (unelected).







Nature, protected (1990s – present)

Thus far, these groups in Hamilton focused largely on peripheries including the harbour and Cootes Paradise. While conservation and remedial actions continue to evolve, a third category also emerges. The 1960s made way for more citizen-led initiatives that pivot the scope of environmental awareness to have relevance in everyday life in urban environments. Providing Hamiltonians with knowledge and skills "protect and enhance the environment"[32] has been a key objective of Environment Hamilton (EH) since 2001. Launched via seed money[33] from a private citizens' legal case against the City for toxic dumping at Red Hill Creek, EH undercuts their own importance in providing citizen-science training[34] (data collection, observation skills) and organizing politically oriented activist campaigns to help citizens advocate for change.[35]

In 2023, the first draft of a Biodiversity Action Plan (BAP) for Hamilton was released for public consultation, followed by the final BAP in June of 2024. The BAP is a strategy that involves the partnership of multiple groups and connects resources to protect, explore, and restore biodiversity,[36] highlighting biodiversity as a clear subset of "environmentalism" that with urgent cause for action in Hamilton. Within the framework of seven key priorities, the strategy outlines actionable steps that each organization can take, such as social programming, habitat creation and preservation, policy creation and renewal,

Fig. 35 (left) **Stackwatch.**

Steam is released from an industrial factory. The first season of the Environment Hamilton podcast guides listeners in how to stack watch from Pier 8. By author.

Fig. 36 (below) **"STACHWATCH" Fridge Magnet.**

An image published by Environment Hamilton to guide Hamiltonians on appropriate steps to take should they witness a problem emission. (Source: Environment Hamilton).

and further research. Overall, the strategy reiterates accountability within the urban realm, representing a critical shift in these priorities from historical approaches. The prescribed actions are largely inclusive of urban Hamilton and the impacts to biodiversity within.

The BAP also begins to include Indigenous perspectives: staff from the Six Nations of the Grand River discussed improvements to the 2023 draft with the committee. Though details are limited, comments include "to improve education about the presence and impact of invasive species in all natural contexts," and to "signal commitment to going beyond legislative requirements for protection of species and habitats."[37] In reading the BAP strategy, it is unclear how and if further Indigenous knowledge will be consulted during its implementation.

A nature neighbourhood?

Contrary to its industrial-driven past, the Official Secondary Plan details a vision to establish West Harbour Area as a destination for community and recreation (a "people place"),[38] a vision based on a robust open space network. Within the Secondary Plan, this described: "A.6.3.3.2.13. It is the City's objective to establish and maintain, to the extent possible, a comprehensive network of public open spaces in West Harbour linked to open spaces in adjacent neighbourhoods and Downtown." The network approach mentions Strachan Street specifically, in the Official Secondary Plan, the city aims to: "…enhanced green space and trail connections between Bayfront Park and Ferguson Avenue through the lands on the south side of Strachan Street." Indeed, the proposal for Perimeter faced City Council's final rejection in 2003.[39]

This new vision of ubiquitous public green space and trail connections to other parts of Hamilton is reflected in contemporary redevelopment projects in West Harbour. The plan for Pier 7+8, a multi-building waterfront community, promotes year-round activities and continuous public space.[40] The Barton-Tiffany area planning has a vision to "evolve… into a mixed use, pedestrian oriented area,"[41] with features including centrepiece park and green linkages connect the multi-block, mixed use development to the rest of the city. Finally, the Recreation Trails Master Plan illustrates the proposal of trails that extend into areas currently lacking in multi-modal access, such as the industrial park.[42]

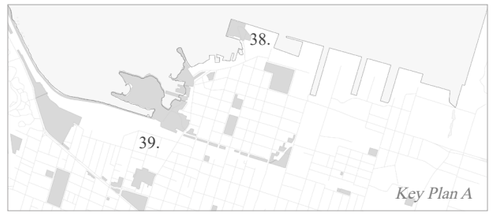




Fig. 37 (left) **Pier 8 Open Space Network Proposal.**

The new development proposal incorporates open space parks and greenways that connection the existing waterfront trail. Strachan Street is located eight blocks directly south. (Source: Pier 7+8 Urban Design Study.)

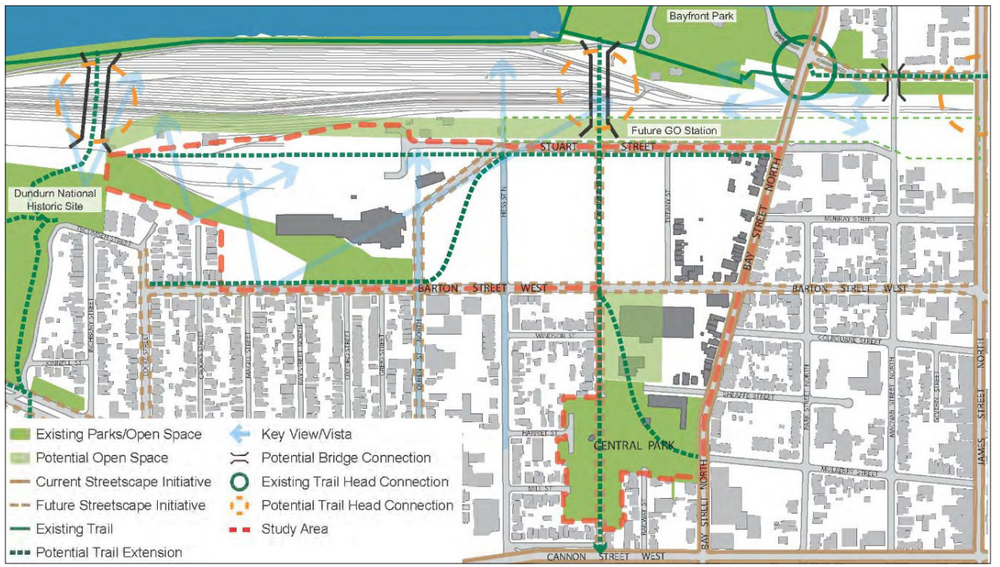


Fig. 38 (below) **Barton-Tiffany design study.**

The multi-block residential/ commercial proposal considers potential trails within and beyond the established study area. Strachan Street is located to the right of Bayfront Park, in upper right corner of the map. (Source: City of Hamilton et al.)

The design potential of the “green linkage” described is underexplored within the West Harbour context. The definition and degree of “enhancement” planned for Strachan Street specifically continues to evolve on the site and in planning. In the early research of this thesis, this was evidenced by landscaping initiatives, such as trail improvements, and identification as an underused site, and has since expanded to include further mention in planning documents as possessing “opportunity” to engage biodiversity objective.[43]

Therefore, this thesis engages with selected BAP steps that can be implemented through spatial means, contributing to the goal of biodiversity engagement and assisting in defining design guidelines for the green linkage type. Key mid and long-term actions that will be engaged with are:

“4.16 Develop and maintain a focal habitat creation site on public lands in each Ward by planting native trees, shrubs and wildflowers to demonstrate the potential to increase biodiversity in the urban area.”

“4.17 Install trial pollinator gardens in areas of the City to promote increased pollination with native species of plants and pollinating insects.

“4.18 Create naturalized areas in selected parks by planting native perennials and low growing shrubs.” [44]

Key Priority 4: Education and Stewardship

Goal	Action	Timeframe	Leading Partner(s)	Supporting Partner(s)
Restore	**4.16** Develop and maintain a focal habitat creation site on public lands in each Ward by planting native trees, shrubs and wildflowers to demonstrate the potential to increase biodiversity in the urban area.	Long-term (3–5 years)	• Hamilton Naturalists' Club	• Green Venture • Niagara Peninsula Conservation Authority • Conservation Halton
	4.17 Install trial pollinator gardens in areas of the City to promote increased pollination with native species of plants and pollinating insects.	Mid-term (1–3 years)	• City of Hamilton (Public Works – Environmental Services, Forestry & Horticulture and Parks & Cemeteries)	• Green Venture • Niagara Peninsula Conservation Authority
	4.18 Create naturalized areas in selected parks by planting native perennials and low growing shrubs.	Long-term (3–5 years)	• City of Hamilton (Public Works – Environmental Services: Parks & Cemeteries, Facilities, Forestry & Horticulture, Landscape Architectural Services)	• Niagara Peninsula Conservation Authority
	4.19 Host community tree plantings through volunteer groups to plant native species of container stock trees to enhance biodiversity. (Coordinate strategic plantings across the city, and map, monitor and commit to stewardship of all past and future sites. Develop stewardship	Immediate (0–1 year)	• City of Hamilton (Public Works – Environmental Services: Parks & Cemeteries, Forestry & Horticulture) • Hamilton Naturalists' Club	• Green Venture • Niagara Peninsula Conservation Authority

Fig. 39 **Key Priority 4.**
One of seven key priorities, this thesis aims to engage with the second Guiding Action. (Source: Hamilton Biodiversity Action Plan.)

Regrowing: Conclusion

Therefore, key takeaways that can influence design guidelines are: 1) Per the existing conditions and amenities in West Harbour and the BAP, engage the green linkage type or other liminal, “leftover” spaces to provide everyday access to rich, functional habitat nature; 2) Per the BAP, design a tiered forest garden structure that incorporates aspects of native trees, shrubs, wildflowers, and pollinators; and 3) Engage with the citizen education that is ongoing within select non-profits, such as Environment Hamilton, and propose additional partnerships for program-specific education related to native and invasive species in urban Hamilton.

Replaying: Sport close to home

Architecture can act as a facilitator or inhibitor of play. Perez de Arce uses a binary method to categorizing architecture as configuring play to the field (i.e., sports) or encouraging the search for new possibilities (i.e., resort).[45] Within this section, the status of urban outdoor sport in Hamilton is explored. Play can constitute more than just "traditional'" sport and engages a transition to provide more low-cost options, diverse amenities, and outdoor parks in response to several factors. How can questioning the aforementioned binary present solutions to these concerns?

Questioning variety

Trends in sport continuously evolve, but facilities cannot always keep up with these shifts.[46] In Hamilton, pickleball emerged as a popular sport in recent years, maxing one club's waitlist into the hundreds, and pressuring the use of any resources that could be salvaged or shared.[47] Meanwhile, the creation of a new cricket pitch at Jennie Florence Parker Park,[48] an asset that is hoped to bring in international-level competitions, raises questions about access to similar public facilitates across the city across multiple levels of the sport. On the other hand, decline in popularity and use of golf has led to reassessment of the city's municipal golf course, Chedoke Golf Club, in recent years. A potential adaption includes additional provision of multi-purpose sport use that retains the informal use and naturalized qualities of the area.[49] These examples begin to outline how conventional sport types need to be reassessed rather than assumed in Hamilton; they suggest that the design of multi-layer sport spaces may help increase usability of a site for various user groups.

Questioning services

In June 2022, the Hamilton City Council approved the restriction of growth within its urban boundaries until 2051.[50] This "No Urban Boundary Expansion" option means that Hamilton′s projected population intensification − 40% from 2021 to 2051 − will occur within the existing urban space, with some areas densifying more heavily than others but an average intensification target of 60%.[51] The most recent Growth Related Integrated (GRIDS) conducted for the city identifies Lower Hamilton, consisting of Wards 2, 3, 4 and part of Ward 1, as the planning area with the most predicted growth.[52]



Fig. 40 **Multiuse outdoor sport court.**

Designed by ASPECT Studios, a sports area within a linear park layers several courts and games into a singular footprint. Project located in Victoria, Australia. (Source: https://www.aspect-studios.com/au/projects/caulfield-to-dandenong-railway-linear-park)

This is an important consideration for the future of sport in Hamilton because it will further stretch already thinning resources. In the most recent Recreation Master Plan, the city made note of budgetary strain on the recreation department, citing $89.8 million in deferred maintenance since 2008,[53] a figure that grew exponentially. This is due to aging infrastructure against the limits of a stable operating budget.[54]

Recreation service delivery is based on nine planning areas[55] that are divided by geographical and infrastructural features (i.e. highways, the escarpment) that limit accessibility across boundary lines.[56] Each planning area has unique adjacencies to landscapes of sport, and different social dimensions. The relation of social status to urban geography in Hamilton became evident

GRIDS 2 Population Forecasts by Recreation Planning Area – 'No Urban Boundary' Expansion Forecast

RPA	2021	2031	2041	2051	Change 2021 - 2051	
Ancaster	38,613	41,448	43,725	45,444	6,831	18%
Beverly	18,629	18,493	18,311	18,084	-545	-3%
Flamborough	30,578	36,767	41,435	44,580	14,002	46%
Glanbrook	20,711	24,653	27,209	28,379	7,668	37%
Hamilton Mountain	161,068	176,419	188,635	197,717	36,649	23%
Lower Hamilton	155,130	182,555	219,121	264,828	109,698	71%
Lower Stoney Creek	81,819	97,271	111,067	123,205	41,386	52%
Upper Stoney Creek	32,361	39,275	44,036	46,642	14,281	44%
West Hamilton/Dundas	45,054	46,729	48,961	51,752	6,698	15%
Total	583,963	663,610	742,499	820,631	236,408	40%

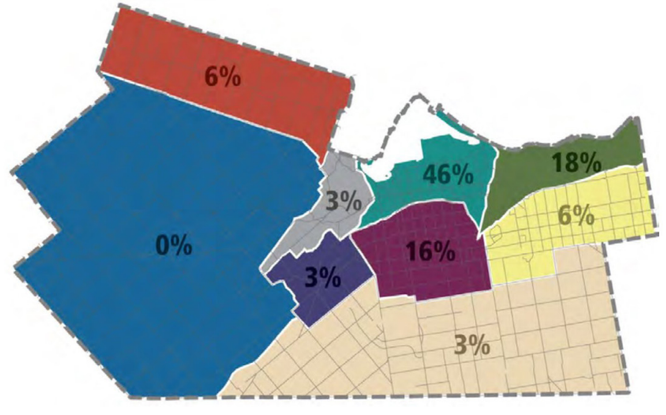


Fig. 41 (top) **"GRIDS 2 - 'No Urban Boundary Expansion Forecast - Population Forecasts by Recreation Planning Area."**

Lower Hamilton is predicted to by 71% from 2021-2051. Referenced by the Master Recreation Plan. (Source: City of Hamilton (GRIDS 2) 2022).

Fig. 42 (bottom) **"GRIDS 2 - 'No Urban Boundary Expansion Forecast - Allocation of City-wide Population Growth to 2051."**

Accompanying map indicates that 46% of the total population growth will occur in Lower Hamilton. Referenced by the Master Recreation Plan. (Source: City of Hamilton (GRIDS 2), 2022).

during industrialization when the distribution of "lower class" densified in the factory areas of Lower Hamilton and the "upper class" on Hamilton Mountain.[57] These dynamics are perpetuated in contemporary Hamilton through multiple factors.

For example, disparity in income and home ownership are stressed in Ward 2. Low-income status is held by 24% of the population, compared to a 10.7% average for the rest of Hamilton. Most residents rent their dwelling space (76%), many of which are apartment buildings,[58] indicating most people do not have a private yard, and that public spaces are their primary sites for sport. Additionally, higher percentage of Ward 2 residents rely on transit, so the safety and experience of the open space network is a priority. As the city

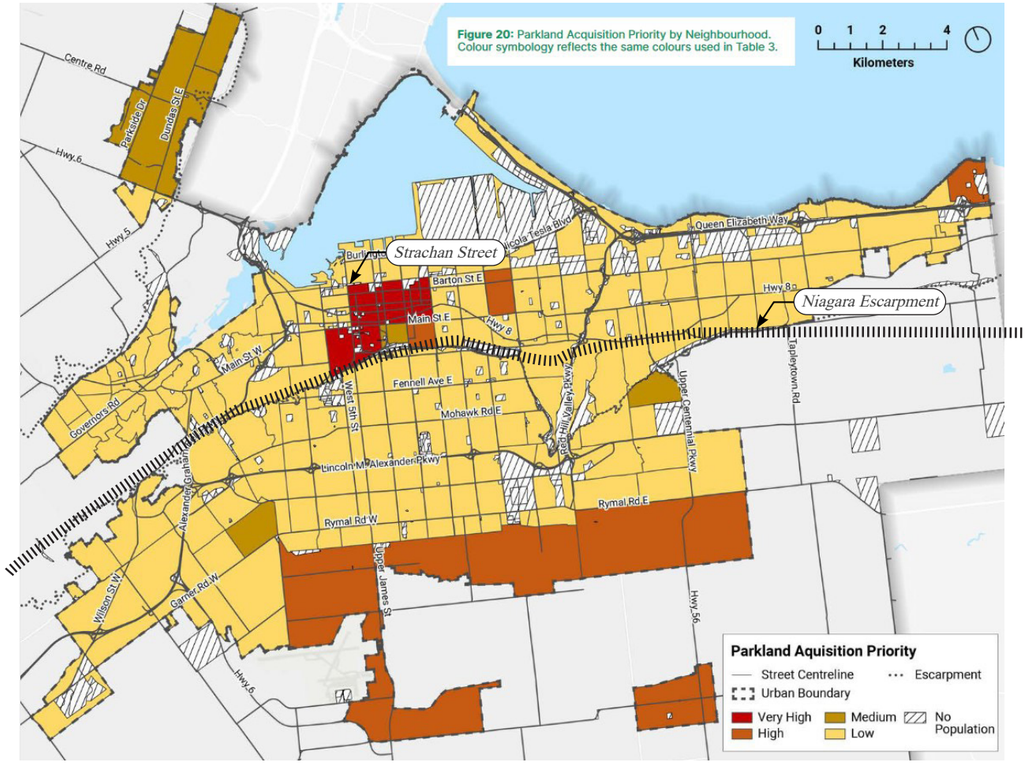


Fig. 43 **Parkland acquisition Priority. 2023.**

Relative to Strachan Street (circle) and the escarpment (dashed line).Central and Beasley, on the south side of the railway corridor, is among the "very high" listings. (Source: City of Hamilton.)

