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Fort Needham Master Plan

HALIFAX

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HALIFAX

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CHAPTER

01

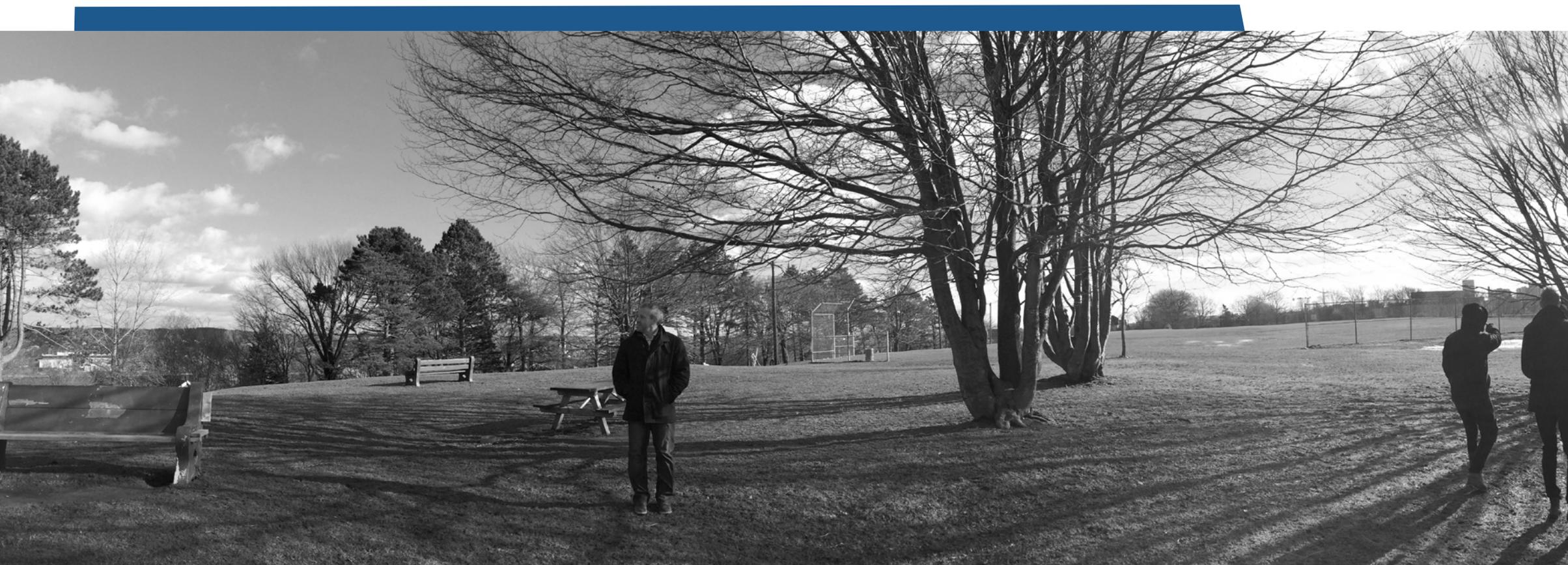
INCEPTION

01: Inception

1.1 The Imperative of Balance

The history of Needham Hill goes back to the settlement of Halifax in 1749 with an 80 acre land grant for the Governors North Farm. Like Citadel Hill, around which the City of Halifax was planned, Needham Hill offered a strategic defensive command of the Halifax Harbour Narrows at the gateway to one of the finest ice-free harbours in North America. Amongst the hostile terrain of rocky granite outcrops and extensive coastal wetlands, these glacial drumlins were prized for their deep fertile soils, their generous old growth hardwood forests and their commanding views as far as the eye could see.

Needham Hill was initially cleared for agriculture but was quickly seized as a defence for the Royal Naval Dockyard in 1776 when an earthen redoubt, barracks and later, a blockhouse were constructed. As the City of Halifax expanded around the hill about the time of Confederation, it became well used by the Richmond neighbourhood for both community recreation and military training. On December 6th, 1917, the Halifax Explosion at the foot of Needham Hill changed the face of Halifax forever, killing almost 2000 and injuring over 9000 people. Since that time, the Hill has become a memorial to the tragic explosion, but also remains



an important community park for the growing Richmond community and City of Halifax.

In 2014, with the approaching centenary of the Halifax Explosion, the Halifax Regional Municipality commissioned Ekistics to craft a long-range vision and design concept for the park. The team was tasked with balancing the needs of the local community and objectives for improving the community park while significantly enhancing the memorial capacity of Fort Needham as an important regional park destination for the City, Province and Nation.

Today, the site has many conflicting uses, lacks visibility, has poor access, and demands a clear plan. The park suffers from a loss of focus from its original purpose and significance as a Regional Park, and it fails to fully convey the significance of the Halifax Explosion and its impact on the city and country. Like any historically significant park, the new plan must balance:

- › the need to respect and relay the cultural history of the site and educate future generations;
- › improve the urban ecology of the city;

- › enhance recreational uses in a way that caters to the current priorities of local and regional residents of Halifax; and
- › improve the park's capacity to attract non-local visitors who want to learn about the national and humanitarian significance of the events that occurred in the past.

The goal of the Fort Needham Master Plan is to achieve the right balance of uses and outline a roadmap for improvements enhancing the site's national and historic significance.

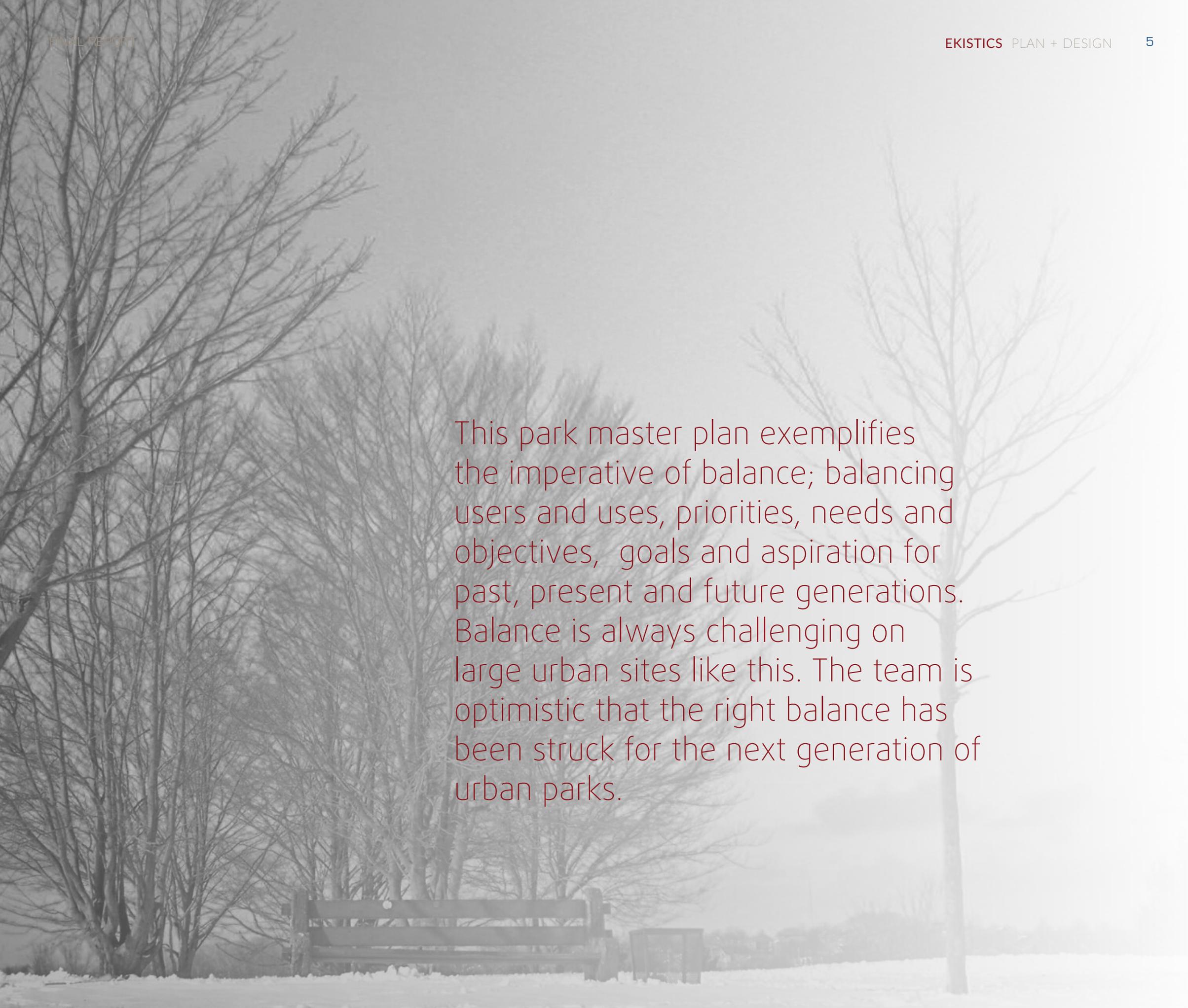


1.1.1 Plan Objectives

The objectives of this plan are:

1. To **engage** the community and spark discussion about the future of the Needham Park
2. To **create** management guidelines and recommendations for the park that takes into account the Municipality's public open space, community recreation, and culture and heritage planning objectives.
3. To **identify** the significant cultural and heritage components of the Memorial Park and recommend a conservation approach around the cultural landscape and heritage resources.
4. To **conduct** an integrative site assessment and comprehensive data-gathering exercise of the study area to inform future decisions about the park design, development, operations and maintenance that establish sustainable land development and land management practices for the park.
5. To **rationalize** and prioritize outdoor recreation programming and facilities, and make recommendations based the capacity of the site and the impact to the cultural integrity of the park to support various programs.
6. To **identify** opportunities and improvements for the park as a cultural destination for residents and visitors;
7. To **develop** a program approach for heritage interpretation and a visitor experience concept; and make recommendations to improve visible prominence, wayfinding, and access.
8. To **develop** an overall conceptual site plan and detailed design solutions that set up the framework for site development and operations that will guide the eventual preparation of more detailed design plans.
9. To **identify** capital projects and park improvements to be implemented in preparation for the Halifax Explosion 100th Anniversary in 2017 including detailed concept plans for these projects
10. To **propose** an implementation strategy that identifies capital projects, probable costs and phasing approach.



A photograph of a park in winter. The ground is covered in a layer of snow. In the foreground, there is a dark wooden bench. Behind the bench, a line of bare, leafless trees stretches across the middle ground. The background is a pale, overcast sky. The overall tone is muted and serene.

This park master plan exemplifies the imperative of balance; balancing users and uses, priorities, needs and objectives, goals and aspiration for past, present and future generations. Balance is always challenging on large urban sites like this. The team is optimistic that the right balance has been struck for the next generation of urban parks.



Fig 1.1. Study Context

1.2 Study Context

1.2.1 Location

The 6.3 ha (15.5 acres) Fort Needham Park is located in Halifax's North End, a predominantly residential neighbourhood with some mixed commercial development, civic institutional uses, and heavy industrial uses on the waterfront. The park is situated atop a glacial drumlin and is characterized with a flat open top and steep, vegetated slopes on most sides. To the east, the park overlooks the Halifax Shipyards located on the western shore of The Narrows of the Halifax Harbour. Prior to this study, Irving Shipbuilding signed a historic contract with the federal government to build six Arctic offshore patrol ships with a ceiling price of \$2.3 billion. While many in the community are thrilled at the economic potential of this project, there is some dismay that the scale of the recently constructed shipbuilding facilities are further eroding views to the site of one of the most profound events to change the face and heart of the City; all the more reason to improve the memorial capacity of Fort Needham. To the west lies the Hydrostone District National Historic Site. Built to replace housing destroyed by the Halifax Explosion of 1917, the Hydrostone was planned as a complete, self-sustaining urban community. The residential neighbourhood has matured gracefully over the last ten decades maintaining its authenticity as an excellent example of the Garden City urban planning movement in Canada and has become a vibrant and desirable place to live in the North End. The Hydrostone Market fronting Young Street is a popular destination with unique shops and eateries.

The Needham Community Recreation Centre borders the northwest corner of the park.

1.2.2 Planning Context

As the Halifax Explosion approaches its historic centenary, the City has embarked on Phase 3 of the HRMbyDesign process, the Centre Plan, to increase density in core areas of the city that will not compromise the quality and character of existing neighbourhoods. The nearby Young Street corridor is one of these important growth centres for the Municipality which will eventually accommodate thousands of new people. Similarly, the area around the Hydrostone is currently going through a renaissance of development activity with mid-rise developments adding new people and new activities to the neighbourhood. With this growth and development, there is increasing pressure on the parks and open space networks to fulfill a variety of passive and active recreation needs.

1.2.3 Parkland Context

Within the Halifax Regional Municipality's park system, the primary objective of a regional park is to preserve and protect significant natural or cultural resources. Regional parks are intended to serve the educational, cultural and recreation needs of the population of the entire region as well as for visitors to Halifax. The municipality has classified Fort Needham as a regional park because of its high cultural significance,



Young/Kempt
future growth
area

Hydrostone
District National
Historic Site

NS Family Court

Needham Community
Recreation Centre

Devonshire Arena

Mulgrave Park

Hydrostone
Market

Novalea Dr.

Union St.

Young St.

Devonshire Ave.

Explosion Site

Gottingen Street

Halifax Shipyard

CFB Halifax
Stadacona

Halifax Harbour

Figure 1.1 Aerial View

Figure 1.1 Aerial View



Halifax Citadel National
Historic Site

Halifax Commons

Macdonald Bridge



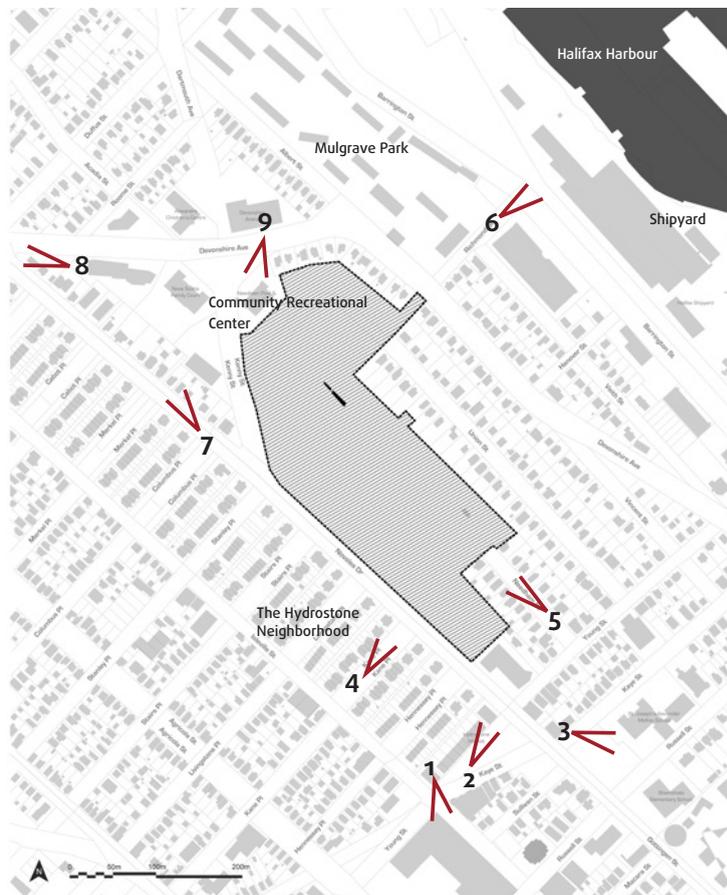


Fig 1.2 Contexts Views. See views on Fig 1.3.

particularly its association with the event of the Halifax Explosion. The park provides a variety of recreation opportunities at the local level, but it is the cultural and heritage aspects that create the regional draw for park visitation. Therefore, the park must satisfy a broader set of objectives than those for a local park, with an appropriate level of service and amenities that will support the needs of visitors who are coming to this park for its cultural and heritage offerings.

1.2.4 Surrounding Context

The Hydrostone Neighbourhood

Located to the west of the site is the Hydrostone district, which was planned by planner Thomas Adams after the Halifax Explosion in 1917. The area is designated as a National Historic Site (listed in 2007) because it is an excellent example of the English-style garden suburb in Canada retaining a high degree of authenticity. The Hydrostone was so named from the material utilized to build the properties in the area - Hydrostone concrete. Adams utilized the best practices of the time, implementing Garden City Design principles which included tree lined boulevards and grassy strips to serve as communal outdoor space for the neighbourhood, and back lane access at the rear of buildings. Fort Needham Park was designed to act as the geographical focus and open space in the district. The development is laid out in a grid formation with houses of similar architectural styles lining the treed boulevards, and contains a mix of residential and commercial uses.

While the area was originally developed to provide affordable housing, today the Hydrostone has become a vibrant, desirable and trendy area. The mix of cafes, shops, green spaces and aesthetically attractive, unique architectural features emulating a European-style market destination has become popular with both residents and tourists. With the increased popularity of the district, the social structure of the

area has shifted over time as young professionals and families have moved in, attracted to the abundant green spaces, proximity to shops, transit, and recreational opportunities.

Acadia Square/Halifax Harbour/Shipyards

To the east, the park overlooks the Halifax Shipyards which are located on the western shore of The Narrows of the Halifax Harbour. The view offered from the top of the glacial drumlin straight down to the harbour was chosen primarily to defend naval shipyards from overland attacks from the land-side. These views, in addition to the impact of the Halifax Explosion on the North End made this hill an appropriate location for the Halifax Explosion Memorial Tower.

In 2011, Irving Shipbuilding was awarded a \$25 billion dollar contract to build Canada's new naval combat vessels starting in September 2015. To handle this influx in work Irving has developed the Ultra Hall Production Building which will house the ships under construction. The construction of this building has blocked the view of the harbour from the top of Fort Needham, much to the disappointment of local residents.

The Needham Community Recreational Centre

Located at the northwest corner of the park is the Needham Community Recreation Centre on Devonshire Avenue. This centre serves the surrounding community with facilities that include an indoor swimming pool, a gymnasium, party room, and an outdoor playground for the daycare.

It was recommended in the 2008 Community Facilities Master Plan that the existing Needham Community Centre building be demolished and a new replacement facility be constructed at the Devonshire Arena property across the street. Though the Devonshire

property has not yet been planned, this master plan gives consideration to how the Needham Community Centre corner could interact with the future Devonshire property.

Mulgrave Park

Mulgrave Park is a public housing project located

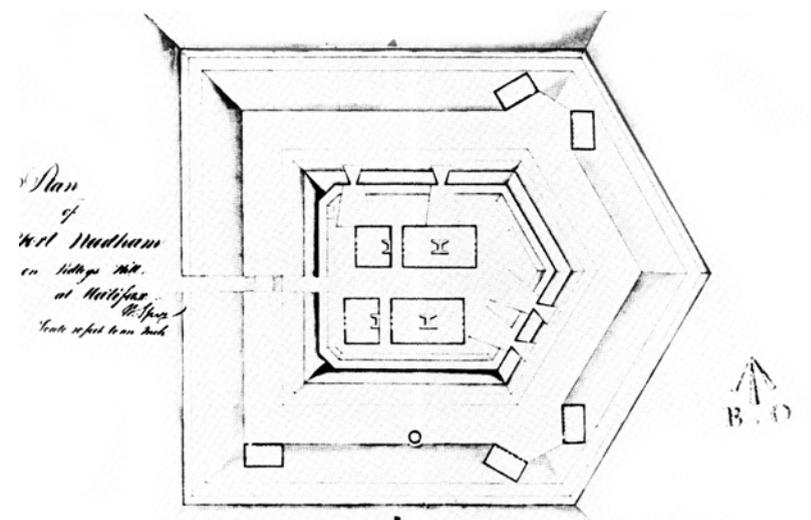
to the North of Fort Needham Park that houses over 250 families. Mulgrave Park was constructed in the 1960s to prepare for the destruction of the Africville community. The turbulence that surrounded the destruction of Africville and the habitation of Mulgrave Park has had lasting impacts on the area.

The proximity of Mulgrave Park to Fort Needham

offers residents accessible recreation and greenspace opportunities. Correlations between public housing and nature have been extensively studied and show positive impacts to the communities. Proximate greenspace has been shown to increase informal contact, forming social ties by acting as a meeting space and integrating communities.

Fig 1.3 Contexts Views (see Fig 1.2 for map)





1.3 Fort Needham Vestiges

As part of this master plan process, an archaeological resource assessment (Heritage Resource Permit A2014NS106) was prepared by Davis MacIntyre and Associates in November of 2014. This archaeological document is appended as a separate document from the master plan and provides a comprehensive overview of the history of the site. The archaeological investigation, combined with supplementary historical analysis is summarized below to provide a context for the interpretive and design rationale of the plan in later chapters.

Ice Age

When the glaciers began to recede at the end of the last ice age (10-15k years ago), they left behind drumlins, or egg shaped topographical formations consisting of sandy or silty soils. Citadel Hill, George's Island and Fort Needham are examples of glacial drumlins that were highly valued as military sites due to their commanding views and ease of shaping the topography. Frequently in Nova Scotia, drumlins are ideal agricultural sites, and were covered with old growth hardwood forests.

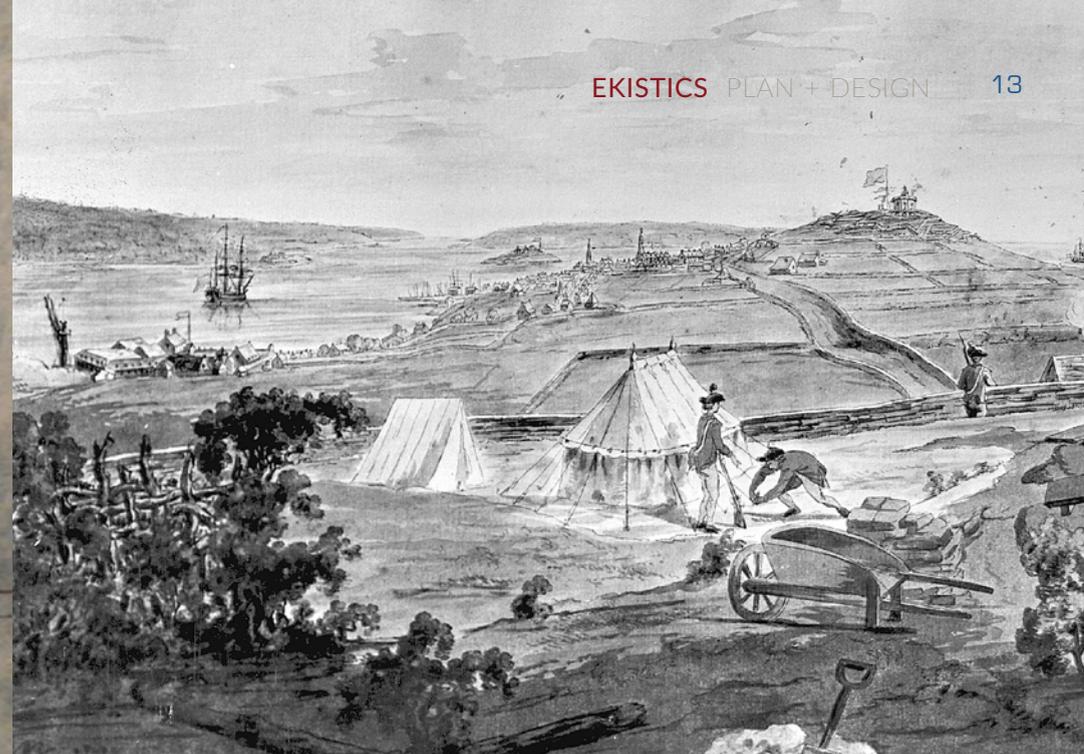
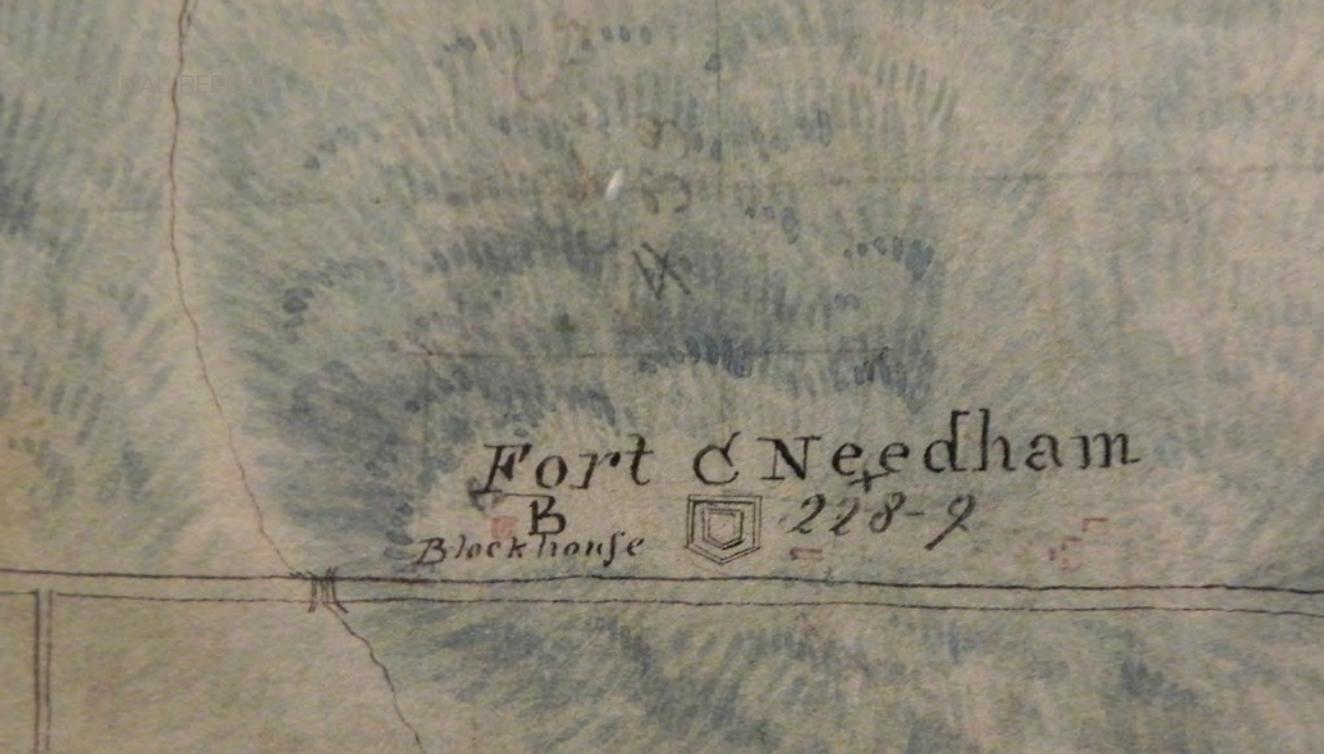
First Nations Settlement

First-Nation Peoples have occupied Nova Scotia for the last 11,000 years beginning with the period known as the Sa'qewe'k L'nu'k or Paleo-Indian period. There is strong record that significant settlements occurred around the Harbour at Dartmouth, the Northwest Arm and Bedford, though there is no evidence of pre-European contact First Nations settlement on Fort Needham hill. However, marshy areas (such as the land where the Halifax Common is today) were traditionally used for moose hunting by the Mi'kmaq. Halifax Peninsula was part of the district called Eskikewa'kik or the "skin dressers territory".

Fort Needham and The Founding of Halifax

Halifax was founded in 1749, and the hill now known as Fort Needham lay well outside the palisades of the original town, over 2.2km from the city walls.

In 1753 the 32 hectares of the hill were granted to the Governor of Nova Scotia, and it was given the name Governor's North Farm. The land was cleared and farmed, subdivided several times, and buildings were built on the south western corner, where Young



and Novalea Streets now meet and where a large apartment building stands today. The hill would have been a long walk for a Halifax resident of the 1750s. The original survey of the town of Halifax was a rectangle of land approximately 700m by 390m; the hill would have been over 3 times the town's length away.

By the 1770s the town had grown well beyond the early palisades. Both the Royal Dockyard and the extensive suburbs and farms grew north of the town, up along the harbour. Concern surrounding the American Revolutionary War caused the government to consider upgrading its defences, and the British Royal Engineers built a fort on the south side of the hill for this purpose in 1776.

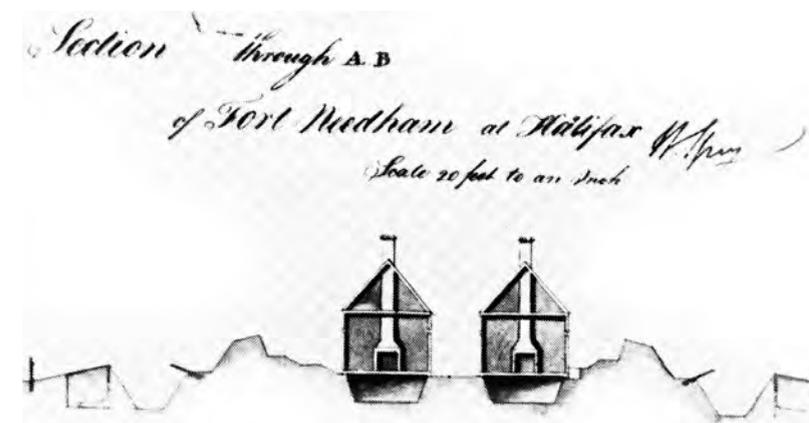
As one of the highest points on the peninsula, the hill had a great view of the harbour as well as over-land to the west and south. Two barracks were built inside a ditch within a raised berm, each barracks having room for 50-100 men. Plans called for a blockhouse on the north end of the hill, which was never built. The fort was originally known as Pedley's Hill Redoubt, after landowner James Pedley, whose land was expropriated for the purpose. In 1778 the name was officially changed to Fort Needham. Fort Needham

persists as the name of the site today, long after the fort itself disappeared.

Fort Needham was intended primarily to protect the Royal Naval Yard from overland attacks, and as such, it faced the road into Halifax from the north, not the harbour. Two 24lb. cannons pointed west toward then Gottingen Street (Now Novalea Drive), and 2 cannons pointed south toward Fort George (the Citadel).

By the beginning of the 19th century, the fort was already in ruin. It was meant to be a temporary structure, and was no longer necessary after the revolutionary war was over. Unfortunately, conflict broke out again in 1803, this time between Britain and France during the Napoleonic Wars. After the Leopard-Chesapeake Affair of 1807, wherein the British ship Leopard boarded the American Chesapeake to search for British deserters in the high Atlantic seas, a rumour was circulated that the Americans would retaliate by attacking Halifax. As a result, the Royal Engineers planned another fort to be built on the hill.

