540
KING STREET EAST

URBAN DESIGN SUSTAINABILITY REPORT

APRIL 2022

FOTENN

Prepared for Sunnyside Village Inc.

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CONTENT

1 INTRODUCTION

Figure 1. Site Context

1.1 PROJECT OVERVIEW

1.1.1 Site Context

Town
Cobourg

County
Northumberland

Legal Description
Part of Lot 10, Concession A

Address
540 King Street East

Total area (approx.)
3.97 hectares (9.81 acres)

Frontage dimension
204 metres of along King Street East

Current development
A two-storey dwelling with a barn and silos, surrounded by associated agricultural land.

Natural features
There is a wetland in the North West corner

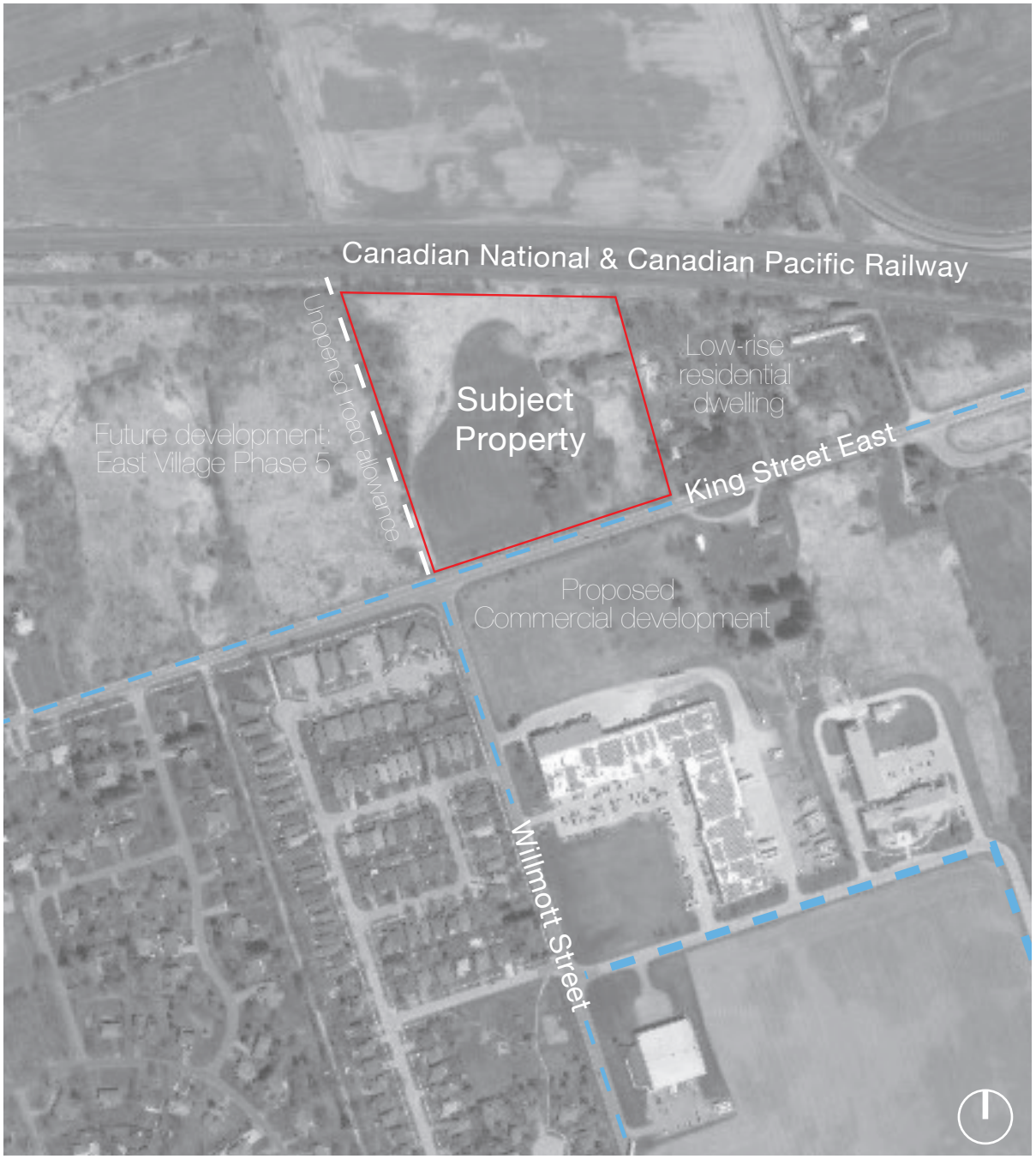

Figure 2. Subject Property

1.1.2
Design Brief

The Sunnyside Village delivers a compact and well connected development with a strong sense of place and interconnected open spaces. Its high quality of living will make the new neighbourhood a destination and precedent for urban development.

The Sunnyside Village delivers the following amenities:

- **90 residential units that range from single detached to stacked townhome typologies to include the existing heritage home;**
- **approximately 15,213 ft2 (1,413.36 m2) of commercial/retail opportunities along King Street;**
- **the retrofitting of the existing barn into a future privately operated community facility;**
- **0.99ha (2.45ac) of privately (condominium) owned publicly accessible open spaces (POPS);**
- **A protected and enhanced environmental regeneration zone of 0.34ha (0.84ac)**

Figure 3. Plan View

Built form
The Master Plan consists of a residential and mixed-use built form ranging from two (2) to four (4) storeys in height. Buildings are sited within five blocks organized by a looped internal private road. It includes 7 single-detached units, 5 semi-detached units, 55 townhouse units (8 rear lane townhouses with attached garages, 17 rear lane townhouses with detached garages, and 30 stacked townhouses), and 24 mixed-use units.

Density