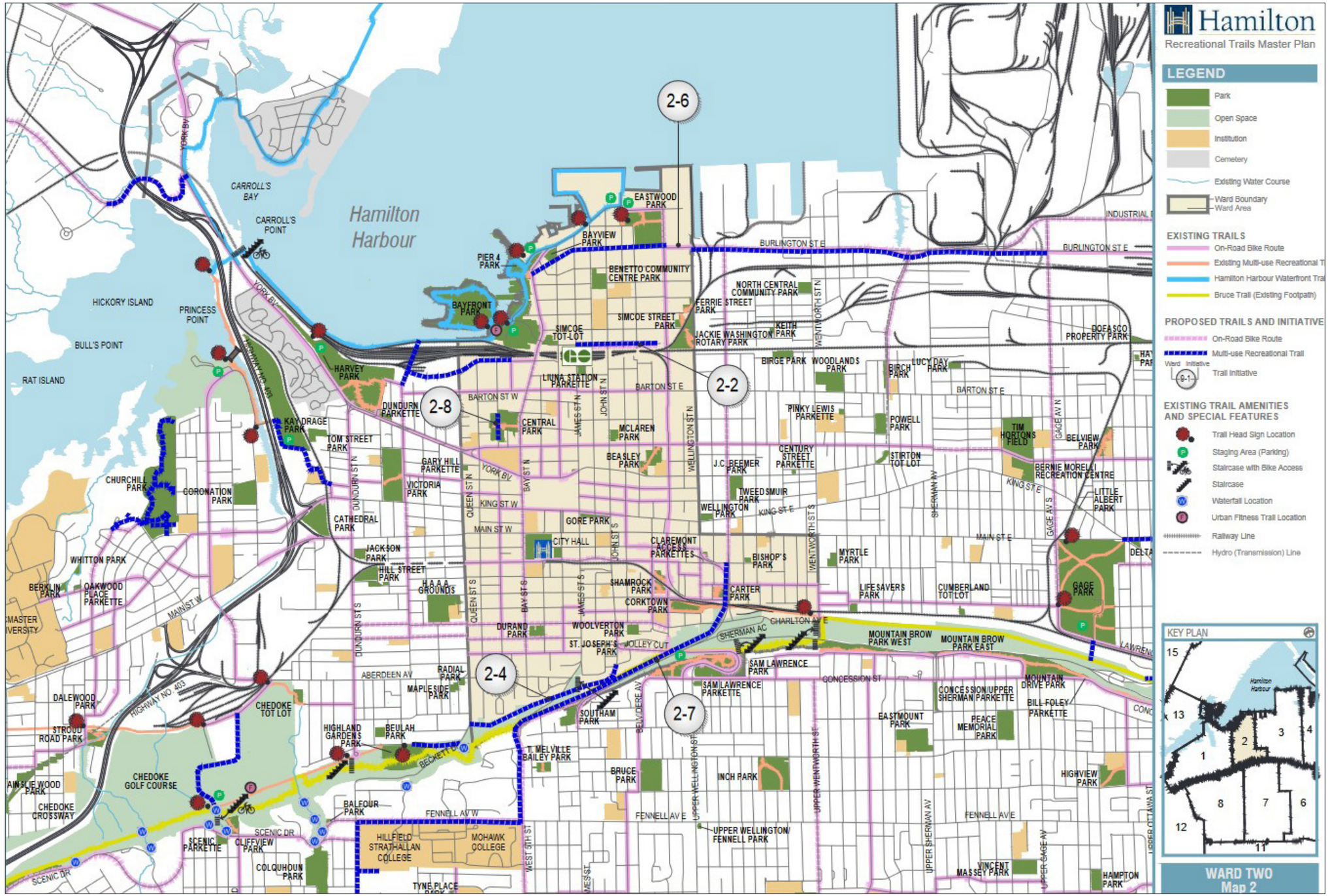


Fig. 44 **Recreation Trails Master Plan: Ward 2. 2022.**

Proposed multi-use recreational trails indicate planned connectivity between major recreational sites, and the particular spotlight on Strachan Street as a key connective route. (Source: City of Hamilton).

grows, it is likely that the disparities will increase, stressing the importance of providing truly public places for sport that support residents' needs as clients.

Questioning normative

In a larger assessment of the city's park stock, Ward 2 – specifically Beasley – had a low % of parks to people and additional factors (high density (existing or planned), transit-oriented community, low income, high youth ratio) that make it a very high priority area for parkland acquisition.[59] As the city seeks the procurement of more parkland, the role of linear – often liminal – sites can be brought into question to fill this urgent gap. The linear site offers a unique characteristic in being an expansive site that can connect to other parts of the sport network, other than working in isolation.

Strachan Street, just north of Beasley, has been looked at in this connectivity context. Its immediate adjacencies are between the Bayfront Park and Jackie Washington Park. The park has gained investments as a multi-model network over past years, undergoing small landscaping initiatives to beautify the space and provide better connection to the Beasley and Central neighbourhoods on the south side of the railway tracks. New infrastructure, including street lighting, bike rental stations and a paved bike path, align with plans for future investments in the open space network across West Harbour,[60] including the purchase of the last private property.[61] Unfortunately, linear park theory suggest Strachan Street – with low-activity immediate context – are not activated externally, so internal program becomes important for increasing perceived safety, interest, and function.

Nearby sites begin to create further dimension in what the park could mean culturally and recreationally. They include Sunset Cultural Gardens, Land Nature's Inlet, WA&HC and Stuart Street Community Garden, and site of nearby Neighbour-to-Neighbour (N2N) donation community gardens. These examples are extrapolated forms of recreation that are intrinsically related to the site of sport. Further, N2N and the North End Health Centre are focused on food security issues. The common theme between these spaces is care for land and people; the possibility of expanding these aims is viable. Are these pockets of program effective landscapes of sport? Could they be expanded to improve their existing functions and promote dimensions of play with the Strachan Street site?

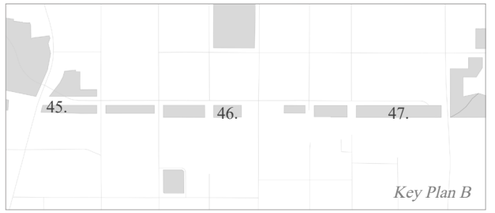




Fig. 45 **Multiuse trail in winter.**

Between Bay Street North and MacNab Street North. February 10, 2023. By author.



Fig. 46 **Multiuse trail in fall.**

Between James Street North and John Street North. October 16, 2023. By author.



Fig. 47 **Multiuse trail in late spring.**

Between Ferguson Avenue North and Mary Street. June 15, 2024. By author.

Replaying: Conclusion

Unpacking what “the need for low-cost, diverse parks” means for Ward 2, we find three key takeaways that can influence design guidelines: 1) Based on the preliminary demographics, it can be deduced that local parks form the primary play spaces for many residents in Ward 2, who do not own private yards, or private vehicles; therefore, design for all ages – including adults – is a primary consideration. 2) The approaches to adapting sport spaces in Hamilton to meet trends suggest that multi-use spaces, particularly those that incorporate programmed and non-programmed play formats, invites visitors to passive, active, etc. forms of site participation. 3) Finally, incorporating other forms of recreation, such as productive gardens, expands existing community initiatives, enhances cultural connections, and provides additional opportunities for visitors to engage with the site.

Overall, this reveals that the “field” type alone cannot satisfy how Hamiltonians participate in play, though a full ‘meadow’ approach negates the intense need for formal play spaces that offer primary contact for local residents. Parks must do more. Therefore, the redesign of the park must meet both standards, inviting traditional – yet flexible – play forms, but also engage with the cultural dimensions of what contemporary outdoor recreation means in this area.

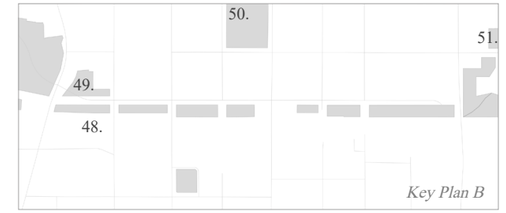










Fig. 48 (top left) **Stuart Street Community Garden.**

Located behind the Workers’ Arts & Heritage Centre, the garden is challenging to photograph through the locked gate. By author.

Fig. 49 (bottom left) **The Sunset Cultural Garden at Simcoe Tot Lot.**

On the corner of Strachan Street West and Bay Street North, many blooms in season during a June visit. By author.

Fig. 50 (top right) **Signage at local community gardens and greenhouse.**

Operated by the North Hamilton Community Health Centre, free programs are regularly hosted on site. By author.

Fig. 51 (bottom right) **Pollinators at Land Nature’s Inlet Sanctuary.**

Insects and birds are heard before they are seen; a distinct embrace of nature at the edge of the neighbourhood. By author.

Endnotes

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Principles of Urban Forests and Sport Landscapes

This section will address how the needs identified in Part 2 can be designed for across the existing conditions of the Strachan Street site using the adaptive format of design guidelines. This thesis divides the project site into three zones of approach to holistically fill site-specific needs of a “green linkage” that hosts adult-inclusive, multi-use sport and recreation spaces and is positioned for longevity in terms of production and citizen engagement.

Each strategy will explore a different dimension of urban forest gardens that adapts one of the three existing landscape conditions encountered at the Strachan Street site into a habitat (woodland, meadow, vacant). Each strategy will also explore a different aspect of sport that responses to the existing spatial conditions (linear, node, open space). The combinations are paired based on existing relationships, producing the linear-woodland, the node-meadow, and the open-meadow. The series of case studies offer design guidance for each monotype, preluding the exploration for how these boundaries can collide in Part 4.

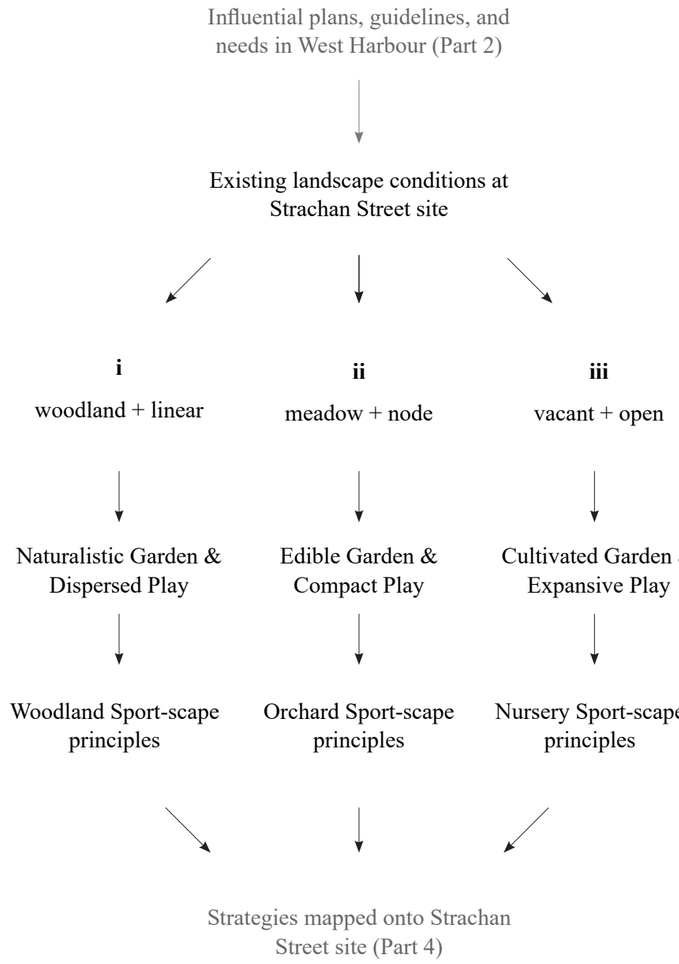


Fig. 52 **Principles derived from precedents.**
Sketch of case study investigation process. By author.

The Naturalistic Garden & Dispersed Play

The Naturalistic Garden

A “naturalistic garden” is an area of land designed to reference a native landscape; for example, a forest (closed-canopy), a woodland (open-canopy), a prairie, a marsh. Authors Thomas Rainer and Claudia West describe how “designed plant communities” can achieve this. Firstly, the design relies on simplifying, or editing, the dynamic aesthetic observed in a given habitat, down to a few main ideas that are easy to read: “It is only when an archetypal landscape is distilled to its most basic forms that it recalls a different reference community.”[1]

Its layers are aesthetic and functional, may consist of structure (focal-points), seasonal (visual interest), ground cover (ecological functions), and filler (for any gaps, short-lived).[2] This “wilder” approach to planting – one that is structured to mimic found plant communities – can be more aesthetically or ecologically-driven. For example, some gardens are designed to be perceived as natural, though gaps between plants are typical and change over seasons is minimal, while other are based on the dynamics of “seeding, dying, spreading, moving.”[3]

New York Botanical Garden: Native Plant Garden

Designer: Shelia Brady, Oehme van Sweden Associates

Location: Bronx, New York, USA (USDA Zone 7b)

Opening Date: 2013

Size: 14,000m^2

This garden balances ecology and design through the adaptation of an existing garden into unique habitats: woodland, prairie, marsh.[4] For example, the woodland habitat includes “oak trees that have been growing on the site since the 19th century”[5] and additional “shrubs, ferns, grasses, wildflowers.” Seasonal interest occurs throughout the habitat zones, the woodland area flowers in the spring: white trilliums, bloodroot, lady slipper orchids, Dutchman’s breeches, Virginia bluebells.[6] The project is flexible in its management: plants are not tended to individually, nor do they all get the same treatment.[7]

The affordances for engagement with the landscape are rather limited. Guided observation is led through education practices, though more

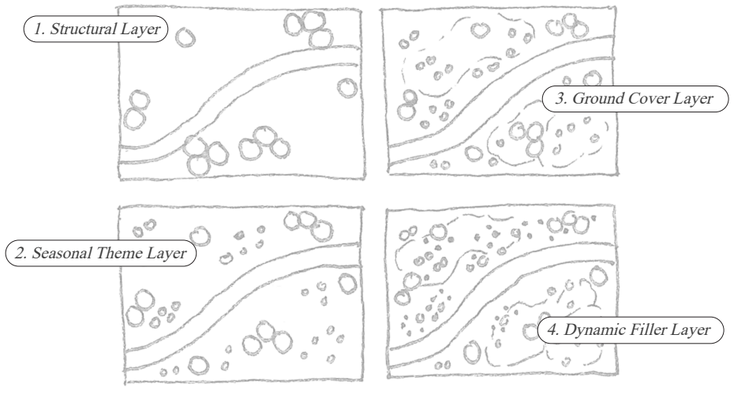


Fig. 53 (left) **"Traditional Planting vs. Designed Plant Community Plan."**
Sketch adapted from "Planting in a Post-Wild World."

Fig. 54 (bottom) **The New York Native Plant Garden woodland section.**
(Source: Oehme, van Sweden)



unconventional ways of engaging the senses or the body with the garden through play could offer a new dimension of learning.

Application to Strachan Street and Design Guidelines

The garden succeeds in showcasing a unique sense of place: the process of editing zones into readable habitat and consideration of seasonal interest helps to make the complexities more readable and understandable. The example of an approach that is between “ecological” and “naturalistic” is useful because it can be edited to accommodate other site aspects such as a sports program.