The second fort was conceived as a large facility, about the same size as Fort George / the Halifax Citadel, including a stone tower with a removable roof, and a barracks for 300 men. However, what was



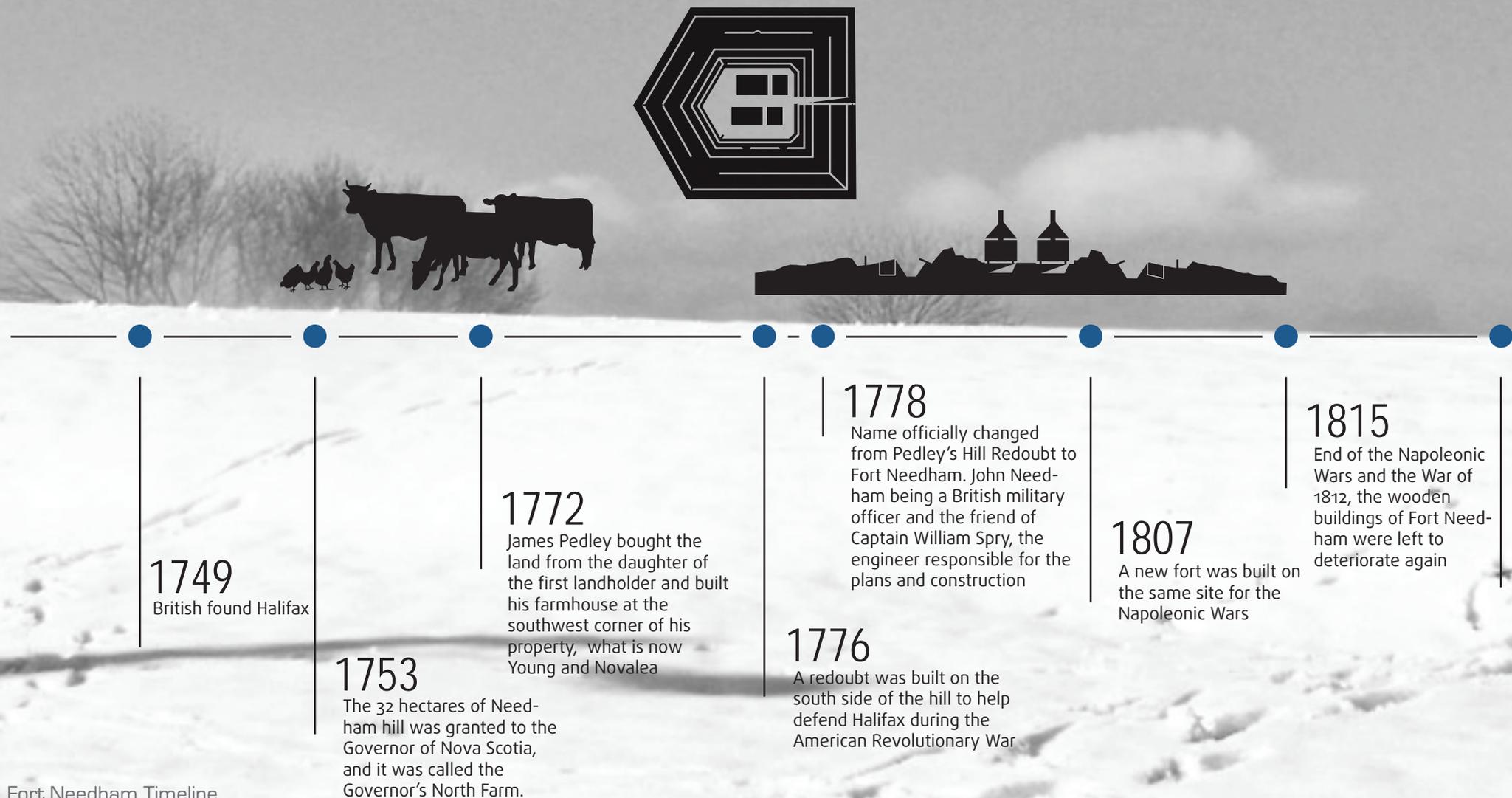
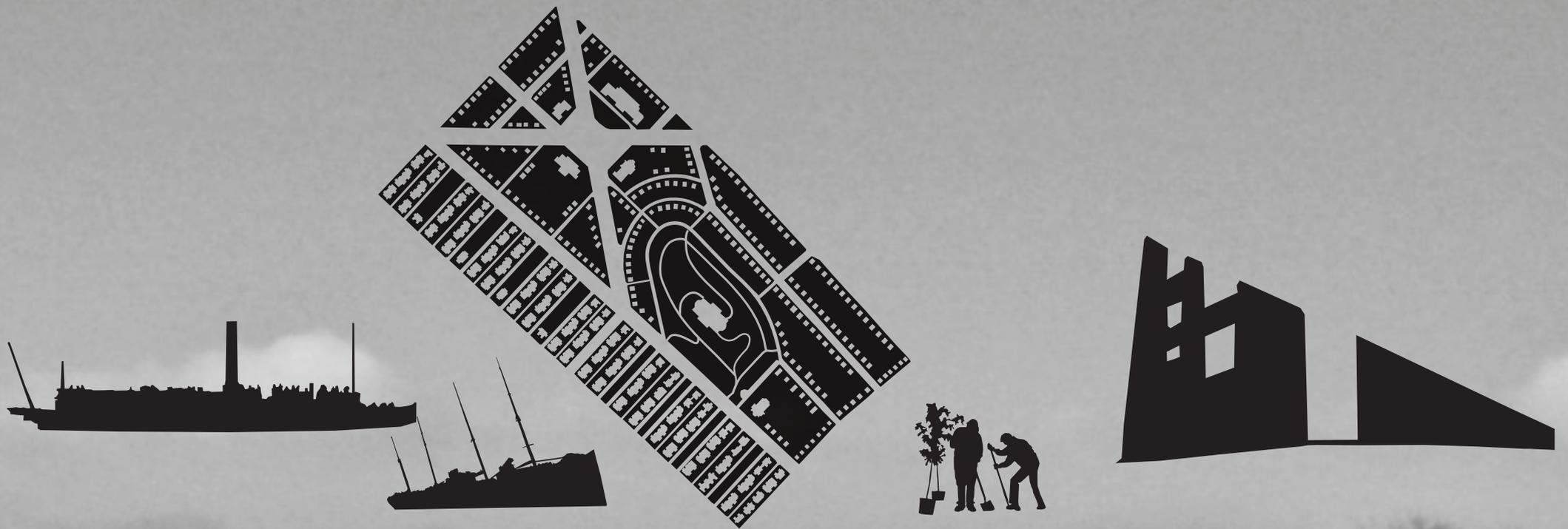


Figure 1.4 Fort Needham Timeline



1860

Soldiers from the nearby barracks used Needham hill as a rifle range and a place to play polo

1854

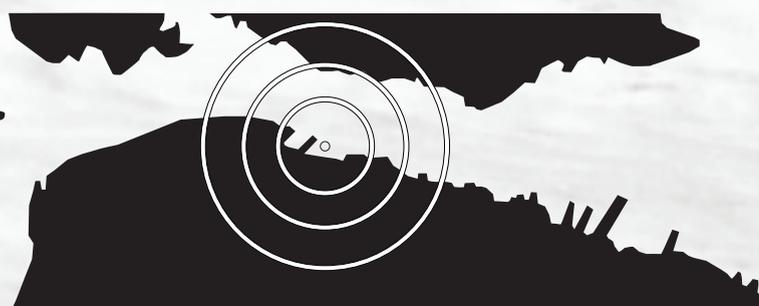
The Nova Scotia Government relinquished its hold on the governor's North Farm and subdivided it for private sale. This created the east-west and north-south street grid of the pre-Explosion Richmond Community.

Three parcels were reserved for green space, Mulgrave Park, Acadia Square and Fort Needham



1917

The SS Mont Blanc filled with explosives collides with SS Imo creating a devastating explosion killing almost 2000 people, and over nine thousand were injured



1918

The Halifax Relief Commission planned for rebuilding the Devastated Area. The Hydrostone area and several new streets were created north of Fort Needham

1942

Fort Needham Memorial Park was deeded to the City of Halifax by the Halifax Relief Commission

1949

Agreement dated August 25, 1949 the lands were established as a public park "as a memorial to the victims of the Halifax Explosion of 1917 to be used as a public park forever."

1985

An existing monument to the Halifax Explosion was built.



actually built ended up being similar to the original Fort Needham, a redoubt with a building inside (either a barracks or a berm). This time, a wooden blockhouse was built at the northern edge of the hill to protect the redoubt from invaders coming up the north side.

By 1815, after the Napoleonic Wars and the War of 1812 had ended, the wooden buildings of Fort Needham were left to rot again. There was some discussion of making a new stone tower on the site as part of a four-tower defence system for the city. Unfortunately, Fort George (the Citadel) took 30 years to build (it was supposed to be done in six), cost double its budget, and was obsolete by the time it was finished, leaving no resources to finish Fort Needham. In the 1850s, the redoubt was still visible, but there wasn't much left. Fort Needham no longer served any useful military purpose.

Settlement around the Hill

The industrialization of the area began in the 1860s. Down the hill to the east, the sprawling Richmond railway yards of the Intercolonial Railway dominated the waterfront. The rail yards contained the city's first and only railway station - quite far from the city's centre.

South of the hill, the military opened the Needham barracks, or what came to be known as the Wellington barracks. Soldiers used nearby Needham hill for playing polo, and as a rifle range. Farmers still used the hill as pasture land. Even though residents filled

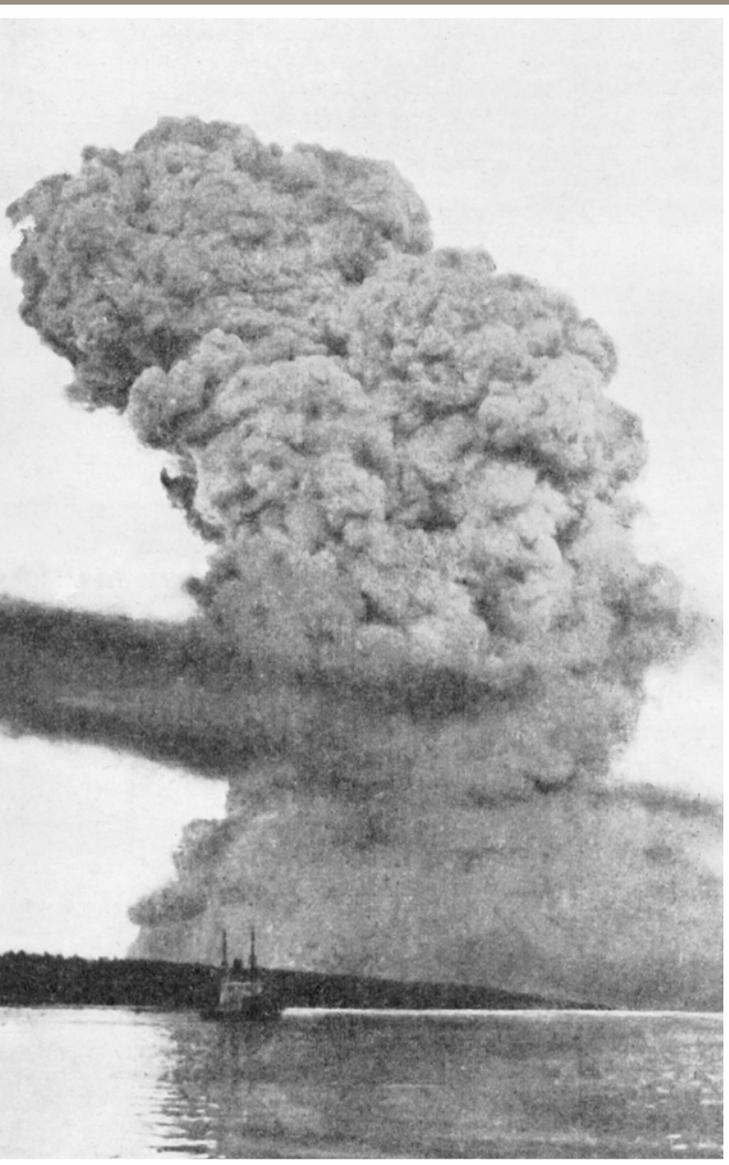
the area around Needham, the hill itself remained a pastoral, open-space.

The district around Fort Needham became known as Richmond, after Richmond Virginia, from which came the sugar for the massive Acadia Sugar Refinery based in the area. Other factories, such as Imperial Oil and Richmond Printing were based in the area because of proximity to the rail yards. Workers and factory owners alike moved into the area to be close to where they made their living.

Part of Needham hill remained open-space into the 20th century, used by the military for training grounds, and by the residents for recreation. Kids played on the old redoubt earthworks and skated in the redoubt ditches in the winter.

1917 Halifax Explosion

In the middle of the First World War, on Dec 6, 1917, a French tramp steamer named the Mont-Blanc blew up in the harbour near the foot of Richmond Street. It was laden with 3000 tonnes of American explosives bound for Bordeaux France, where they would be melted into shells to be used by the Allies. Over 1900 identified people died, and thousands more were injured - massive casualties suffered by civilians in a time of war, and by far the largest loss of life on Canadian soil. Whole city blocks in Richmond were completely razed, especially those to the east of Fort Needham. The hill itself deflected some of the blast upwards, though houses and institutions on the west





side of the hill were not altogether spared, such was the power of the blast.

Fort Needham hill was covered in iron and steel pieces of the Mont-Blanc, bodies and building debris. After the calamity, Fort Needham hill was used as a camp for residents made homeless by the blast.

The Government of Canada founded the Halifax Relief Commission (HRC) early in 1918 to resurrect Richmond. It was given nearly complete expropriation powers over 121.5 hectares of devastated land, and was mandated to plan and build new housing. The Hydrostone area, to the west of Fort Needham hill, is today the best known of the new housing created by the HRC. It was conceived in the style of a “garden suburb” by renowned British planner Thomas Adams along with Montréal-based architects Ross and Macdonald. Several new streets (e.g. Dartmouth, Devonshire and Union) were reconfigured as a better solution to the steep topography and some very steep streets, like Richmond street, were removed.

Adams planned Fort Needham Park as the central neighbourhood park for the area, though it was not developed as a park until much later. 1922 aerial photographs show a completely bare hill, with some relic of the 1807 fort’s earthworks. The hill was covered only by scrub plants and soil and was subject to heavy erosion; crews from Rockhead Prison (a large facility to the north of Fort Needham) were often called in to remove soil that washed down onto Gottingen Street and its trolley tracks in the early 20th century.

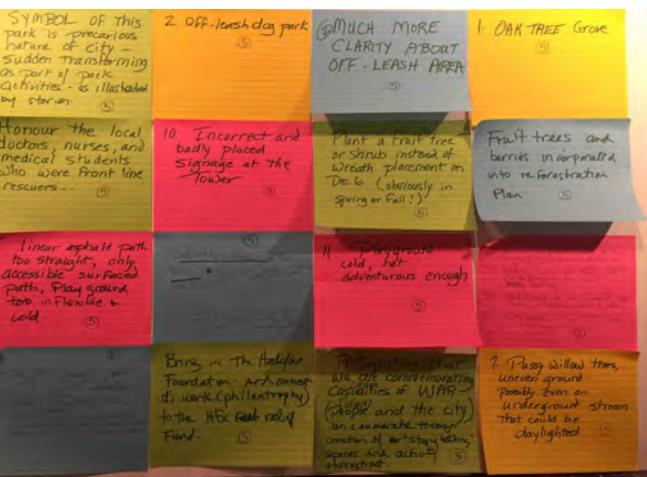
Oddly, Fort Needham had never been turned over to Canada by the British government in 1906 when the British Royal Navy left Halifax. With some difficulty, the land was eventually turned over to the HRC. In the 1940s, the HRC’s “Needham Park” was planted with poplar trees, levelled for sports fields, and a playground and canteen were built. Much of Needham Park as it looks today is as a result of the extensive landscaping done by the Halifax Relief Commission in the 40s and 50s. It is likely that any vestiges of the fort earthworks from the 19th century were erased by the landscaping in the 1950s. The park was ceded to the city in 1959. The agreement between the Relief Commission and the City states that the lands were established as a public park as a memorial to the victims of the Halifax Explosion of 1917 to be used as a public park forever.

In 1983-4 a citizens’ group raised \$400,000 for a memorial carillon that now sits at the northern edge of the hilltop. Designed by Halifax architect Keith L. Graham, the concrete, triangle-shaped monument has a gap which points the viewer to ground zero of the 1917 explosion at the harbour, at the bottom of the hill. The tower’s bells come from the Kaye Street United Memorial Church, in memory of the Orr Family who died in the Explosion.

Every December 6, a commemoration of the 1917 explosion is held on Fort Needham by the Memorial Bell Tower. A moment of silence is followed by the ringing of the bells.



Figure 1.5 Feedback from public sessions



1.4 Public Engagement

Though this master plan began in the fall of 2014, The Municipality began engagement and planning with the community as early as 2013 for park improvements. The outcomes of the engagement activities are highlighted below.

1.4.1 Precursor Engagement

February 28, 2013 Public Meeting

In the wake of the Green Network Plan for parks and the Urban Forest Master Plan, the area Councilor held a public meeting to solicit local feedback on local park issues. With approximately 40 people in attendance, HRM staff and public discussed maintenance issues, short and long term improvements, and opportunities for commemorative projects for the 100th anniversary of the Halifax Explosion (2017).

Maintenance suggestions included:

- › Better drainage for the field
- › More dog bags and dispensers
- › Trimming of undergrowth and trees
- › Improved paths and programmed areas

Short term goals included:

- › Edible landscaping
- › Expanded playgrounds/ add splash pad
- › Increase community events
- › Add picnic tables

Long term goals included:

- › Community food forest and garden
- › Bathroom facilities

- › Preserve open green space / don't tame wild growth

February 26, 2014 Public Meeting

Following the 2013 meeting, a second meeting was held to update the community on what improvements had taken place in the Fort Needham Park over the year. The public was also informed of two planning processes affecting the park over the next few years including:

- › The formation of an advisory committee to provide input into the development and implementation of the Halifax Explosion 100th Anniversary Commemoration Plan 2017.
- › The development of a master plan for the park that would look at all aspects of the park and, giving consideration to public feedback, develop a plan that coordinates potential projects.

Participants were then again asked to work in small groups suggesting maintenance improvements, and short and long term goals, reflecting on the 2013 suggestions and improvements.

Maintenance feedback included:

- › Plaque maintenance
- › Wooden screen for porta potty
- › Signage
- › Beech tree replacement plan if trees get sick/die

New short term interventions included:

- › The addition of a skating rink
- › Consider if there is need for tennis courts, baseball field, and football field
- › Improving trail and wilderness aspects

Long term feedback developed on past points consisted of:

- › Organized storytelling
- › Stormwater controls like rain gardens
- › Improved accessibility

The addition of a community garden, orchard and public washrooms were common themes as in the 2013 meeting.

These public meetings informed the development of this master plan, and were reiterated during the public consultation held in conjunction with the design of the Fort Needham Park master plan.

1.4.2 Master Plan Workshop

As part of the master plan design process, the consultants held a public design workshop in the evening of Thursday, December 4th. Approximately forty people attended. The workshop followed a world café style where groups of 6-8 people worked as teams at individual tables responding to questions developed by the client and consultants.

The first task involved a mapping exercise where participants were each asked to identify on a plan up to three (3) of their favourite places in the park (yellow dots) and up to three (3) of their least favorite places in the park (red dots). Participants were asked to write down the rationale for their choices. This question was designed to understand how people currently use the park, what they value and where there were incompatible uses.

For the second task, participants were asked; “In the future, what types of experiences do you want at Fort Needham?” Participants were asked to think

about broader experiences such as “I want to be sheltered,” rather than focusing on specific programs and elements such as “I want a pergola.” There was no limit set to the number of answers, and the participants were asked to work together in a group to share and record their ideas on blue cards. The third and final question asked; “How can we improve the commemorative experience of the Halifax Explosion?” There was no limit set to the number of responses which were recorded on the green cards. Following the table exercises, an individual from each table was asked to present the group’s top three responses to each of the questions. A number of reoccurring themes emerged, signalling a larger consensus on the major opportunities, challenges, wants, and ideas for the Park.

Fort Needham Park was agreed to be a special spot largely due to the views it offers – views to the harbour, Hydrostone, and to the west to watch the sunset. The park is also seen as a great place to contemplate, relax and read. The forest and vegetated slopes are highly appreciated, as they offer a diversity of blackberries, pussy willow trees, blueberries, and climbing trees. The pathways were also a prominent reoccurring theme, and participants stressed the importance that the pathways were for everyone’s use, including those walking, cycling, running and off-leash dogs.

Noted by many groups at the workshop were the playground areas, picnic tables, benches and gathering spaces. These amenities are seen as great for families and children, but need to be better maintained and upgraded. Participants also felt that the memorial structure, while grand, requires attention and maintenance.

Throughout the workshop, it became clear that the highly valued programs and elements were the



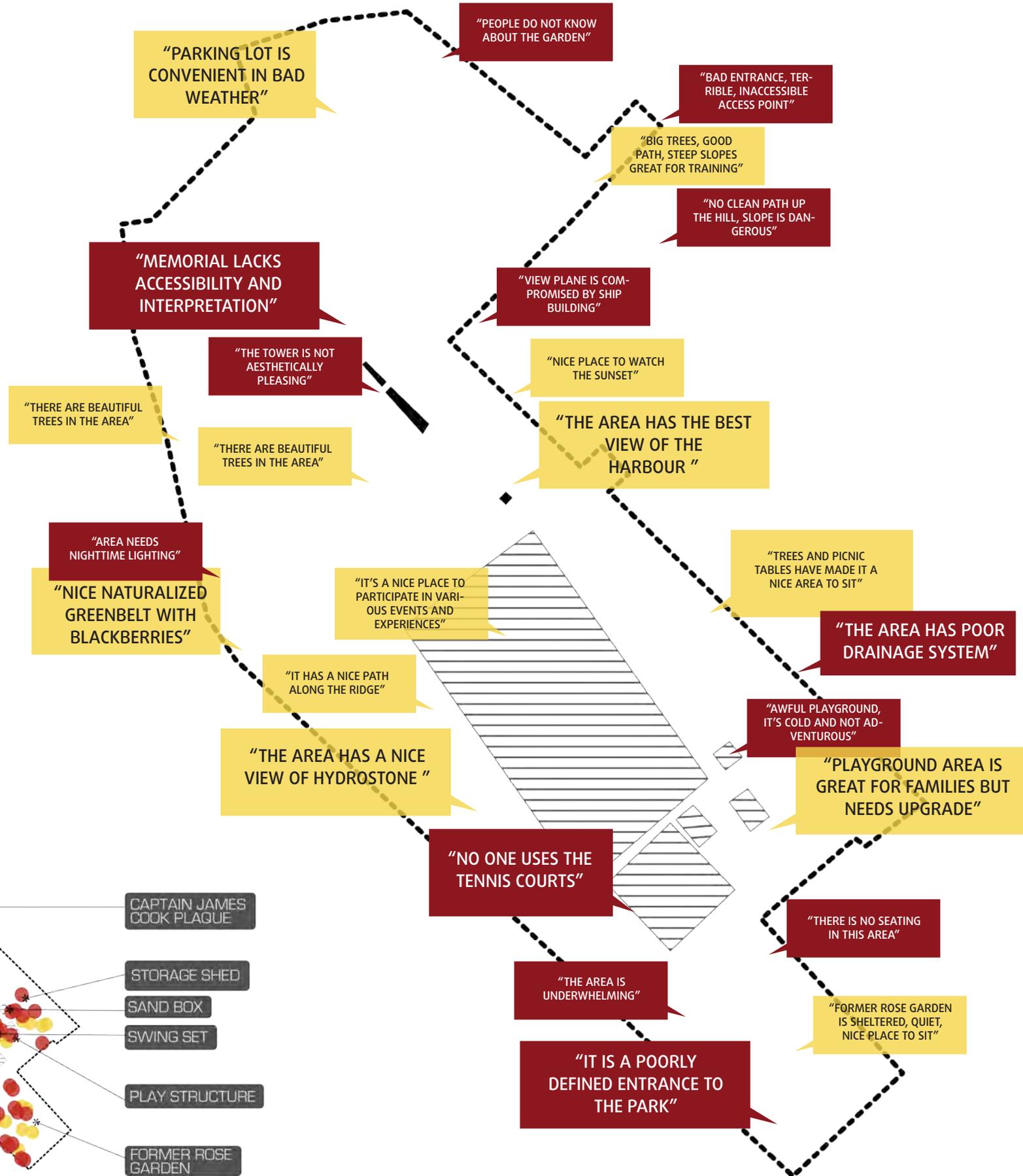


Figure 1.8 Map of Likes and Dislikes

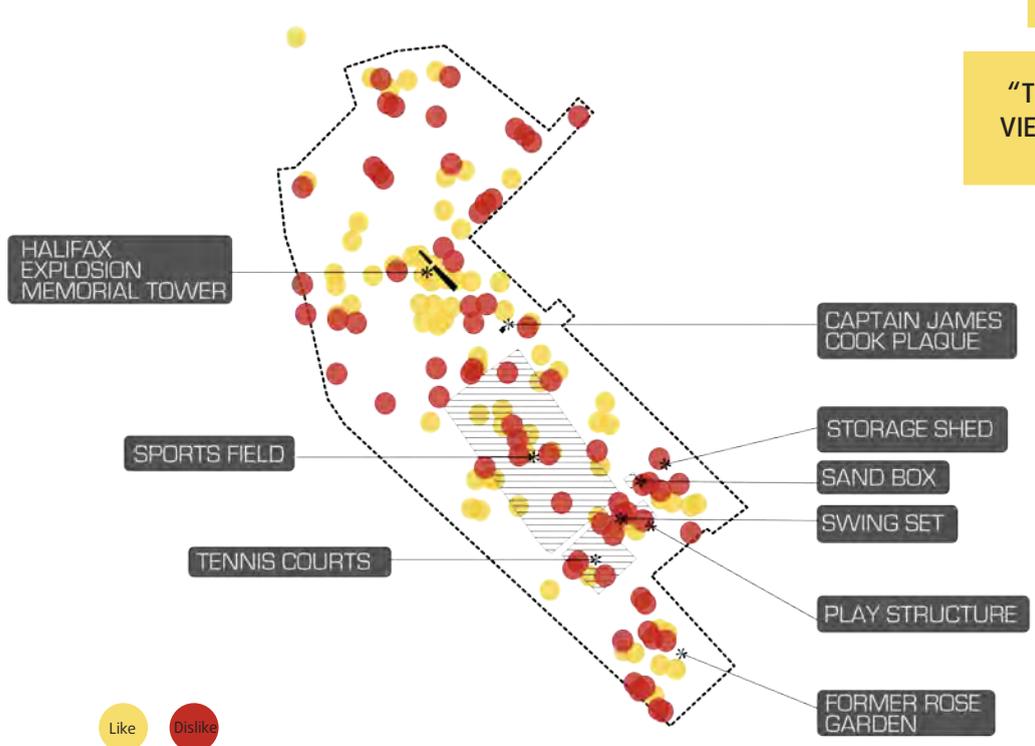
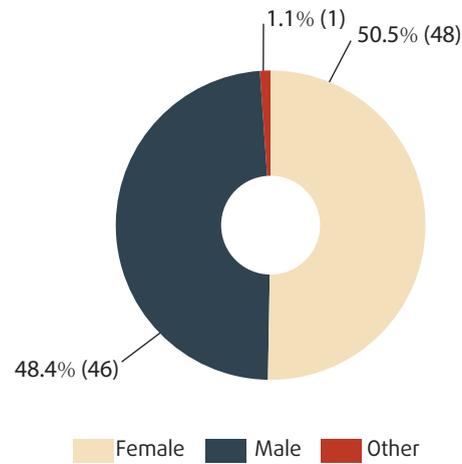
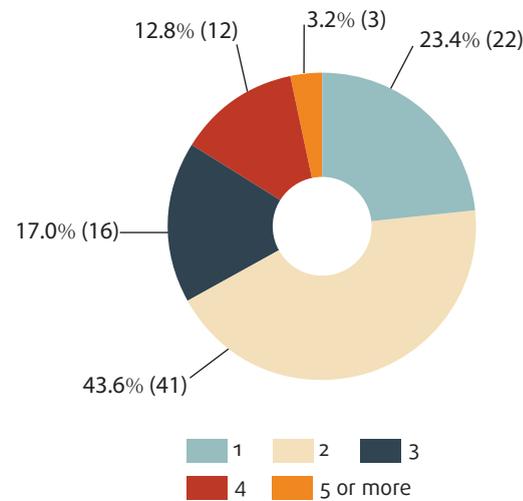


Figure 1.9 Online survey feedback

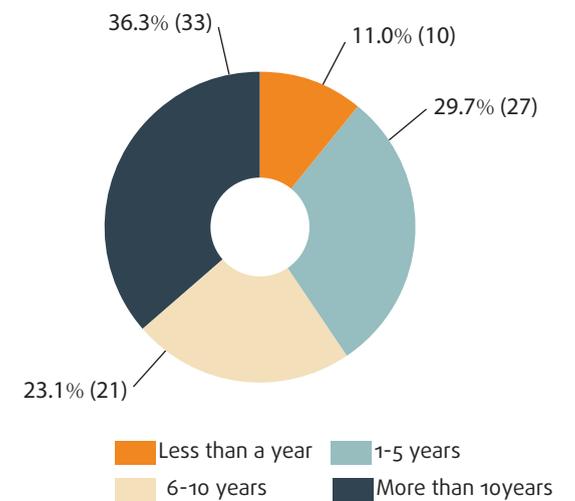
Q₁ Are you?



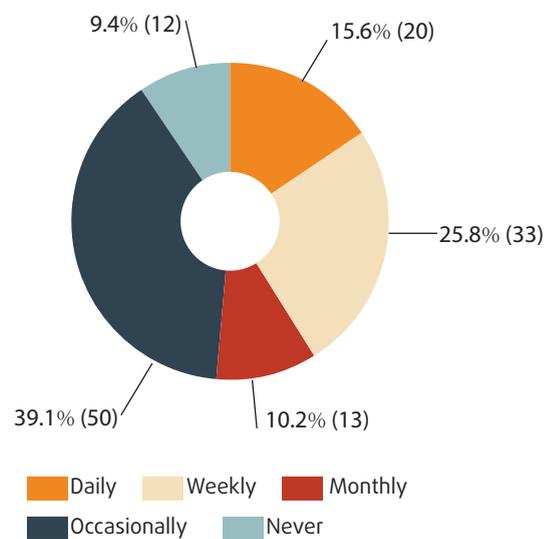
Q₂ How many people live in your household?



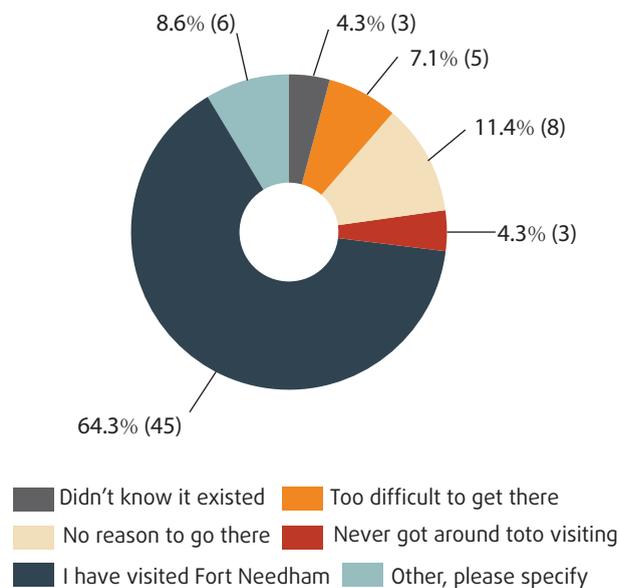
Q₃ How long have you been a user of Fort Needham Memorial Park?



Q₄ How often do you visit Fort Needham Park?



Q₅ If you've never visited Fort Needham, or haven't been there in the last year, why is that?



Q₆ How do you usually travel to Fort Needham?

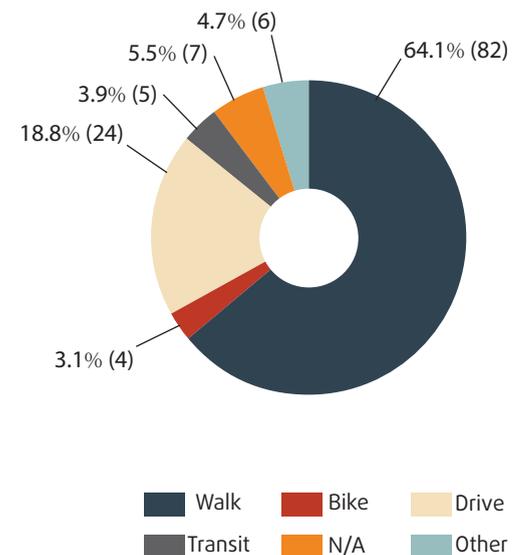


Figure xxxxxx Selected Online Survey Responses

not at all important.

Physical activity, views, social interaction, and contemplation/quiet were the common reasons people visited the park. The monument (17%), treed areas (consists of both the beeches by the picnic area and the forested area to the north - 16%) and picnic area (7%), playground (10%) and Dog Park (10%) were most frequently people's favourite areas on the site.

Important to the park were the physical activity elements, the safety and security of the area, the general health and the biodiversity of the area, and the overall accessibility to, and within the park. The general consensus was that the park is an important place for family, kids and dogs, and programming should reflect this. People valued the social elements and would like to see an increase in activities such as group picnics, festivals, organized community events, BBQs, yoga, community sport teams and music events. Improved facilities such as washrooms and drinking fountains are necessary to improve the comfort of the site. The existing playground is central to the use of the park, and people would like to see improvements as well as the addition of a natural playground.

At the same time, there is also an apparent respect for the park as a historical, commemorative site for quiet contemplation, relaxation and connection to

nature. A balance between the social and contemplative elements of the site is desired.

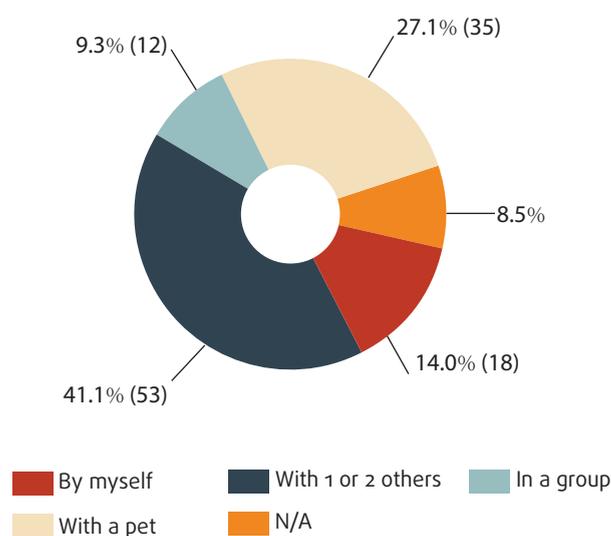
Another theme mentioned by respondents was the desire for increased emphasis on food security and community building through a larger community garden, food orchard, and greenhouse.