The proposed development features a net density of 25.3 units per hectare (when calculated with a site area which subtracts the embankment and future road widening areas). When net density is calculated with a site area which subtracts the future road widening area only, it is 23.2 units per hectare. Both figures are within the permitted density levels for medium density residential development.

Figure 4. Bird's-eye view - Looking North

Figure 5. Bird's-eye view - Barn Plaza

1.2 SUSTAINABILITY APPROACH

1.2.1 The One Planet Living Framework

The Sunnyside Village vision is based on provincial and municipal policy objectives, guideline directives as well as community master planning best practices such as the One Planet Living framework. One Planet Living framework was designed by Bioregional in collaboration with the WWF as a guide for organizations to create action plans toward happier, healthier, and more sustainable communities. It is a vision of a global society living happily within one Earth's resources and consists of a flexible framework made up of ten principles.

- Health & Happiness
- Equity & Local Economy
- Culture & Community
- Land & Nature
- Sustainable water
- Local & Sustainable Food
- Travel and Transport
- Materials and Products
- Zero Waste
- Zero Carbon Energy

Figure 6. One Planet Living Framework - Ten Principles

1.2.2 Vision

Grounded on provincial and municipal policies and guidelines, community planning best practices, and the ten One Planet Living Principles, the Sunnyside Village is envisioned as a sustainable and innovative neighbourhood that promotes a healthy and vibrant way of living.

Compact blocks, a well-connected street network, attractive open and natural spaces, and various housing typologies encourage diversity, equity, and wellbeing. Each design component has been conceived to seamlessly integrate into the natural and social surroundings while celebrating the site's history and looking toward a better future.

Figure 7. Bird's-eye view- Looking East

Figure 8. Bird's eye-view - Looking West

2 DEVELOPMENT FRAMEWORKS

2.1 SITE LAYOUT

Shaped by the site's environmental, functional, and physical context, the Sunnyside Village is designed in an integrated manner where roads, land uses and open spaces create strong visual, physical, and pedestrian-friendly connections with the existing context.