Dispersed Play

Rail corridors are unique places of activity, often already serving a major cultural connector through rail transit and can be biodiversity connectors with naturalized rights-of-way. Adjacent linear parks can make once circumstantial liminal space clearly public by introducing new forms of multi-modal transit (i.e., cycling, walking), landscaping (i.e., gardens, parks), and program (i.e., sport courts) enable activity to be a third dimension of use.

The context of linear parks greatly influences them, posing a challenge in low-activity contexts. (Fig. 55) Strachan Street open space has a major and a minor park on either end as anchor points, but lack of visual experience or activity on either sides. This makes the layering of program a useful tool for this site to make it a destination in itself. (Fig. 56) Methods of incorporation of sport and non-sport program are explored through the study, though the case study is challenged where dimensions of sport and biodiversity could be further entangled to create new possibilities. Patterning, integration with context, and hierarchies are all strategies explored and weighed against the Strachan Street context.

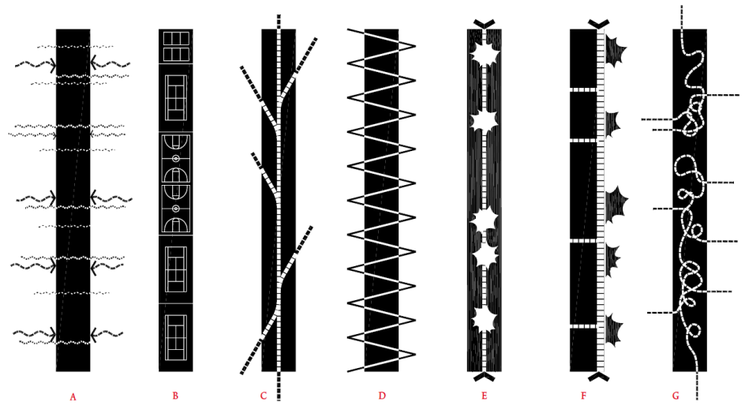


Figure 12 Thin park typologies, from left: A filter; B programme sink; C conduit; D suture; E stage; F pedestal; G thicket.



Fig. 55 (left) **"Thin park typologies."**

(Source: Karl Kullmann).

Fig. 56 (bottom) **Red Path at Activity Landscape.**

The layers of path, play structures, manicured, and naturalized landscape makes this park both a linear connector and a destination for play. (Source: Kirstine Autzen).

Activity Landscape Kastrup

Designer: MASU Planning
Location: Vægterparken, Kastrup, Denmark
Opening Date: 2015
Size: 15,000m^2

This project demonstrates how sport for all ages can be imposed and integrated into existing, human-made landscapes in a way that reclaims otherwise vacant land for public use. The project is situated in a thin lot, approximately 45m x 365m, where deposits of "excess soils and building materials"[8] forms rolling hills of topography between a metro line and a residential neighbourhood. The design retains three equidistant sport courts at the centre and at either ends of the park and creates a further rhythm through two additional activity spaces between the existing ones. Between the five activity areas, well-positioned artifacts or "landmarks" draw the eye forward through the linear space and present opportunities for engaging with the context of the site (i.e., train spotting).

The path creates movement and evokes curiosity by leveraging the topography's characteristic ability to obscure vision and create a sense of mystery. Spatial positioning of individual features suggests unusual relationships to sport in landscape, as opposed to uniqueness coming from other, non-sport programs on site or nearby. Traditional playground elements – swings, rope climbing, slides – are situated on topographic features and are designed with larger dimensions to allow both children and adults to play. The continuous running track has both challenging climbs and soft slopes, weaving through meadow and woodland areas.

Application to Strachan Street and Design Guidelines

A project strength is the thematic continuity of a "playscape" applied across the site via the points of interest – connected by a path – assist in placemaking across the site. If applied to Strachan Street, this strategy can help with create a high degree of cross-sectional permeability, as the structures would be visible from the north and south axes as well.



Fig. 57 (opposite) **Activity Landscape Site Plan.**

Activity areas are located at each intersection with the adjacent subdivision, the most prescriptive spaces anchor either end. (Source: MASU Planning).

Fig. 58 (top opposite) **Swings at Activity Landscape.**

Oversized, 'all-ages' play structures guide visitors through the park, using ridges and hills to leverage their function. (Source: Kirstine Autzen.

Fig. 59 (bottom opposite) **Slides at Activity Landscape.**

Play structures are positoned to emphasis different aspects of openness, enclosure, etc. (Source: Kirstine Autzen.)

The narratives of curiosity and movement are well expressed though seating areas and pathway that change view levels and guide the visitor through different habitat types. In contrast, the high-activity sport areas are surrounded by a maintained field in lieu of a fence. To allow habitat areas to be in closer proximity to the sports areas, fencing or alternative enclosure measures could be explored as methods of both functionality and garden architecture.

Finally, the program location responds directly to the surround context, suggesting that at the Strachan Street open space, additional programming could be invested in Jackie Washington. Activity nodes can be positioned within the park boundaries, like Activity Landscape Kastrup, but should also consider the larger recreation network, perhaps through expansion to the south side of the CN railway corridor and into Beasley and Central.





The Edible Garden & Compact Play

The Edible Garden

The goal of the “food forest” is to “mimic the self-regulating system found in nature”[9] but uses edible, perennial polycultures.[10] This means that a variety of species are planted in “guilds,” allowing the garden to become sufficient in self-maintenance as nature preforms processes such as fertilizing, pest control, and cyclical renewals. Design elements include vegetation layers (typically seven), soil horizons, vegetation density (coverage, root density), patterning, and diversity, together contributing to the “visible structures” of forest architecture.[11]

Knowledge of less-visible plant biology and social structures is also useful for comprehensive design development: this is reflected in Beacon Food Forest, which had a Landscape Architect and Permaculture Designer for initial planning.[12] From there, classical methods of trail-and-error and adaption seem to be just as important in the learning experience. The hands-on approach of the gardeners plays a big role in the initial set-up and maintenance, especially in larger-scale community projects.

Further, the edible food forest is related to the practice of urban agriculture, a well-studied facet of landscape architecture. Social, economic, environmental, and health benefits come from this practice, including increasing affordable access to nutritious, safe, and unprocessed foods in lieu of national or global shipments.

Beacon Food Forest

Designer: Glenn Herlihy & Margrett Harrison, Harrison Design Landscape Architecture; Jenny Pell, Permaculture Now!
Location: Seattle, Washington, USA
Opening Date (Phase One): 2013

The Beacon Food Forest is situated on public land along the western edge of Jefferson Park in Seattle. The project uses a series of seven-layer guilds that vary in management difficulty. Some only require watering and weed maintenance, while others need ongoing attention and care takers with a strong proficiency in plants, soil, and guild conditions.[13] The garden is primarily a community resource: open

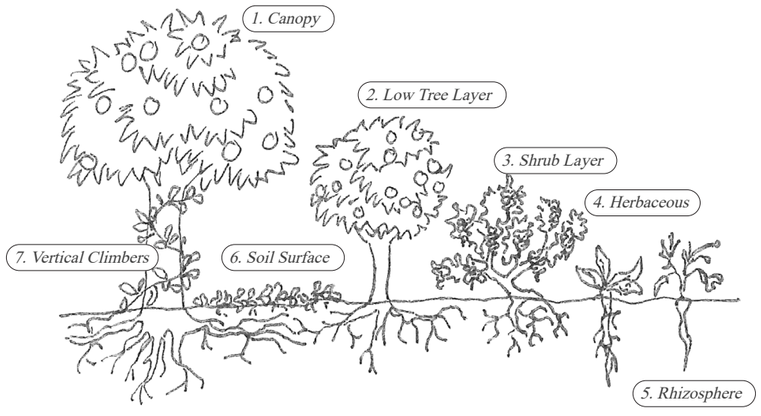


Fig. 60 **The Seven Forest Garden Layers.**

Adapted sketch. (Source: https://www.crcresearch.org/crc-blog/seven-layers-food-forest).

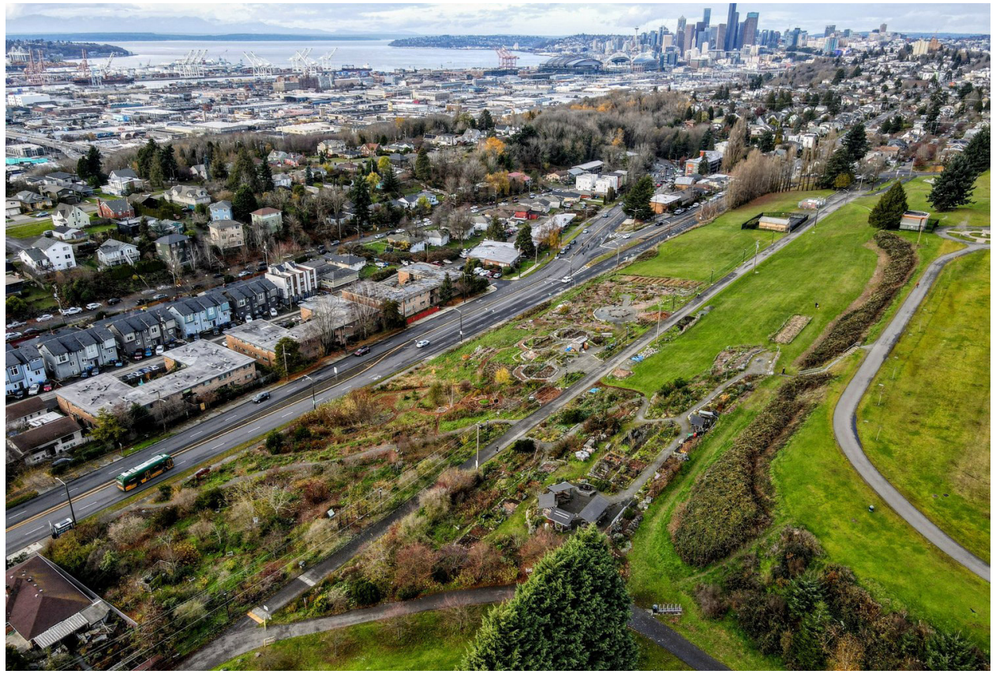


Fig. 61 **Beacon Food Forest Aerial.**

(Source: https://www.beaconfoodforest.org/).

24/7/365, anyone can participate and enjoy free food from the forest, though a more traditional community garden model, where individuals are responsible for their own plot of land, is also embedded into the site through Seattle's P-Patch program.[14] It includes 27 plots – and a 1-2 year wait time – making the free access to the main garden a striking feature.[15]

Overall, the project expresses the land as closely related to the community. It is both giving to and reliant on the gardeners, and has been shaped by the community to better it over time. The initial design featured a central community playfield and a childrens' play area. So far, Phase 1 (opened 2013) and Phase 2 (commenced 2018) do not seem to prioritize expansive play areas (access to Jefferson Park's fields, hiking, and community centre are within close proximity to the site), but rather cultural developments. For example, since its opening in 2013, BIPOC gardens have been added. Events such as "Work Parties" or "May Bloom" facilitate big pushes in maintenance and in getting new people connected to the forest garden.

Application to Strachan Street and Design Guidelines

The community-driven aspect is a challenge in the applicability of this project to other locations, as voluntary labour is vital to its success. The flexibility of commitment, varied skill, and varied knowledge of the gardeners may make it difficult to understand the exact metric of how much labour is needed. However, like Seattle, there is an existing community of gardeners and plots in Hamilton, many of which are located within Lower Hamilton. Initial indications of need for more community gardens have been expressed through a recreation survey, coupled with existing garden closure due to sale of borrowed land.[16] Therefore, in the application at Strachan Street, architecture can be used to provide a space to conduct critical programming, such as hosting events, with the aim of increasing the transparency of forest garden models to the public and boosting engagement. Further, signage is a key tool that can be implemented on site to help describe this type of open-harvest garden model and its species to visitors.

Though Beacon Food Forest uses an open harvest model, most similar to a collective community model for the food forest, there are still allotment-style plots on site. Site observations revealed that



Fig. 62 **Beacon Food Forest ground-making. 2012.**

A team of volunteers from the community prepare the city for the food forest. (Source: K. Shuyler).



Fig. 63 **Harvest Map.**

A harvest map indicates the areas dedicated to open harvest and to p-patch plots. (Source: Maddie Price).

existing models near Strachan Street are allotment-style, with a mix of open-access and private-access to the garden beds. Introducing an open harvest model can help challenge the typical rules and allow free access, and free play, in a park type that usually does not present these aspects. To meet local goals of ensuring a minimum amount of food can be grown and donated offsite, for example, aligning with Hamilton's N2N program, a series of allotment-style plots could be introduced, or simply marked areas that are designated as donation-only.

Compact Play

This section of the thesis briefly explores formal sports architecture, recognizing that contemporary sport spaces must support more than just traditional sport types. Designed to be inclusive of more ages, interests, and personal backgrounds, sport hubs represent a type that aims to be inclusive of holistic wellness, beyond sport and physical health. The consolidation of many sport and non-sport amenities offers visitors exposure to different activities and opportunities to connect with a variety of groups present within the community.

Shane Homes YMCA at Rocky Ridge

Designer: GEC Architecture

Location: Calgary, Alberta, Canada

Completion Date: 2018

Size: 26,400m^2

A long-span glulam beam roof structure is the defining architectural feature of both the exterior and interior of the YMCA at Rocky Ridge. The roof, which rises and lifts along the building façade, is reflective of the soft undulating prairie topography, and houses the internal programs rather uniquely. Within three interior stories, the facility hosts a long list of amenities that layer in the central of the building: the running track overlooks a fitness area, a self-serve library is situated between the gyms and lap pool spectator seating.

The project is designed to serve 100,000 people locally; this is reflected in the variety of sport and leisure offerings. The visually open

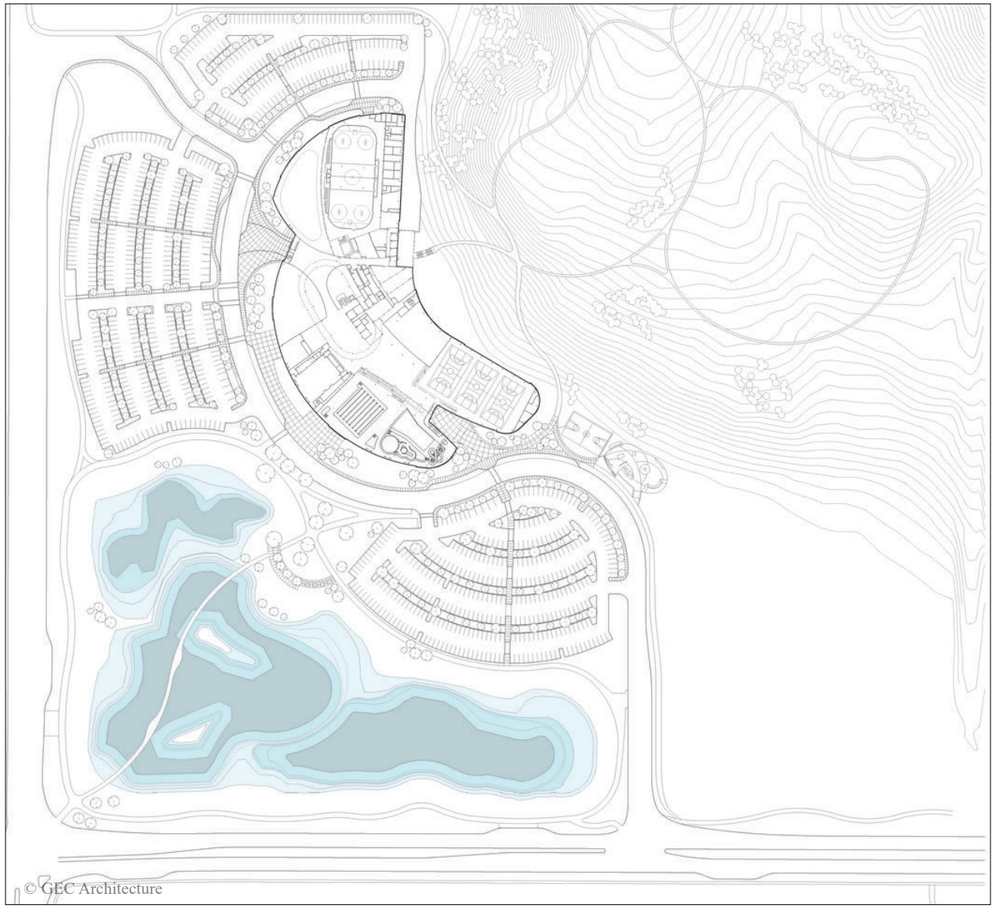


Fig. 64 **Shane Homes YMCA at Rocky Ridge Site Plan.**

(Source: GEC Architecture).