People felt the Memorial Bell Tower could be more attractive with an improved interpretive role. Many had suggestions for revitalization through interpretive signage, and vegetation. Loss of the view due to the shipbuilding building was a major disappointment to many, with suggests for the addition of an observation tower to rectify the loss of view.

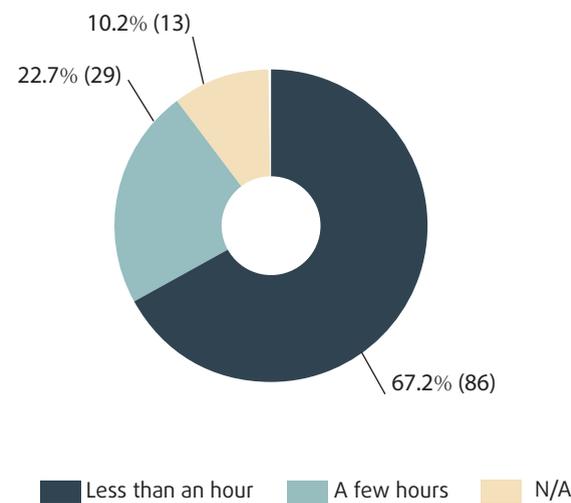
Improvement to the vegetation and paths were reoccurring in the feedback. Improving natural vegetation, trees, the community garden, and former rose garden were all mentioned. Improvements to paths so that people could meander through the site, as well as the addition of lights so the site can be better used in the winter and at night, were common.

The majority of feedback surrounding least favourite areas touched on lack of lighting in the park, underutilized areas, issues with off-leash dogs, and the sports field being underutilized, wet, or unattractive.

Q7 When visiting the Park, do you usually come alone or with others?



Q8 How long do you usually stay when you visit the Park?



Q9 What days of the week do you usually visit the park?

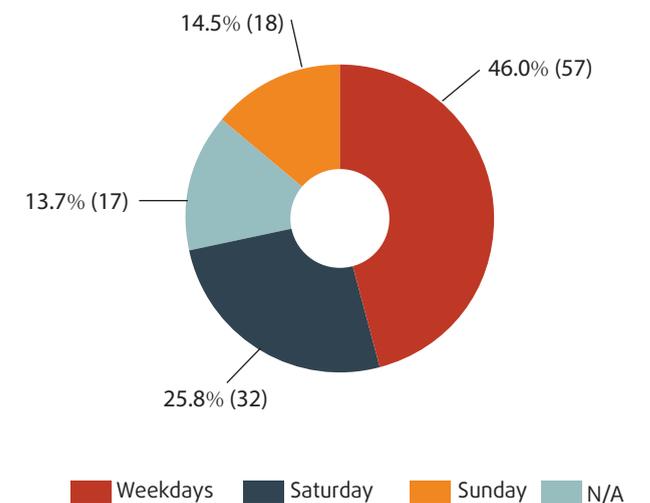
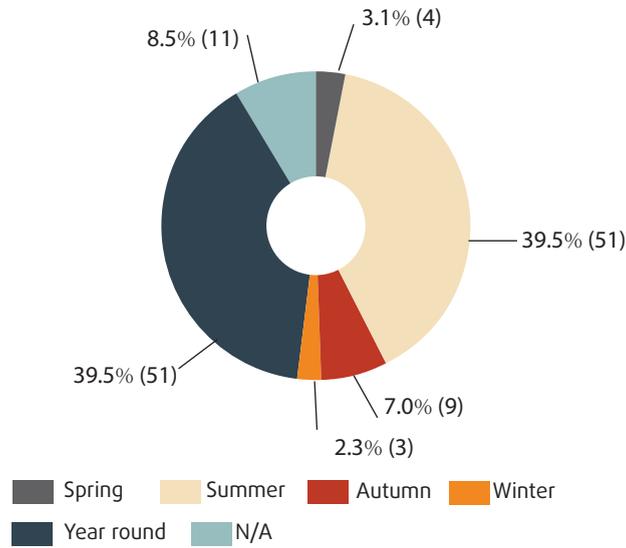
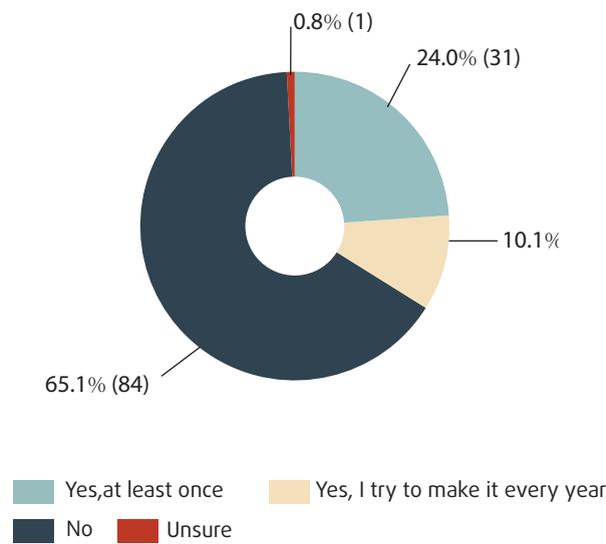


Figure 1.10 Online survey feedback

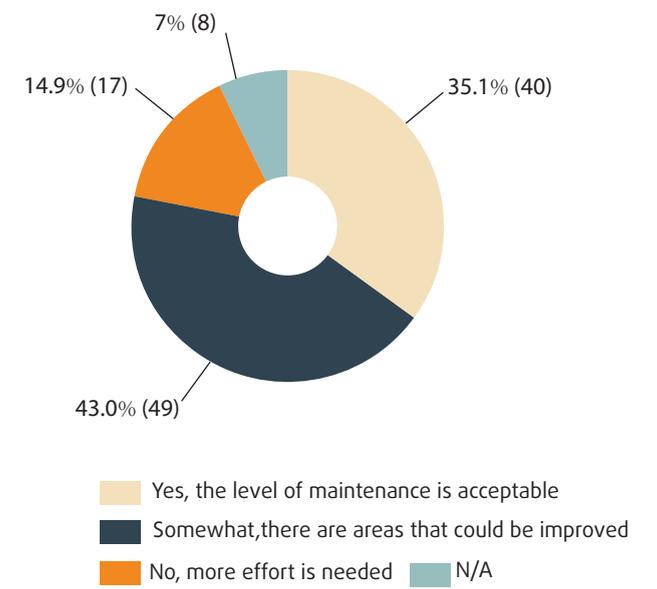
Q₁₀ Seasonally, when do you visit Fort Needham the most?



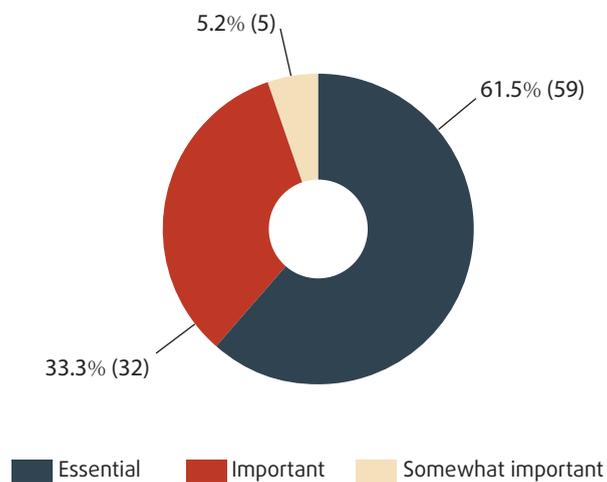
Q₁₁ Have you ever attended the Halifax Explosion Memorial Service held annually in the park on December 6th?



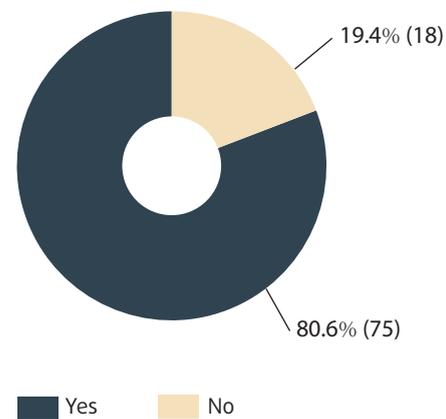
Q₁₂ Do you think Fort Needham is well maintained?



Q₁₃ How important is Fort Needham as a city park?



Q₁₄ Do you feel Fort Needham receives the attention to reflect its importance?



Q₁₅ How do Fort Needham's facilities rank against other parks in the area?

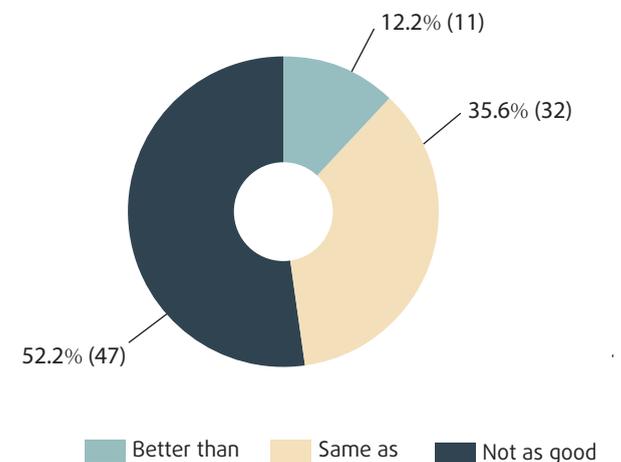
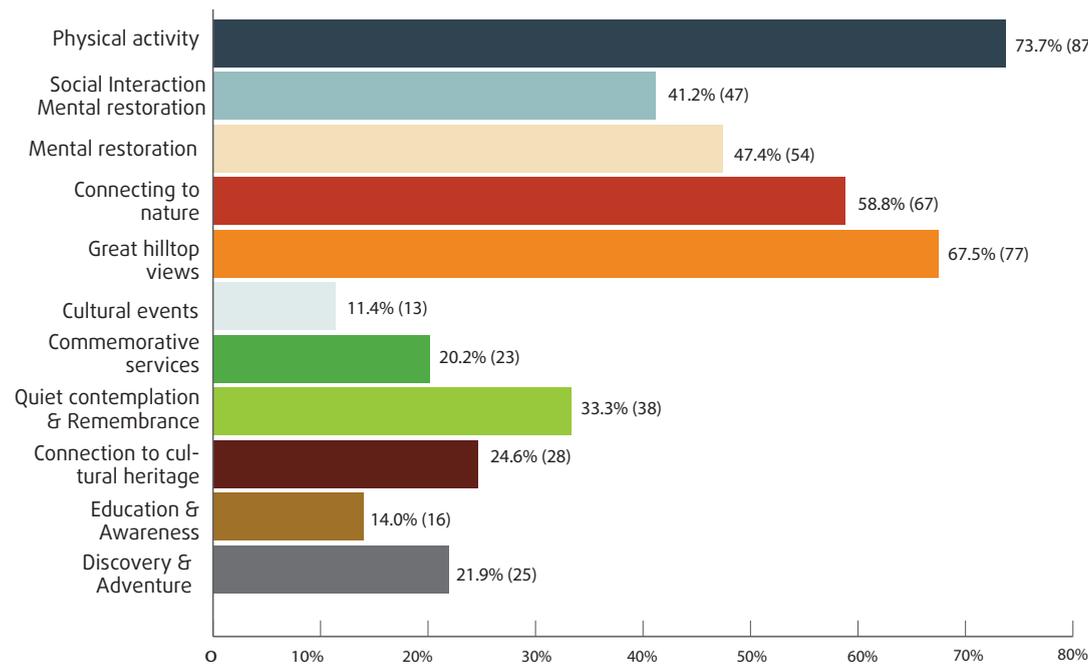
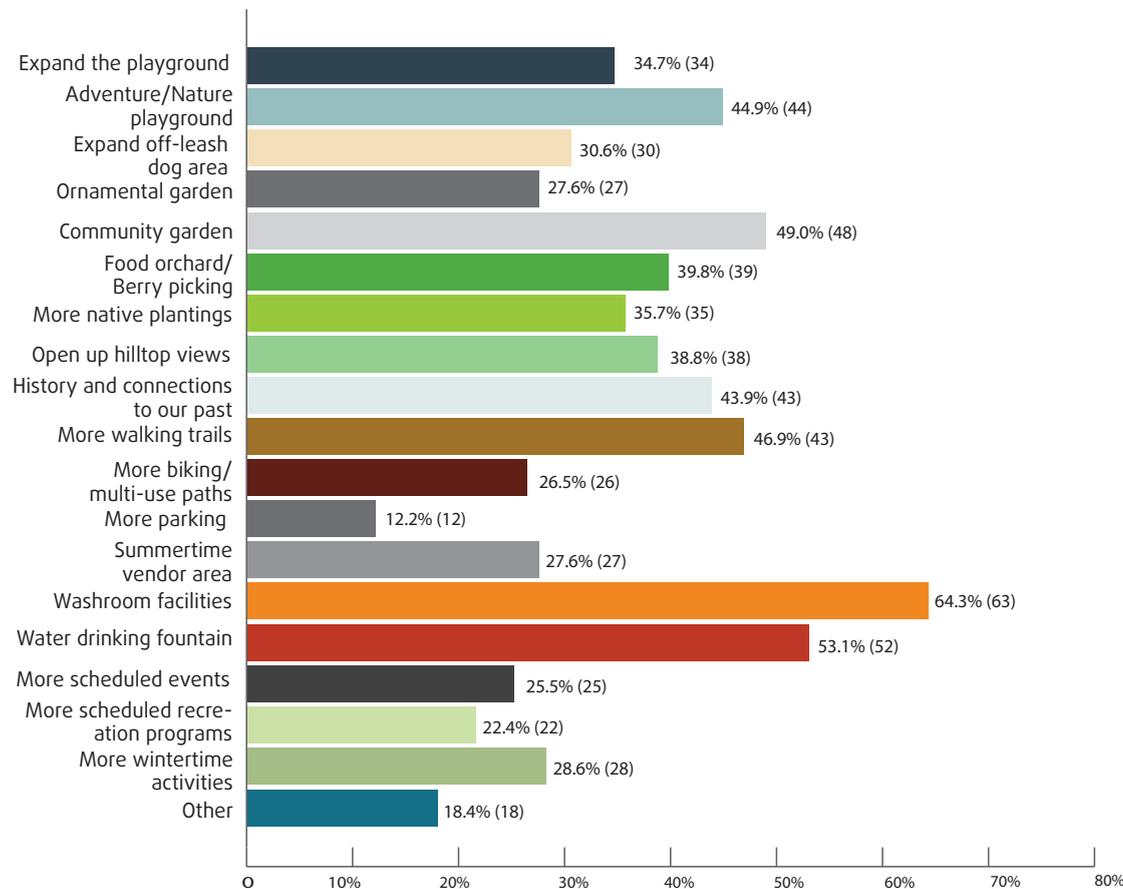


Figure xxxxxx Selected Online Survey Responses

Q₁₆ What are your primary reasons for visiting Fort Needham Park?

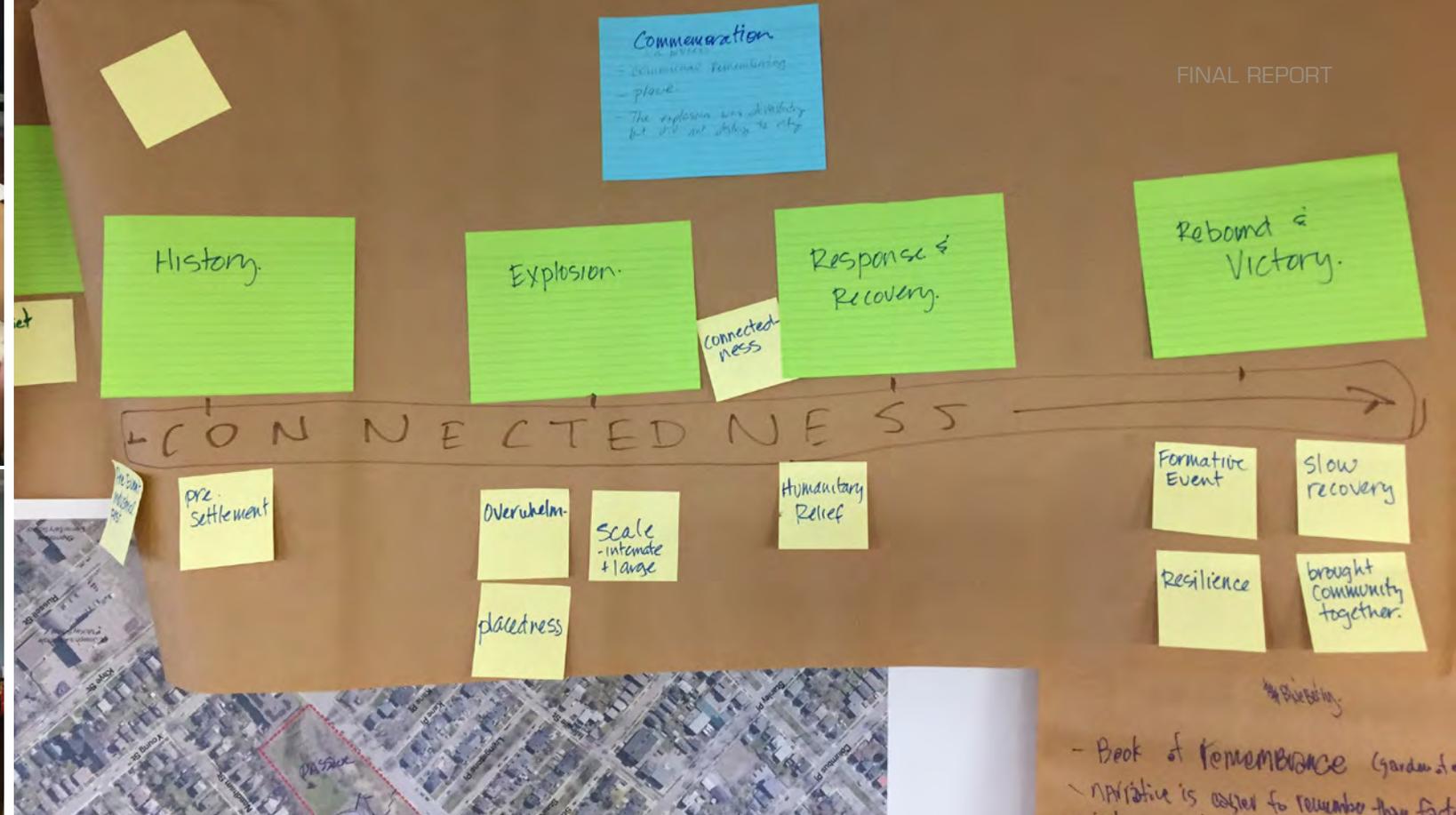
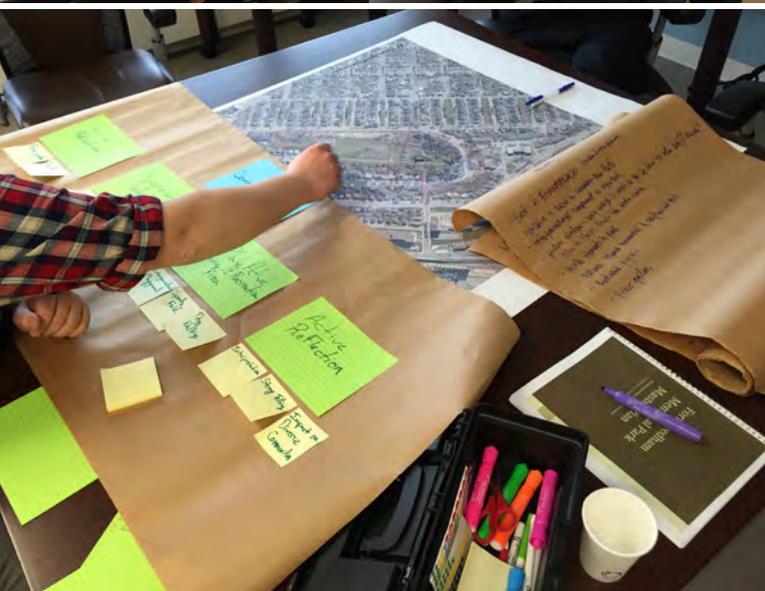


Q₁₇ What new or enhanced elements would you like to see in Fort Needham?



Overall, survey respondents valued the community and social aspects of the park, including the playgrounds and active recreation. They also highly valued the naturalized elements of the park, as there are not many other areas in the north end where this is available. While the commemorative and historical function of the park is crucial, it came second to the factors that made daily use of the site enjoyable. Most respondents:

- › don't attend the December 6th Halifax Explosion Memorial Service;
- › feel Fort Needham is very important as a city park;
- › feel that fort Needham is relatively well maintained but could be better maintained to rank higher among other parks in the region.
- › would like to have washroom facilities, drinking fountains, community gardens, walking trails, and a nature playground.



1.4.4 Interpretive Design Workshop

On January 24 2015, Form: Media hosted an interpretive workshop with the Halifax Explosion 100th Anniversary Special Advisory Committee to gather input on the key themes, stories and interpretive approaches for the site. At the event, the committee confirmed their broad vision for commemorative intent of the project to include:

- › Honouring the memory of those who died & suffered
- › Educating current and future generations
- › Celebrating the resilience of Halifax

During the workshop, the steering committee confirmed the guiding principles of any future commemorative design considerations for the site. All aspects of future commemorative design elements should:

- › Be solemn, respectful, and reflective
- › Reflect the legacy of the story
- › Represent all communities
- › Educate and connect people to the history
- › Capture the national imagination
- › Explore the compassionate response

- › Explore the institutional responses
- › Be compelling, meaningful, evocative, enduring

After a brief presentation by the consultants, two committee teams worked over a two hour workshop to crystallize an interpretive program and approach for the site. The outcomes of the workshop by committee members were both creative and meaningful and helped to shape the interpretive strategy. Many of the creative ideas that form the basis of the master plan had their roots in this interpretive design workshop and are described more fully in chapter 4.4.

1.5 Summary

Fort Needham's future is firmly rooted in the evolution of Halifax from its early inception to its use as a regional urban park today. The site's rich history should create a tapestry of uses that will make the site respectful of its past while remaining relevant to residents today. The intent of this plan is to bring together history, culture, recreation and ecology, using a balanced approach that recognizes the needs of local residents and our shared responsibility to tell an important chapter of the city's history.



CHAPTER

02

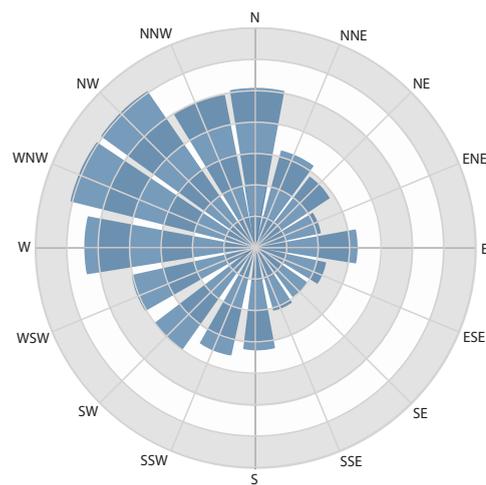
FOUNDATION

02: Foundation

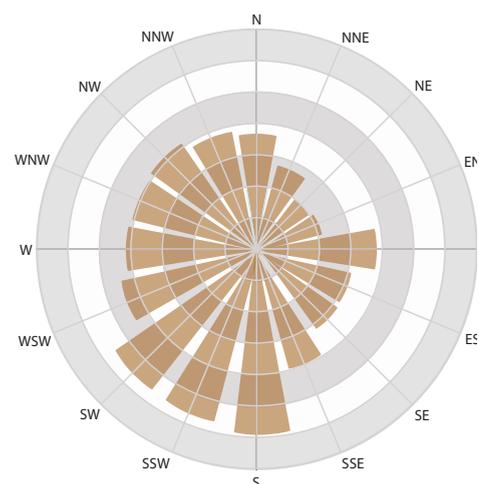
The foundation of every park master plan lies in its ability to respond to the context within which it will operate, who will use it, how it will be used and maintained and how it could evolve over time. Fort Needham has been used as an urban park for over a century. Why now is a plan needed?

Like cities and buildings, parks evolve over time to reflect changing cultural ideals, changing attitudes, changes in technology and changes in health and recreation trends. The most obvious changes are the ecological changes as nature reclaims portions of unkempt areas. What is less apparent, is the slow and steady generational attitudinal changes which makes some park uses obsolete over time; and, our increasing knowledge of the important role of parks in human health and well-being as cities grow and become more dense. Technology, taste and trends will continue to shape our parks into the future.

The purpose of a park master plan is to reflect on how a park is used today, where the trends may take us tomorrow and how to maximize its potential to improve our quality of life. This starts with understanding the building blocks of the site and how recreation and commemorative trends will influence its future. This chapter outlines the foundation of our understanding of the Fort Needham Park, eventually guiding the future design program.



Winter Winds (November to April)



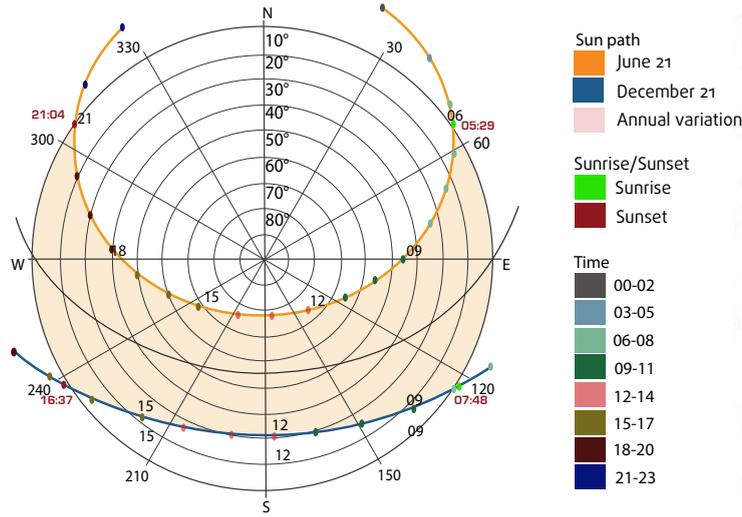
Summer Winds (May to October)

Figure 2.1. Halifax Directional Distribution of Winds

2.1 Bio-Physical Attributes

A comprehensive inventory of biophysical attributes was conducted in order to better understand the factors that gave rise to the park today and the factors that could influence its evolution tomorrow. Fort Needham is a unique site atop a steep glacial drumlin with deep silty tills, perched groundwater table with local groundwater seeps, and a unique vantage point overlooking the Halifax Harbour and Bedford Basin. The elevation of the hill creates unique microclimates which influence the park uses significantly. The Memorial Bell Tower and the hill's overall relationship with the Halifax Explosion creates opportunities for commemorative uses that sometimes don't mix well with other park uses. All these attributes influence the placement and feasibility of uses at the Park.

Figure 2.2 Halifax Solar Map



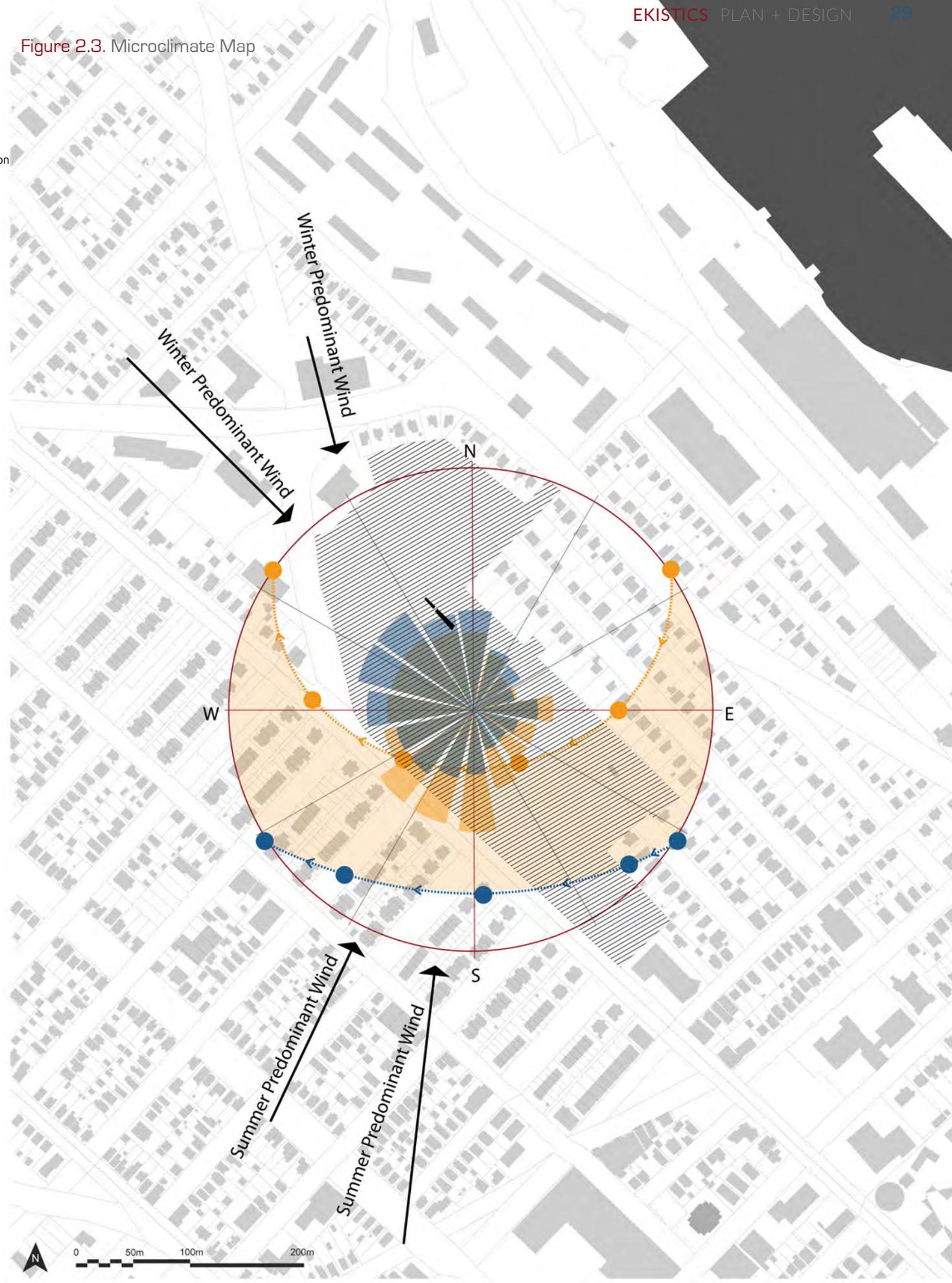
2.1.1 Climate & Microclimate

Halifax’s climate is influenced by its coastal location and it falls into a Zone 5b hardness zone along the coast. Coastal winters are comparatively mild; springs start early but are long and cool, and autumns tend to be warm and normally extend late into the year. Near the coast, mean temperature vary 15 to 20 degrees Celsius over the course of the year; inland mean temperature vary 20 to 25 degrees Celsius. This translates into a long frost-free period, and extended growing season and relatively low rates of evapotranspiration (the sum of evaporation and plant transpiration from the surface into the atmosphere), although summer temperatures are cool.

About 1,500 millimeters of precipitation fall on the Halifax peninsula annually, with 90 per cent as rain and 10 per cent as snow. On average, there is fog 15 to 25 per cent of the year, more often in summer and autumn, when warm air temperatures from the south mix with cooler offshore waters. High humidity is also a common coastal influence. Relatively cool moist conditions tend to encourage forest development, reduce the stress of midsummer droughts and lower the risk of forest fires.

The winter wind direction has implications on the human thermal comfort in open areas. The prevailing winter wind on Fort Needham Park is from the west and north-west. North-westerly gusts accelerate across the open Bedford Basin in the winter and as they approach Needham Hill, they accelerate creating exceedingly cold gusty winds at the top of the hill. Near the base of

Figure 2.3. Microclimate Map



the hill, the trees and vegetation on the north eastern side mitigate the impacts of the wind significantly creating more comfortable conditions at the base of the hill and reducing the extreme wind impacts slightly at the top of the hill. Preserving the copse of vegetation at the north of the hill will improve the thermal comfort of the park all year round. In the summer, prevailing wind is from the south and south-west mostly. The winds can still be extreme at the top of the hill in the summer.