Key design elements reflected on the proposed site layout include:

- A diverse and linked open space system that delivers a range of amenities to the community to include: Central Park, the Barn Plaza, and the Environmental Regeneration area to the west;
- An open space system that incorporates and builds on the built heritage resources found on site, such as: the heritage farmhouse and the barn and silo complex;
- An internal looped private road providing access to all envisioned blocks;
- The introduction of a series of private condominium laneways to provide vehicular access to adjacent land uses.

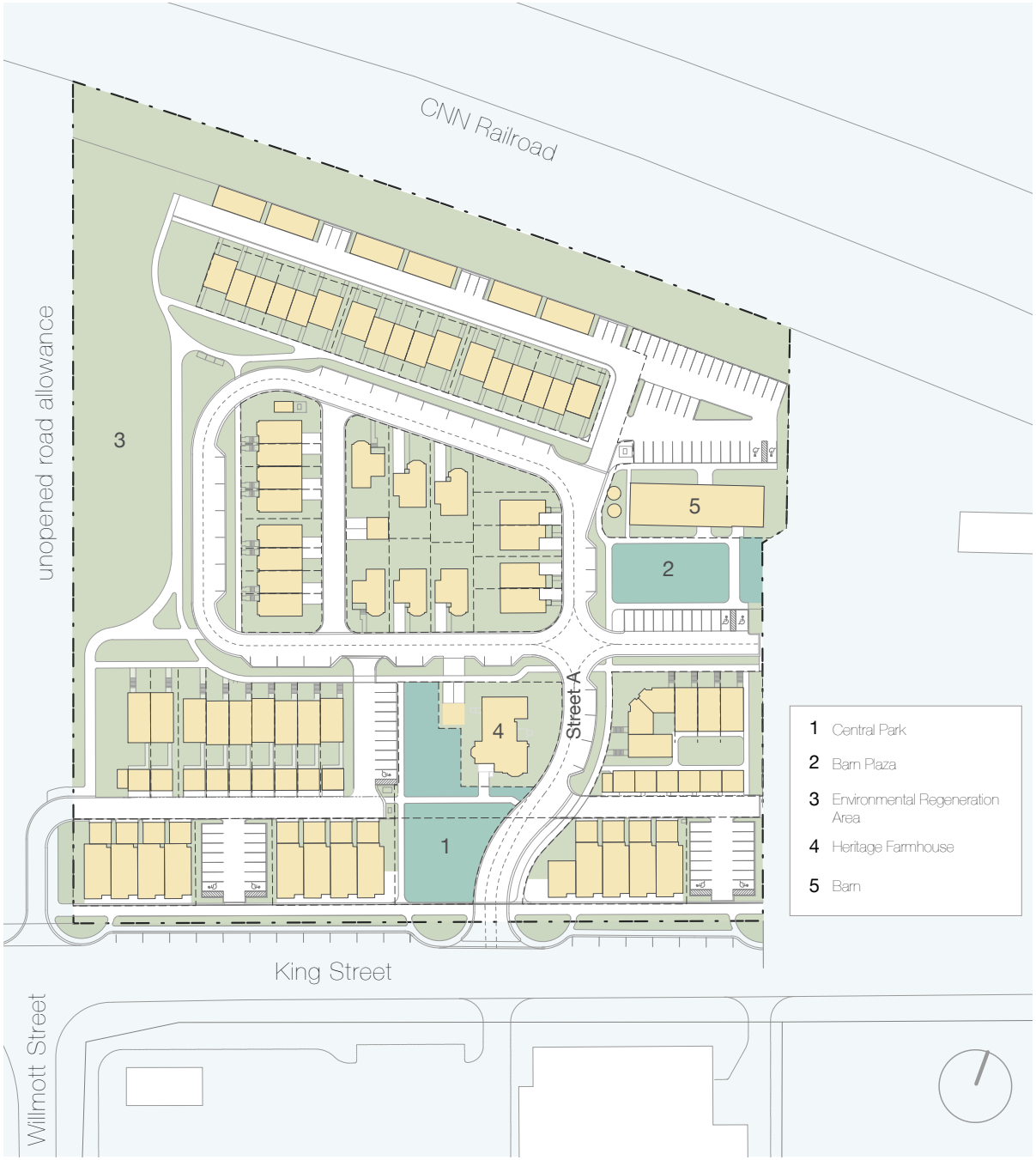

Figure 9. Site Layout

2.2 LAND USE STRUCTURE

Complete communities, characterized by a diversity of land uses, open spaces, and community amenity opportunities, create livable neighbourhoods with a high quality of life. The proposed Sunnyside Village has been planned to accommodate a range of uses destined to deliver a diverse living, working, and playing environment directly impacting residents' quality of life. Key land use structure elements include:

- The provision of an appropriate land use transition between the community and adjacent neighbourhood to the west, lands to the east, and King Street;
- The location of the highest densities along King Street.
- A range of residential types and densities from single detached houses to mixed-use residential buildings to promote variety and diversity and address changes in market conditions;
- A full range of housing types and options that welcome new families, provide new housing opportunities for existing residents, and permit life cycle residence options;
- Local retail and opportunities that accommodate the day-to-day convenience needs of residents;