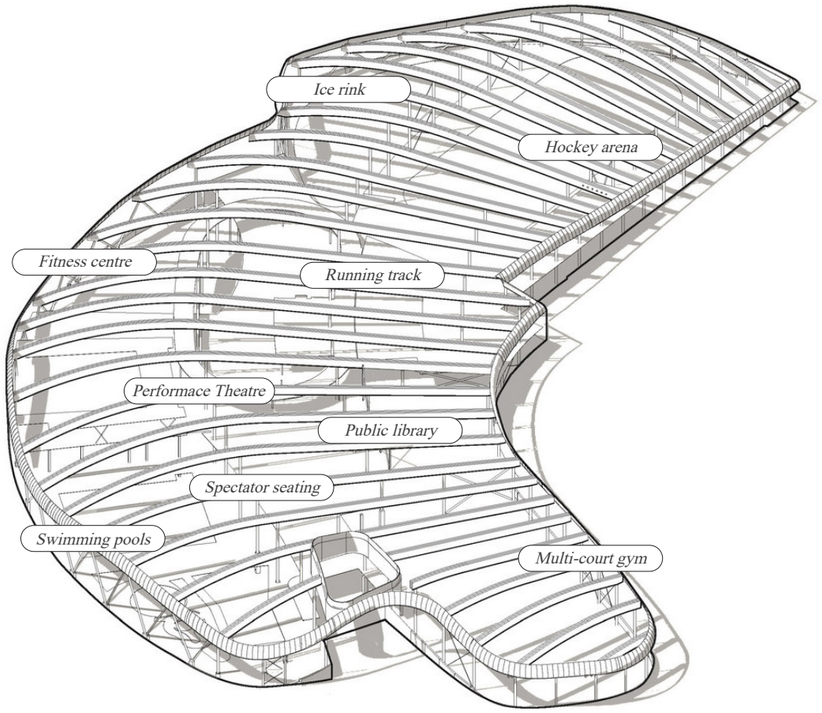
concept exposes visitors to new activities, and the level-of-service invites a great number of people from across different backgrounds. The site plan reveals the connection between the outdoor trail systems and the internal circulation of the building that centre the sports hub within a broad network of multi-modal movement.

In practice, the open-space facility is a rather rule-bound space. Paid membership and photo identification is required at designed check points to allow for access to the facilities. Employee presence reinforces the site as a monitored and rule-bound space. Do visitors take stewardship over aspects of the interior or exterior site features?

Application to Strachan Street and Design Guidelines

This project suggests an inversion of the common player-spectator court-format. Most formal sport spaces that have strict dimensions and spatial forms are located to the periphery. Flexible spaces, and perhaps more universal spaces, such as the track, spectator seating, the library are located centrally, along the wide circulatory spine. Similarly, the design at Strachan Street should locate flexible spaces centrally, commonly, and/or prominently.

Further, formal seating and membership check points are two examples of design features that enforce a level of structure that can limit free play. These concepts may be questioned in the exploration of what public sports design can be. Instead, providing a variety of seating, general rest areas, and play elements that can be used anytime and in a non-prescriptive way might be more appropriate for a site that functions as a multi-modal connector.



© GEC Architecture

Fig. 65 **Shane Homes YMCA Isometric.**

Annotation added by author. Universal functions, such as the walking track, theatre, library, spectator seating, are centralized and layered. (Source: GEC Architecture).

The Cultivated Garden & Expansive Play

In “Tree Nurseries: Cultivating the Urban Jungle,” Dominique Ghiggi suggests that while tree cultivation practices have become intensified, specialized, even automated to meet the high demands that correspond with rapid city growth, family businesses often retain a high level of handicraft traditional to the practice.[17] Yet, observing a garden in full bloom, it’s difficult to imagine the life of the plants before. Before they arrived on site, someone planted and pruned them, from seedling upward. Someone else had to put in those first days, weeks, months, or years of labour, care, and practice of patience. If not a person, then nature herself, always at work: hopefully dropping seeds that sprouted and joined the mosaic of the ever-changing palette. This is to say, the design of a garden begins long before even its thought conception. Working closely with organic matter, the lifespan of plants – trees in particular – means the processes of growth began years before it arrived on site.

Increased interest and demand of native species and the rapid growth of urban spaces[18] puts pressure on the horticulture industry. The design is limited by availability and knowledge practices, to name a few. As this thesis envisions a scalable proposal, how will access to native plants be secured? Two methods are studied in the case studies following. The first addresses seed propagation and community knowledge sharing using in field propagation; the second addresses how temporary use of industrial lots can become part of this process.

The Toronto Seed Strategy Pilot Orchard

Collaborators: Jonas Spring, Liam Doyle, Jane Mah Hutton
Location: NVK Nurseries, Dundas, Ontario; Toronto Plant Market, Toronto, Ontario
Date: 2022

Within the context of international and national seed movements, this pilot project responds to the need for native seed at a localized level. The orchard is located at a private nursery, NVK Nurseries, and consists of three rows, containing 28 species of plants, totaling 1000s of individual plants.[19] Plugs were planted in June and monitored through their growth, bloom, pollination, and setting seed. Methods for collecting and processing seeds is unique to plant species; therefore, seed collectors must be educated on these processes and other







Fig. 66 (top left) **Desmodium canadense.**
(Source: Liam Doyle, Ground Magazine)

Fig. 67 (bottom left)
Planting the Toronto Seed Strategy seed orchard.
Planting plugs at NVK Nurseries. (Source: Liam Doyle, Ground Magazine)

Fig. 68 (bottom right)
Straining for seeds at the Seed Saving Workshop.
Community engagement with the process occurs through seed saving workshops at the Toronto Plant Market. Events were advertised through social media, including Instagram. Various guest experts help lead the sessions. (Source: Liam Doyle, Ground Magazine)

considerations such as seed storage. Seeds were collected on site, then processed at the Toronto Plant Market.

A goal is to connect the designer to the grower, who together serve to educate the visitor or client about “the value of source-identified seed.” This is carried out through the second location of the project, the Toronto Plant Market during “Seed cleaning workshops” that were hosted November 12th, 2022, November 25th, 2023, and January 13th, 2024 with seeds from the Toronto Seed Orchard.

Application to Strachan Street and Design Guidelines

While the project started small, it is located at a well-equipped nursery site. This raises questions as to whether this decision was made because space was needed, or if the maintenance provided by a seasoned team of workers was critical to the success of the project. Could this project exist in a more urban space, with a less strict maintenance regime using limited resources?

Benefits of replicating this project in the city include the provision of pollinators in urbanized space and the potential for further dissolution between seed collection at the orchard and seed processing at the market. The educational aspect of the project could invite a specific form of steward-based recreation to the Strachan Street area.

Dagenham Docks Sustainable Industries Park

Designer: Vogt Landscape London | Sergison Bates Architects LLP

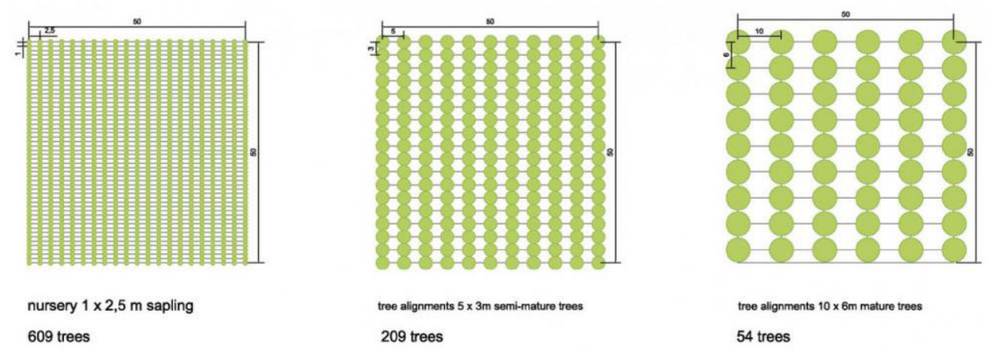
Location: London, England

Completion Date: Unbuilt/ Proposal

This temporary tree nursery embraces an industrial riverfront site as a place of constant change. The proposal integrates a multi-species tree nursery with the phases developed of an industrial park. Across the site, a gradient of tree species and their corresponding densities are related to the river, with moisture-driven species closer to the bank and species from drier environments positioned further away. Drainage canals are incorporated in the site design. Street trees are permanent, while the rest of the trees are “mobile.” Trees would be planted as plugs and have two opportunities to be transplanted on or off-site: once



© VOGT



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Fig. 69 (above) **Tree transplantation over time.**
(Source: VOGT).

Fig. 70 (below) **Trees per hectare.**
(Source: VOGT).

as young trees (t=5 years), then again as semi-adult trees (t=15 years). If the trees remain on site, they are replanted in grid formation.[20]

The project aims to showcase two alternative perspectives to the naturalistic garden: the processes of production, and that sustainability is not necessarily synonymous with “naturalist.”[21] The proposal is inherently flexible in its ability to expand, condense, and adapt to rapidly changing site construction.

Application to Strachan Street and Design Guidelines

The parallels drawn between the industrial typology and the tree nursery are illustrated clearly by Silke Schemeing’s article, “Dagenham Docks: Tree Nursery as Park.” Each landscape has basic formal structures, but external forces such as product demand, material availability, and technology advancements cause rapid alterations.[22] It relies on third-party partnership with the city to engage with environmental and sustainability initiatives, donating space or other resources temporarily or long-term.

Conclusion

This series of case studies explores existing spatial conditions and urban configurations found on site. Together, their co-habitation inform methods for mutually beneficial results:

1) "The Woodland Sport-scape"

A naturalistic garden, the Woodland should be an edited, readable habitat with ecological functions and seasonal interest. Most of the landscape should be dedicated to garden, but incorporate landmarks of play that are sized for all ages, serve as points of interest, and emphasize permeability of the park from the street. Grant dual purpose to play structure materials through bringing visitors closer to vegetation. To further integrate sport and biodiversity, prioritize edible vegetation that can be gardened and harvested. Propose to emphasis connection to other recreational sites.

2) "The Orchard Sport-scape"

An edible forest garden, the Orchard should include both open-harvest and allotments, and a dedicated space for community engagement, with sufficient food storage. The spatial requirements of the two are competing; therefore, incorporate a multi-use sports area that challenges the “panopticon” model with permeable entries, less-formal seating, and minimal directional seating. Grant dual purpose to architectural structure(s) to support edible gardens (i.e., boxes, trellises) and sport needs (i.e., spectator seats, fencing).

3) "The Nursery Sport-scape"

An experimental space dedicated to tree and seed production, the Nursery increases pollinators and the urban tree canopy in real-time. The implementation responds to potential challenges of post-industrial lands, such as contamination, with a mix of remedial and potted vegetation recommended. Adjacent to existing multi-modal networks to promote access and activity on otherwise vacant, private land. Potted trees should be free to be manipulated to change spatial boundaries for sport; and sport should likewise influence the development of experimental native meadow growth. The nursery-market boundary should be dissolved through a key public space that enables biodiversity education and sporting event.

Endnotes

1 Thomas Rainer and Claudia West, *Planting in a Post-Wild World: Designing Plant Communities for Resilient Landscapes* (Portland, OR: Timber Press, 2015), 146.

2 Rainer and West, 172..

3 Noël Kingsbury and Claire Takacs, *Wild: The Naturalistic Garden* (London: Phaidon, 2022).

4 Jane Garmey and Michael Hales, *City Green: Public Gardens of New York*, Public Gardens of New York (New York, NY: The Monacelli Press, 2018), 33.

5 Garmey and Hales, 34.

6 Garmey and Hales, 34.

7 Rainer and West, *Planting in a Post-Wild World: Designing Plant Communities for Resilient Landscapes*, 242.

8 MASU Planning, "Activity Landscape Kastrup," *MASU Planning* (blog), accessed June 30, 2024, https://www.masuplanning.com/project/activity-landscape-kastrup-2/.

9 Roxi Thoren, *Landscapes of Change: Innovative Designs and Reinvented Sites* (Portland, OR: Timber Press, 2014), 221.

10 Dave Jacke and Eric Toensmeier, *Edible Forest Gardens* (White River Junction, Vermont: Chelsea Green Publishing, 2005), I.

11 Jacke and Toensmeier, 67, 109.

12 *CityStream: Beacon Food Forest*, 2016, https://youtube.com/watch?v=Hlf4IY9ZXOs.

13 Beacon Food Forest, "March 2023," 2023, https://www.beaconfoodforest.org/news/32023-newsletter.

14 *CityStream: Beacon Food Forest*.

15 City of Seattle, "Seattle Department of Neighbourhoods: Beacon Food Forest," accessed June 30, 2024, https://www.seattle.gov/neighborhoods/p-patch-gardening/garden-list/beacon-food-forest; Seattle Neighbourhoods, "P-Patch Community Gardening Program: How the Interest List Works," October 31, 2018, https://www.seattle.gov/documents/Departments/Neighborhoods/PPatch/How%20the%20Interest%20List%20Works%20Handout%2010_31_18.pdf; Seattle Department of Neighbourhoods, "P-Patch Community Gardening: Plot Assignment Guidelines," 2020, https://www.seattle.gov/documents/Departments/Neighborhoods/PPatch/Plot-Assignment-Guidelines.pdf.

16 Within the Recreation Master Plan, 34% of surveyed individuals indicated community gardens as a high priority for investment. See: Monteith Brown Planning Consultants, Tucker-Reid & Associates, and The JF Group., "Recreation Master Plan" (City of Hamilton, July 21, 2022), 26, https://www.hamilton.ca/sites/default/files/2022-11/recreation-master-plan.pdf.

17 Dominique Ghiggi, *Tree Nurseries: Cultivating the Urban Jungle* (Baden: Lars Müller, 2010), 100.

18 Ghiggi, 100.

19 Jonas Spring et al., "Up Front: Information on the Ground," *Ground*, Winter 2022, 5.

20 Ghiggi, *Tree Nurseries: Cultivating the Urban Jungle*, 230.

21 Ghiggi, 228.

22 Ghiggi, 226.

Design Guidelines: Naturalistic Sport Landscape

This section of the thesis presents design guidelines for a naturalised sport landscape that responds to the needs of enhanced public engagement with biodiversity and the continued development of a robust recreation network across urban Hamilton. The three strategy zones that were developed in preceding research – Woodland, Orchard, and Nursery – are presented with a series of key principles to guide the adaption of a sample site. Strachan Street open space serves as an example for principles to be mapped onto, demonstrating instances of how the requirements may be coordinated and applied within existing conditions.

The guide is dual-purpose, serving as a recommendation for the City of Hamilton (including Public Works departments), and as a methodology for citizens to enact design agency over public space. The following portion of the thesis is designed as a document that could be published on the City of Hamilton website, and linked through the various organizations that the project envisions collaboration with.

A city-wide guide

The aim of the naturalistic sport landscape is to contribute to the recreation network and accessible naturalized areas in urban Hamilton, with a focus on linear sites that are liminal or post-industrial in nature.

A new way to play

Typical “sport landscapes” and “landscapes of biodiversity” are mediated through these guidelines, resulting in a new typology not yet prevalent in the city. Challenge the typical notion of “park” in your interpretation of the guides.

A call to action: the city + the citizen

The city has a responsibility to engage with Step 1 and Step 2, which involve identifying and selecting site(s) and implementing functional aspects of each key principle that meet high-level recreation and biodiversity goals.

The citizen has a role to engage with aspects of Step 2 and Step 3. These involve site-specific recreation and biodiversity goals and adaption over project lifetime.

How to Use this Guide

These guidelines operate as a collective set, where each strategy meets an aspect of biodiversity or recreation goals. The guidelines present a sample site, Strachan Street open space, as a case that is designed and illustrated to convey the application of key principles. To assist your own design process, the following steps are recommended:

Step 1: Identify.

Site identification and selection by the City is a critical first step. The adaption of the existing site conditions is recommended in multiple instances. The site should consist of a primary linear site that can support multi-modal connectivity and biodiversity (per Strategies 1 and 2) and secondary site(s) that can host supportive programming (per Strategy 3). Respond to park priority areas per the Hamilton Parks Master Plan. Strachan Street was selected for its existing multi-modal connections and evidence of biodiversity to its immediate south.

Step 2: Design.

Reference Strategies 1-3 to begin site design that achieves the key principles; the City and citizen can act as collaborators. The key principles are organized into themes that meet aspects of a biodiverse sport landscape:

Key Principle 1: Location, frequency, size, connection, access

Key Principle 2: Biodiversity, gardens

Key Principle 3: Sport, play

Key Principle 4: Architecture, furniture

Key Principle 5: Longevity, maintenance regime, potential partners

Step 3: Engage.