2.1.2 Aspect

As a distinct promontory, Needham Hill is not influenced by the shade of buildings or features around its periphery. Its eastern slopes receive the morning sun, kick-starting evapotranspiration earlier than its western slopes and helping trees pull access water out of the groundwater seeps. On the west side of the hill, the western slopes create unique sunset vantage points that are well known and appreciated by the

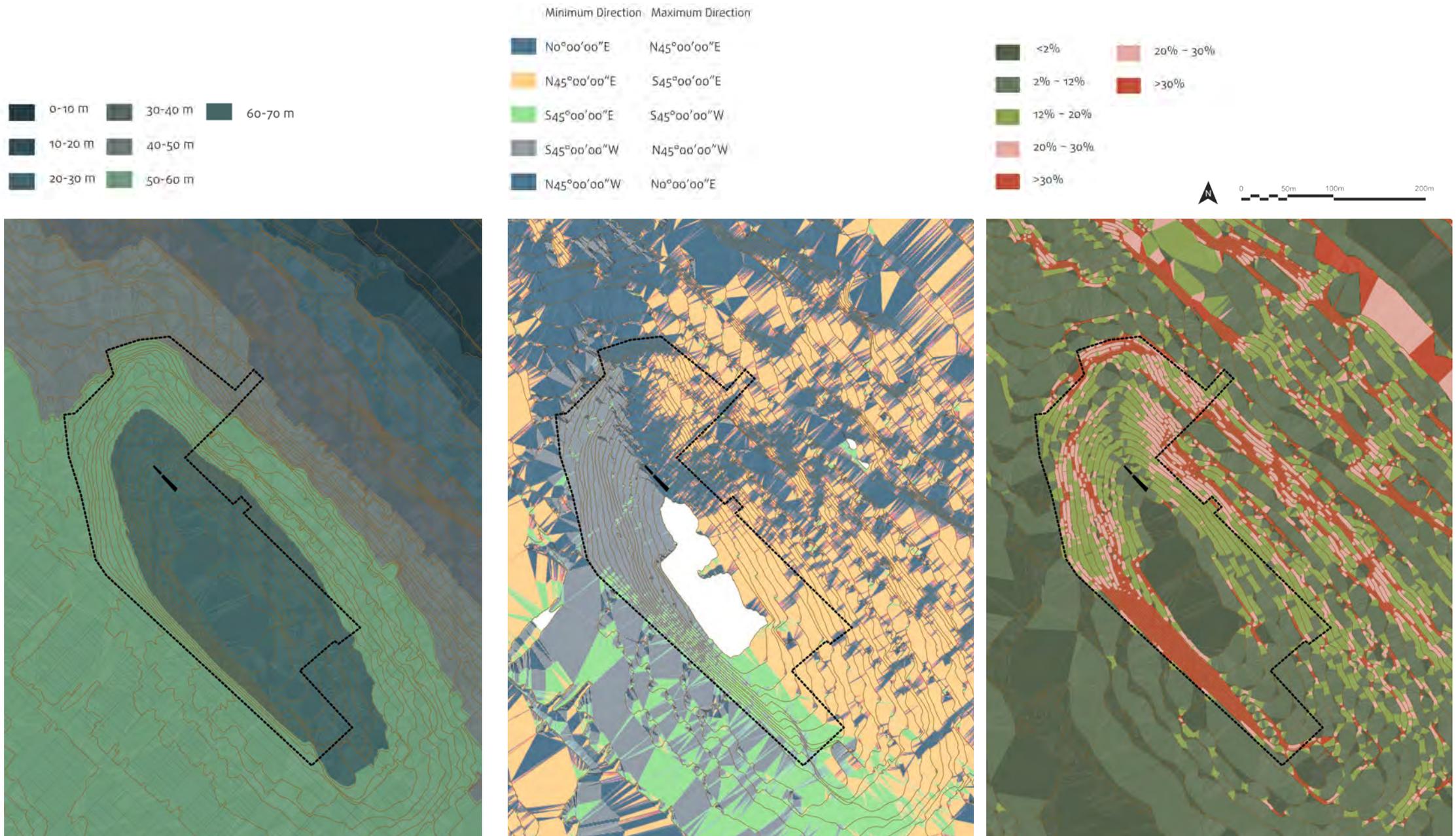


Figure 2.4 Elevation Map, Aspect Map, Slope Map

community. Needham Hill is known for some of the best sunsets in the city.

The steep sideslopes of the hill exceed 30 percent in many areas of the park. From a visibility perspective, these steep slopes hide the park from the surrounding roads and challenge access to the park. The steep hill that runs along Novalea Drive provides little evidence of the park's existence to the thousands of vehicles and pedestrians that pass by it each day. The need for more visible entry points and park features along the slope should help to increase the parks visibility and usability.

-  DIRECTION OF DRAINAGE
-  EXST. DITCH
-  EXST. CATCH BASIN



Figure 2.5 Drainage Map

Halifax Harbour

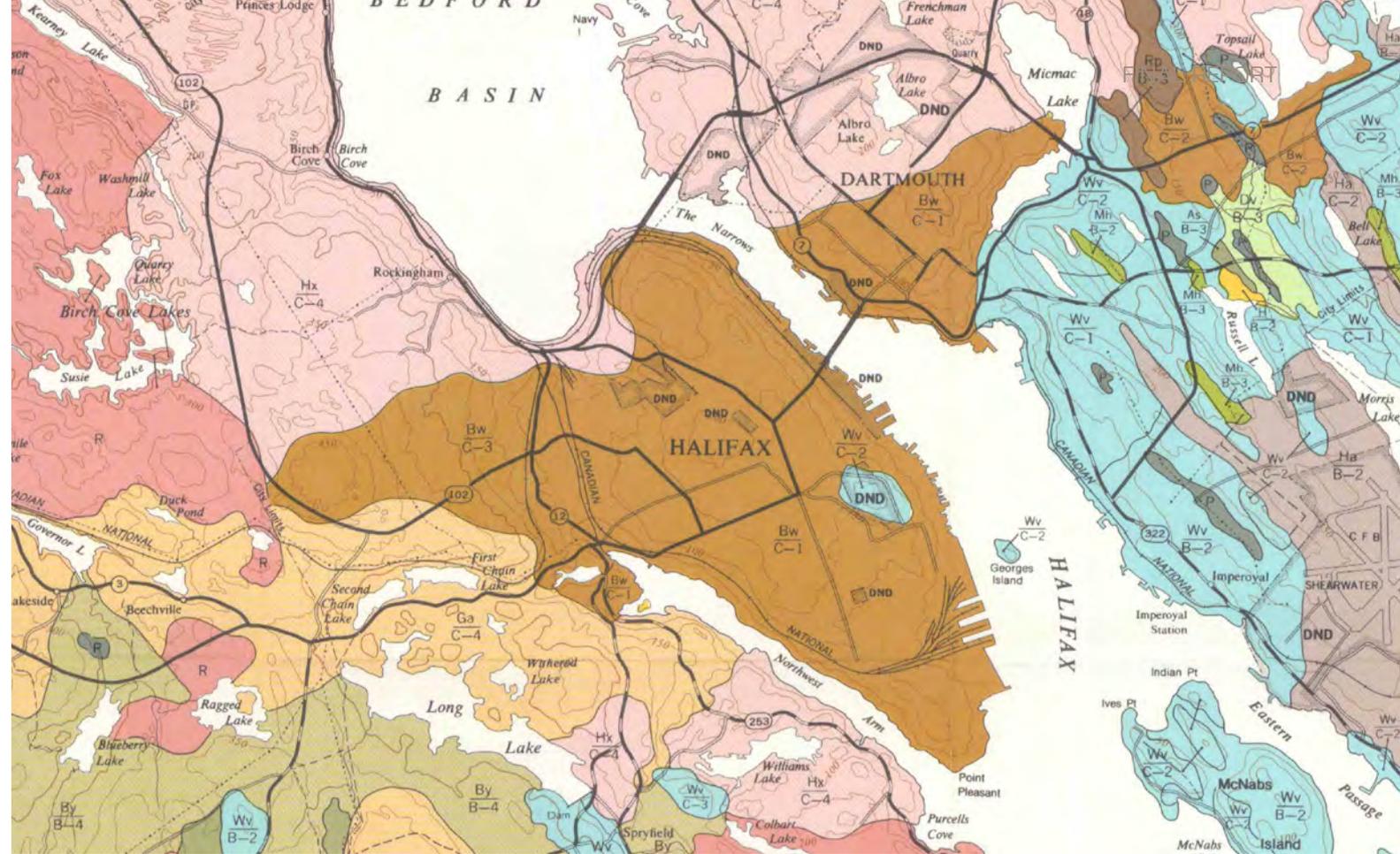


Figure 2.6 Soils Map

2.1.3 Slope

The slope maps illustrate the significant slopes that make up the site. About a quarter of the site exceeds 20 percent slope. These areas are difficult to maintain, and difficult to use for trails or other forms of active recreation. Another quarter of the site ranges in slope from 12-20 percent. These slopes are still difficult for active recreation and are at the upper threshold of walking trails. A little less than half the area of the site has slopes ranging from 1-12 percent.

2.1.4 Soils

The soils of Needham Hill (like most drumlin soils in the area) consist of the Bridgewater Formation. The parent material is a reddish-brown sandy loam till /moderately coarse textured parent material that:

- › is well drained;
- › consists of varying amounts of granite, trap, and quartzite material; and
- › has moderately rapid internal drainage

The Precambrian slates that underlie the topsoil are common to the Halifax Peninsula and are well known for their pyritic

slates. When exposed to oxygen, these slates can mix with water to create sulphuric acid. Pyritic slates are managed carefully by the Province. Although it is highly unlikely that bedrock will be struck on the Needham Hill drumlin, any deep foundations or cuts will need to be monitored for the presence of pyritic slates.

2.1.5 Vegetation

The original vegetation on the drumlin at Fort Needham Park would most likely have consisted of a diverse Acadian forest, probably dominated by Nova Scotia's longest-lived tree species - American beech, sugar maple, red maple, yellow birch, red oak, eastern hemlock, red spruce, and eastern white pine. Featuring these species in redevelopment of the trees and woodland in the park would connect visitors to the natural history of the Halifax peninsula.

For military reasons, Needham Hill was devoid of any vegetation since the 1770's onward. In the 1960's or 1970's the northwest corner of the hill was planted with non-native populations of Norway Spruce, Scots Pine, European beech, and Norway Maple. In the intervening years, the patch of forest has regenerated to include more native species like Red Maple, Yellow Birch, Mountain Ash, white birch and Linden.



European Beech Copse
Conserving the health of the beech copse near the memorial monument should be made a priority

Semi - Natural Woodland
Red Maple, White Ash, Norway Spruce, White Spruce, White Pine, and Scots Pine, Norway Maple, White Spruce, Mountain Ash, and Saskatoon Berry.



Dominated by Norway Spruce, also contains young populations of Norway Maple, Red Maple, Yellow Birch, Mountain Ash, and Linden.

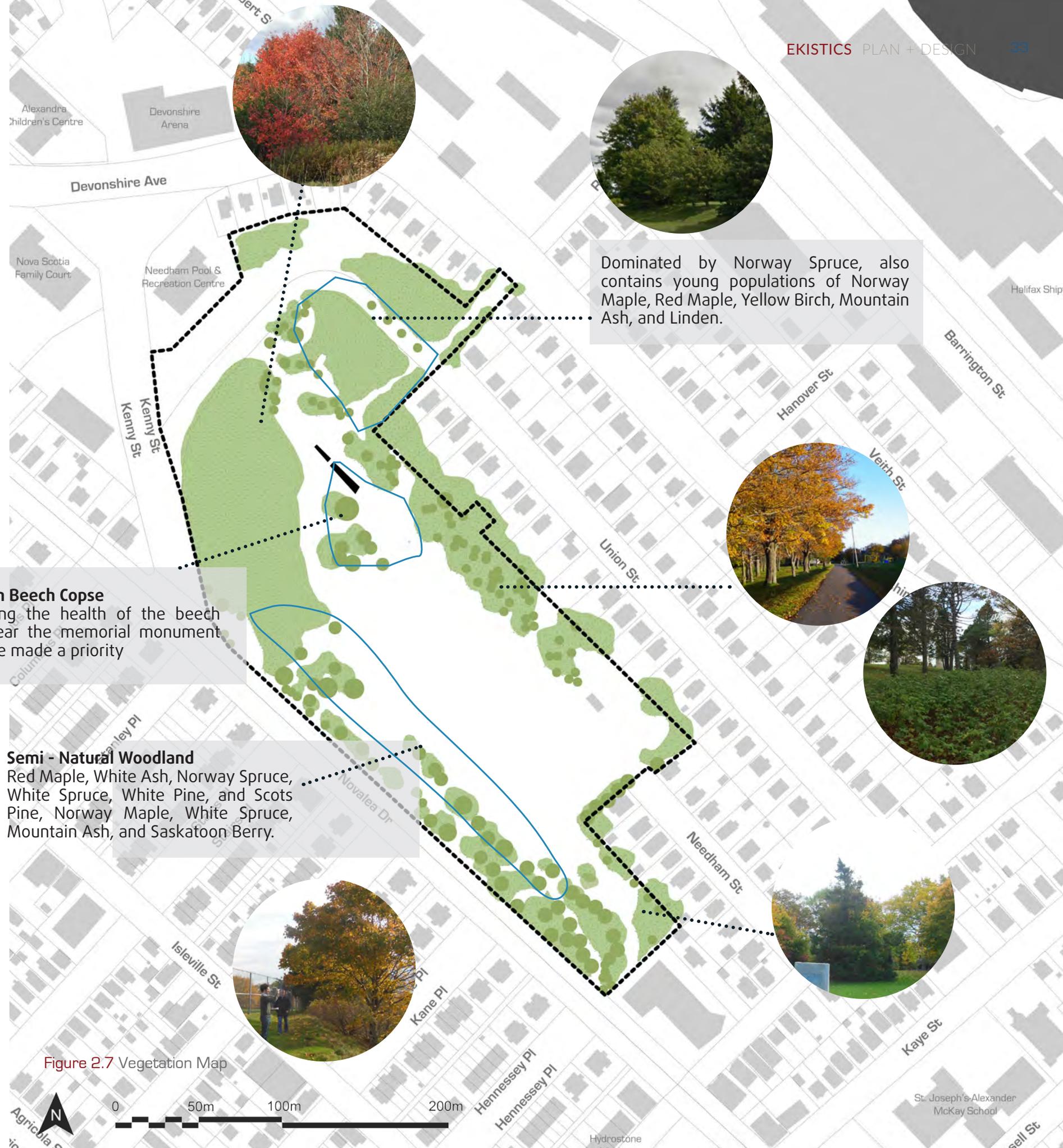
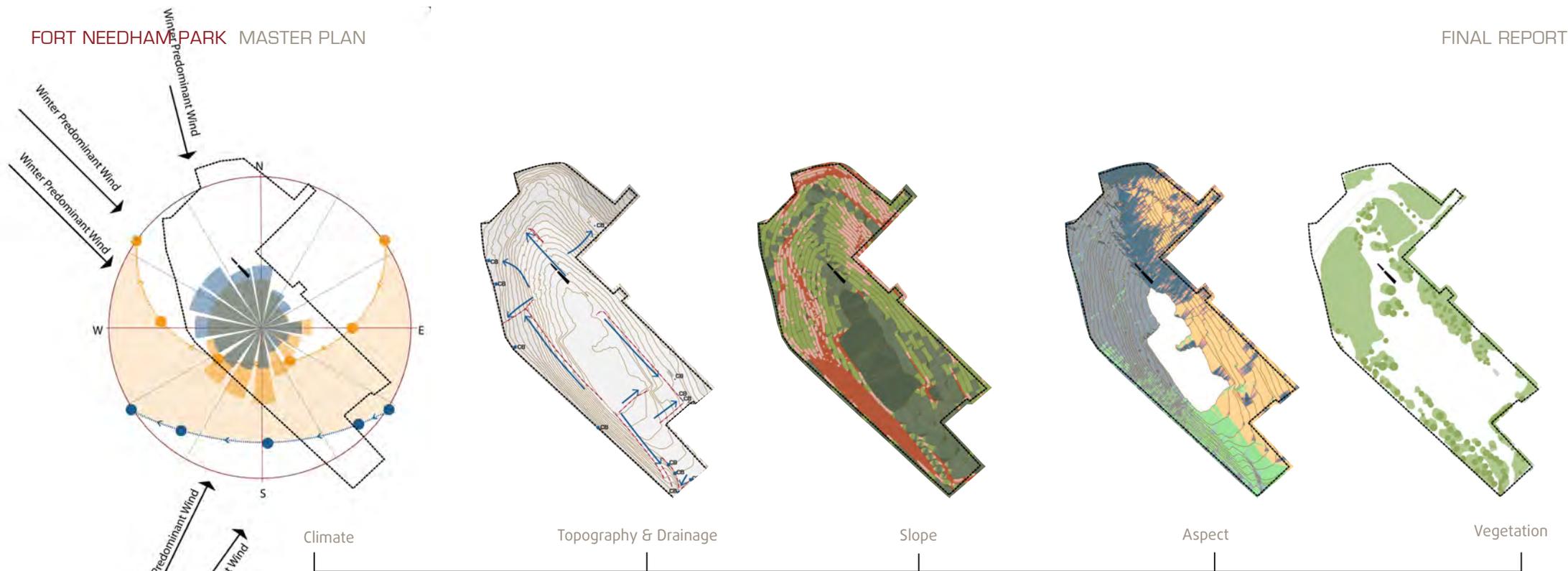


Figure 2.7 Vegetation Map





Map 2.8 Analysis Map

- 1 North Facing Slope, Exposed to Winter Wind
- 2 Existing Trees to Remain, Relatively Steep, Minimize New Development
- 3 Existing Beech Copse to Remain
- 4 Relatively Flat, Suitable for Open Lawn Area
- 5 Steep Slope, Sunny Spot, Unsuitable for New Development

In the southwest corner of Fort Needham Park, on a west-facing slope, is a semi-natural woodland. It has a more diverse canopy - the large trees include specimens of Red Maple, White Ash, Norway Spruce, White Spruce, White Pine, and Scots Pine, whereas the smaller trees contain populations of all these species plus Norway Maple, White Spruce, Mountain Ash, and Saskatoon Berry.

The specimen European Beech trees by the Memorial Bell Tower have been noted as important features in the park that the public would like to retain. Other trees scattered throughout the grassed areas of the park include mainly European Beech, Red Oak, and Scots Pine.

There are historic records of residents collecting blueberry's, strawberry, blackberry's and Saskatoon berry on the slopes of Needham Hill.

2.2 Land Use

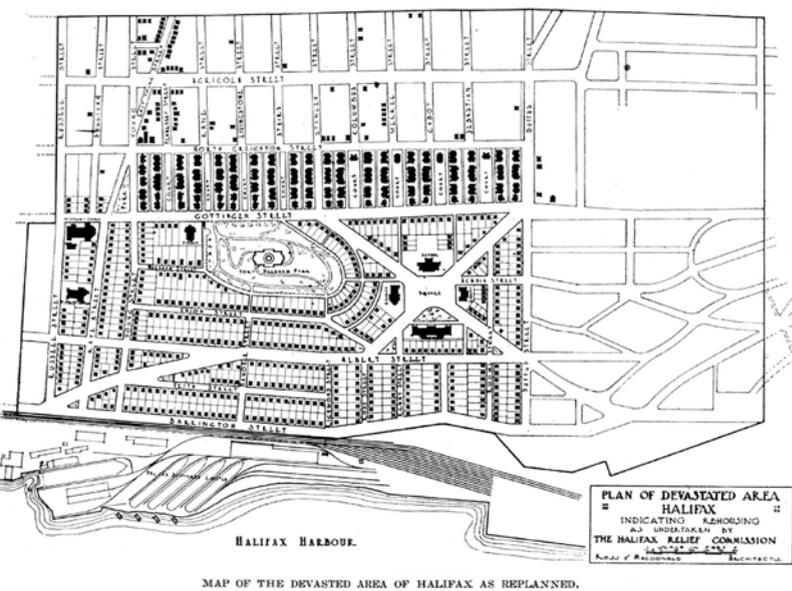
2.2.1 Land Use & Zoning

Fort Needham Park is primarily encircled by single detached and semi-detached residential units, except to the north-west where institutional uses prevail. As the Richmond area continues to develop towards the Young Street corridor, there will be increasing density and mixed use development. This mix of housing allows a range of family types and income levels to afford to live in the area, creating the diverse neighbourhood that the North End is praised for.

Commercial zoning is dispersed throughout the residential areas. To the south of the Park is the Hydrostone Market, offering boutique shopping and dining alternatives. Commercial zoning pockets are scattered along Isleville Street, expanding out of the Hydrostone Market. These commercial zones are made



Map 2.9 Zoning Map



up of general business, local business and minor commercial zoning, taking the form of small shops and convenience stores. These commercial properties serve the immediate surrounding population, with the exception of the Hydrostone Market which draws both residents and tourists. Additional commercial zoning is located along Barrington Street to the east of the park.

The social housing and commercial properties on Barrington Street serve as a buffer between the residential areas surrounding the Park and the industrial activities of the Harbour. Integrated into the area are noteworthy institutional organizations which support both the local community and the greater Halifax area, including the Nova Scotia Family Court and the Needham Community Centre.

The influence of Thomas Adams' original design for the reconstruction of the devastated area after the Explosion can still be seen in the way the area has developed, with the large park space a central focal point in the area, with residential and commercial uses radiating from it. At the crossroads of Devonshire Avenue and Kenny Street, Adams envisioned Richmond Square to be a civic focus. Reestablishing the square as a hub and meeting place to connect all the surrounding neighbourhoods came out strongly at the public meeting. Devonshire Avenue was originally scaled and conceived to be a collector road connecting an eventual second bridge with the downtown. This 4-lane boulevard has never seen the traffic volumes for which it was originally intended and access to the MacDonald Bridge (built in 1972) is much easier off of Barrington Street rather than cutting through the Richmond District.

2.2.2 Mobility

Transit

Needham Park is directly served by the #7 "Robie" Halifax Transit route connecting the North End with the downtown. The bus passes Needham Park every 15 minutes from 6:34 am to 12:48 am. Just one block away to the south, six additional bus routes (21, 31, 33, 34, 35, 86) frequent the Hydrostone market area on an almost constant basis.

There are two stops located at the Young and Kenny intersections along Novalea near the two main entrances to the Park. All together, there are approximately 20 bus stops located within a 10 minute walking distance of the park and Hydrostone region, with many of those located within 5 minutes.

The region is serviced by the following routes:

- › 7 (along Novalea Drive)
- › 31, 33, 86, 34, 21, 35 (Young Street and Novalea Drive)
- › 9 (Duffus Street and Novalea Drive)
- › 9, 84, 85, 185 (along Barrington Street)



-  INTERSECTION
-  BUS STOP
-  WALKING RADIUS
-  BUS ROUTE (TWO WAY)

Map 2.10 Mobility Map





Map 2.11 Local Parking Map

Parking

The streets surrounding Fort Needham were designed to accommodate on street parking. There are approximately 660 parking spaces within a 5 min walk of Fort Needham and an additional 120 dedicated parking lot spaces near the Kenny Street institutional core.

Cycling Network

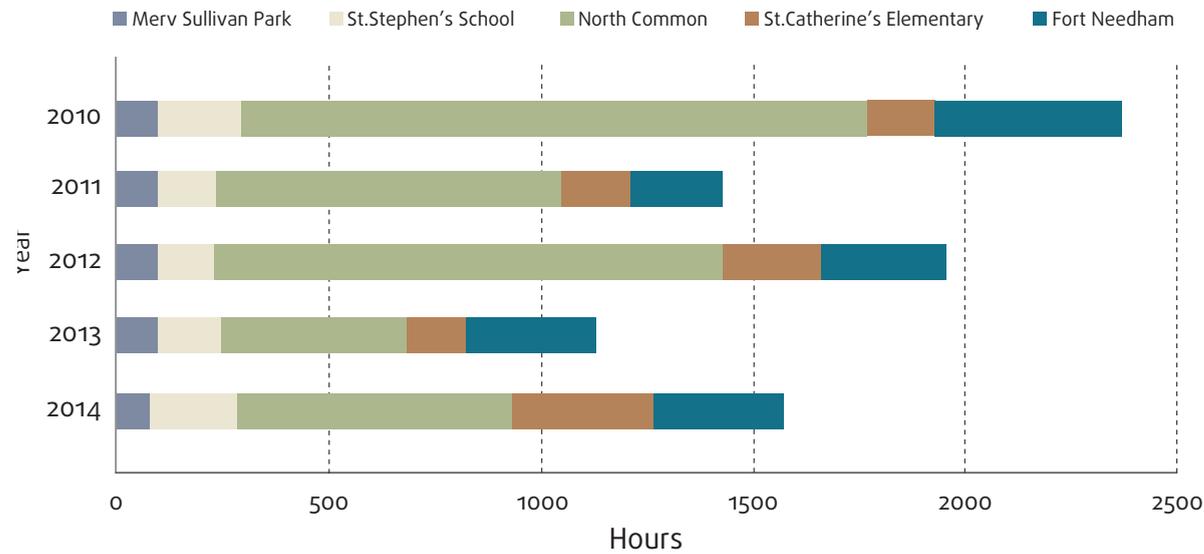
In September 2014, Regional Council approved the 2014-2019 Active Transportation (AT) Priorities Plan. The latest AT map for Halifax shows Devonshire Avenue and Novalea Drive as priority bike routes. In addition, the plan shows Isleville Street as a suggested bike route on a local road. There is ample room on both Novalea and Devonshire for both on-street parking and a dedicated on street bike lane. As such, the future master plan should show both these areas with bikes lanes and additional on-street parking. Kenny Street connects Devonshire and Novalea with a boulevard, of the original Village Centre from the Adams Plan. This street would be ideal for a dedicated multi-use trail between the two streets, providing dedicated bike infrastructure on three sides of the Park.

Map 2.12 Proposed Cycle Network

- ENVISIONED GREENWAY
- PROPOSED LOCAL STREET BIKEWAY
- PROPOSED BIKE LANE / PAVED SHOULDER
- EXISTING BIKE LANE / PAVED SHOULDER
- BIKEWAY DESIRED
- ▭ SITE AREA



Figure 2.13 Local Park Use over Time



Fort Needham Field

YEAR	FOOTBALL	TOUCH FOOTBALL	SPECIAL EVENTS	ULTIMATE FRISBEE	SOCCER
2010	256	143	23	8	6
2011	122	28	8	20	19
2012	116	44	9	34	10
2013	126	10	22	38	
2014	185	35		22	

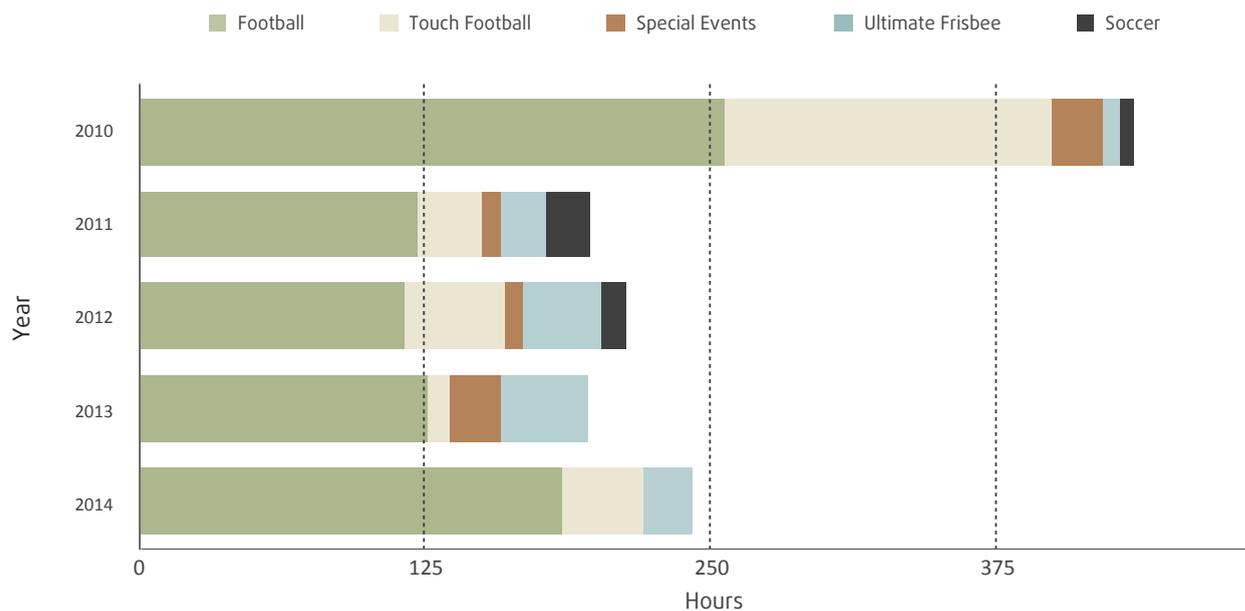


Figure 2.14 Fort Needham Recreational Use Over Time

2.2.3 Open Space Network

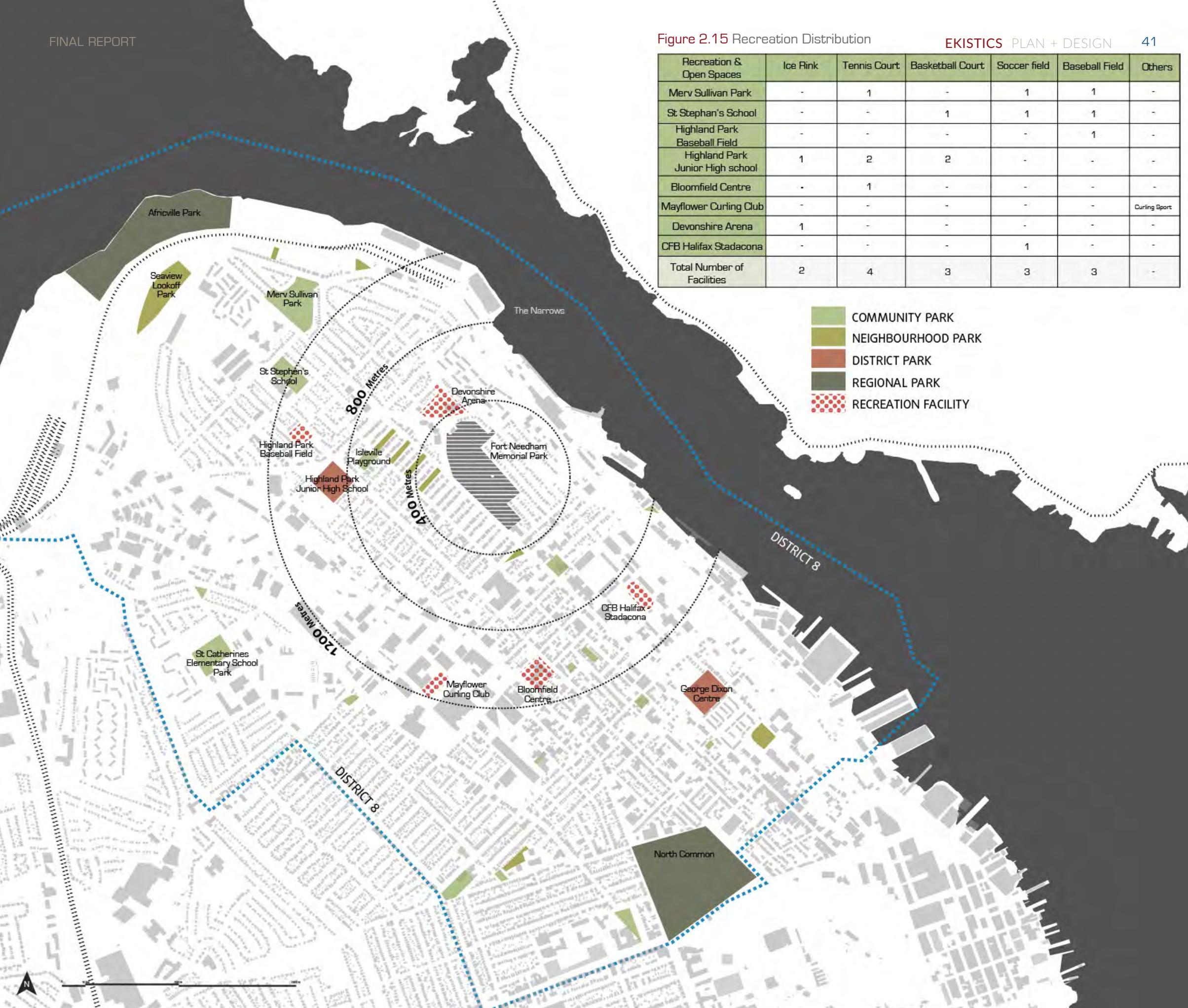
The North End is home to an abundance of open spaces; District 8 contains 34 HRM designated parks. These parks vary in sizes and use, from a collection of small local and community parks up to regional parks such as Fort Needham and the North Common. Within the immediate vicinity of Fort Needham Memorial Park there are few alternative public parks. While there is access to green space, Fort Needham is the only programmable space, and the only substantially sized park. Within a 10-15 minute walking radius there are multiple park options, with the majority of HRM parks offering a mix of active recreation programming and passive recreation alternatives. Nonetheless, Fort Needham Park is the only park, with exception to the North Common located at the periphery of District 8, which services the larger region of HRM.

Most parks in the area are combined with a local school and prioritize active recreation programming. Within the region there are a total of two (2) ice rinks, four (4) tennis courts, three (3) basketball courts, three (3) soccer fields, and three (3) baseball fields. Additionally, community centres within the area offer additional services including indoor sport facilities.

Considering park use trends from 2010 to 2014, it is apparent that there has been a shift in the way parks are being used. While passive recreation activities cannot accurately be monitored, data has been collected pertaining to the hours booked for active recreation and special events for all parks in the HRM. This data shows that there has been a general decline in the number of hours fields are booked over the last four years. Fort Needham field saw a sharp decline in field use starting in 2010 and levelling off from 2011-2014.

Figure 2.15 Recreation Distribution

Recreation & Open Spaces	Ice Rink	Tennis Court	Basketball Court	Soccer field	Baseball Field	Others
Merv Sullivan Park	-	1	-	1	1	-
St Stephen's School	-	-	1	1	1	-
Highland Park Baseball Field	-	-	-	-	1	-
Highland Park Junior High school	1	2	2	-	-	-
Bloomfield Centre	-	1	-	-	-	-
Mayflower Curling Club	-	-	-	-	-	Curling Sport
Devonshire Arena	1	-	-	-	-	-
CFB Halifax Stadacona	-	-	-	1	-	-
Total Number of Facilities	2	4	3	3	3	-



- COMMUNITY PARK
- NEIGHBOURHOOD PARK
- DISTRICT PARK
- REGIONAL PARK
- RECREATION FACILITY



2.2.4 Existing Park Programs

Tennis Court

The double courts at Fort Needham are in very poor condition with cracking asphalt, rusting chain link fence and runoff from the courts causing erosion on the east side of the courts. During the workshop and online survey, participants noted that the courts are generally used as a fenced in area for off-leash dog use rather than tennis. The tennis courts were noted as a use that may not be well suited to the top of the windy Needham Park. Additional courts are located at Merv Sullivan Park and at Highland Park Junior high only a short distance away. Tennis participation rates in Canada have hovered around 2 percent since 2000 (5-14 year old active children, Sport Participation 2010), while other court uses like basketball have hovered around 16-18 percent.

In their current state and location, the tennis courts create an unappealing first impression of the park. The fencing blocks many important views, including that of Memorial Bell Tower. The courts also act as a physical barrier, creating a pinch point that requires visitors to enter the park by walking along the poorly drained gravel path to east at the property line or along the backside of the courts on a narrow swath of lawn at the top of the ridge. Overall, the tennis courts are not well suited for this location, and would be served at street level where there are other compatible uses and facilities.

Playground Facilities

Three separate playground areas exist at the southern end of the park close to the Needham Street entrance. Each is defined by timber edging and pea gravel surfacing. The uppermost area contains a swing set, while one of the lower areas contains a relatively small pre-fabricated plastic play structure, and the other another swing set. Aside from a few benches surrounding the lower play area, there are no other amenities in the vicinity. The area lacks trees and there is no place to get shelter from the sun or the rain. While there is much to be desired in terms of playground design and amenities, the facilities as they exist, have been observed as well-used by families and children. The area is a destination for local residents, and for many, it is the primary reason they go to the park. It is important that this program remain, especially if the park is to continue serving neighbourhood and community park functions. Moreover, a well-designed, carefully thought out playground could enhance the park as a regional destination while helping to educate children about the Halifax Explosion.

Sports Field

The sports field measures approximately 65 by 120 meters and occupies more space in the park than any other program. The field is used for practice by the Halifax Argos Football Club, and has some intermittent usage by other organizations for community recreation events. A single goal post at the south end of the field indicates that in its current configuration

and adjacency to other programs in the park, the field cannot be utilized for official games. Just to accommodate the practice field, a large, approximately eight foot high chain link fence has been erected along its western edge. While likely installed to catch stray balls, the fence effectively severs the park and obstructs access to the ridgeline that looks over the Hydrostone neighbourhood. The fence is also one of the only park elements visible from below at Novalea Street. When seen from street level, the fence creates the perception that the area on the top of the hill is not welcoming or accessible. Despite its infrequent formal use, a field is seen as an important flexible program element that should remain in the park. As a relatively flat expanse that sits at the highest elevations, the field offers a feeling of openness not found in many places in the Halifax's North End. When not booked for football, it can be used for a variety of other active recreation activities, community gatherings, and small events. At present, the field is poorly drained and has problems with standing water. Further, its current configuration creates some undesirable topographical conditions and greatly influences the placement of other park programs. As such, the field's position and construction will need to be rethought. The community supported the idea of keeping an 'unofficial' field but would like the area drainage and field condition improved. There was a lot of discussion of the value of the wide open space for other uses like flying a kite or letting a dog off-leash. More trees would help to improve the microclimate at the top of the windy hill.



Playground



Community Garden



Storage Bunker



Tennis Court

- OPEN SPACE
- BOULEVARD
- SCHOOL YARD
- ACTIVE RECREATION AREA
- EXST. VEGETATION ON SITE



Figure 2.16 Fort Needham Existing Conditions





Explosion Memorial Bell
Monument Bells



Halifax Relief Commission
Monument



Captain James Cook
Monument



Explosion Memorial Bell
Monument

Storage Bunker

A storage building is located at the south end of the park, close to the Needham Street entrance and the playgrounds. The concrete bunker-like structure does not have any windows and is in poor condition, and is considered by many as aesthetically unattractive. The building was formerly a canteen, but has served for many years as storage for football equipment for the Halifax Argos football club. Its strategic location, in close proximity to the playgrounds and park entrance, could be better utilized for a facility that serves more than a single purpose.

Off-leash Dog Area

Fort Needham Park provides the opportunity for dogs to be let off-leash. At present, the off-leash area exists at the top of the ridge, running along the west side of the park and falls within a few meters of the Memorial Bell Tower at the north end of the site. The area is poorly defined and demarcated by only a handful of small, intermittently placed signs.

While there is high demand for this program from area residents, the off-leash service provision is currently under review by HRM for all of its parks and open spaces. According to HRM staff, it is anticipated that a classification system for off-leash parks will be developed in the near future. This system is expected to include neighbourhood, community, and regional designations with corresponding spatial, location, and design criteria. If the off-leash program remains in Fort Needham, it will most likely fall under the neighbourhood classification; The off-leash area in its current configuration is seen as incompatible with the Memorial Bell Tower and its commemorative function. If the program is to remain in the park, considerations should be given to creating more separation between these uses. The municipality also has a 30m exclusion zone from dogs and playgrounds and this will have to be taken into account in the future design.

Community Garden

The community gardens are the most recent addition to Fort Needham. The gardens, which occupy an area of approximately 20 square meters, are located at the northernmost end of the park, opposite side of Union Street, and beside the existing parking lot. In the current location and configuration, the gardens do not feel as if they are a part of the park proper and appear as somewhat of an afterthought. There are 17 beds right now, some of them shared, some assigned to families with about 30 active gardeners. If you include the volunteers who don't have a plot, the beds for the preschool and youth program, the number reaches 50 people.

The study team recognizes the benefits of community gardening for a number of reasons including social interaction, food security, promoting consumption local and sustainable product, and the engagement with plant life in the outdoors. The existing community garden may adequately service current demand; however provision should be made for more space anticipating greater usage. It is the opinion of the study team and surveyed community members that gardens be an integral part of the park, and should be a more prominent feature in the landscape. The proximity to a road for unloading and loading was noted as important.

Portable Toilets

Aside from temporary portable toilets, there are no washroom facilities located in Fort Needham. As a regional park and a community destination, washrooms should be introduced into the park and in a location close to frequently populated areas of the park such as the playgrounds. In conversations with HRM staff, considerations for location include the need to address the negative problems of crime and vandalism, be in an area that is well monitored, easily accessible to maintenance staff, and convenient to popular areas of activity.

Halifax Explosion Memorial Bell Monument

The *Halifax Explosion Memorial Bells Committee* was formed for the purpose of erecting a bell tower to house the United Church Bells as a perpetual memorial to the victims of the Halifax Explosion. The committee raised \$400,000 (with help from a Provincial grant) for the monument and they hosted the design competition and selected the winning entry in 1984. The City of Halifax granted a license to the committee to erect the bell tower on lands in Fort Needham for a term of 99 years.

The Halifax Explosion Memorial Bell Tower commemorates those who were killed or injured, and those who lost homes and family during the explosion. It was designed in 1984 by a team of designers led by local architect, Keith Graham. The design employs hydrostone (concrete) and copper to evoke the history of the surrounding Hydrostone community. The structure rises 60 feet at the highest point, sloping 150 degrees to disappear into the side of the hill. The ten original bells hanging in the tower were donated to the United Memorial Church on nearby Kaye Street by Barbara Orr, who lost her entire family in the explosion. The bells play on the hour and again every December 6th at 9:04 am.

Though the structure is over 30 years old, it is in relatively good condition. The netting around the bells was put in place to keep the pigeons away from the bells and has substantially altered the look of the structure. In addition, the large concrete light bases at the bottom of the tower are in very poor condition and should be removed and replaced with more modern architectural lighting. The idea of architectural 'projection mapping' onto the Bell Tower was an idea that came from the community.

The original design set the monument on a flat landscaped podium base. This part of the project was never realized. Observations of the annual ceremony note that the site around the base, with its steep slopes and limited hard paving, does not well serve the functions of the gathering, nor the numbers of people attending. Redesign of this area should consider space for at least 300 people and easier access to the monument for laying wreaths.





BEDFORD BASIN

MACKAY BRIDGE TOWER

TUFTS COVE GENERATING STATION STACKS

GROUND ZERO

BLESSED MOTHER TERESA PARISH

MULGRAVE PARK BAPTIST CHURCH

THE NARROWS

MACDONALD BRIDGE

STRAWBERRY HILL

ROBIE STREET WATER RESERVOIR

YOUNG TOWER

FORMER DOCKYARD



Pathways, Trails, and Service Roads

Fort Needham currently has two recognized and maintained pathways. The primary path is a three meter wide asphalt service road that runs north-south along the eastern edge of the site connecting Needham Street to Union Street. The second path is a gravel trail that connects the Novalea Drive entrance at southwest corner of the site up to the park in the area of the tennis courts which then turns to the east to connect with the primary path adjacent to the Needham Street entrance. While the connection at Needham Street is level, the pathway connection at Union Street is extremely steep and a challenge for all types of users. The need for improved and additional pathways is unquestionable. The existing paths fail to provide universal accessibility due to the grades, and some of the most desirable locations on the hill such as the ridgeline running parallel to Novalea are not serviced at all.

2.2.5 Views & Access

Fort Needham Park has extraordinary vistas and panoramas due to its physical characteristics and its proximity to Halifax Harbour. There are opportunities for re-establishing unique views and the juxtaposition of historic, external and internal view planes play a major part in defining and heightening the experience of Fort Needham Park and its intrinsic character.

When assessing the viability of preserving existing views and restoring historic sight lines from Fort Needham Park, there are certain factors that need to be considered. Most significantly, the open vistas that would have been enjoyed just three decades ago are presently blocked by large stands of trees that were intentionally planted in the 1980s. While these trees may obstruct the desired viewsheds, they can also work to block harsh winds, provide needed shade, and create a sense of enclosure. Any efforts to open up views will require careful and selective tree removal.

Between 1776 and 1815 Fort Needham had two fortifications that were built to defend both the Narrows and the dockyard. The landform, known then as Pedley's Hill, provided a strategic location approximately 70 meters above sea level and 1200 meters northwest of the dockyard. A set of guns were mounted on the northwest corner of the fort pointed towards a blockhouse on Strawberry Hill, and another set on the south side covering the dockyard. These historic view planes that were once used to defend the city now have been partial obscured by development and trees being planted on site as well as adjacent to the park.

Another historically significant sight line is ground zero of the 1917 Halifax

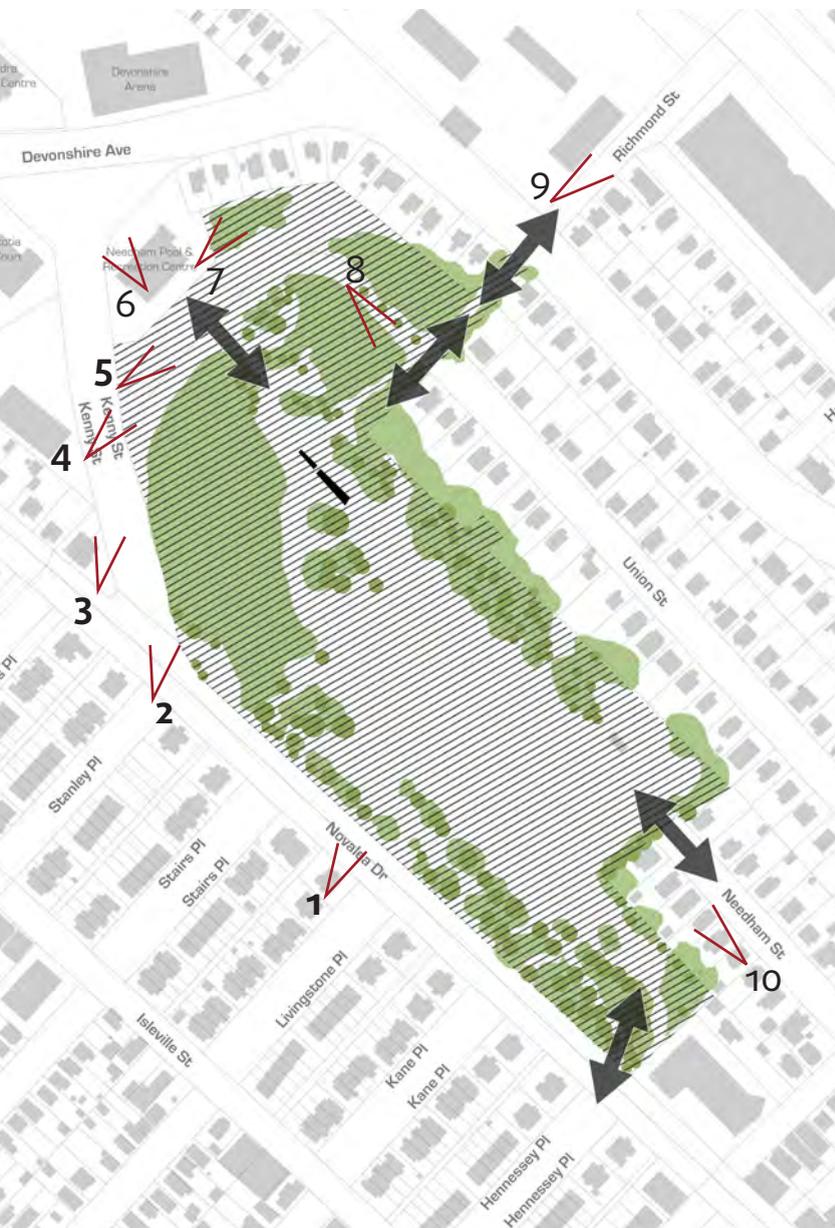


Figure 2.20 Fort Needham Views

Explosion. Recently this view from the park has been disrupted with the construction of the Irving Shipbuilding Shed.

Despite the fact that some of the historic views have been partially blocked there are still several locations along the ridges of the park's landform that offer specific vantage points to local landmarks on both the Halifax and Dartmouth sides.

MacKay Bridge & Bedford Basin (North View)

- › A small area to the north of the memorial offers views out to MacKay Bridge and Bedford Basin.
- › Although much of the woodlands on the north side of the site block views out they still remain quite purposeful in blocking cold northwest winds during the winter months.

Tufts Cove Generating Station (North View)

- › Standing just south of the memorial there is a direct view to Tufts Cove Generating Station. The 3 stacks of the station become almost iconic in nature and act as a landmark not only for the park but as well as for the surrounding communities.

Macdonald Bridge & the Harbour (East View)

- › In the southeast corner of the sports field there are scenic opportunities to view the Halifax Harbour and the Macdonald Bridge.

The Hydrostone Neighbourhood (West View)

- › The ridge along the west side of the site gives way to one of the most significant vantage points in the park. Sitting approximately 7

meters above Novalea Drive the ridge allows visual access across the west side of the city with enjoyable views of the setting sun. In the far distance it's possible to see the Waterton, a condominium development approximately 4.5 km away.

Access

Currently there are four formalized access points into the park, located on each side of the park. Each entrance is marked by signage and a pathway. As the park is located above street level at the top of the hill, clearly delineated entrances and access points are important to draw people off the street into the park. Fort Needham is often discussed as the North End's hidden gem. Figure 2.20 shows the experience of the park at street level. Current signage standards should be upgraded to better notify passerby of the park.

Currently there is no formal hierarchy to existing access points. The south entrance located off of Novalea Drive and the northeast entrance on Union Street, are visually smaller entrances, with a gravel pathway delineating the route up to the park. The Southeast entrance from Needham Street and the North entrance on Union Street are larger, drive-up entrances; with the North entrance acting as a service road.

2.2.6 Historic Resources

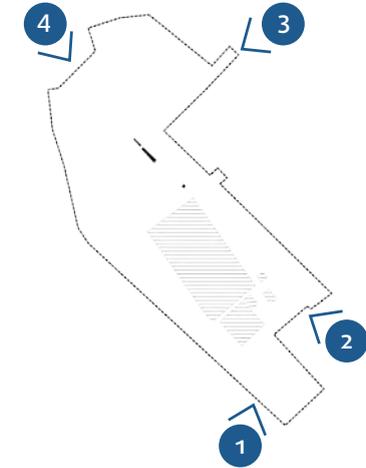
An Archaeological Resource Impact Assessment was completed in the fall of 2014 by Davis MacIntyre & Associates Limited in conjunction with the Fort Needham Memorial Park Master Plan. The purpose of this assessment was to determine the potential



South Entrance on Novalea Drive



Southeast Entrance from Needham Street



Northeast Entrance on Union Street



North Entrance on Union Street

for archaeological resources within the study area and to provide recommendations for further mitigation, if necessary. This was done through documentary research including historic data collection, as well as a field reconnaissance (completed on Nov. 3, 2014). Included here is a summary of the main conclusions and recommendations drawn of that report:

The potential for archaeological resources related to First Nations land use is low in the study area. It is unlikely they settled in this area as there was little to attract settlement, and short term use is not likely to have left an archaeological footprint.

There are remains of a historic road which lead from the northwest corner of the property to the redoubt in the south, as well as remnants of an old footpath along northeastern part of the park leading from what is now a pedestrian access off



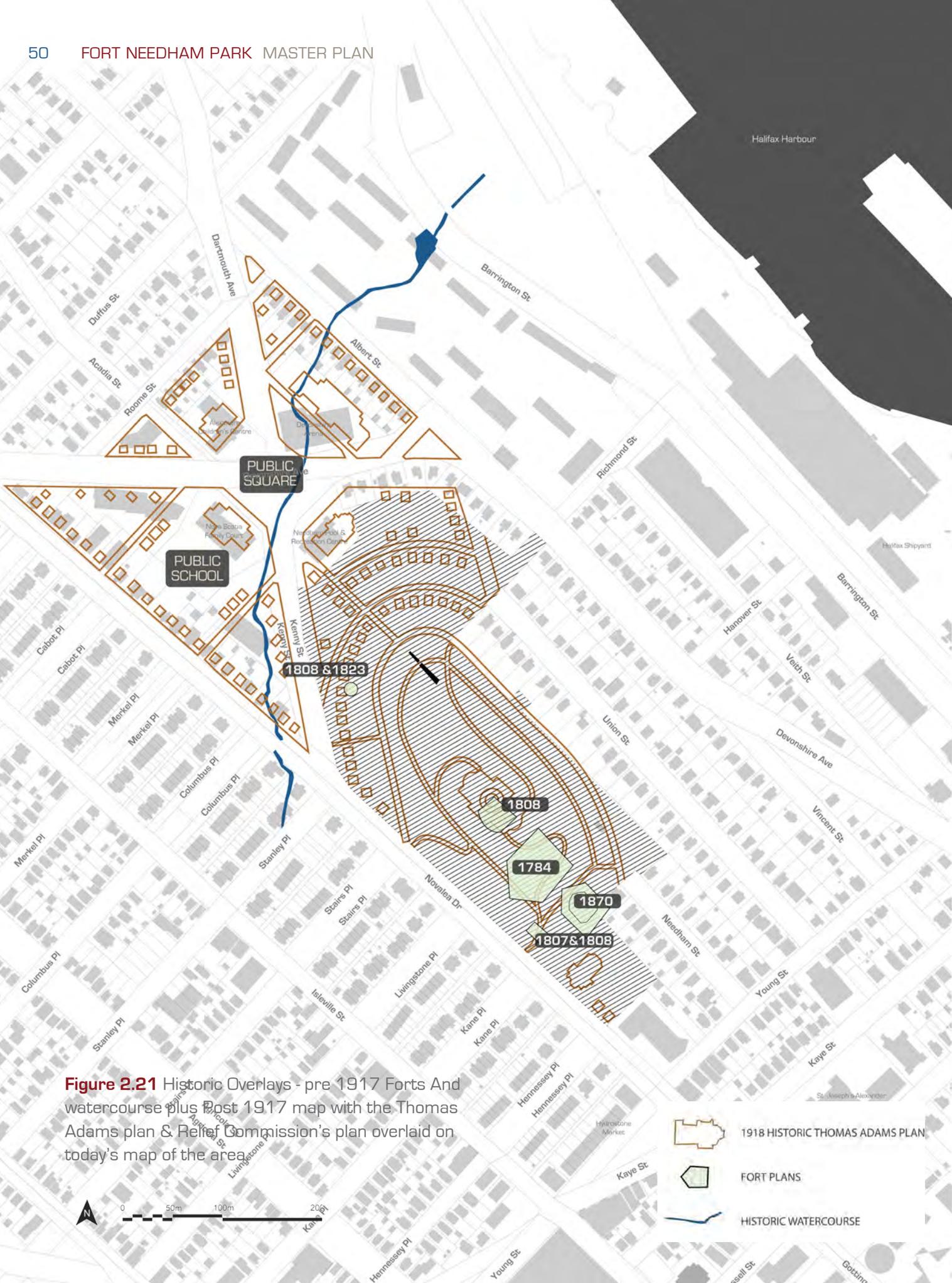


Figure 2.21 Historic Overlays - pre 1917 Forts And watercourse plus Post 1917 map with the Thomas Adams plan & Relief Commission's plan overlaid on today's map of the area.

Union Street to the north end of the park, below the bell tower (likely location of the late 18th to early 19th century blockhouse). It is recommended that any ground disturbance of these areas be monitored by an archaeologist as there is potential for artifacts related to the military use of the property.

There is potential that remnants of the blockhouse, redoubt or barracks could exist, and it is recommend that a profile cut be excavated in the east-facing embankment of the sports field behind the playground in order to understand the stratigraphy and impact to the area (now occupied by the sports field).

The location of the blockhouse is not known, but from historical data it is assumed that it was located to the north of the Bell Tower above Union Street. It is recommended that the possibility of completing a Ground-Penetrating Radar (GPR) survey on the east side of the existing walkway be explored. The consultants also suggest that systematic sub-surface testing be completed in this area to determine if remnants of the blockhouse exist, as this might reveal information useful for interpretation or remains related to the Halifax Explosion.

Finding that the area between the Memorial Bell Tower and the sports field has been relatively undisturbed, there exists the potential for artifacts. It is recommended that any ground disturbance be monitored by an archaeologist.

When examining the land of the northeast side of Union Street (by existing community gardens), nothing was found save for two stones which have been incised with several names, initials and dates. It is recommended that the stones be kept in the park. If they must be moved from their current location, the move should be recorded in detail. Additionally, any ground disturbance below the level of infill should be monitored as there is the potential for features related to James Pedley's estate.

The report noted that if anything is found during ground disturbance, work must cease and the Coordinator of Special Places must be contacted.

2.2.7 Natural and Cultural Landscapes of Fort Needham

Fort Needham Park has been identified in HRM's Regional Municipal Plan as a site with high cultural significance. The Park aligns well with several of the Regional Plan's objectives in the Cultural and Heritage Resource section, which are to broaden our heritage protection through the identification and preservation of cultural landscapes, and to support cultural tourism by investing in signature cultural attractions and events.

The first step in considering Fort Needham Park as a cultural landscape is to identify and understand the ideas and practices embedded in the place that make it culturally significant. Through this study two cultural themes have emerged: the historic military land uses of the hill and the idea of the park as a commemorative landscape for the Halifax Explosion. Since the founding of Halifax, the site has been used for farmland, military defence and recreational parkland. There is very little physical evidence left of farming or the century use of the hill as a military stronghold, but the continuing and evolving use of the site for recreation is present today. The site's association with the Halifax Explosion is what resonates most with citizens and gives this site special cultural meaning. This historic event has profound importance as a defining moment in our history. It is a national story as much as it is a local story. The explosion of the munitions ship was the most devastating catastrophe to occur on North American soil during the

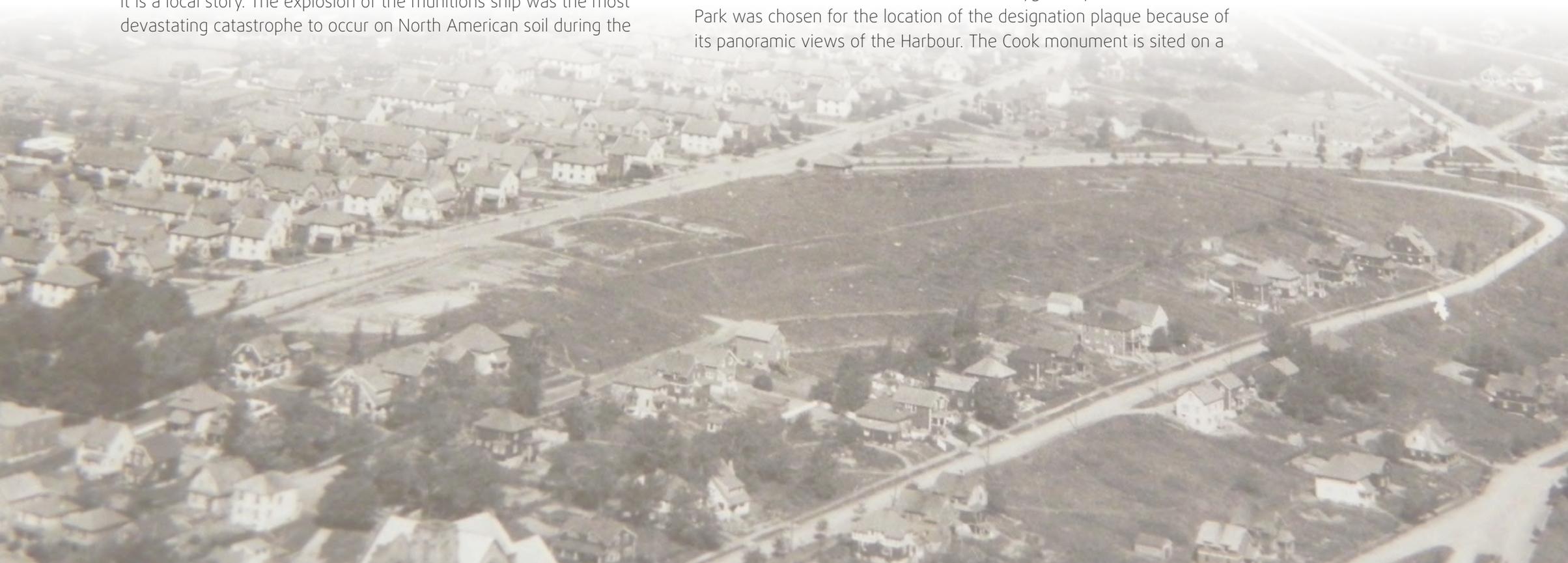
First World War and relief aid came from all over the continent, from communities both near and far away.

Historic Fort Needham Redoubt

The park is significant for its military history. The drumlin hill was a strategic location for defending the naval dockyards and colony from potential overland attacks from the northeast. There are several drawings and paintings that exist showing the fort and views from the hill that give historical record of what was there. Although the vestiges of the earthen redoubt and blockhouse are no longer visible today, the hilltop views still give a visitor an understanding of why this location was important for defending Halifax. Fort Needham played a role within the Halifax Defense Complex - which includes Georges Island, McNabs Island, York Redoubt and the Halifax Citadel - and there is potential for connecting its interpretation with the larger military history story.

Captain James Cook National Historic Monument

The Historic Sites and Monuments Board of Canada erected a monument to the famous explorer Captain James Cook recognizing his work compiling navigational charts for the coasts of Quebec and Nova Scotia while he was based in Halifax from 1758 to 1762. Fort Needham Park was chosen for the location of the designation plaque because of its panoramic views of the Harbour. The Cook monument is sited on a



high point of land so that visitors can look out and see some of the coastline he mapped. The plaque is on the east side of the cairn so it can be read from the main path, but this sets visitors with their backs to the view. Future park improvements should consider bringing visitors to the west side of the monument and relocating the bronze plaque to this side to better present the story to have visitors face the views of the Harbour's coastlines.

A Memorial Park to the victims of the Halifax Explosion

The idea of the park as a commemorative landscape to the Halifax Explosion began when the Halifax Relief Commission built the park as a memorial to the victims of the 1917 Halifax Explosion. With the civic goal of providing green space for the emerging neighbourhoods, the Commission transformed the barren hilltop into a recreational green space that included an open play field, canteen building, rose garden, and children's play greens. Elements that are important to keep from this era are the use of the site as a recreational park and the Commission's plaques commemorating the designation. There are benefits to re-establishing the memorial rose garden to tell the story of the Commission's post war work in rebuilding the area.

In the 1980's, the Halifax Explosion Memorial Bells Committee chose Fort Needham Park as the preferred site for a new monument to house the Memorial Bells. The placement and design for the Bell Tower was thoughtfully conceived for this location. Sited on the ridge of the drumlin, the monument's symbolic architecture can be seen to rise as an extension of the hill. The site overlooks the Narrows where the collision of the Imo and Mont Blanc took place. A perpendicular axis to the gap in the structure is aligned with the point of the explosion at the end of Richmond Street. The monument's angular construction in concrete makes a dramatic statement suggesting an image of destruction while simultaneously evoking the energetic civic renewal that followed the devastation. The designers envisioned the bell tower to be

a landmark clearly visible from both the surrounding area and the Harbour shores.

The Monument stands today as a memorial to those who were injured and killed in the Halifax Explosion, and as a tribute to those who rebuilt the devastated areas of Halifax and Dartmouth. It is meant to be a reminder of the spirit and vision that led to the rebirth of a whole section of the city. It has become an iconic symbol for the Halifax Explosion with its distinct sculptural form and sounds of the carillon bells.

Practices

The park has become a place of commemoration to remember the tragedy of the 1917 disaster. Every year since the completion of the Memorial Bell Tower in 1985, a memorial service is held on the morning of the December anniversary date. There are speeches and wreaths laid at the base of the monument during the ceremony. The time of the explosion is marked with a moment of silence. Ship horns are sounded from the Harbour followed by the playing of the memorial bells carillon. There is a small chamber inside the Monument that houses a keyboard to play the carillon. The bells can also be programmed to ring at certain times of the day, and if you are near the park you can hear the bells ring out on the hour. There is the possibility to have the bells ring daily at 9:06 a.m. as a reminder of the Explosion every morning. Survivors of the blast attended the ceremony in the past, but now with almost a century since the tragedy, it is now their descendants, dignitaries, local residents, and those with an interest who attend the ceremony on December 6th. The ceremony occurs despite the inadequate site conditions for ceremonial functions and public gathering. Future park development should consider completing the site design for the grounds around the base of the monument.

Character Defining Elements

The Heritage Value lies in the following elements of the landscape that give the park its special character that support the cultural themes of the Halifax Explosion and the past military fortifications.

Category	Description
1. Evidence of Land Use	<ul style="list-style-type: none"> › Farmland (open field on hilltop now used for a sports field) › Military Fort Needham - earthen redoubt and blockhouse (demolished) › Recreation – sport, play, and park amenities (present today) › Commemorative site to the Halifax Explosion (present today)
2. Evidence of Traditional Practices	<ul style="list-style-type: none"> › Annual memorial ceremony on the anniversary date of the Halifax Explosion on December 6th at 9:06 a.m. › The Memorial Bells programmed to ring at certain times of the day.
3. Land Patterns (Relationship with larger-scale landscape)	<p>Surrounding urban context:</p> <ul style="list-style-type: none"> › Navy and ship industries along the Harbour. › Thomas Adams town planning and urban design (Garden City Suburb): <ul style="list-style-type: none"> › Hydrostone District; › Acadia Square envisioned by Adams to be the civic focus for the rebuilt neighbourhoods. (at Devonshire Ave. & Kenny St.) › Diagonal streets introduced into the street grid to work better with the steep slopes of the natural topography. › Original Gottingen Street (now Novalea) as major route connecting from the north into Halifax settlement
4. Spatial Organization	<ul style="list-style-type: none"> › Open field on the plateau of the hill › Siting of monument on the break of the hill › Axial relationship of Bell Tower monument with Richmond Street and point of explosion in the Harbour.