Long-term citizen engagement is critical to the project’s success. A “kit of parts” zine is included as a municipal resource to inform the public of the selection of vegetation, points of interest, activities, and amenities that may be layered within each strategy zone. The zine format conceptualizes that these aspects can be added, expanded, or manipulated by the citizen.



Fig. 71 **Strachan Street Design Guideline Strategy Area**

Strategy 1: The Woodland Sport-scape

"Sun filters through maple leaves, speckling onto layers of ferns and – whisssssk– a frisbee glides over the understory and settles on a slacken net above some wild blue phlox. Still, a pair of mourning doves are startled into flight, the chirp of their wings echoes in take-off..."

Character Profile

The woodland is an urban sanctuary, textural and soft. Strength and scale of maples, locusts, and lindens is contrasted by the delicacy of the groundcover. A meandering path invites pause, while play structures dotting the landscape invites energetic adventure. A sensory landscape, olfactory and cool is the slip from the sun-baked street into the cover of the canopies.

Key Principle 1: Convey a permeable habitat in an urban setting.

1.1. Designate the whole of the primary site footprint per "Approach 1," less areas where "Approach 2" is applicable.

1.2. Assess existing site conditions and identify the existing dominant habitat type: forest, woodland, prairie, meadow, marsh, and so on. Consider this habitat to be foundational. The sample case uses the woodland type.

1.3. Internal multi-modal pathways must be provided to connect with existing bike and multi-use recreational trails. Consider integration potential of existing informal routes and short-cuts. A tiered hierarchy of trails is suggested:

1.3.1 An accessible fast path with clear linear and peripheral views, adjacent to the street.

1.3.2. An accessible nature path that meanders through the linear park, granting use of all amenity spaces. Material suggestion is non-slip large pavers, bricks.

1.3.3. An adventure path that branches off the nature path. Material suggestion is fixed and/or loose materials, such as stepping stones, wood chips.

citizen engagement

1.4. Promote access to the site from the street at each intersection, and along a minimum of 50% of its length.

Key Principle 2: Implement a woodland garden that becomes self-sufficient over time.

2.1. Retain existing trees and major vegetation features in all viable cases (i.e., individual health).

2.2. Design and plant in guilds that consider the following:

2.2.1. Utilize, at minimum, a basic forest-tier layering of structure, seasonal, groundcover, filler.

2.2.2. Prioritize use of native, edible species. See example plant list for suggestions to guide species selection that aligns with local interests.

citizen engagement

2.2.3. Complement each other functionally (i.e., staggered harvest), aesthetically (i.e., seasonal interest), and ecologically (i.e., competition). Engage with local knowledge to inform design.

Key Principle 3: Incorporate points of interest, supportive of the woodland biodiversity, that facilitates play.

3.1. To create internal site activity, at every 500m at minimum, provide a unique play installation that is visible from the nearest intersection. May select areas based on unique, identifiable features, such as internal or external views, existing vegetation.

3.2. Play installations should:

3.2.1. Have multi-functional and/or non-prescriptive use to promote free play.

3.2.2. Be comprised of large dimensional components to support and promote adult use and family play.

citizen engagement

3.2.3. Components should be multifunctional to support a dimension of species survival, such as climbing plants or nesting birds. Specifications may be informed by local interests or initiatives.

3.2.4. Facilitate engagement with biodiversity.

Key Principle 4: Furnish with basic amenities that increase site functionality.

4.1. Provide furniture for rest along the trail:

4.1.1 Provide barrier-free furniture at regular intervals, positioned near the points of interest and along the nature path.

4.1.2. Provide informal objects and rest areas, such as mossy beds, logs, swings for sitting, reclining, and so on.

citizen engagement

4.2. In addition to street lighting, provide a hierarchy of lighting to promote evening visibility and aesthetic appeal:

4.2.1 Provide overhead lights at the points of interest.

4.2.2. Provide path lights along the nature path.

4.2.3. Optionally, provide landscape spotlights to illuminate the vegetation itself.

Key Principle 5: Consider partners and project longevity.

5.1. Consider partners that align with Strategy 1 biodiversity and sport goals to support funding, maintenance, and expertise. For example: Hamilton Naturalists' Club, Niagara Peninsula Conservation Authority, Conservation Halton, and Green Venture.[1]

5.2. Develop a maintenance plan for the city to care for critical project components related to access and safety, such as pathway repair, snow removal, etc. and play installation repair.

5.3. Engage with local non-profit organizations for everyday operational maintenance (i.e., weekly gardening). For example: N2N.

5.4. Engage with local organizations for community events (i.e., night markets, film screenings). For example: WA&HC.

citizen engagement

5.5. Initial plantings can be plugs, though seeds or plugs growth within the project scope are recommended for annual fill and continued growth.

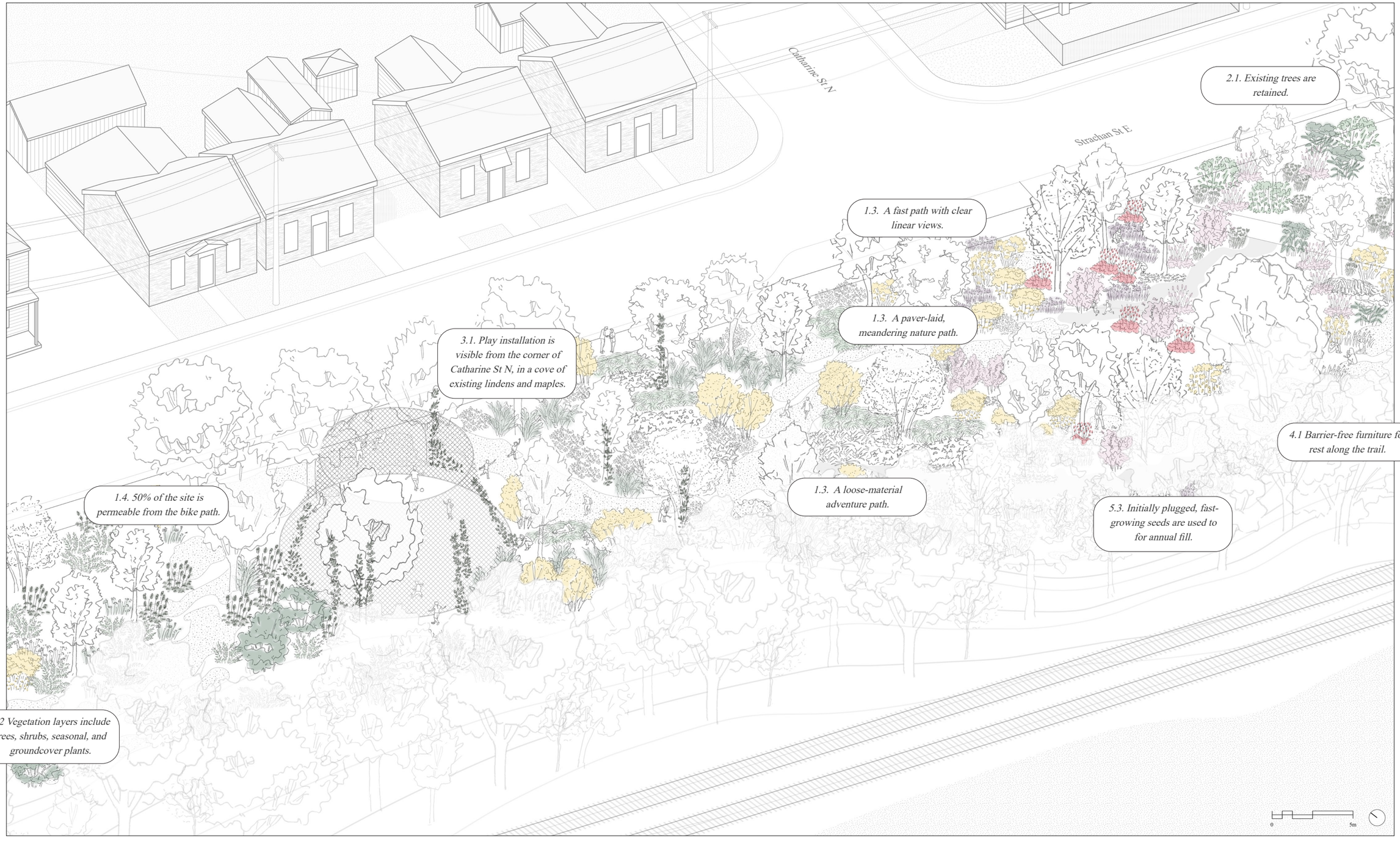


Fig. 72 **Strategy 1 Axonometric.**

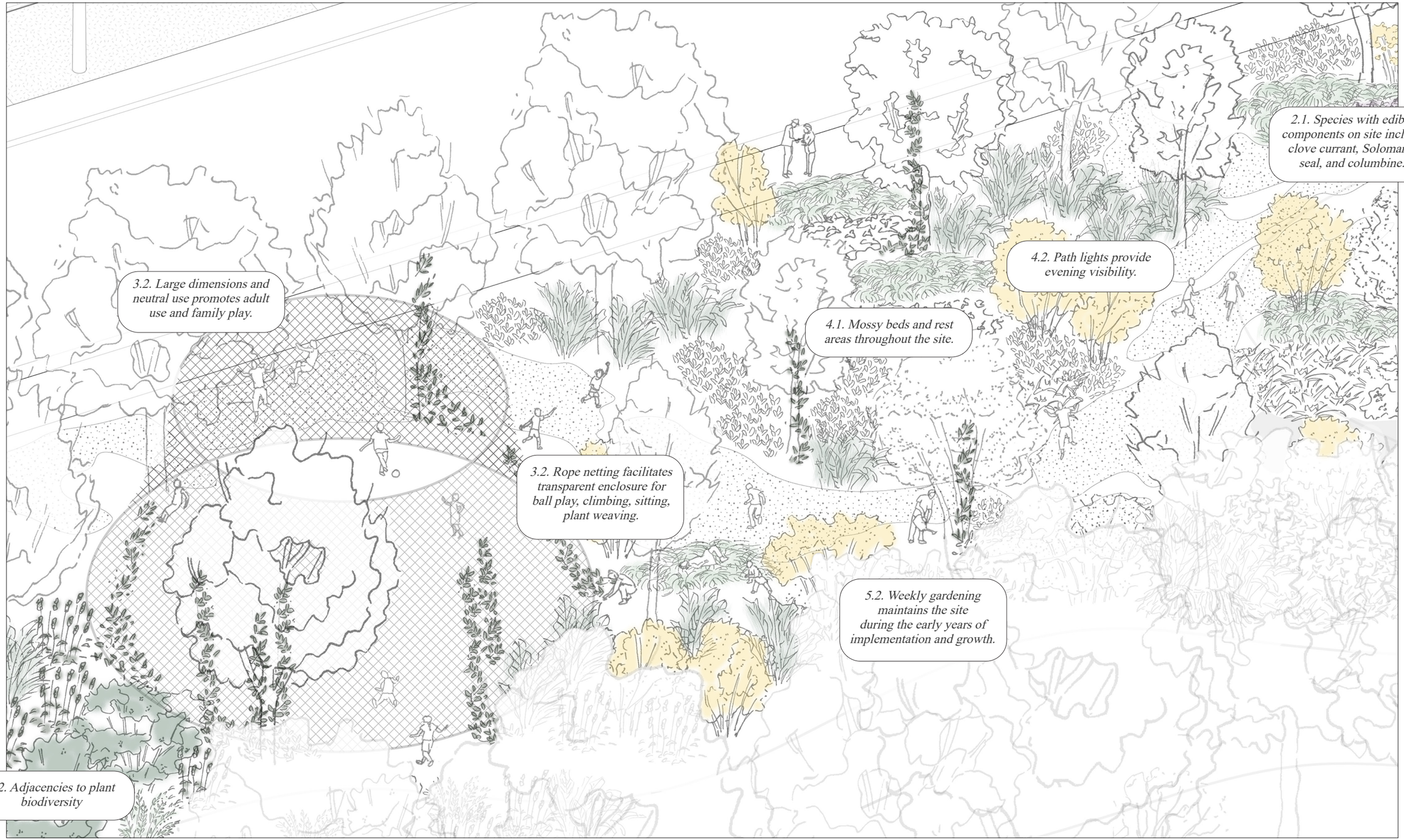


Fig. 73 **Strategy 1 Axonometric Zoom.**

5.
Seasonal harvesting
proposed w/ N2N, NECHC

2.
c f g m r s t
Smooth gooseberry
Ribes hirtellum

3.
the 'wave'
play installation

2.
Sugar maple
Acer saccharum

2.
c f g m r s t
Showy sunflower
Helianthus x laetiflorus

5.
Regular monitoring
proposed w/ HNC

2.
c f g m r s t
Nodding wild onion
Allium cernuum

1.
Multiuse Path
a direct linear connection

2.
c f g m r s t
Hog peanut
Amphicarpaea bracteata

5.
Educational experiences
proposed w/ EH

2.
c f g m r s t
Golden alexander
Zizia aurea

2.
Littleleaf liden
Tilia cordata

1.
Nature Path
a journey thru the woods

2.
c f g m r s t
Ostrich fern
Matteuccia struthiopteris

5.
Community events
proposed w/ WAHC

2.
c f g m r s t
New jersey tea
Ceanothus americanus

1.
Adventure Path
a muddy, loose parts route

2.
c f g m r s t
Trout lily
Erythronium americanum

Fig. 74 **Strategy 1 Expanded Legend.**

4.
pathway lights
from dusk-

2.
c f g m r s t
Spring cress
Cardamine bulbosa

2.
c f g m r s t
Downy wood mint
Blephilia ciliata

4.
secure bins
compost, recycling, trash

3.
the 'satellite'
play installation

2.
c f g m r s t
Soloman's seal
Polygonatum biflorum

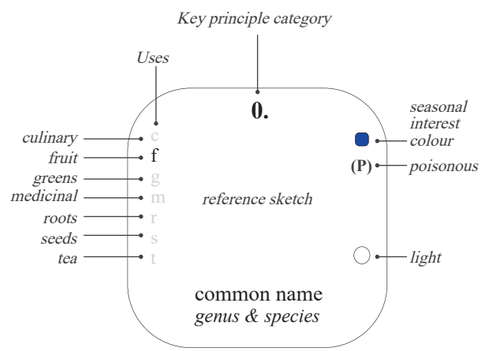
2.
c f g m r s t
Carolina allspice
Calycanthus floridus

3.
the 'snake'
play installation

5.
Regular maintenance
proposed w/ City of Hamilton

2.
c f g m r s t
Clove currant
Ribes odoratum

The Woodland



The selected species are based on hardiness zone (5b), partial sun/shade, a garden-alkaline soil, Eastern North America native, open woodland habitat, edible use(s), and limited poisonous (P) species. Refer to *Plant Species Matrix Appendix 1* from "Edible Forest Gardens" for more information.

2.
Common hackberry
Celtis occidentalis

4.
benches
every 50m

2.
c f g m r s t
Canadian columbine
Aquilegia canadensis

Strategy 2: The Orchard Sport-scape

"Neighborhood kids, faces and fingers stained in blueberry juices, test the tension of nets: dangling feet above the mossy floor, waiting for the aloft volleyball to soar of bounds so that they might send it back in play."

Character Profile

The orchard is a welcoming threshold, open and bright. Textural and leafy, the layers of the forest garden are colourful throughout the seasons as flowers, berries, and autumn leaves take their course. A pavilion invites spending a moment, or an afternoon; above, below, or between its open structure. The energy from the sport courts mingles with the smells of the herb harvest.

Key Principle 1: Convey a colourful habitat, unique from the previous Approach 1 habitat.

1.1 Implement at critical multi-modal intersection(s), subjective to existing site conditions and existing context conditions. The case example is in place of an existing parking lot was (i.e., little existing vegetation, full sun conditions) and at the intersection of along James Street North, a recreational, transit, and commercial route. Use Approach 2 every 1km, at minimum.

1.2. Per Approach 1, internal multi-modal pathways must be provided to connect with existing bike and multi-use recreational trails. A tiered hierarchy of trails is suggested:

1.2.1. An accessible fast path with clear linear and peripheral views, adjacent to the street (typical in Hamilton).

1.2.2. An accessible nature path that meanders through the linear park, granting use of all amenity spaces. Do not confine the boundaries. Material suggestion is level and non-slip large pavers, bricks.

1.2.3. An accessible orchard path provides access to harvesting areas. Material suggestion is level and non-slip pavers, bricks. — citizen engagement

1.3. Promote access to the site from the street at each intersection, and along a minimum of 50% of its length.

Key Principle 2: Implement an edible orchard that becomes self-sufficient over time.