5. Visual Relationships	<ul style="list-style-type: none"> › Memorial Bell Tower as Landmark to be seen from Halifax, Dartmouth and the Harbour. › Hilltop views of the Harbour and Bedford Basin, the Hydrostone district, Halifax & Dartmouth, and Acadia Square. › View down Richmond Street to the point of the Explosion in the Harbour
6. Circulation	<ul style="list-style-type: none"> › Staircase on the Richmond Street view corridor climbs up the hill following the path of the Explosion’s blast waves.
7. Ecological Features	<ul style="list-style-type: none"> › Original Acadian forest ecosystem › Drumlin geology and hydrology
8. Vegetation	<ul style="list-style-type: none"> › Memorial Rose Garden – horticultural plants have been removed but the shape of the garden is still evident › Mature trees at south corner from pre-blast era › Berry bushes on slopes
9. Landforms	<ul style="list-style-type: none"> › Drumlin Hill – land height siting for historic Fort Needham and Bell Tower
10. Water Features	<ul style="list-style-type: none"> › Views to Halifax Harbour and Bedford Basin – borrowed landscape
11. Built Features	<ul style="list-style-type: none"> › Halifax Explosion Memorial Bell Tower › Halifax Relief Commission monument › Captain James Cook monument › Possible archaeological vestiges of military fortifications (buried)

2.2.7 Integration & Synthesis

The results of all of the previously described studies; including the inventory of physical and biological attributes, cultural attributes, archaeological investigation, historical analysis, forest assessment, and existing program and facility assessment; have been synthesized with the feedback and recommendations from the public engagement initiatives and engagement with HRM staff. This work has culminated in a Framework Plan which lays out the functional requirements, opportunities, constraints, and parameters for the park design and illustrates the most influential of factors. This plan provides the foundation on which to introduce the principles and objectives of the master plan and to integrate the narrative for the park.

The Synthesis map shows view points and visual relationships, key destination points, key entry points, transit and active transit, and forested cover areas. The synthesis diagram will be part of the eventual design diagrams in chapter 4.



Figure 2.22 Synthesis Map

CHAPTER

03

DESIGN FRAMEWORK

03: Design Framework

3.1 Vision

Needham Hill has born witness to the history and evolution of Halifax, from its strategic location for defending the city and historic naval dockyards, to the devastation of the Halifax Explosion and the rebirth of the community in the aftermath. It is a place of commemoration and reflection but it is also an active part of resident's lives; a place for both remembering and for living.

The vision for the Needham Park balances the national and regional commemorative significance with the local recreational needs of the community. Future park improvements should be geared to improving the quality of life for all Halifax residents, as well as the visitor experience for the explosion memorial. Needham Park should be a destination that strengthens the foundations of our community while honouring the memory of our past.

3.2 Design Principles

Fort Needham Park is both a regional park (designated for its regional cultural heritage significance), and a local park used regularly by local residents for recreation. These two uses are not mutually exclusive, however, they have different audiences, programs and design principles.

3.2.1 Commemorative Principles

Commemorative landscapes are special cultural places established to remember, celebrate, honour, or memorialize noteworthy locations, people, or events. These landscapes form an important physical expression of a culture's shared memory. Overall, the commemorative intent of the Needham Park project, as defined by the Special Advisory Committee's Vision Statement for the Halifax Explosion 100th Anniversary Commemorative Program, is to (1) honour the memory of those who died & suffered, (2) educate current and future generations, and (3) celebrate the resilience of Halifax.



The following commemorative design principles were in part guided by the Special Advisory Committee's recommendations for commemoration. Any future design considerations for Fort Needham should:

- › Be solemn, respectful, and reflective
- › Reflect the legacy of the story
- › Represent all communities
- › Educate and connect people to the history
- › Capture the national imagination
- › Explore the compassionate response
- › Explore the institutional responses
- › Be compelling, meaningful, evocative, and enduring.
- › Raise the profile of the park and its experience using strategic marketing and directed tourism promotions.
- › Protect any archaeological resources which may be present using sound archaeological planning at key construction stages. Incorporate findings into the

design program if suitable.

- › Enhance the existing Memorial Bell Tower by completing the unfinished ground-plane plaza enhancements that were planned as part of the original memorial.
- › Ensure Fort Needham remains the 'heart' of the Halifax Explosion story, linked together with other sites around the city that will help illustrate the significance of the event.
- › Protect and strengthen the identified important Cultural Landscape elements; particularly the original commemorative intents of the Bell tower design and siting.

3.2.2 Park Design Principles

The following park design principles should guide any future design of Fort Needham. Future park alterations should:

- › Recognize that Fort Needham is a regional park for Halifax, and as such, it must satisfy the broad demands of the regional public and the needs of the local community.
- › Be accessible to a widest possible audiences, age groups, active and passive users, and seasonal users
- › Make the park more visible and accessible to residents and tourists.
- › Use materials and design approaches that are fitting, authentic and high quality.
- › Use lighting as a creative design feature to bring the park alive.
- › Manage stormwater as part of every design element to minimize off-site impacts.
- › Make Fort Needham a signature park experience in Halifax's network of parks and cultural places
- › Improve the urban ecology of the park
- › Be compatible with surrounding uses



3.3 Design Vocabulary

To create a legible and lasting narrative of place, there must be a concise design vocabulary that is symbolic, metaphoric, artistic and rooted in the local vernacular and local meaning. The design vocabulary should inform every aspect of design, from site scale planning down to the detailing of individual site elements.

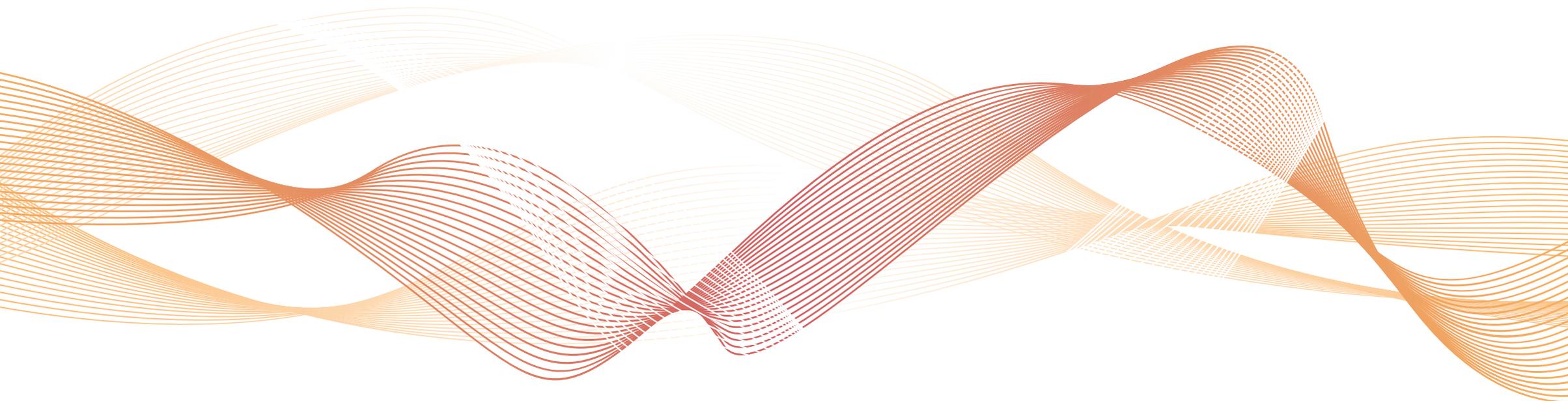
The British military history and the Halifax Explosion provide unique design clues that can help inform meaning and provide special relevance and symbolism for Fort Needham. Some of these elements are summarized below:

3.3.1 Explosion Vocabulary

Death and suffering came from three primary sources during and after the explosion.

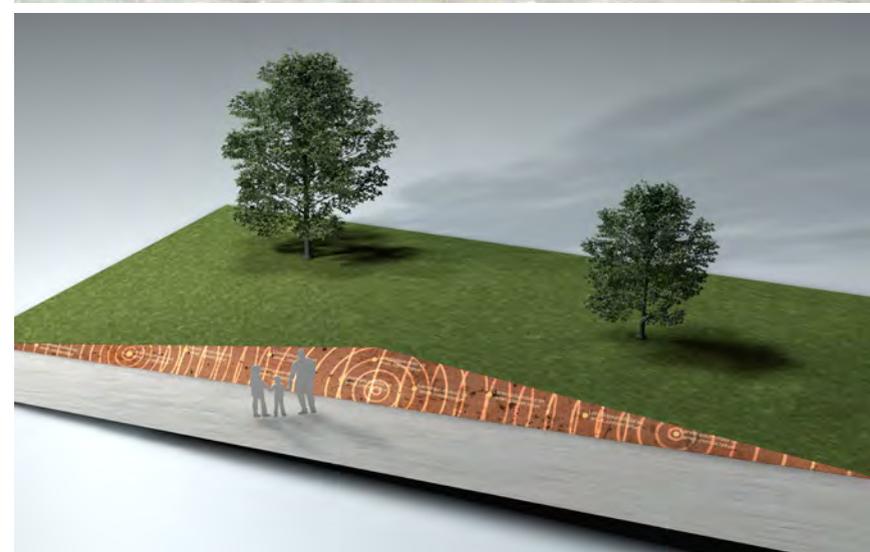
3.3.1.1 The Shockwave

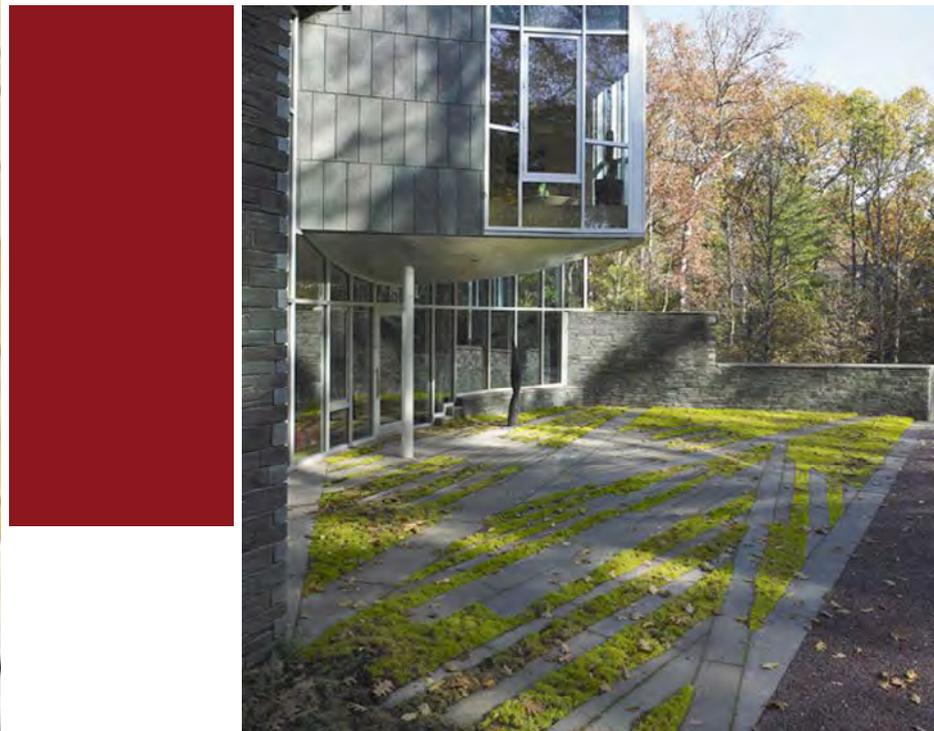
The blast travelled at over 1-1.5 km per second and had temperatures in excess of 5000 degrees Celsius. The blast wave flattened everything between Needham Hill and the Harbour. Ground Zero of the blast hurled shards of metal and steel tens of kilometres away (With the Mont Blanc's cannon hurled 5.6 km towards Albro Lake and part of her anchor landing 3.2 km in the opposite direction towards Armdale) reigning down death and destruction on the unsuspecting residents of the city. Fragments of rusted and twisted steel





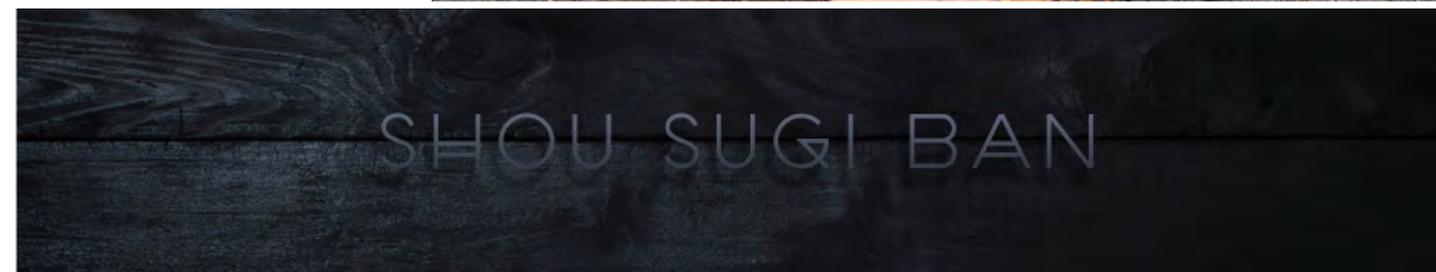
from the ship are still being found today. Corten steel is a fitting memorial material for the park. The blast caused over 600 eye injuries from flying glass as the onlookers watched the burning ship from inside their homes, schools and businesses. The use of shattered glass or materials shaped in 'shard' patterns is also a fitting design vocabulary. Historic photos of the aftermath show toppled structures, snapped telephone poles with no vertical upright. The purposeful use of non-vertical elements (wood or metal), leaning away from the point of impact, would be poignant and symbolic.

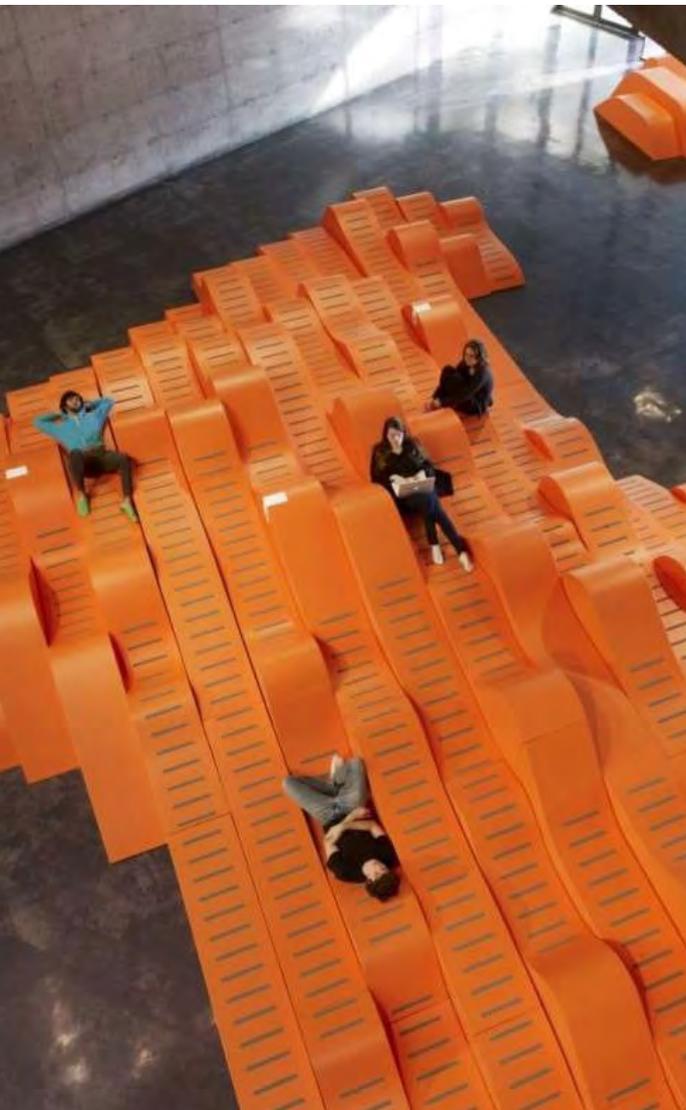




3.3.1.2 The Fires

Everything in the immediate vicinity of the blast were incinerated from the 2.9 kiloton explosion. Those that were flattened were set ablaze from the toppled wood stoves that heated homes and schools. 'Shou sugi ban' is an ancient Japanese technique for naturally preserving wood using fire. This type of timber is available and is specially relevant for Fort Needham. It is naturally rot resistant.





3.3.1.3 The Tidal Wave

The pressure of the explosion sent a 16 meter tidal wave out into the harbour and up into the Richmond neighbourhood for three city blocks. The use of water as a symbolic design element is tricky atop the windy Needham Hill. The sporadic use of shallow water, reflective ponds, stormwater features or reflective glass could achieve symbolic goals of the tidal wave. The idea of shaping the land or other landscape features in wave patterns would also be effective.

Native Plant Material Vocabulary

Since the 1960's, non-native plants have been used in the park. This was a design trend of the day using exotic imported species. These non-natives should be strategically 'edited' from the forest and native Acadian Forest species reintroduced. This plant vocabulary is described in more detail in the Section 4.4 the Forest Management Plan.

CHAPTER

04

THE PLAN

04: The Plan

As outlined in the vision, the plan for Fort Needham must balance the national and regional commemorative significance with the local recreational needs of the community. It must raise the profile of the park for tourists and regional residents, while catering to the needs of local families and individuals.

The master plan for Fort Needham is an amalgam of:

- › feedback from the community engagement process;
- › the site analysis and suitability analysis;
- › current trends in commemorative design, interpretive planning, cultural landscape planning and park design;
- › tourism trends;
- › maintenance and forest management best practices

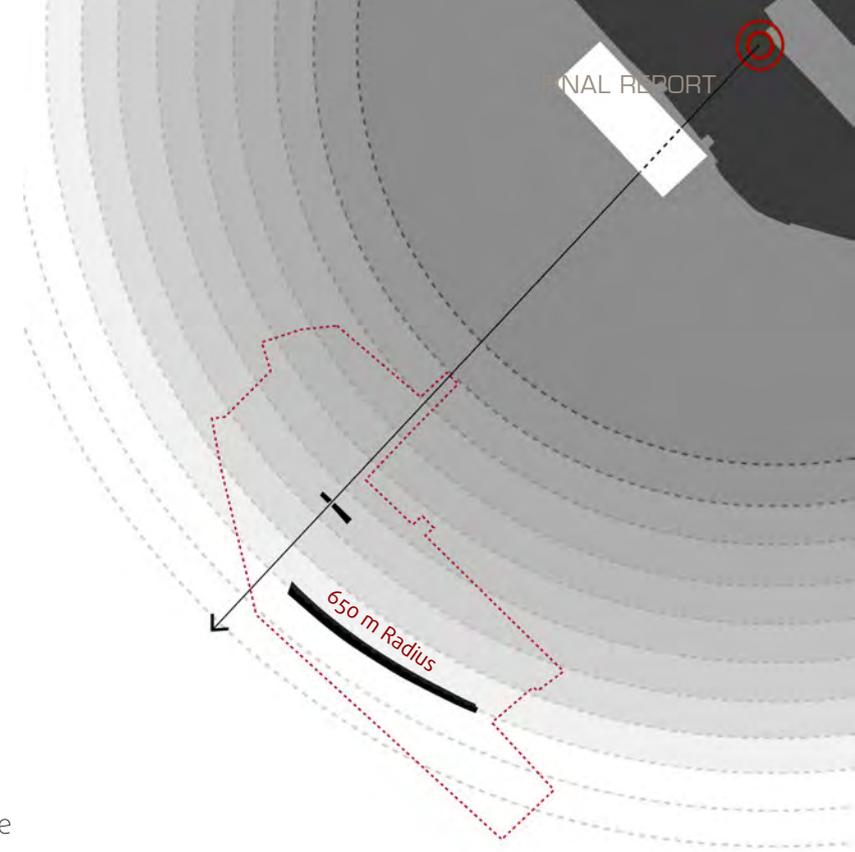


Figure 4.1 Explosion Radii



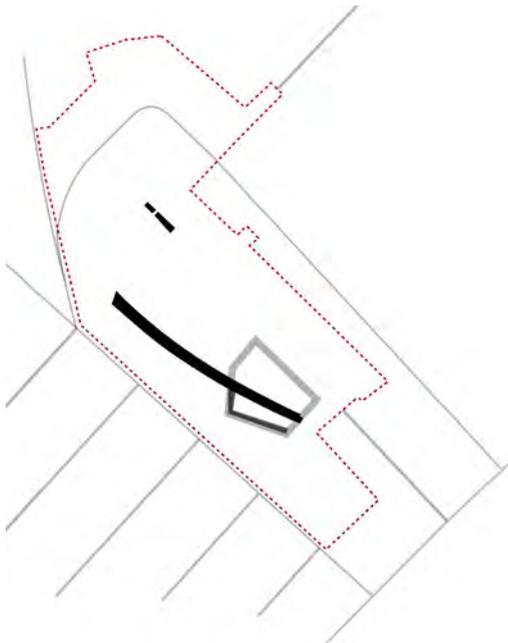


Figure 4.2 Abstracted Fort

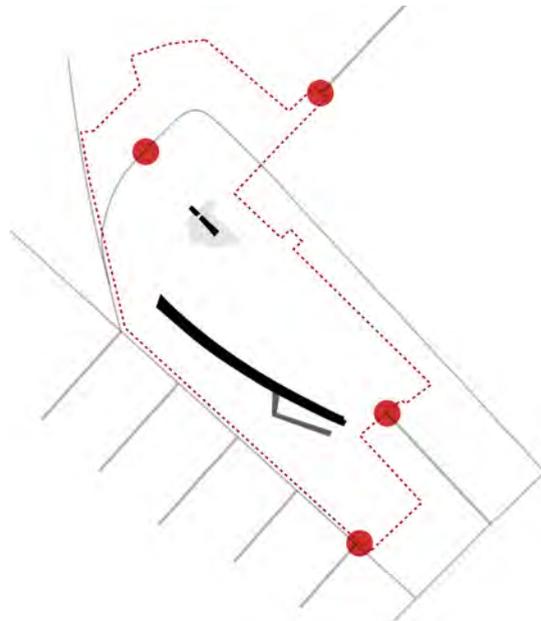


Figure 4.3 Emphasize Gateways

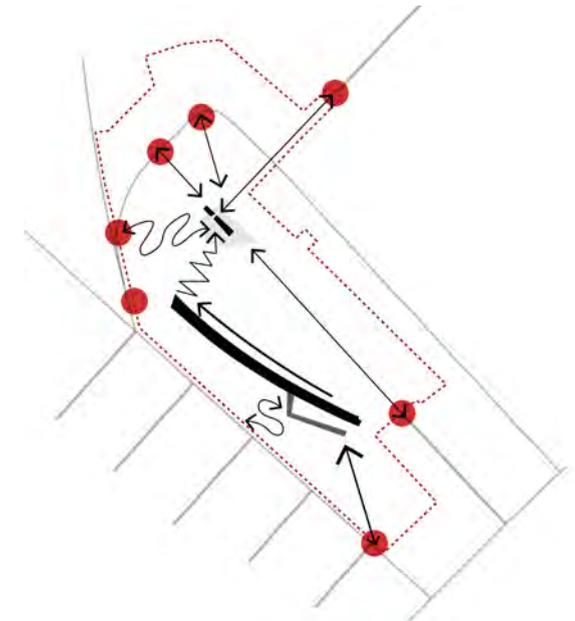


Figure 4.4 Connections Frame Spaces

4.1 Formative Design Elements

The upper left graphic shows the relationship of the park to ground zero of the explosion. The Halifax Memorial Bell Tower, constructed in 1984, was deliberately located on an axis – where at the time – a view corridor existed from the park to the explosion site in Halifax Harbour. Unfortunately, the recent construction of a new building in the Irving shipyard has obstructed this important sight-line. In the absence of the harbour as a visual terminus through the Richmond Street corridor, the relationship of the explosion site to the park and surrounding neighbourhoods must be revealed in new ways.

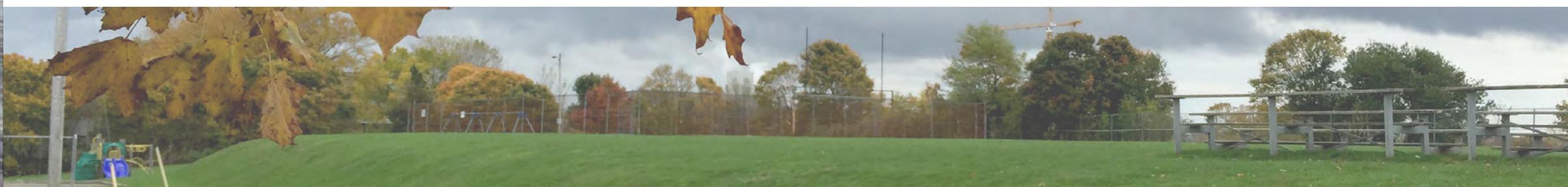
Objective #1: Explosion Radii represents the shockwaves that would have radiated from the centre of the blast. The result is a series of concentric curves or radii projected onto the park site. The strong physical manifestation of

these curves can be used to make the proximity and impact of the catastrophic event more perceptible to park visitors. For instance, where the curve meets the top of the embankment, it forms a strong spine that supports the southern structure of the park. A memorial walk is introduced along its length where movement is carefully choreographed, views of the city are captured, and important stories are conveyed.

Objective #2: Abstracted Fort. At the top of the embankment is the approximate location of the original fortifications. Upon arriving in the park, the visitor will be able to understand the former military use of this site. The space is configured as an abstraction of the fort's original footprint, while its construction begins to speak the language of a defensive wall or rampart.

Objective #3: Emphasize the Gateways. The current entry points do not provide the prominence warranted for such a special park. Strengthening the existing arrival thresholds and introducing a new gateway at Novalea and Kenny Street will go a long way in making the park more visually prominent and accessible from the periphery.

Objective #4: Connections Frame Spaces. The final design move is using the pathways to visually connect the explosion monument with the gateways, while at the same time framing the important spaces that remain.



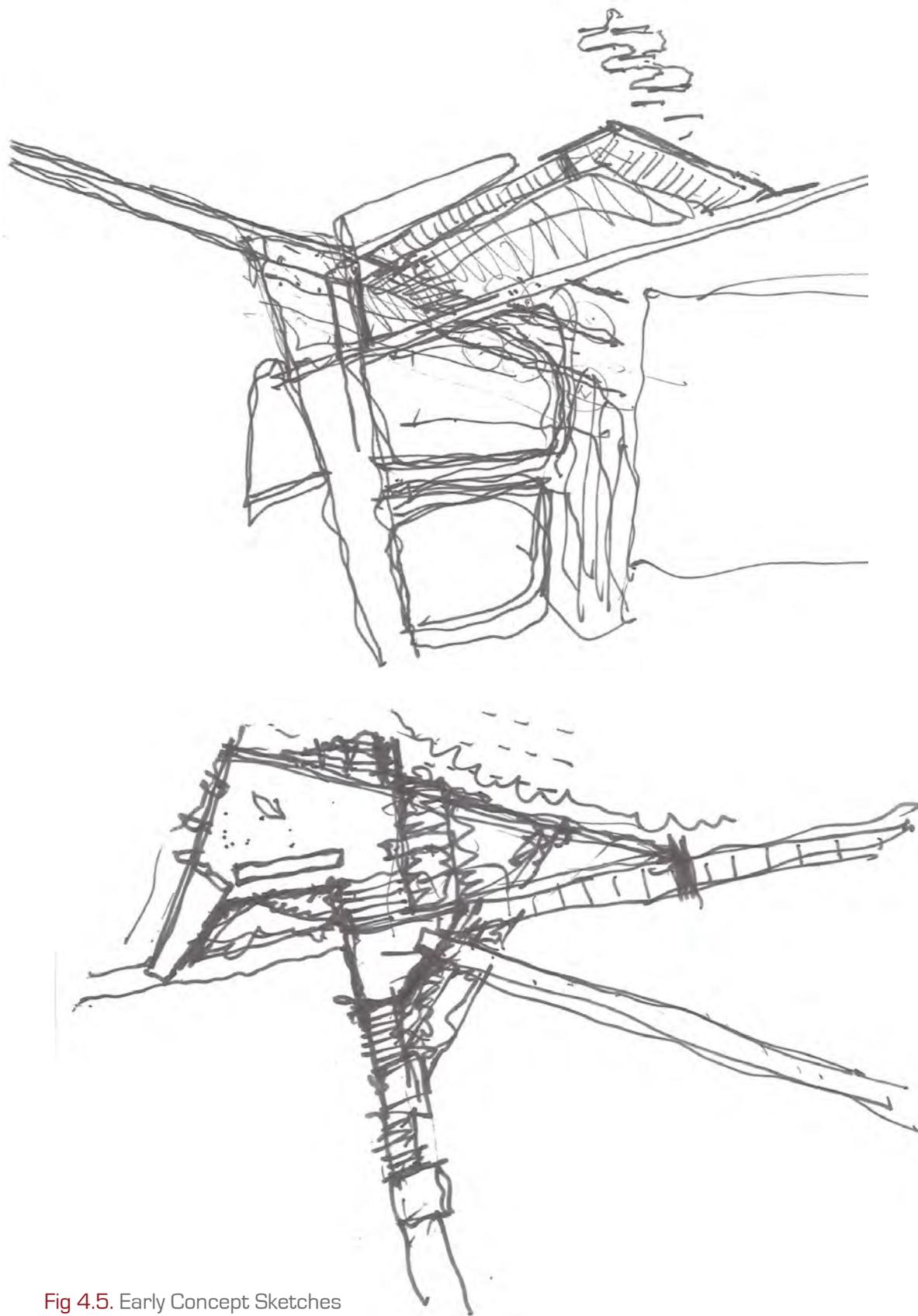


Fig 4.5. Early Concept Sketches

4.2 Master Plan

The Master Plan for Fort Needham recognizes the new importance of the park as a Regional Park and a renewed destination for people wanting to learn and remember about the victims and survivors of the Halifax Explosion. It is the expressed desire of the Municipality and the Special Advisory Committee to raise the profile of this park through improved programming, improved features and spaces, and improved legibility of the events which have shaped the community.

Park master plans are not cast in stone, they evolve over generations to represent the priorities, technology and values of each new generation. They usually have a life of one or two generations (20-40 years) before they need to be revisited and updated. Park master plans are also implemented over time, phase by phase, project by project. The plan represents a desired end state, but sometimes it can take tens of years to implement.

Master plans are guidebooks for future decision-making. They inform the present thinking, and guide decisions about suitable programs and activities, where things go or how they should look.



Fig 4.6. Park Master Plan



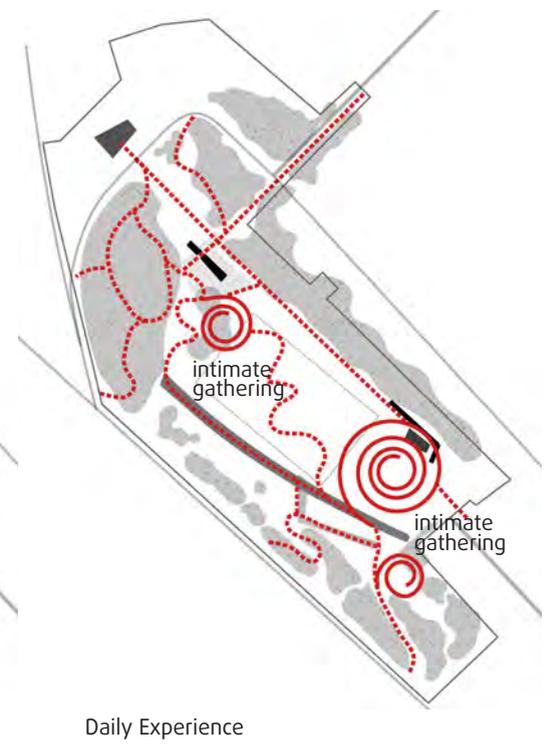
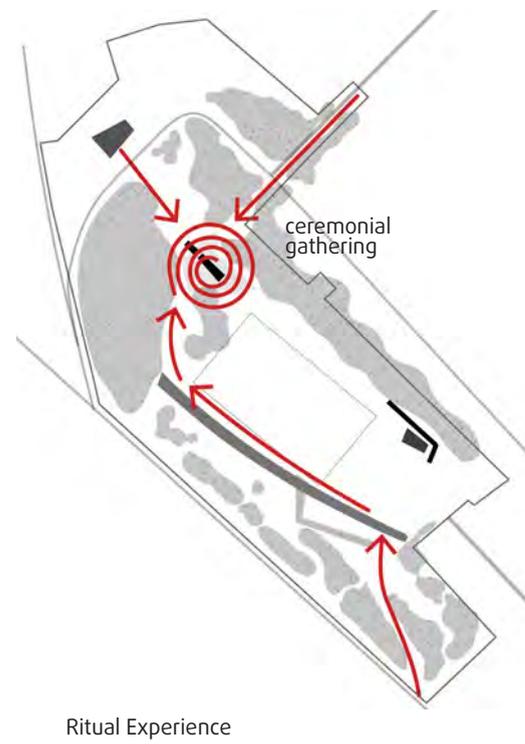
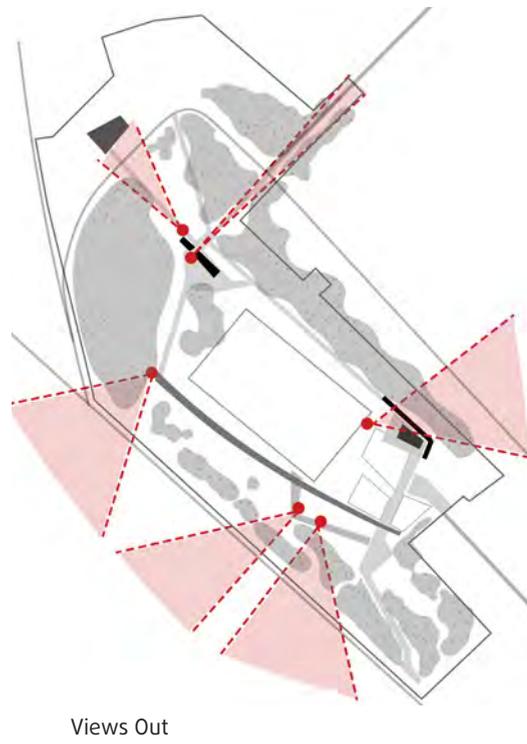
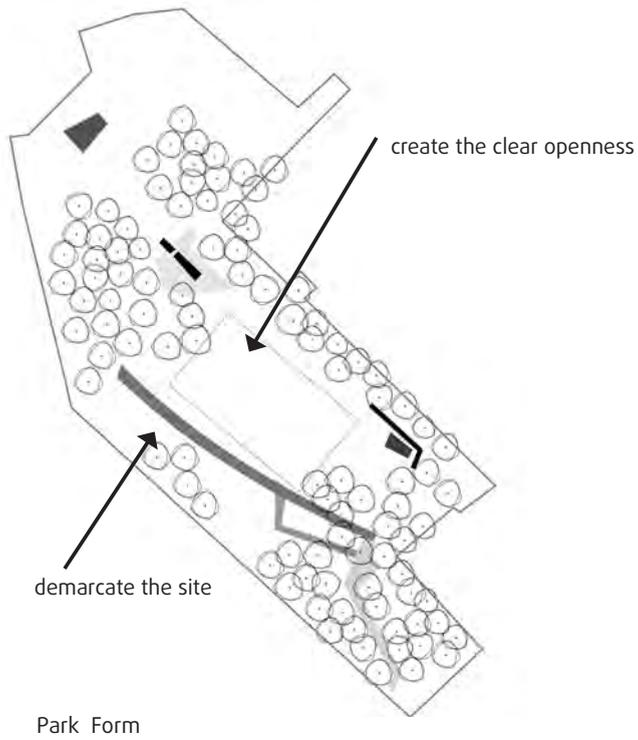
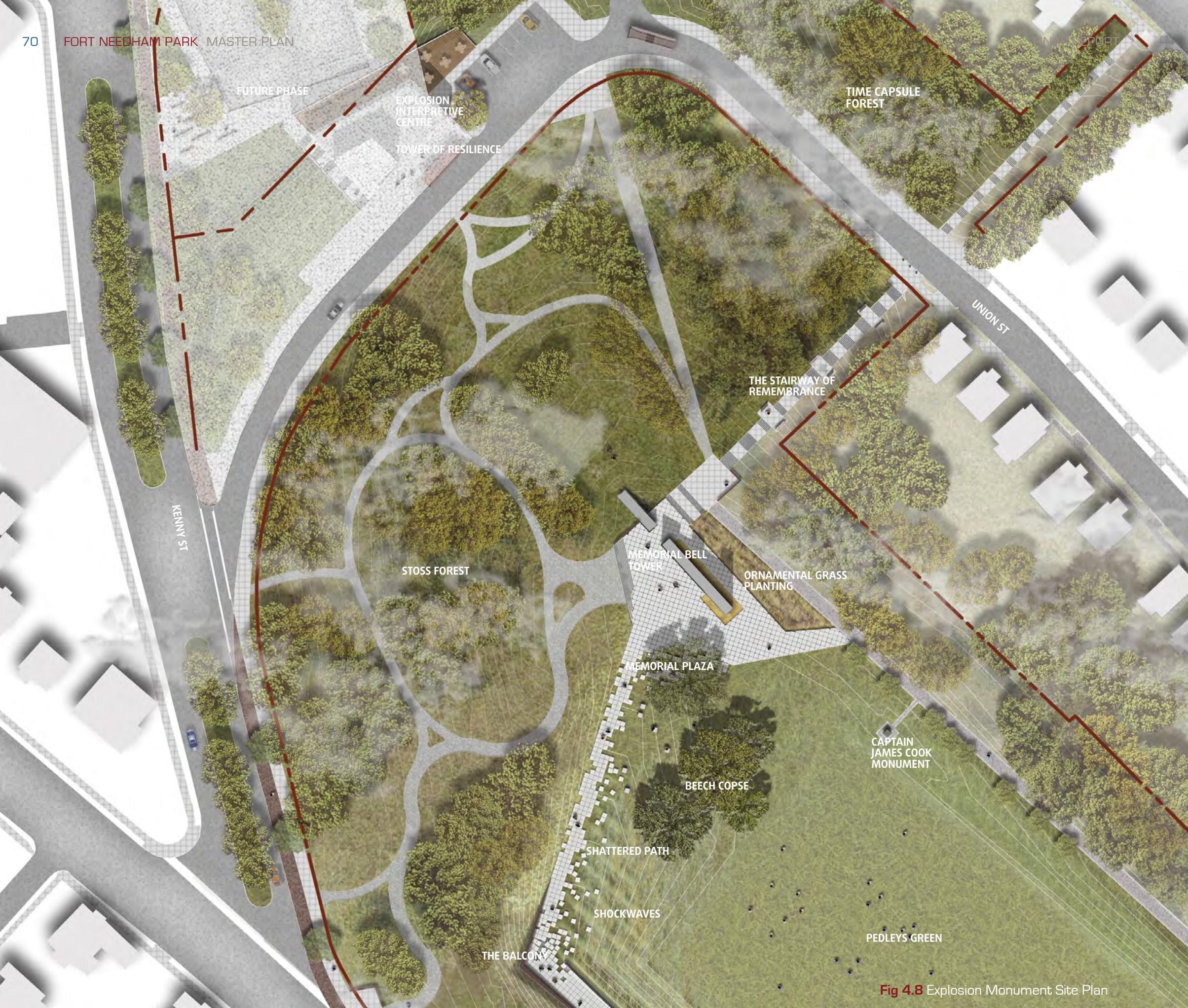


Fig 4.7. Synthesis Diagrams

Master Plan Inspirations

This section outlines the major park components and design features in more detail:

- › **The blast radius from ground zero** - One of the main paths along the southern side of the park will be formed from the blast radius shockwave. This radius will show just how close the 2.9 kt blast was to Needham Park as the tangent of the curve will always point to the blast site. Similarly, shockwaves from the blast will be represented in the shaping of the ground. The valleys of the shockwaves will double to direct stormwater.
- › **Explosion Monument vistas and redevelopment** - key pathways in the park will point towards to explosion monument. All primary entrances into the park will point towards to the monument. The monument will finally receive the groundplane gathering area it deserves. Able to accommodate 300 people and expandable to 600 people, it will be located on the west side of the monument so that people who gather at the December 6th event will face the explosion site. By design or by accident, the orientation of the monument at 9:06am on December 6th, casts a shadow along the long axis of the monument so that each side is in sunlight. The opening in the monument will receive the prominence it rightfully deserves.
- › **Park zoning will reinforce the themes of Remembrance, Regeneration, Vitality**
The area around the monument and to the north towards the Needham Centre will be the sacred area of *remembrance*. Here, the solemn story of the explosion, the dead and the injured will be remembered. Along the southern boundary of the site, the theme will be *regeneration*. This area will focus on the story of rebuilding after the great explosion, the natural regeneration of the forest and sideslopes, and the evolution of the city to the southwest. The central and southern area of the park will be dedicated to *vitality*, the power or ability of something to continue to live and be successful. The new elements in this area will include two playgrounds (one natural play and one accessible play), a community garden, a stormwater gardens, a new upgraded sports field, washrooms and an interpretive garden.
- › **Redoubt Look-Off**- In the approximate location of the last redoubt, the land will be shaped to recount several sides of the pentagon that used to fortify the hill.
- › **Kenny Street Active Recreation** - Between Kenny Street and Union Street, on the land occupied by the Needham Centre, the area will be part of a future Community Centre planning exercise. The idea of a multi-use trail on the park side along Kenny Street should be considered, as well as some active court space to replace the courts removed as part of this plan at Fort Needham. Once the Needham Centre is removed the hill will have an abundance of potential recreational uses. The view corridor from the corner of Kenny Street and Devonshire Avenue to the Explosion Monument should be maintained. The potential for a small dedicated explosion interpretive centre could be part of that future program.



FUTURE PHASE

EXPLOSION INTERPRETIVE CENTRE

TOWER OF RESILIENCE

TIME CAPSULE FOREST

KENNY ST

UNION ST

THE STAIRWAY OF REMEMBRANCE

STOSS FOREST

MEMORIAL BELL TOWER

ORNAMENTAL GRASS PLANTING

MEMORIAL PLAZA

CAPTAIN JAMES COOK MONUMENT

BEECH COPSE

SHATTERED PATH

SHOCKWAVES

THE BALCONY

PEDLEYS GREEN

Fig 4.8 Explosion Monument Site Plan

Explosion Monument

The original Explosion Monument design didn't anticipate the amount of people attending the annual ceremony and did not make provisions for 300+ People on a cold wet December morning. There is a need to accommodate these people on a hard surfaced area. Similarly, some of the original landscape design for the structure was never fully realized including stairs and the pathway through the monument. A simple but modern design solution for the base of the monument is warranted prior to the centenary event in 2017.

The new proposed design elements include:

- › Relocating the asphalt path further from the monument to provide more room to view it and more space around the monument.
- › A new path from the monument to the north where the grades are better for a pathway than the current extremely steep path to the monument.
- › hardscaping and landscaping using simple ornamental grasses and native oceanfront plants around the immediate base of the monument
- › A formal pathway between the 'break' in the

monument as was always envisioned.

- › Improved architectural lighting of the structure (removing the existing monumental lighting)
- › Creation of a gathering plaza on the south west side of the monument so that people face the explosion site during the ceremony. The plaza should not be one monumental hardscape; instead it should be broken up with landscape inlays to reduce its visual impact.
- › Seating blocks and integrated interpretive art (not traditional interpretive panels) on the edges of the gathering plaza
- › Creating a more formal plaza from the break in the monument down to the steps at the north east of the monument.
- › A path to connect the Cook monument to the relocated pathway and relocating the panel to the opposite side of the monument with a small plaza and seating.
- › Improved staircase along the Richmond Street view corridor with interpretive landings down to Union Street and Devonshire Avenue.
- › A 3D projection system to project digital images and movies onto the monument on the west side

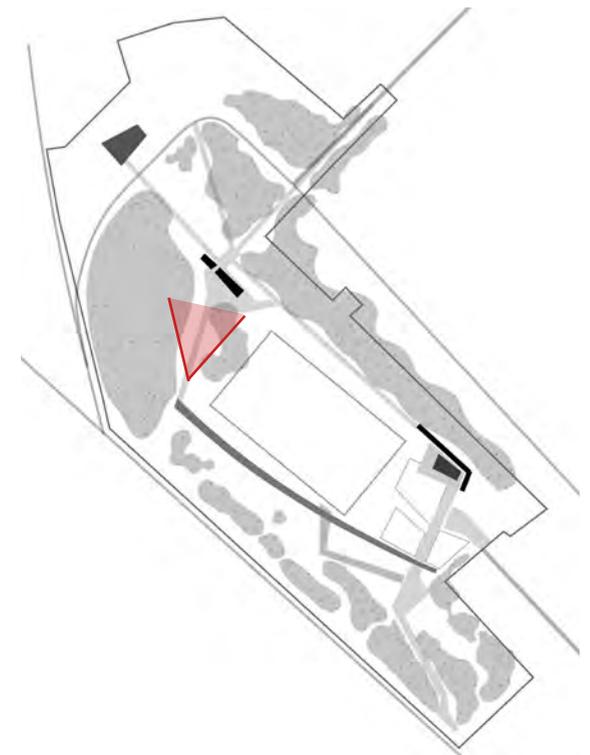


Fig 4.9. Explosion Monument Sketch



- › Selective thinning of the forest to the southwest of the monument so that the landmark is visible from Stanley Place
- › The Vestige Forest east of Union Street is an area that has been untouched since the explosion. A low impact pathway could be located through this area with some interpretation.

Explosion Interpretive Centre

During the interviews and workshop, there were some suggestions that a small interpretive building or structure would help convey the importance of the explosion event and aftermath. Though the planning for the Needham Centre site will be undertaken as part of the Devonshire community centre design, the design team has illustrated a modest 100 square metres structure with an elevated look-off and pedway across to the monument. The location should preserve the site lines to the monument from the corner of Devonshire and Kenny Street. This master plan hints at potential uses for this important corner but the final design will be part of the eventual Community Centre design process. The important considerations are that this site should be preserved as an important adjunct to Fort Needham and the view corridor from Devonshire / Kenny Street to the Monument should be preserved.

Any future Explosion Interpretive Centre could include:

- › Parking for 8-10 vehicles and 2 bus laybys on Union Street.
- › A 100 sq.m. exhibit space with washroom facilities and a small welcome/gift shop.
- › An elevator to a roofdeck look-off with a catwalk across Union Street over to the monument. The elevator could also go down to the Kenny Street plaza level
- › The exhibit would use artefacts and new technology

to make the explosion and aftermath come to life for visitors.

- › Exterior steps to the lower Kenny Street plaza.
- › The use of shattered glass and an inspiring design for the building.

Stoss Forest

A 'Stoss' is the leading edge of a drumlin and its steep slopes have been left to revegetate over the last few decades. This area should:

- › Be slowly 'edited' removing non-native species in favour of native Acadian Forest species.
- › Stacked looped trails through the forest should be added
- › Include Interpretation for the blockhouse that used to be located in this wooded area.
- › Include memorial sculptures through the forest. More formal monuments would be acceptable in this area if they took on a more artistic tone rather than the traditional tombstone monument.
- › Open up site lines from Stanley Place to the monument.
- › Integrate a multi-use trail along Kenny Street at the edge of the forest as a 3.1 metre wide multi-use trail.
- › Include a gateway plaza at Kenny Street / Novalea Drive as one of five main gateways into the park. The use of explosion artefacts (twisted metal or other materials) should be designed into the plaza. The significant grade change would necessitate steps and seating walls in the design. Other barrier free entries are located elsewhere around the park. The gateway should include wayfinding signage and lighting.
- › Employ the forest management strategy described later in this chapter.

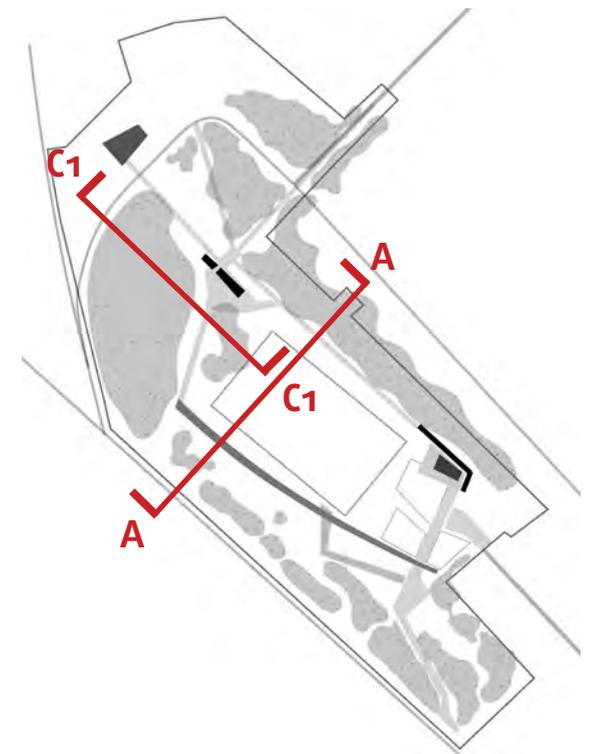
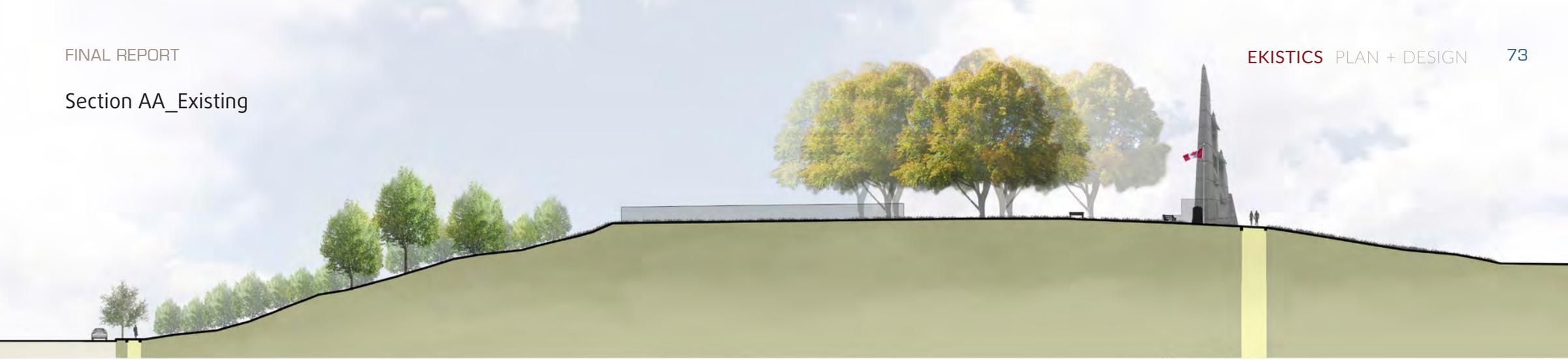


Fig 4.10. Site Sections

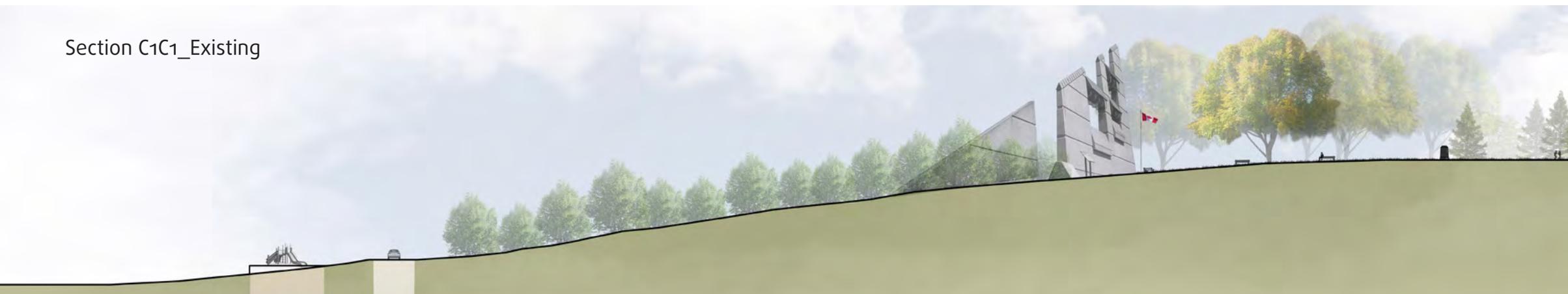
Section AA_Existing



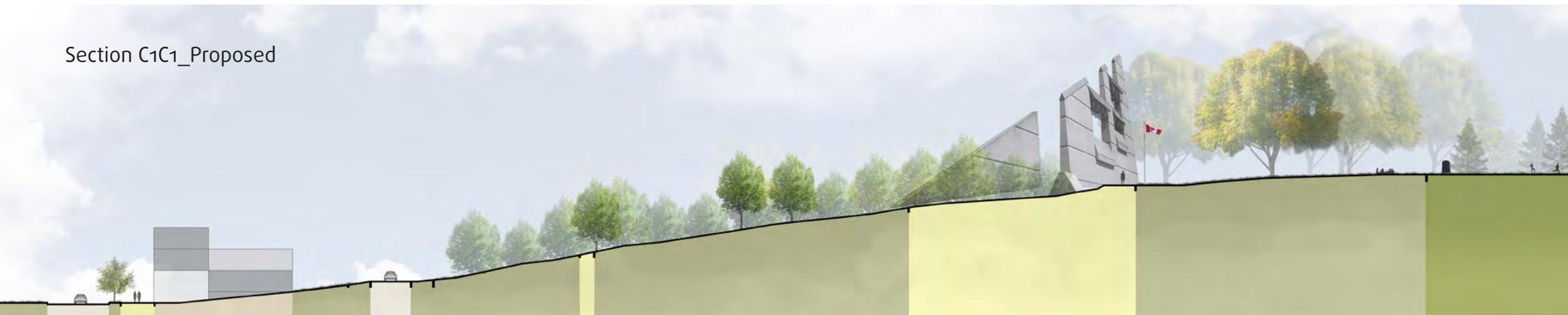
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Section C1C1_Existing



Section C1C1_Proposed





SHOCKWAVES

PEDLEYS GREEN

RAISED SEATING TERRACE

ESPLANADE OF HEALING

BLUEBERRY PATCHES

REDOUBT INTERPRETIVE PLAZA

LIVINGSTONE PLAZA

ORCHARD

SENSORY GARDEN

NATURE PLAY

BLOSSOM PLAZA

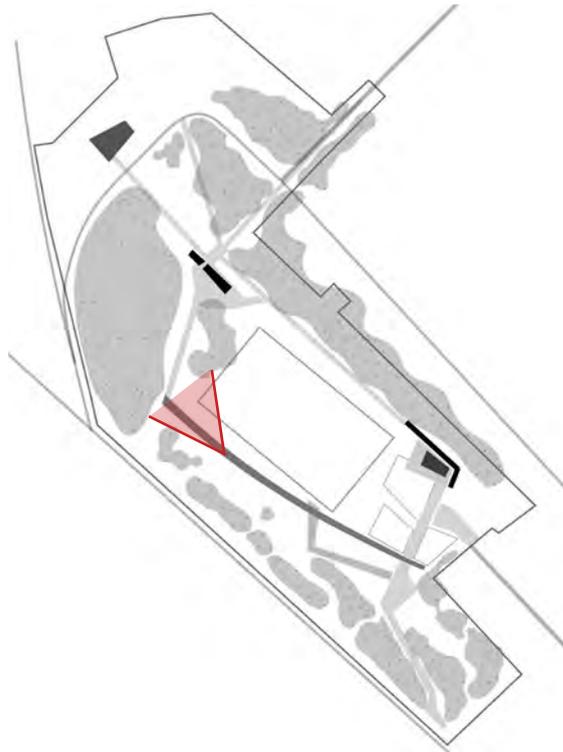


Fig 4.11 The Esplanade Perspective

Esplanade of Healing

The curved walkway follows the 650 metre blast radius from ground zero and follows the edge of the hill slope where an expansive view can be taken over the Hydrostone Neighbourhood. The subtle curve in the path infers the proximity of the Explosion, even though the point of detonation is not visible anymore due to buildings and topography. The esplanade runs along the ridge of the drumlin and is a place to stop and embrace the heightened experience of the unique cultural, geological, and historic landscape of the park. The walkway links the south end activities with the more contemplative spaces and forest surrounding the Memorial. The pathway's northern terminus is built out over the edge of the landform offering a scenic lookout and interpretive elements about Thomas Adams Plan and the rebuilding of the community.

The main intent of the Esplanade is to highlight specific events surrounding the post 1917 reconstruction

through inscribed texts that offer a narrative to visitors as they move along the walk. The disaster response is commemorated through engravings in the concrete pavers. This includes the names of the communities that contributed to the recovery efforts through financial aid, donations, and how far people traveled to physically lend a hand in the weeks and months following the event. Details of the explosion, including hull lengths of both the Imo and Mont Blanc are marked by granite insets that cut through the ground plane and the slope – making the enormous scale of the vessels that collided perceptible from the start of the walk. The esplanade is also an ideal spot to point the visitor to locations across the city where debris was flung from the blast highlighting the magnitude and scale of the Explosion. The details of the esplanade interpretation will be part of a more detailed interpretive strategy or detailed design for the entire park.





PEDLEYS GREEN

PARK PAVILION

NATURE PLAY

STORMWATER GARDENS

PARKING

ESPLANADE OF HEALING

SENSORY GARDEN

ALLÉE

NEEDHAM DRIVEWAY PLAZA

REDOUBT INTERPRETIVE PLAZA

ORCHARD

COMMUNITY GARDEN

DEDICATION WALL

BLOSSOM PLAZA

NEEDHAM ST

UNION ST

Fig 4.12 Needham Drive Gateway

Needham Drive Gateway

Needham Drive is only 'at-grade' entrance into the park. The residents living on the street provide eyes on the park which is favourable for park investments in an area that is currently well used by the community.

Elements of the Needham Drive Gateway include:

- › Improved gates and entry sequence into the park including improved gateway and wayfinding signage.
- › Removal of the old concrete block 'canteen'
- › New washroom and outdoor exhibit building. A small covered outdoor exhibit would include some interpretive panels and possibly outdoor displays of artefacts from the site. The covered structure would provide some shade and cover from the elements for park users. Any exhibits should be aligned so that there is good visibility from Needham Drive into the structure. The structure should include gateway signage and park wayfinding signage. The structure should be well lit.
- › Natural Play playground #1. This playground would be a significant upgrade from what exists today using natural play elements. The use of timbers slanted away from Ground Zero would be part interpretive, part art, part play structure. The playground would include wave topography, seating blocks with interpretive elements inlaid, natural play swings and slide (built into the hill), seating areas for parents and a shade structure.
- › Accessible Playground #2. The Halifax Explosion blinded and handicapped the young and the old alike. The upper playground would be designed as an accessible playground for all disabilities with a focus on tactile and sensory play for visually impaired children. Through play, children of all abilities can form an understanding of the challenges the victims of the Explosion were faced with. Themes of sensory play for the visually impaired can bring focus to the fact that eye injuries were one of the most common impairments from the Explosion. The surfacing on this playground should be poured rubberized surfacing.
- › Community Gardens. The plan shows the community gardens moved to a more permanent position in the active hub of the park. Elements of the community gardens should be designed for

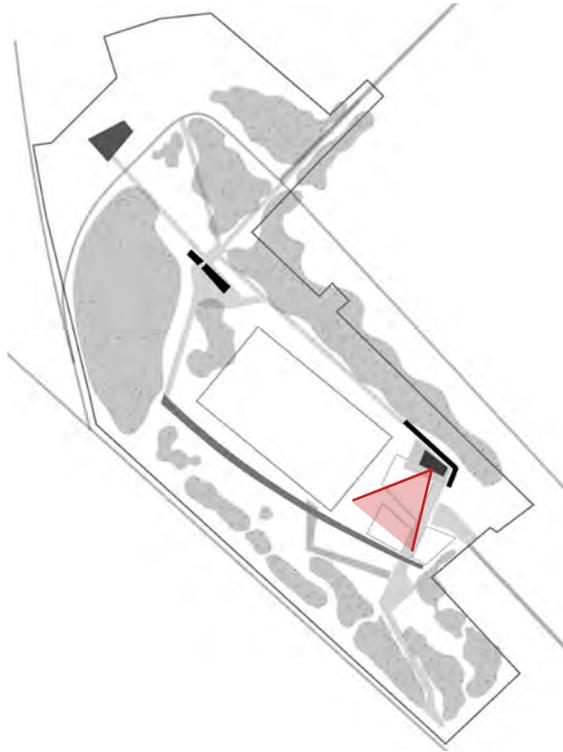


Fig 4.13 Natural Playground





accessibility. Other considerations for the garden are access to water and vehicle space for loading.

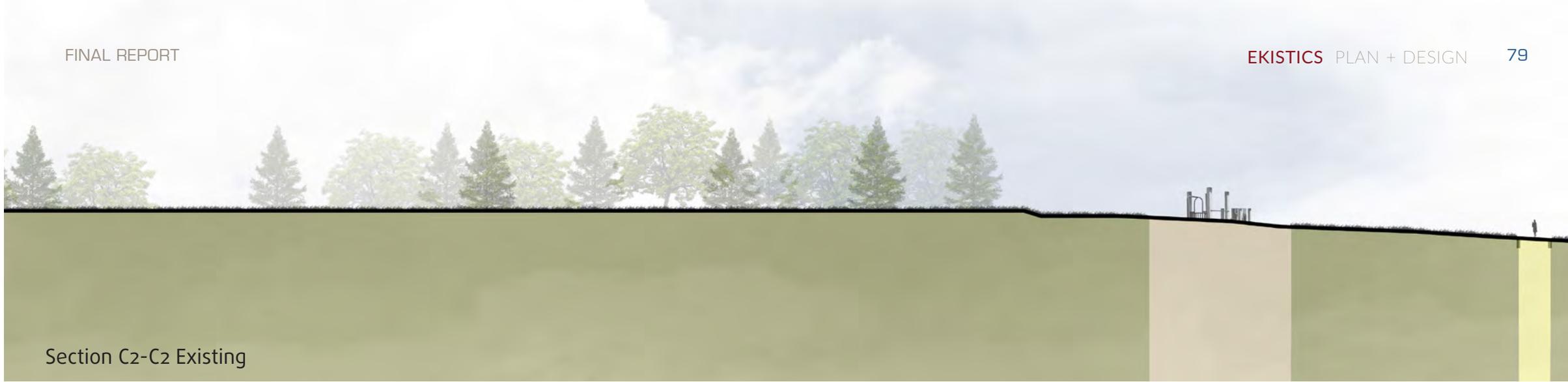
- › Parking Area. A small parking lot at the end of Needham Drive would provide parking for 4-5 vehicles and 3 point turning for vehicles at the end of the road.
- › Stormwater Gardens. The lowest elevation of the site could be used for a stormwater garden collection area. A right-of-way exists in this low area to move overflow drainage in times of high storm events with fail-safe drains to Needham Street in times of heavy rainfall.

Pedley's Green

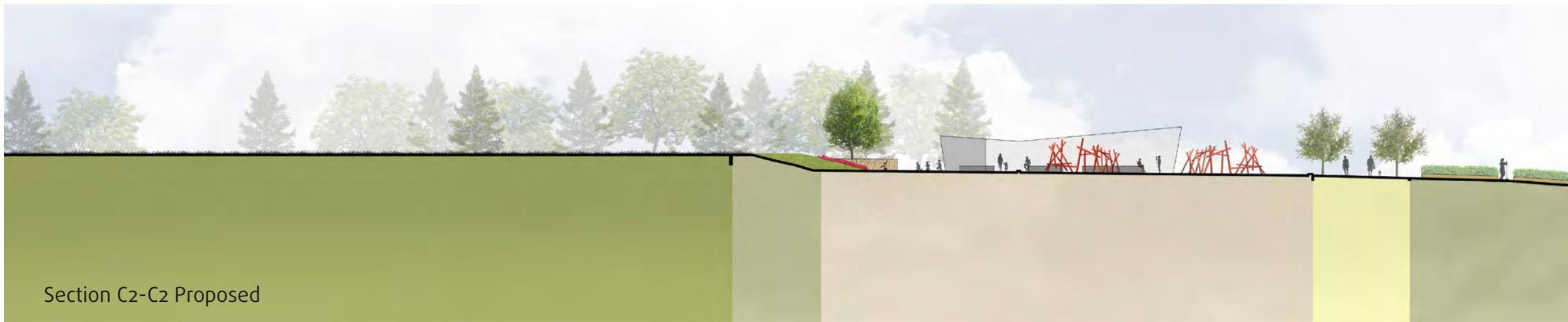
The poorly drained football field at the top of the hill is an important asset for the community and local sports clubs. The aim of this project is to maintain and improve the sports field but also create a more usable undifferentiated open area at the top of the hill. The "green" is named after James Pedley who operated a farm just south of the hilltop. Projects include:

- › The old football field has been realigned, regraded (lowering it about 1 m) and significant drainage improvements added. The Municipality will need to discuss whether the intention is to keep this as a practice field, or whether to create a regulation field. Ornamental grasses and meadows will frame the field to create a more natural field setting.
- › Land Shockwaves. The land around the field will be sculpted to create shockwaves of meadow mixture or ornamental grasses on the edge of the field. These topographic waves will contain balls that could stray from the field, while directing drainage away from pathways and high use areas.