2.1. Retain existing trees and major vegetation features in all viable cases (i.e., individual health).

2.2. Design and plant a mix of open-harvest guilds and allotment-style planting boxes that are comparable to community garden area precedents (approximately 50-80% of the area footprint). Boxes can be cared for under more controlled conditions, and the harvests donated, per N2N and NECHC, while guilds must consider the following:

2.2.1. Utilize, at minimum, a basic forest-tier layering of structure, seasonal, groundcover, filler.

2.2.2. Prioritize use of native, edible species. See example plant list for suggestions.

2.2.3. Complement each other functionally (i.e., staggered harvest), aesthetically (i.e., seasonal interest), and ecologically (i.e., competition).

citizen engagement

2.3. Provide signage introducing edible species and the open harvest model on site.

Key Principle 3: Incorporate a community sport area that facilitates group and individual play.

3.1. Implement a compact, multi-purpose sport area that can host a variety of sport, such as volleyball, basketball, soccer, roundnet, four-square, yoga, as well as adventurous play, such as climbing, swinging, hiding, running.

3.2. Maintain a loose permeability and informal seating around the boundaries to challenges a panopticon structure that may limit the scale and type of activities that can occur where of when.

Key Principle 4: Construct a sculptural pavilion that houses functional amenity, and mediates sport and biodiversity programs.

4.1. The pavilion should be a unique landmark that responds to local themes.

4.2. The design should incorporation key amenity such as:

4.2.1. High-importance public facilities (washrooms, water fountains).

4.2.2. Functional storage to support biodiversity-related program offered on the site (harvests, workshops).

4.2.3. Offer a flexible design that can be modified by its users per the site needs. In the case of an orchard, the structure may be used for vertical plant growth, hanging baskets, pots, raised boxes.

citizen engagement

4.2.4. Sufficient shade and shelter in lieu of a woodland canopy.

4.3. In addition to street lighting, provide a hierarchy of lighting to promote evening visibility and aesthetic appeal:

4.3.1. Provide overhead lights to illuminate the sport area.

4.3.2. Provide lighting along the length of the structure, attached or adjacent. Clearly define key entrances where applicable.

4.3.3. Provide path lights along the nature path.

4.3.4. Optionally, provide landscape spotlights to illuminate the vegetation itself.

citizen engagement

Key Principle 5: Consider partners and project longevity.

5.1. Refer to Strategy 1.

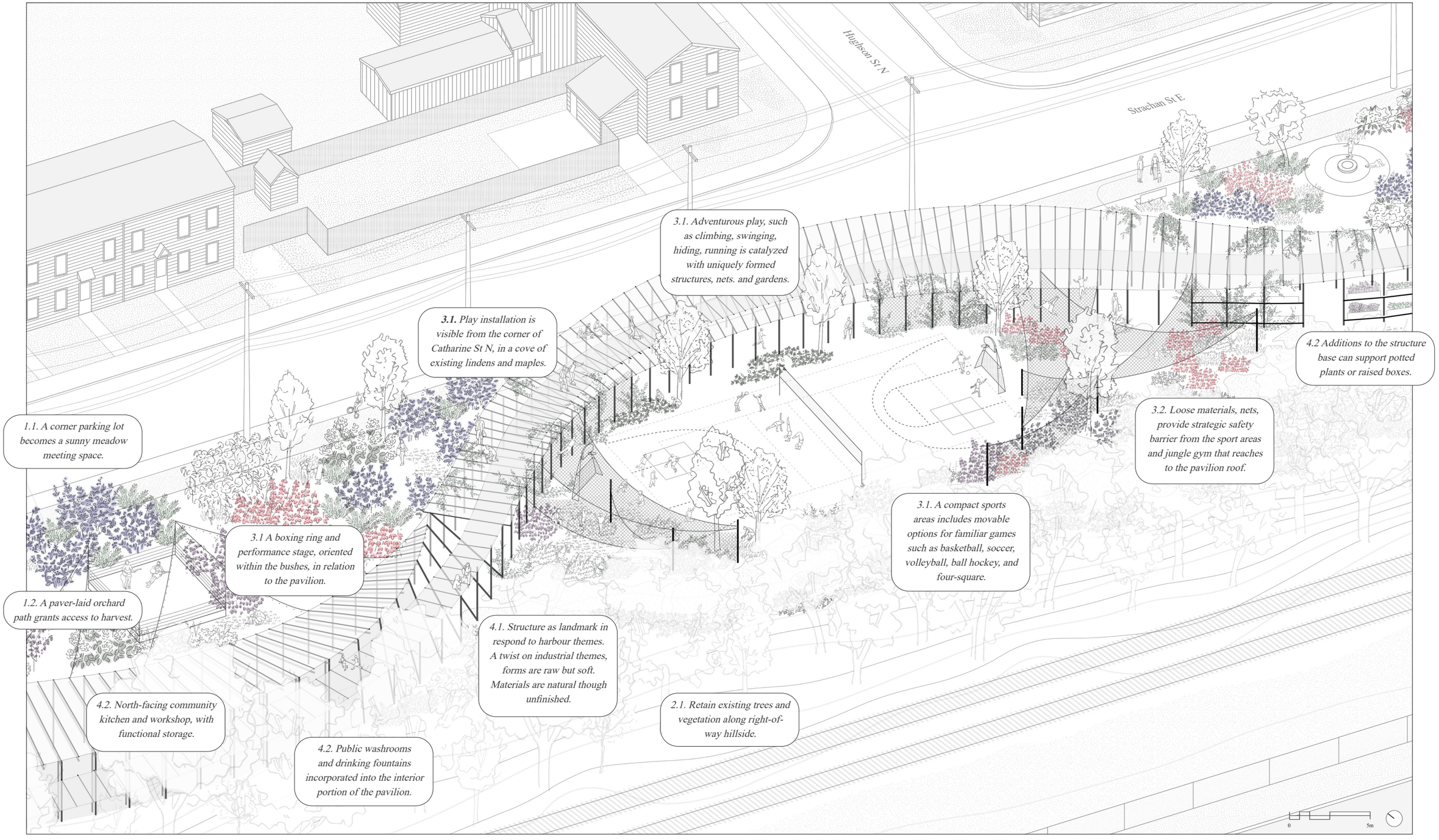


Fig. 75 **Strategy 2 Axonometric.**

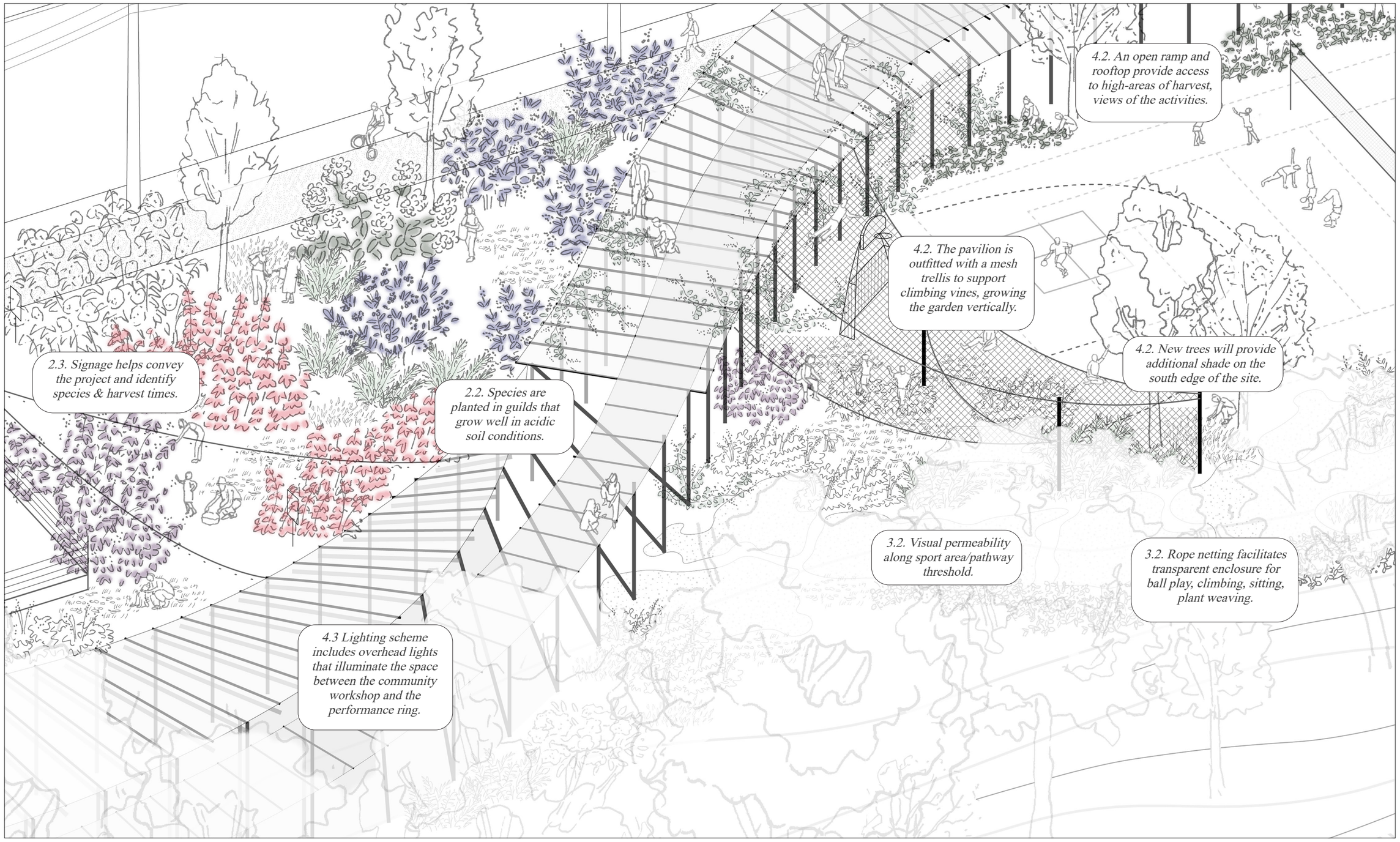


Fig. 76 **Strategy 2 Axonometric Zoom.**

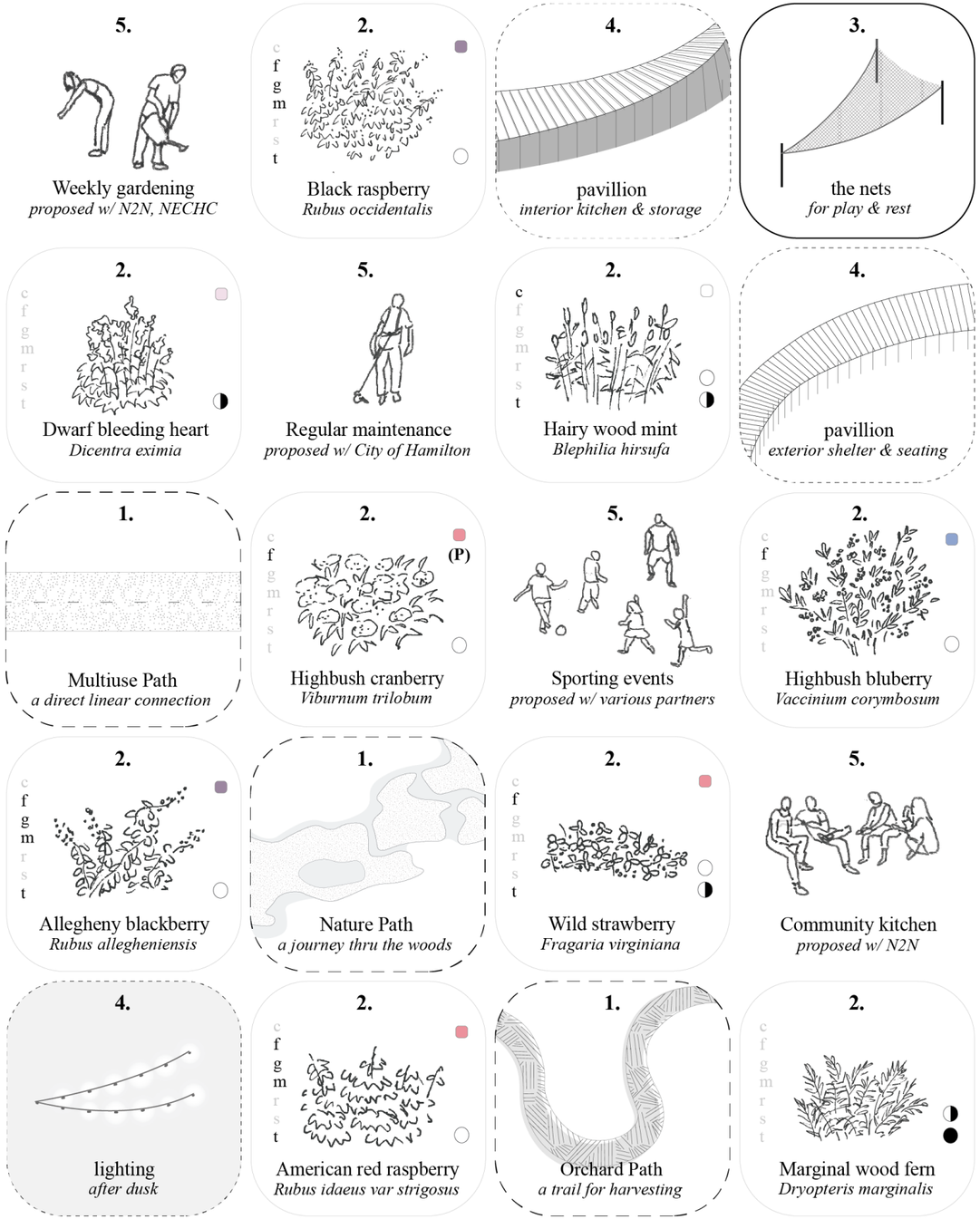
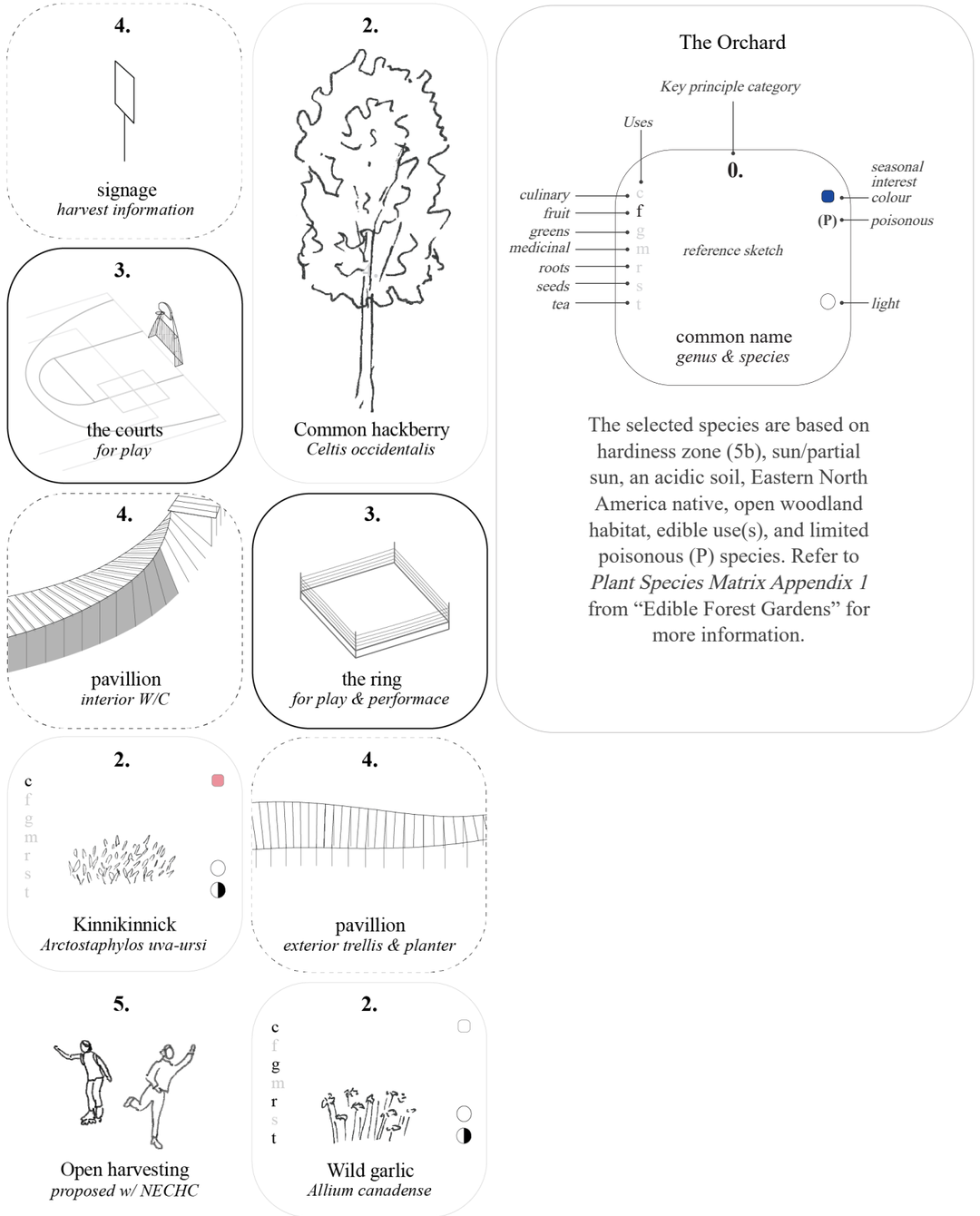


Fig. 77 **Strategy 2 Expanded Legend.**



The selected species are based on hardiness zone (5b), sun/partial sun, an acidic soil, Eastern North America native, open woodland habitat, edible use(s), and limited poisonous (P) species. Refer to *Plant Species Matrix Appendix 1* from "Edible Forest Gardens" for more information.

Strategy 3: The Nursery Sport-scape

"Breeze gusts through the open space, causing lines of trees and messes of wildflowers to dance in synchronization. A clustered game of catch flows suit through the field, the family of six take turns chasing the ball when flies land out of reach. Seeds catch on shoes and pants, scattering into new pockets of soil in a cracked landscape."

Character Profile

The nursery demonstrates the dualities of organized production and naturalized growth, offering a unique visual appeal to the industrial landscape. Wildflowers, shrubs, and grasses mingle between asphalt poured long ago; pockets for pickup games and picnics are dispersed throughout. In contrast, linear and organic arrangements of saplings and trees sculpts areas for sport, opening onto a public square for festival and event that can take over the whole street.

Key Principle 1: Implement a temporary space of production on site(s) near the primary site.

1.1. Select secondary sites that are accessible from the primary site through recreational trail connections.

1.2. Assess existing site conditions, often the dominant habitat type on urban, vacant land is the meadow type.

1.3. Promote access to the site from the street at each intersection, and along a minimum of 50% of its length.

1.4. In lieu of a linear path system, incorporate an accessible public square for large gatherings, central to key program and amenities on site.

Key Principle 2: Implement two zones of production.

2.1. Retain existing trees and major vegetation features in all viable cases (i.e., individual health).

2.2. Designate an area for native tree production:

- 2.2.1. Provide temporary storage for materials and maintenance equipment on site.
- 2.2.2. Prioritize use of native species. See example plant list for suggestions.
- 2.2.3. Plan long-term movement of saplings across site as development occurs, including steps for planting (on-site) or distribution (off-site).

2.3. Designate an area for native seed production:

- 2.3.1. Create semi-controlled environment for plant growth and monitoring.
- 2.3.2. Designate additional environment(s) for a meadow habitat. Functional maintenance and regular seeding optional.

citizen engagement

Key Principle 3: Facilitate play across a variety of flexible sport areas.

3.1. Provide large community-oriented sport to clearly demonstrate the site as a public space.

3.2. Arrange tree production to enable play:

3.2.1. Rows of trees can be used as an efficient formation, with openings for larger field games. As sod deteriorates, may rearrange trees to form new openings.

3.2.2. Organic formations of trees can be used as mazes, running routes, or for “nature-play.”

citizen engagement

3.2.3. Provide movable sports equipment, such as soccer nets, hockey nets, and so on, that can be swapped and adapted based on community engagement and feedback over the duration of the project life cycle.

3.3. Install mural on adjacent street(s) where temporary road-closure is feasible:

citizen engagement

3.3.1. Collaborate with local artist(s) to develop a colourful and abstract image.

3.3.2. Incorporate a variety of sport courts as suggestive play options.

3.4. Further investigation of the meadow as a catalyst for alternative urban land use may include the provision of additional architectural structures and/or objects based on community engagement and feedback.

citizen engagement

Key Principle 4: Adapt existing architecture towards programming objectives of production, engagement, and sport.

4.1. Assess and adapt existing buildings on site for educational events and production-related activities.

4.1.1 Incorporate an interior event space, classrooms, and/or workshop(s).

citizen engagement

4.1.2. Incorporate offices and storage; may incorporate rooftop garden boxes where possible.

4.2. Provide a temporary structure for longer-term use:

4.2.1. Include storage for maintenance equipment, such as tools, bins, materials, and small vehicles.

4.2.2. If viable, may include a greenhouse function for year-round seed production.

4.2. Provide temporary pavilions in open spaces to provide shade, shelter, and visual interest.

citizen engagement

Key Principle 5: Consider partners and project longevity.

5.1. Consider partners that align with Strategy 3 biodiversity and sport goals to support funding, maintenance, and expertise. For example: Toronto Plant Market & Native Plant Supply.

5.2. Develop a maintenance plan for the city to care for critical project components related to access and safety, and allocate production-related maintenance to third-party or community-led groups.

5.3. Engage with local organizations for everyday operational maintenance and community events (i.e., seed collecting, sports competition).

citizen engagement

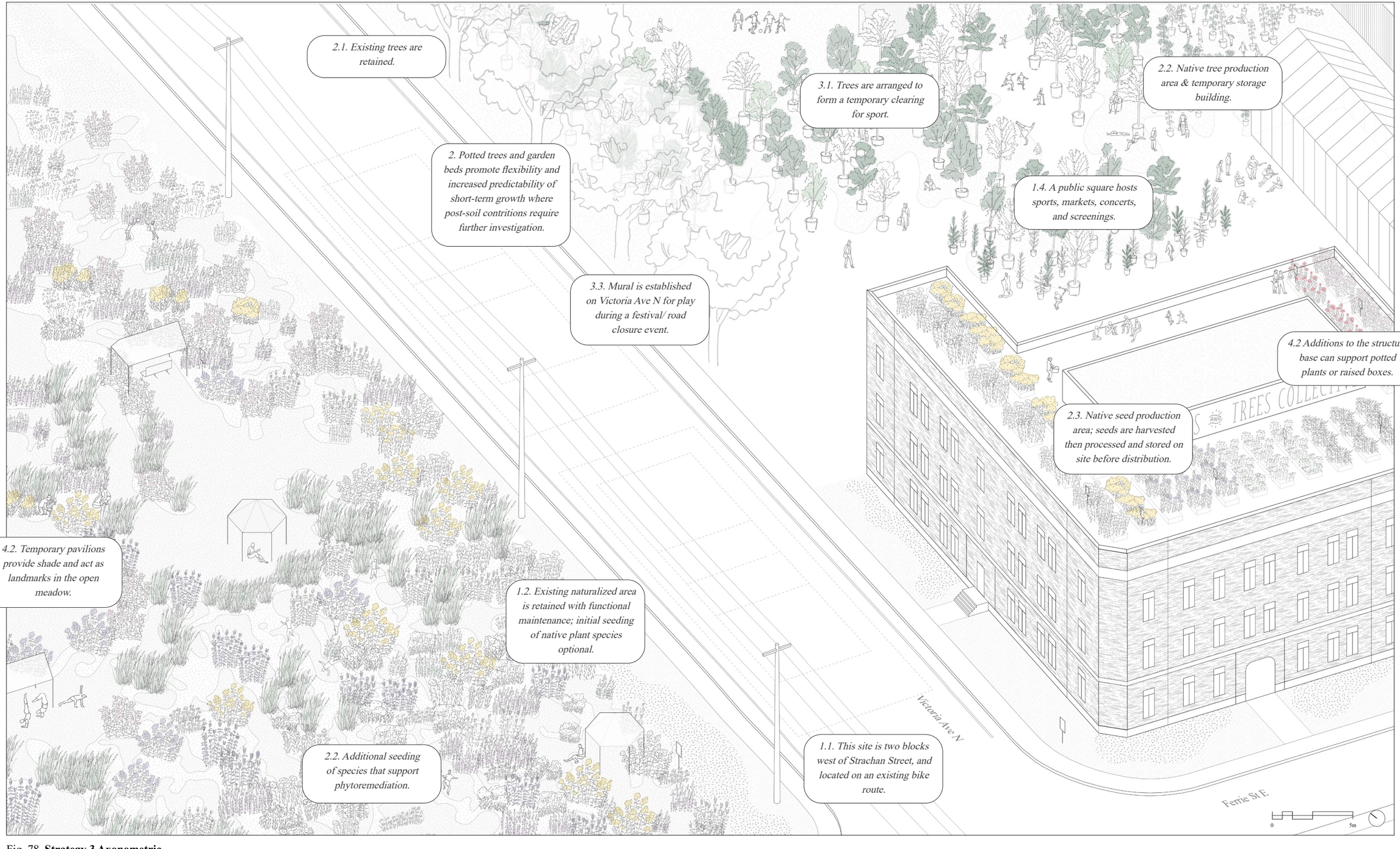


Fig. 78 **Strategy 3 Axonometric.**

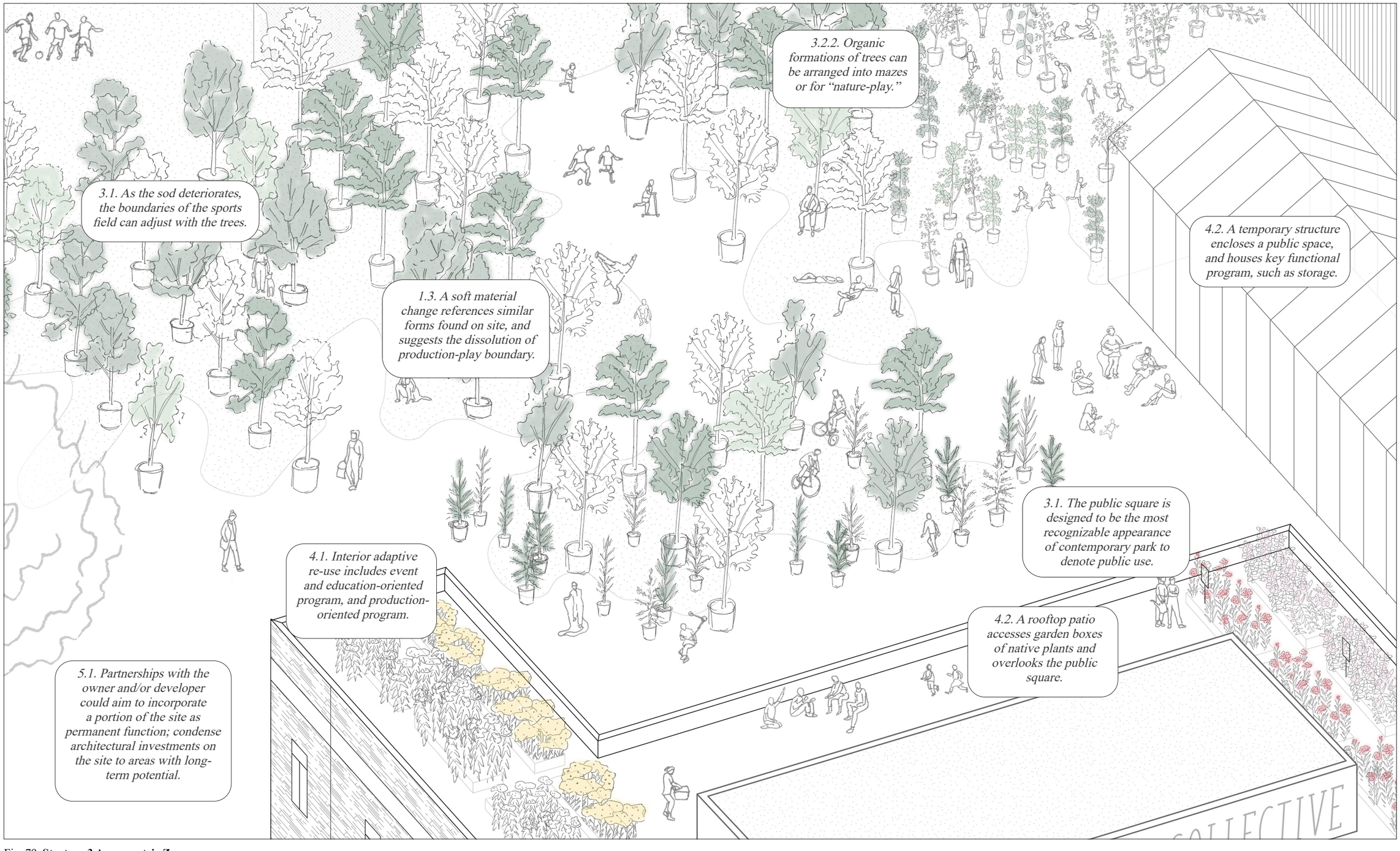


Fig. 79 **Strategy 3 Axonometric Zoom.**

5.
Seed harvesting
proposed w/ TO Seed Market

2.
c f g m r s t
(P)
Burterfly milkweed
Asclepias tuberosa

4.
Pavillions
for shade & shelter

2.
c f g m r s t
Common boneset
Eupatorium perfoliatum

2.
Balsam fir
Abies balsamea

5.
Tree monitoring
proposed w/ City of Hamilton

2.
c f g m r s t
Canadian wild rye
Elymus canadensis

4.
Adaptive re-use
for growth & education

1.
Bike Path
a direct linear connection

2.
Littleleaf inden
Tilia cordata

5.
Community events
proposed w/ EH

2.
c f g m r s t
New England aster
Symphyotrichum novae-angliae

2.
Littleleaf linden
Tilia cordata

1.
All-Path
a public square

2.
Sugar maple
Acer saccharinum

5.
Sporting events
proposed w/ various partners

2.
c f g m r s t
Anise Hyssop
Agastache foeniculum

1.
Non-Path
a public expanse

2.
Red oak
Cercis canadensis

3.
the experimental meadow
loose parts play

2.
c f g m r s t
Common milkweed
Asclepias canadense

2.
f g r c t s m
Blue vervain
Verbena hastata

3.
the street
painted court murals

4.
Temporary “greenhouse”
for storage & maintenance

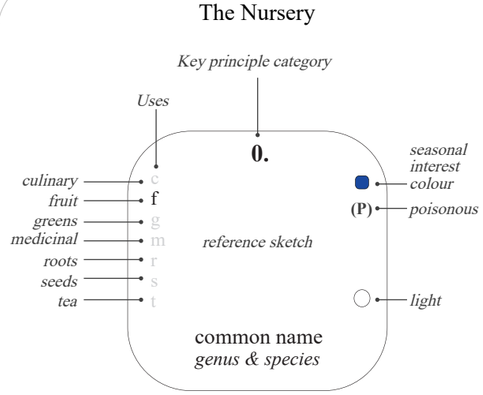
2.
Sugar maple
Acer saccharum

2.
c f g m r s t
Wild bergamot
Monarda fistulosa

5.
Tree moving events
proposed w/ City of Hamilton

2.
c f g m r s t
White yarrow
Achillea millefolium

The Nursery



2.
c f g m r s t
(P)
Black-eyed Susan
Rudbeckia hirta

3.
the nets
moveable for play

4.
Market stalls
for food & event

2.
c f g m r s t
Lance-leaved coreopsis
Coreopsis lanceolata

Fig. 80 **Strategy 3 Expanded Legend.**

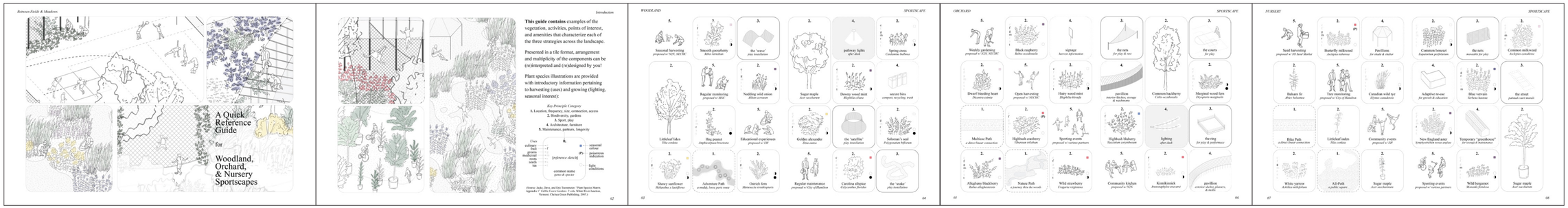


Fig. 81 **Zine, unfolded. 5.5x42.5”**

The Zine: A Quick Reference Guide

Select components from the Strategies 1, 2 and 3 expanded legends are presented in an 8-page zine to demonstrate how the concept of the Woodland, Orchard, and Nursery Sportscapes can be presented to the public to promote engagement with the site at multiple levels. Within the zine, a selection of vegetation (biodiversity) and activities (sport) are illustrated to inform about the various amenities and services that can be a part of these landscapes.