Section C2-C2 Existing



Section C2-C2 Proposed

Fig 4.14 Natural Playground Sections

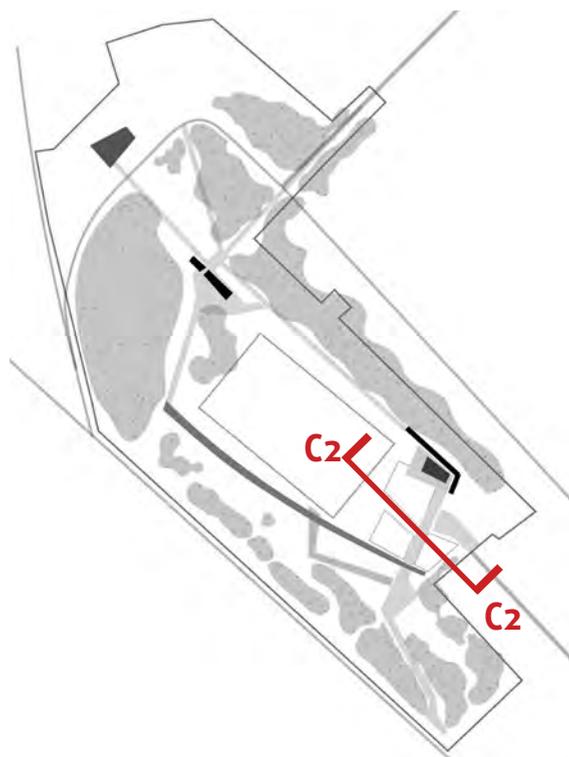






Fig 4.16 Needham Drive Gateway



Novalea Park Edge

- › Hydrostone Gateway. At the foot of Hennessy Place, close to the Hydrostone, the current sloped walkway would be widened, slightly realigned (to reveal the monument from the top of the hill), and a gateway plaza would be added at the base of the hill. The gateway plaza would include a seating wall, gateway signage, and some enticing interpretive elements. The walkway would be surfaced to reduce erosion.
- › Redoubt Interpretive Plaza. At the top of the hill in the area of the current tennis courts, there is an opportunity for a larger gathering space. Vertical interpretive markers and stone seating would be part of this plaza area.
- › Redoubt Boardwalk. In the vicinity of the last pentagonal redoubt, a boardwalk and redoubt land shaping will create an interesting look-off overlooking Livingstone Place. Steps from Novalea Drive would find their way up the slope to the look-off at the top of the hill. This area would be themed to talk about the military history of Needham Hill.
- › Former Rose Gardens. The lawn of the former Rose gardens could again be restored into a more formal garden space. The Municipality would have to commit to a maintenance regime or they could work with residents

to create a local garden association that would have some funding to maintain the gardens in this area. This area should include ample seating and rest areas to enjoy the gardens.

- › Novalea slope. The slope bordering Novalea Drive would be planted with native berries, slope stabilizing trees and other forms of bioengineered structures. Overall, the intent is to keep the views that are currently in place rather than allowing the hill to naturally regenerate over time. At minimum, the vegetation should be maintained for open views at the Hydrostone cross streets.
- › Novalea on-street parking and AT. Novalea is currently 12.8 metre wide. This width provides enough room for 2.4 metre on-street parking on the Needham Park side of the street, 1.2 metre AT lanes on both sides of the street and 4 metre travel lanes. Park benches and park lighting would be placed along the sidewalk on the park side of the street. The two bus stops should include bus shelters and seating/waste receptacles to benefit both transit and park users.

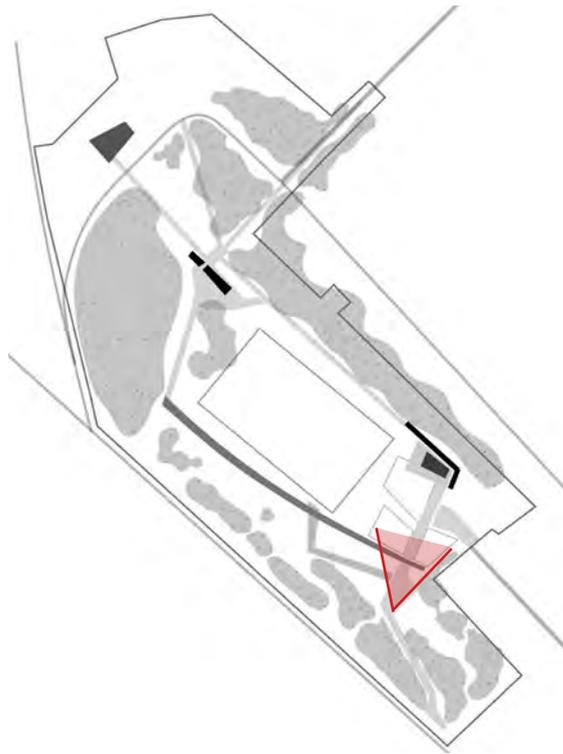


Fig 4.17 Blossom Plaza Sketch





MULTI-COURTS/
WINTER SKATING
PLAZA

PARKING

TIME CAPSULE
FOREST

EXPLOSION
INTERPRETIVE
CENTRE

TOWER OF RESILIENCE

UNION ST

KENNY ST

Fig 4.18 Kenny Street Devonshire Gateway Concept



Needham Centre Property

Needham Centre is nearing the end of its lifespan and there are plans to replace it (quite possibly to the adjacent Devonshire Rink site) with a modern community facility sometime in the next 5 years. When the Needham Centre is removed, the site will become an even more important property for Needham Park. Views to the monument will open up for the first time from the intersection of Devonshire Avenue and Kenny Street, tying the park and monument to this important corner. Ultimately, the plans for this corner envisioned by Thomas Adams as a civic town square and hub for the new community need to be coordinated with the plans for the future Community Centre, but in the interim, the master plan imagines some active recreation uses that would 'play nice' with a future civic centre use across the street. The opportunities could include multi-purpose sports courts, urban plazas, some creative way to use the steep slopes for active play, a multi-use trail from Devonshire Avenue to Novalea, and possibly some sort of small explosion interpretive centre. The plan shown in figure 4.18 is one possible solution which meets these objectives for the site. Development of the rink and community centre properties should be in keeping with Thomas Adam's historic plan for the post-explosion community creating a civic square. Future development should also be linked to the urban design principles associated with the Regional Centre Plan.



4.3 Interpretive Plan

A detailed interpretive plan is beyond the scope of this study, however, Form:Media did create a high level interpretive strategy to guide the themes, stories and design approaches for future implementation. The process was guided by a workshop with the Special Advisory Committee January 24, 2015. This workshop helped to define the intent and guiding principles for interpretive design that are listed in section 1.5.4. The interpretive goals of this project as defined in the workshop are to:

- › Communicate the international significance of the site
- › Raise the site's Provincial destination potential.
- › Relate the stories at Fort Needham to the different audiences
- › Double visitation to the site within 5 years. Local + non-local
- › Connect the stories at Fort Needham to other sites and other regional stories
- › Be compelling, meaningful, evocative, enduring, solemn, respectful, reflective

Audience

The audience for Fort Needham is broad and includes:

- › Neighbourhood users (dog walkers, families, walking seniors, sports groups)
- › Explosion Memorial event Dec 6, (100-300 people usually)
- › Tour buses (cruise ship passengers)
- › Students / teachers
- › Tourists
- › Residents of the Halifax Region

Tourist Visitor Profile (2010 Visitor Exit Survey)

Every 5 years, the Province of NS undertakes a detail tourism survey. The last completed survey was in 2010 and another is scheduled for 2015. The following summary represents the findings of the latest 2010 survey.

Of the roughly 2 million visitors that visit the Province of NS, roughly 79% of all visitors to the Province come to Halifax. The breakdown of visitors is shown in fig 4.19

35% come as a couple, 30% come alone, 20% come as a family, 9% with friends or another couple, and 8% come as 'other'. From a visitation perspective, 42% of all visitors visit the waterfront, 25% visit museums/heritage sites, 13% visit nature park. These figures bode well for an upgraded Fort Needham tourism experience. Even if the site could achieve 10% of the visitors currently visiting museums and heritage sites in the City, that number would translate into about 40,000 visitors per year to Fort Needham (800,000 people visit Citadel Hill each year, the Maritime Museum of the Atlantic attracts 175,000 visitors per year). Over one-half of visitors to HRM have completed a university education, while two in ten have a college completion.

There are many motivations for travellers coming to Nova Scotia. Out of the main reasons people come to the Province, 7% came to attend a festival or public events, 7% came for the scenery, and 6% came to experience NS's tourism and heritage. The idea of more events and better experiences at Fort Needham could translate into significant tourism visitation.

Fort Needham is not a well-known tourist destination. It is not listed on any of the major tourism destinations and where it is mentioned, information is spotty and incomplete. Ambassadors sends coaches and double decker buses to Fort Needham every year (bringing from 50 to 500 passengers to the site every cruise day), however, the tours are limited due to the problems turning buses around on Union Street. In 2015, Fort Needham was removed from the route due to problems accessing the site. Buses cannot continue



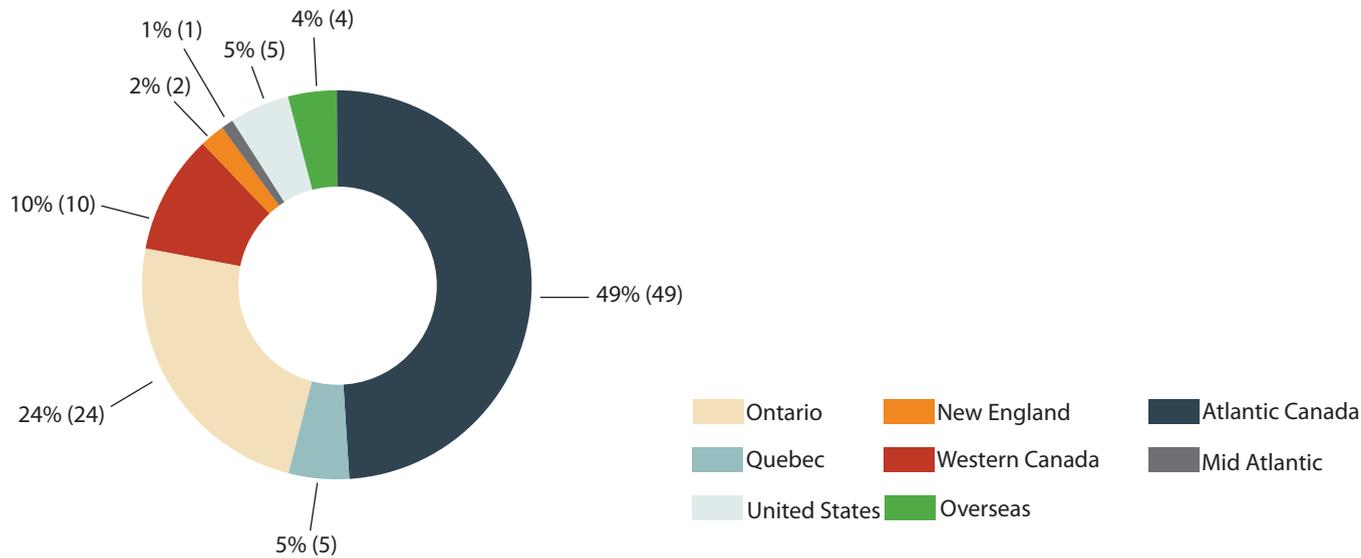


Fig 4.19 Visitor Origins to Halifax

through on Union Street due to lack of clearance with overhanging branches and powerlines for double decker buses. A turn-around at the top of Union Street would be a welcome addition to attract more tours or improving the clearance on Union Street. Similarly, a dedicated explosion interpretive centre would enhance the experience. Visiting tourists are currently challenged by the very steep pathway up to the monument.

The Halifax Explosion Story

The Halifax explosion story is told mainly at the Maritime Museum of the Atlantic in a small exhibit space. The cannon and anchor sites also show the artefacts in-situ with a small interpretive panel. The oral story is part of most of the tours given around the city. Other than that, there are very few other sites to learn about the explosion. Fort Needham has the distinct opportunity to 'own' the Halifax Explosion story, creating a must see destination in the network of heritage sites in the city.

Fort Needham Interpretive Approach

There are many ways to interpret history. The most literal approach uses interpretive panels and exhibits to 'literally' tell a story. When designing an interpretive exhibit it is important to remember that people remember:

- 10% of what they **hear**
- 30% of what they **read**
- 50% of what they **see**
- 90% of what they **do**

As a result, people learn better when they're actively involved in learning. People learn better when they're using as many senses as possible and discovering for themselves generates special excitement and satisfaction.

The idea of 'cerebral discovery', can be much more effective than interpretive panels. The use of sculpture, short verses, tactile exhibits, new virtual technologies, embedment's, carvings and objects that tell a story can be much more memorable than a traditional interpretive panel (people remember 30% of what they read). There is a place for both approaches in the landscape of Fort Needham. The area surrounding the monument

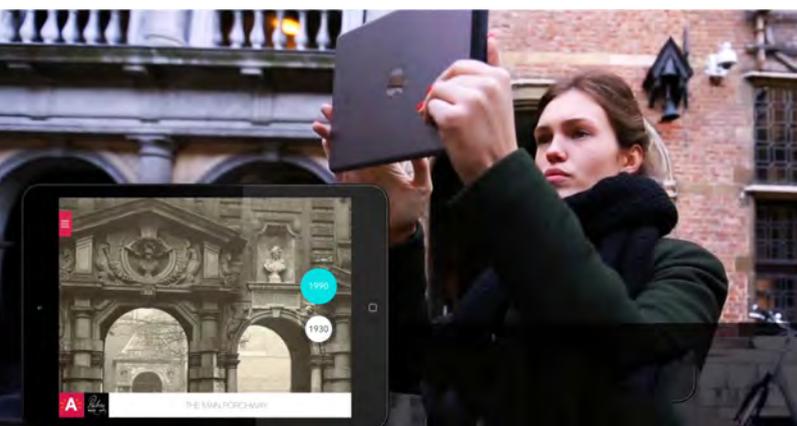
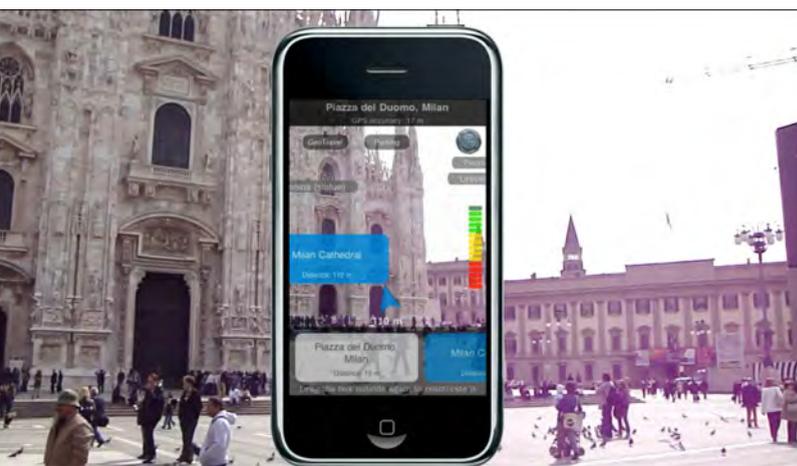




is a sacred space where cerebral discovery should take precedence over interpretive panels. Moving away from the monument, traditional panels could be part of the interpretive experience.

Augmented Reality & Beacons

Smart mobile devices are now owned by over 56% of adults in Canada. The use of smart phone augmented reality applications are on the rise. Augmented reality uses the camera's GPS and camera to overlay realtime information on the camera screen 'augmenting' what the user is viewing. These can include historic views, information, 3D objects or other realtime information. This technology coupled with mobile 'beacons' can serve information up to smart phone users in realtime, providing virtual tours in outdoor exhibits. The application of augmented reality and beacons at Fort Needham is significant in its interpretive value. The applications allow users to go into as little or as much detail as they want about any particular topic.



Themes & Stories

There many stories to tell at Fort Needham, however, the stories can be organized into 3 primary themes.

1) The Defense Complex.

A network of British fortifications designed to protect the city and the harbor. Fort Needham was one battery in a network that protected key British installations along the harbour. The stories include:

- › Pre-settlement Halifax
- › The 3 redoubts and blockhouse that occupied the Hilltop
- › The proposed Citadel at Needham Hill
- › Members of the British Military that shaped the city (Captain Cook and Captain William Spry)
- › Polo and shooting range other recreation and training uses on the hill

- › The Halifax Defense Complex and network of fortifications.

2) Tragedy and Loss.

The events leading up to the Halifax explosion and how the aftermath changed the face of Halifax forever. The stories include:

- › Wartime Halifax
- › The Mont Blanc and Imo
- › The force of the explosion
- › The tidal wave, blast and fires
- › The loss (the human toll, devastation)
- › Neighbourhoods and peoples lost (Africville, Turtle Cove, Richmond, etc.)
- › The Hill stories (protection from the blast, sailors who were blown on to the hill, etc.)
- › Heroes and victims (Vince Coleman, Charles Mayer, etc.)

3) Rebound and Victory.

Immediately following the explosion the city and surrounding community's as far away as Australia rallied to remobilize and rebuild. This is the story of the victory of the human spirit and how the events of 1917 still reverberate in the city today.

- › The relief efforts
- › Assistance from nearby and abroad
- › The Halifax Relief Commission and the rebuilding
- › Thomas Adams and the plan for north end Halifax
- › The Hydrostone and rebuilding of Richmond

These themes and stories should be organized into a more detailed interpretive master plan for Fort Needham, exploring creative ways to tell stories as more detailed overlays on to the park master plan. These more detailed ideas would then be incorporated into the detailed design phase of the work.

Explosion Markers

Fort Needham is THE place to tell the explosion story, however, it is just one of many places that were impacted by the events of that tragic day. The idea of placing “Explosion Markers” around the city (and Province and North America) could be an excellent way to create a better understanding of the event. The idea would include creating a series of interpretive ‘totems’ that could be placed around the city at areas where key events occurred. The totems would have small interpretive panels, a map showing the network around the city, and a historic Halifax/Dartmouth explosion map would tie all the sites together. The markers could also be fitted with inexpensive (\$50) iBeacons to transmit additional information to mobile devices.

The Explosion markers could be donated (or sponsored) to places like Truro, Sydney and Charlottetown that sent relief and where the explosion was heard. Similarly, markers could be sent to key cities as urban installations in places like Boston or Chicago to celebrate the relief assistance that was sent. The idea would significantly raise the profile of the centenary of the explosion and create a focus on Halifax in other cities that sent assistance.





4.4 Forest Management Plan

Trees are the ONLY municipal infrastructure that can improve over time with modest maintenance. The range of such services, or urban-forest values, is broad indeed and covers the widest array of ecological, economic, and psychosocial themes. No other element of green space can provide park visitors with as strong a set of benefits as the trees.

The following management directions are suggested for the tree canopy of Fort Needham Park

Increase overall canopy of the park ecosystem

The HRM Urban Forest Master Plan (UFMP) calls for strongly increased canopy across the entire city of the next decades. It also calls for a strong program of increasing the tree canopy of the city's parks through citizen-based tree planting. Because Fort Needham Park will be subject to substantial alterations through redesign, the UFMP's goal of increased canopy is easily accommodated while the engagement of citizens to plant up grassed areas is less relevant. Increasing the canopy cover in select parts of the park is part of the master plan concept, even though this may require the initial 'editing' of non-native species from the park over time to open up view corridors to the monument or protect archaeological resources.

Preserve all semi-mature and fully mature trees that do not need to be removed in the operations of park refreshment

It takes some decades to develop a fulsome canopy on a new tree. Therefore, while the long-term return of a large canopy is expected when a large tree is cut and a new one planted, the intervening years are characterized by a small canopy that does

not provide the same level of ecosystem services. As a general rule, a less-than-ideal mature tree is better on a site than no tree at all. Replacement of less-than-ideal mature trees (e.g., trees with weak crowns, diseased trees, trees of non-native species) should take place gradually, as per the guidelines below.

Prevent maturation of young trees of non-native species (except European beech)

A reasonable treatment for young naturally regenerated seedlings and saplings of non-native tree species is a periodic (e.g., every five years) removal by cutting at ground level. Such small trees are easily cut with manual equipment, thus avoiding the public annoyance of power saws to accomplish this task.

The Beech copse requires special attention to secure its longevity

Conserving the health of the beech copse near the memorial monument should be made a priority. While these are European beech, they are to be cherished on this landscape because, until stock resistant to the beech bark disease is available, healthy native beech cannot be grown in Halifax. It may be sensible to consider soil treatments in and around the beech copse to relieve the impacts of compaction due to foot traffic or future monument plaza planned in this report.

Species choices for woodland development and amenity trees

For amenity trees along paths and providing strategic shade over high-traffic areas (e.g., playground, grass areas), use caliper-size stock of the following long-lived species: red oak, yellow birch,



Blackberry
Rubus.spp



Raspberry
Rubus.spp



Serviceberry
Amelanchier



Wild lily-of-the valley



Sarsaparilla



Chokecherry
Prunus virginiana



Pin Cherry
Prunus pensylvanica



American Mountain Ash
Sorbus americana



Blue bead lily



Bunchberry



Checkerberry



Starflower



Lowbush blueberry

sugar maple, red maple, American elm, eastern white pine, red spruce, and eastern hemlock.

For the woodlands, there is no merit in perpetuating the non-native tree species (notably Norway maple, Norway spruce, and European linden). In addition to the above species, which are all highly suitable for all the woodland sites in the park, small planting stock of species like large-tooth aspen, white birch, and larch might be fill-planted judiciously in openings.

Given impending climate change, the use of Carolinian species like Kentucky Coffeetree *Gymnocladus dioicus*, Tuliptree (*Liriodendron tulipifera*), Blue Ash (*Fraxinus quadrangulata*) and butternut (*Juglans cinerea*) in the woodlands should be considered.

Fruit-bearing trees

In the spirit of the UFMP as well as the Mayor's initiative to promote urban orchards across Halifax, the liberal use of native berry-producing trees (as well as vine berries like blackberry and raspberry) in any redevelopment or expansion of the woodlands should be considered. These species provide interesting floral shows in spring and wonderful berry colours in summer/fall. Their fruits are especially important for native birds. The trees could include the serviceberries (*Amelanchier* spp.), the cherries (e.g., choke cherry, pin cherry, black cherry; *Prunus* spp.), and the dogberries (or mountain-ash; *Sorbus* spp.).



Red Oak
Quercus rubra



Yellow Birch
Betula alleghaniensis



Sugar Maple
Acer saccharum



Red Maple
Acer rubrum



American Elm
Ulmus americana



Eastern White Pine
Pinus strobus



Red Spruce
Picea rubens



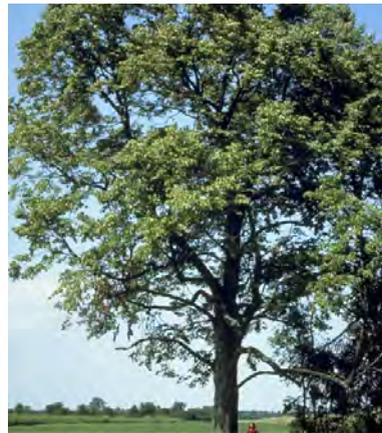
Eastern Hemlock
Tsuga canadensis



Largetooth Aspen
Populus grandidentata



White Birch
Betula papyrifera



American Basswood
Tilia americana



Butternut
Juglans cinerea



Silver Maple
Acer saccharinum

Fig 4.20 Species choices for woodland development and amenity trees

CHAPTER

05

IMPLEMENTATION



05: Implementation

As we approach the century mark since the Halifax Explosion, it is fitting to commemorate this historic event in our national history. Regional Council has identified improvements and rededication of Fort Needham Memorial Park as a Legacy Project for commemoration of the upcoming 100th Anniversary. This report describes a long-term vision for Fort Needham and recommendations to achieve that vision. The master plan gives direction on how future development of the park can enhance the commemorative experience of the Memorial Park as a significant cultural landscape in our region; continue to provide a range of healthy, vibrant, and active recreation opportunities for the local residents; and overcome the functional impediments in the park.

The long-term vision can be implemented over several phases of construction. The following outlines the phasing for development. Priority projects were chosen for their multiple intents of improving the commemorative experience, enhancing the local park use and enjoyment, and upgrading the park's functionality. It is phased to deliver on the direction of Regional Council to create a legacy for the 100th Anniversary commemoration and specific improvements can be recognized as milestones in preparation of the Explosion centenary. As a means to build the momentum for realizing this master plan, it is useful to initiate projects with a high degree of visibility and public support early in the development process.

The proposed implementation of the park master plan has been broken into 3 phases:

Phase 1 will include priority projects to be constructed by December 2017 for the 100th anniversary commemoration event. The scope of redevelopment for this phase is confined to the southern section of the park and the area around the Memorial Bell Tower. This work can be implemented with limited impact to the rest of the park site. These projects will focus on improving the grounds around the Halifax Explosion monument and providing better street presence and access up to the park's hilltop area. Important objectives in this phase will be to reconnect to the explosion site at the foot of Richmond Street and open views to the Harbour, strengthening the sense of place and understanding of the explosion's scale and impact. Phase 1 looks at improving what is in the park today and enhances past commemorative initiatives such as the Memorial Bell Tower built in the mid 1980's.

This work is estimated at the \$2.2 million mark.

Phase 2 includes projects that are both commemorative in nature and functional, creating better circulation and spatial organization within the park. These projects affect a larger area of the park for redevelopment. This includes changing the park's spatial layout to improve the internal circulation and necessitates shifting the sport field towards the east and lowering the grades by a meter to create the space required for the commemorative



Phase 1:

Phase 2:

Phase 3:

elements of the Shattered Path, and the Esplanade and look-off on the western edge of the hill.

The Esplanade and Shattered path introduce new commemorative elements and can be positioned to be new memorials for marking the 100th Anniversary. Through integrating the commemorative interpretive plan with the detail design of these landscape elements, they become the vehicles to tell other facets of the Explosion story such as the number of individuals killed or impacted by the Explosion; the response agencies and relief aid; and celebrating the resilience of Halifax rising from the destruction to be the vibrant city it is today. Completing Phase 2 for 2017 would be opportune for presenting the site for visitation during the 100th Anniversary Commemoration.

An additional \$3 million would be required to complete this phase of construction.

Phase 3 includes projects that can be done incrementally over a longer timeframe or are stand-alone projects that are not tied to the other major construction phases. They can be implemented through future municipal programs and budgets.

This work is estimated at \$3 million in 2015 dollars.

Implementation in all phases must recognize both the importance of the commemoration and the importance of the space as a functional park for the local community. The detail design stages will need to further determine how the existing neighbourhood recreation amenities get phased in with the larger construction works. All projects outlined in the Master Plan will require additional levels of design, by design professionals with the support of forestry or archaeological experts to enable implementation to an appropriate standard.

Scope of work in Phase 1:

- › Improve the grounds around the Memorial Bell Tower to create a better setting for the monument and stage for the annual community gathering and commemorative ceremony. This includes new plaza paving, stairs and walls, accessible paths, interpretive elements, seating, landscaping and lighting.
- › Improve the access up to the monument site with the construction of accessible pathways; a new service road with gentler grades; a staircase from Union Street up to the Bell Tower monument along the Richmond Street view corridor; and new trails up the forested hill to the Bell Tower monument.
- › Give the park more presence on the surrounding streets by constructing a new park entrance at the Novalea Drive /Kenny Street corner; Improving the southern park entrance and pathway off Novalea Drive near the Hydrostone Market; improving the northern park entrance on Union Street;
- › Selectively clear vegetation to open up views to the Bell Tower landmark, and key hilltop look-off views out.
- › Remove the tennis courts and chain link fence that block the view of the Monument and park access from the southern entrance.
- › Build Blossom Plaza in the place of the removed tennis courts. This area is a central place in the park for a seating area with good views to the monument and proximity to the popular Hydrostone Market shops on Young Street. The plaza will help strengthen the sense of arrival and progression into the park from the south.

Scope of work in Phase 2:

- › Relocate the sports field to the east; lower the grades and improve the field's drainage.
- › Sculpt the ground around field to create the landscape Shockwaves

that will be both interpretive of the Explosion and functional for channeling drainage run-off and catching stray balls.

- › Construct the internal circulation loop that includes the Allée, the Esplanade, and the Shattered Path. The detail design to be expressive of the commemorative ideas outlined in this report, and coordinated with an interpretive plan.
- › Construct one of the new playgrounds to replace the existing play equipment required to be removed with the site regarding. The smaller Sensory Playground is comparable in size to what is in the park today. Designing a playground around the themes of sensory play and universal design works with telling the stories and empathising with the many children who lost limbs or were blinded by the flying glass and debris from the explosion.

Scope of work in Phase 3:

- › Projects that can be implemented independent of the major construction phases, but may be initiated sooner for the 100th Anniversary include additional interpretive initiatives such as panels, technologies and markers; park entrance and wayfinding signage.
- › Build a new community garden area in the central hub of the park near the playground and Needham Street entrance.
- › Plant an Urban Orchard including re-establishing the berry picking opportunities on the hill slopes.
- › Build the Nature Playground to expand the play area.
- › Re-establish the historic Rose Garden and horticultural area.
- › Develop the Redoubt Plaza to interpret the military history of the site
- › Build a small parking lot at the Needham Street entrance for accessible parking for the playground and drop-off zone for the community gardens.
- › Replace the old canteen bunker with a new park washroom facility and Pavilion with an outside interpretive area.
- › Create a new street level entrance on Novalea at Livingston and trail access up the hill to the Esplanade.

5.1 Next Steps and Areas for Further Study

In order to proceed with some aspects of the Master Plan, there are several areas for further study. These have been identified throughout the Plan but are summarized in this section.

Signage and Wayfinding Schematic Design

The idea of developing “Explosion Markers” around the city should be a high priority project designed to bring more people to Fort Needham and to improve on the telling of the story throughout the city (and beyond).

Park Interpretive Master Plan

This report provides a very high level overview of the themes, topics and approaches for interpretation within the park. The process was guided by a steering committee and is designed to provide high level input for future designers. An important next step is to develop a creative interpretation strategy for the park following the new master plan using traditional interpretation (signage and panels), art and sculpture, live interpretation, augmented reality, beacons, verse and poetry, environmental art, travelling exhibits and other creative vehicles for story-telling. All interpretation should answer the question...“What do we want to resonate with visitors after they leave Fort Needham”?

Detailed Design for Various Park Areas

The Fort Needham Park Master Plan sets out a vision, a physical plan, priorities and rough costs for the development of the Park, based upon the condition of the Park, the priorities of the client and the professional knowledge drawn from several disciplines. Detailed design of specific projects, guided by the Master Plan, is the next stage in realizing the works proposed in this report.

In the detailed design stage, specific design drawings and requirements are described to permit successful implementation by Parks staff, or for larger works, tendering and contracting with an independent builder. Many of the same areas of professional expertise will be needed in the

final design of works in the Park, although a landscape architect will normally play a lead role in shaping the final construction drawings that will enable work to proceed. This process helps ensure that the aims that are set out in the Master Plan, and endorsed by the Municipality, are accurately translated to physical reality.

It is anticipated that archaeological monitoring will be needed for all excavations required to implement the plan. In the event that any archaeological resources are impacted at any time during ground disturbance, it is required that all activity cease and the Coordinator of Special Places (902-424-6475) be contacted immediately regarding a suitable method of mitigation.

Operations Plan

Using this Master Plan, the City will need to develop an operations plan for Park staff and administration. The operations plan will describe duties, responsibilities, seasonal schedules, bookings, more detailed treatment protocols, timelines and monitoring approaches.

FundRaising Plan

More and more parks around Canada are developing fund-raising strategies for capital improvements. This approach is much more commonplace in the United States. Fund-raising professionals can assist the municipality to determine the ability to potentially raise funds for park improvements using a capital fund-raising campaign.

Forest Management Strategy Evaluation

Forests grow slowly, and it can take years before managers can be sure whether the new strategies are working. Thus, the forest-management strategy must be evaluated at the following intervals:

- (a) Annual review: to review measurements of fast-responding variables such as vegetation control (for example, non-native understorey plants) and to prepare for the annual work plan;
- (b) Five-year review: to review measurements of slower variables such as regeneration and stand responses to thinnings and other harvests and to provide an interim

evaluation of forest-management strategies; and

(c) Ten-year review:

to review measurements of slow variables such as forest development, based on full forest inventory, and full evaluation of forest-management strategies.

5.2 Administration & Governance

Fort Needham Park is owned by Halifax Regional Municipality. Governance for the park falls under Community Planning and Economic Development Standing Committee for Regional Council oversees community building initiatives in the areas of arts, culture and recreation. Under the current corporate organization, the Parks and Recreation business unit looks after everything from planning, recapitalization, maintenance and programming. Under this master plan, there is no proposed change to the current administrative structure.

For the Centenary event (in 2017), the Regional Council established a Special Advisory Committee to provide public input and advise staff on the development of a municipal commemorative program for the 100th Anniversary of the Halifax Explosion. The Committee will provide input on the programming for the civic commemorative event, the grants program for community initiatives, and the legacy capital projects outlined in this master plan.