In early stages of project design, the zine can be used as an introduction to this landscape type, and as a design tool for citizens. The tile format is designed to represent that arrangement and multiplicity of components is site-dependent (i.e., community-dependent). The zine can also preform as long-term reference document. Tiles can be swapped to more accurately promote the activities happening on site in reflection of the “living” nature of landscape projects.

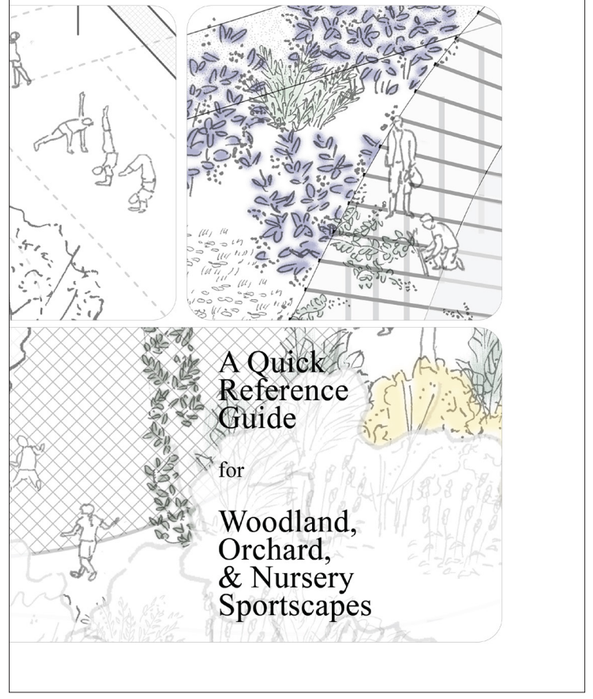


Fig. 82 **Cover. 4.25x5.5”**







Introduction

This guide contains examples of the vegetation, activities, points of interest, and amenities that characterize each of the three strategies across the landscape.

Presented in a tile format, arrangement and multiplicity of the components can be (re)interpreted and (re)designed by you!

Plant species illustrations are provided with introductory information pertaining to harvesting (uses) and growing (lighting, seasonal interest):

Key Principle Category
1. Location, frequency, size, connection, access
2. Biodiversity, gardens
3. Sport, play
4. Architecture, furniture
5. Maintenance, partners, longevity

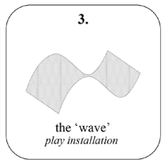
(Source: Jacke, Dave, and Eric Toensmeier. "Plant Species Matrix Appendix 1" *Edible Forest Gardens*. 2 vols. White River Junction, Vermont: Chelsea Green Publishing, 2005.)

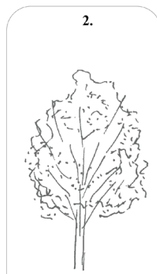
02

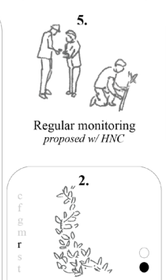
WOODLAND





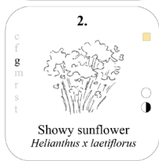










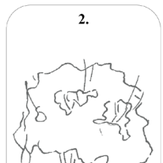






03

SPORTSCAPE

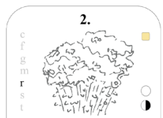


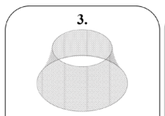






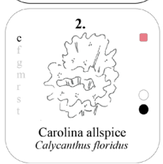














04

Fig. 83 **Pages 1-4, 5.5x17"**

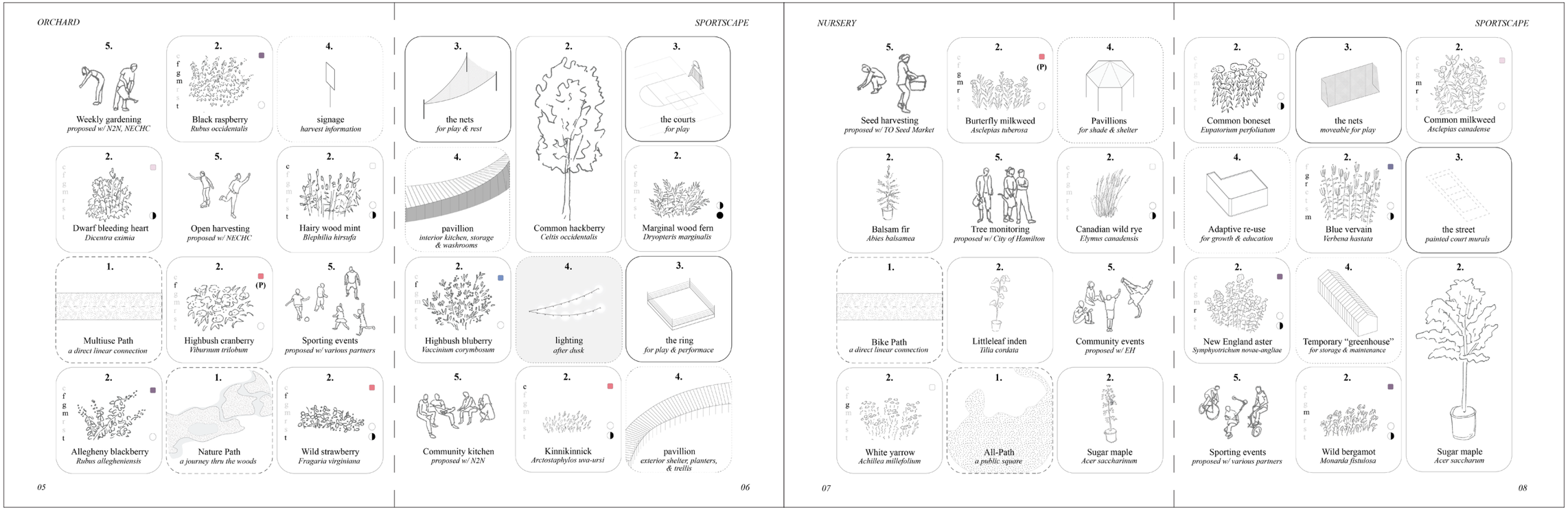


Fig. 84 **Pages 5-8, 5.5x17”**

Endnotes

1 Bay Area Restoration Council et al., “Appendix ‘A’ to Report PED21065(d)/ PW24040: A Five-Year Biodiversity Action Plan for Hamilton, 2024,” 2024, 52, https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=412051.

Conclusion

The incorporation of public space into reclaimed post-industrial landscapes has precedent in Hamilton, but a key challenge is how design can resolve the incorporation of these seemingly conflicting public space typologies within increasingly confined urban space. The naturalistic sport landscape is important because individually, sport and biodiversity are challenged in ways that their cohabitation begins to mediate. The spontaneity and dynamics of biodiversity injects a new set of rules (or rather, non-rules) to the greater arena of the public park. Biodiversity can be empathized with and connected to through play (nature-play), but this play must be more than solely child-focused, include multi-generational forms of recognizable games, and support modes of free play to activate space that may be otherwise be "left to nature." Understanding that outdoor sport and biodiversity are not truly restrained by the boundaries designers impose, a greater investment in their togetherness is the next appropriate step.

This thesis began with the study of the Strachan Street open space, with an aim to understand how its local conditions could be adapted to meet the broad goals of biodiversity engagement and recreation network building in the city of Hamilton. I introduce the green linkage as a type, with existing planning guidance that will influence it: the Hamilton Bayfront Industrial Area Strategy, the Biodiversity Action Plan, and the Hamilton Master Recreational Plan. Aspects of these guidelines are suggested to be either implemented, engaged with, or expanded on within the context of the Strachan Street open space. To exemplify this, the project site is divided into three zones of strategy based on its existing landscape and spatial conditions: the linear-woodland, the nodal-meadow, and the open-field. A series of case studies demonstrate approaches to landscape architecture that continuously mingle programmatic aspects of biodiversity and sport into a singular naturalistic sport landscape. The design guidelines present key principles that formulate each of the three strategies and although Strachan Street open space is taken as example, the final design guidelines suggest an approach for application through a broad urban context of Hamilton.

Future iterations of these guidelines would need to involve an increased investment in the multi-disciplinary aspects of site research. Although this site was selected for its urban connectivity, the proximity to the active railway comes with considerable safety hazards that require further environmental study, including air, noise, and soil pollution studies. Further, if the project is to equitably serve and represent the "public," both less-visible populations, such as individuals who may be underrepresented in public spaces,[1] and visible populations, such as individuals experiencing homelessness,[2] must be researched in greater detail. Direct engagement through meetings, interviews, surveys, and test models will be critical to help gauge local criteria for project implementation; however, these initiatives alone may not be enough to mediate existing tensions, particularly those between residents and unhoused individuals encamped on or near the Strachan Street site.

The design guidelines presented in this thesis are intended for adaptation by other cities with similar sport and biodiversity goals. In consideration of maintenance and financial challenges, this project adapts liminal, in-between spaces as to become self-sufficient, long-term environments that lend themselves to the critical needs of sport, biodiversity, and moreover, connectivity through public space. Desire to build walking and cycling networks[3] suggest that investment in these connective routes is on the horizon. In fragmented, overlooked, or underappreciated spaces like Strachan Street open space, sport and biodiversity can be designed in collaboration, resulting in a landscape somewhere between a field and meadow.

Endnotes

1 City of Hamilton, “Hamilton Urban Indigenous Strategy,” accessed July 2019, https://www.hamilton.ca/sites/default/files/2022-05/EDI-2019urbanindigenousstrategy-Report.pdf.

2 While visiting the site periodically, there was often the presence of individuals experiencing homelessness at Strachan Street linear park, Bayfront Park, and/or Jackie Washington Park. A tiny house proposal for the Stachan Street GOS titled “HATS” was met with great negativity in 2023 according to: Hristova, Bobby. “Safety Concerns for Unhoused People May Jeopardize Location of Hamilton Tiny Homes Pilot: HATS.” CBC News, September 13, 2023. https://www.cbc.ca/news/canada/hamilton/hamilton-tiny-homes-pilot-concerns-1.6963863.

3 City of Hamilton, “Transit Master Plan,” Municipal Class Environmental Assessment Report, accessed July 9, 2024, https://www.hamilton.ca/sites/default/files/2022-08/masterplan-transportation-update-2018.pdf.

Letters of Copyright Permission

APPROVED / PERMISSION GRANTED:

Name: C Spence

Signature:

Date: 8/15/24

Company: ASPECT Studios

Address: Level 1, 78-80 George Street, Redfern NSW 2016

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1. Material Description: Caulfield to Dandenong Railway Linear Park
   Creator: ASPECT Studios
   Credit Information to Appear in Thesis:
   Peter Bennetts Photography, *Caulfield to Dandenong Railway Linear Park*, Digital Photograph, 300x300, Accessed July 2, 2024, https://www.aspect-studios.com/au/projects/caulfield-to-dandenong-railway-linear-park.

Fig. 40

RE: Copyright Permission Request

Sara Downing
Thu 8/8/2024 12:52 PM
To:Anna Rose Supryka
Hi Anna,

You have permission to use this photo. Thank you for reaching out, and good luck with your thesis.

Best - Sara

Sara Downing ASLA, PLA, LEED-AP BD+C | Principal
OEHME, VAN SWEDEN | OvS
LANDSCAPE ARCHITECTURE

800 G Street SE | Washington, DC 20003
T 202.546.7575 x110 | **F** 202.546.1035 | ovsla.com
C 202.740.2622

From: Anna Rose Supryka
Sent: Wednesday, August 7, 2024 4:53 PM
To: Sara Downing
Subject: Copyright Permission Request

Good afternoon,

My name is Anna and I am a graduate student at the University of Waterloo School of Architecture in Ontario, Canada. I am writing to request permission to use one photograph of the woodland portion of the New York Botanical Native Plant Garden in my Master's thesis document.

Could you please connect me with a team member who could potentially grant permission? A formal request form is attached.

Thank you kindly!
Anna Supryka

Fig. 54

APPROVED / PERMISSION GRANTED:

Name: Pawel Antoni Lange

Signature:

Date: 14/8-24

MATERIAL DESCRIPTION:

Title: Site Plan of Activity Landscape Kastrup

Creator: MASU Planning

CAPTION AND CREDIT INFORMATION:

MASU Planning. *Plan Drawing*. (MASU Planning (blog). Accessed June 30, 2024.)
https://www.masuplanning.com/project/activity-landscape-kastrup-2/.

Fig. 57

APPROVED / PERMISSION GRANTED:

Name: Kirstine Autzen

Signature:

Date: 10. august 2024

MATERIALS REQUESTED FOR USE:

1. Material Description: Red Path at Activity Landscape Kastrup
   Creator: Kirstine Autzen
   Credit Information to Appear in Thesis:
   Kirstine Autzen, *Red Path at Activity Landscape Kastrup*, MASU Planning (blog), accessed June 30, 2024, https://www.masuplanning.com/project/activity-landscape-kastrup-2/.

2. Material Description: Swings at Activity Landscape Kastrup
   Creator: Kirstine Autzen
   Credit Information to Appear in Thesis:
   Kirstine Autzen, *Swings at Activity Landscape Kastrup*, MASU Planning (blog), accessed June 30, 2024, https://www.masuplanning.com/project/activity-landscape-kastrup-2/.

3. Material Description: Slides at Activity Landscape Kastrup
   Creator: Kirstine Autzen
   Credit Information to Appear in Thesis:
   Kirstine Autzen, *Slides at Activity Landscape Kastrup*, MASU Planning (blog), accessed June 30, 2024, https://www.masuplanning.com/project/activity-landscape-kastrup-2/.

Fig. 56, 58, 59

Re: Beacon Food Forest Response

Anna Rose Supryka
Sun 8/11/2024 12:48 PM
To:Khalil Griffith

Hi Khalil,
Thank you so much! I really appreciate your help.
Best regards,
Anna

From: Khalil Griffith
Sent: Sunday, August 11, 2024 4:27 AM
To: Anna Rose Supryka
Subject: Beacon Food Forest Response

Hello Anna, I just saw your request to use two of our images. Permission is granted.

Best,
Khalil I. Griffith
Site & Programs Director
Beacon Food Forest
501-772-9470

Fig. 61, 63

APPROVED / PERMISSION GRANTED:

Name: Liam Doyle

Signature: L. Doyle

Date: August 7, 2024

MATERIALS REQUESTED FOR USE:

1. Material Description: *Straining for seeds at the Seed Saving Workshop, Toronto Plant Market*
   Creator: Liam Doyle
   Credit Information to Appear in Thesis:
   Liam Doyle, *Straining for seeds at the Seed Saving Workshop, Toronto Plant Market*, (Ground 60 (Winter 2022)), page 4, figure 5, https://issuu.com/oalagroundmagazine/docs/ground_60-final.

2. Material Description: *Desmodium canadense*
   Creator: Liam Doyle
   Credit Information to Appear in Thesis:
   Liam Doyle, *Desmodium canadense*, (Ground 60 (Winter 2022)), page 5, figure 8, https://issuu.com/oalagroundmagazine/docs/ground_60-final.

3. Material Description: *Planting the Toronto Seed Strategy seed orchard*
   Creator: Liam Doyle
   Credit Information to Appear in Thesis:
   Liam Doyle, *Planting the Toronto Seed Strategy seed orchard*, (Ground 60 (Winter 2022)), page 5, figure 10, https://issuu.com/oalagroundmagazine/docs/ground_60-final.

Fig. 66, 67, 68

APPROVED / PERMISSION GRANTED:

Name: Suzanne Coleman

Signature:

Date: 8/8/24

Company: Vogt Landscape

Address: Unit 9, New North House, Canonbury Yard, 190 New North Road, London N1 7BJ, UK

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1. Material Description: *Tree Transplantation over Time*
   Creator: Vogt Landscape
   Credit Information to Appear in Thesis:
   Vogt Landscape Limited London, *Tree Transplantation over Time*, (Baden: Lars Müller, 2010), 230.

2. Material Description: *Trees per Hectare diagram*
   Creator: Vogt Landscape
   Credit Information to Appear in Thesis:
   Vogt Landscape Limited London, *Trees per Hectare diagram*, (Baden: Lars Müller, 2010), 230.

Fig. 69, 70

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