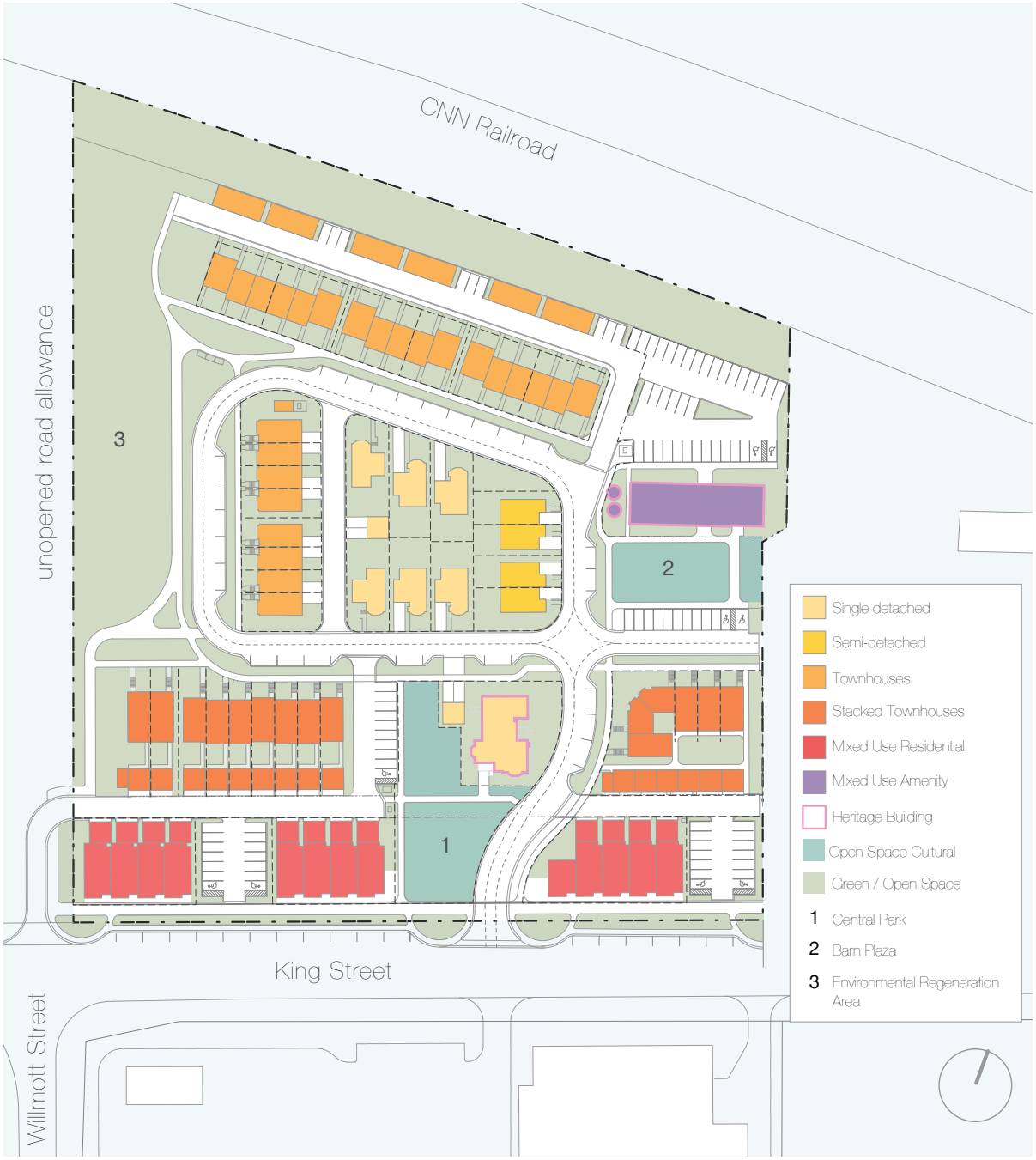

Figure 10. Land Use Structure

- Local community amenity areas that are pedestrian accessible to all residents;
- Modest office opportunities to accommodate for the local road and surrounding community employment needs primarily catered to support the area's small entrepreneurship and professional services opportunities;
- The delivery of community spaces in the forms of a Central Park, Barn Plaza, and a passive recreational area parkette associated with the environmental restoration zone to the west.

The Sunnyside Village proposed land uses include:

Open Space
A modest yet diverse range of proposed open spaces defines the community ranging from Central Park and Barn Plaza to passive recreation facilities associated with the environmental restoration. The varied uses are distributed through the site encouraging compact living and social interaction.

Residential
A range of low-rise residential uses arranged to progressively transition from higher densities along King Street, to lower densities to the north. Single and semi-detached family lots are centrally located and include the existing heritage home.
Townhomes are proposed along the northern edge of development, while stacked townhouse typologies are located immediately adjacent to the mixed-use designation.

Residential Mixed Use
The community's mixed-use designation is located in two key strategic locations:
- along King Street to further compliment the proposed commercial uses across the street. In addition to upper floor residential uses, the King Street mixed-use zone will include approximately 15,213 ft2 (1,413.36 m2) of retail and/or office opportunities and,
- the existing barn with the intent of adaptively reusing the structure to accommodate future community hub functions such as learning and gathering.

2.3 BUILT FORM

2.3.1 Massing and Orientation

Building smarter, safer, and stronger communities is achieved by creating more compact, walkable neighbourhoods. The "walkability" factor of a neighbourhood is not only determined by the extent of the redevelopment's interconnected system of streets, open spaces, and other amenity linkages but also by the community's-built form performance at the street edge. The Sunnyside Village envisions a variety of buildings that contribute to the creation of a high-quality public realm.

Figure 11. Built Form

The proposed Sunnyside Village puts forward a built form strategy that places pedestrian comfort at its fulcrum concerning the location and massing of buildings, their relation to the street, special conditions at corners, and forms that respond to specific uses such as the Central Park.
The built form strategy is supported by a description of urban design considerations and building types. The neighbourhood's-built form vision hinges on the following urban design considerations:

- All buildings are street related. Buildings provide a relatively consistent and contiguous street edge that gives a strong identity to the community;
- The built form strategy encourages distinction, variety, and creative architectural responses while being sensitive to their combined fit into a cohesive sense of place;
- New structures have a range of two to four storeys maximum;
- Development adjacent to heritage resources, such as the heritage home or the barn structure, frames existing built resources in a manner that responds to the structure's height and massing;
- Buildings orient active spaces to the internal private looping road to encourage the development of a vibrant place;
- To define the community's gateway at King Street: the northeast corner is defined by a mix-use building that wraps the corner and frames both streets while providing for future outdoor retail-related opportunities (i.e., coffee shop, bakery, etc.);
- Where feasible, buildings are arranged to create a series of courtyards framing semi-private gathering places (see Block U);
- Buildings provide weather protection for pedestrians at access points through a range or porch and covered entryway solutions;
- Exterior finishes are encouraged to exhibit a quality of artistry, sustainability, and ease of maintenance;
- Buildings are encouraged to incorporate environmental standards for design and construction and incorporate energy-efficient, environmentally friendly material systems, and processes; and,
- Loading, surface parking, and access to garages are carefully located and screened from the main internal loping street.

2.3.2 Building Typologies

A brief description of the proposed building typologies is presented next. Integral to the proposed design of buildings and their future design evolution are the following design directives:

- The use of high architectural standards and variation;
- Direct access to the street and an active living frontage;
- Address both street frontages if located on a corner;
- Front-drive garages setback from the unit's main living wall;
- For higher density residential forms, amenity areas are to be provided on the roof of an attached rear-parking garage, rooftop or rear yards.

Figure 12. Single-detached Unit

Single-detached
The proposal includes seven-single detached units to include the existing heritage home. Single-detached units range between 38' to 39' for the corner condition. Single-detached units offer front and rear access options depending on where they are located.

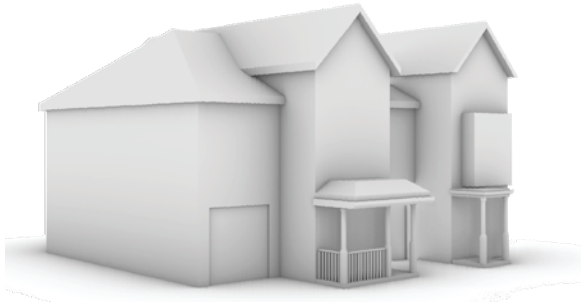

Figure 13. Semi-detached Units

Semi-detached
Four 28' semi-detached units (two pairs) are located east of the single-detached units within the central development block and fronting onto the road and Barn Plaza. All units include front access garages.

Figure 14. Townhouses

Townhouses
19.6’ townhouses are located along the northern property line and in front of the environmental regeneration area, having a solid visual interface with the street and the swamp, respectively. The townhouses to the north have designated rear detached garages along the northern property line, which serves as a buffer between the housing, the acoustic berm, and the railway line.
The central block townhouses have a rear attached garage access of a laneway.

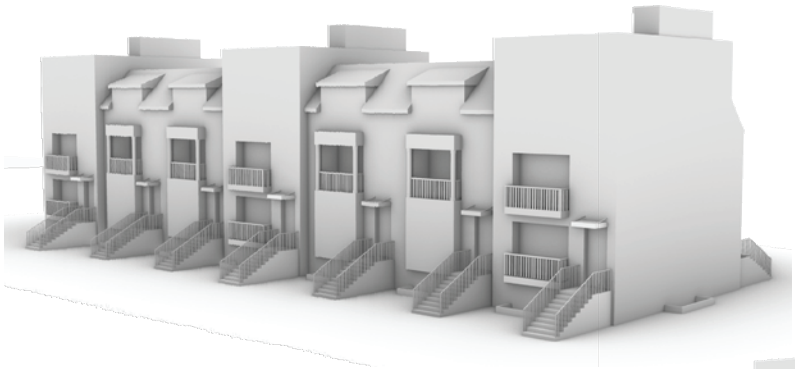

Figure 15. Stacked Townhouses

Stacked Townhouses
21’ Stacked townhouses are located adjacent to/behind the mixed-use buildings along King Street East and oriented towards the internal street network with detached rear garages along a rear laneway that services the mixed-use buildings and the stacked townhouses.

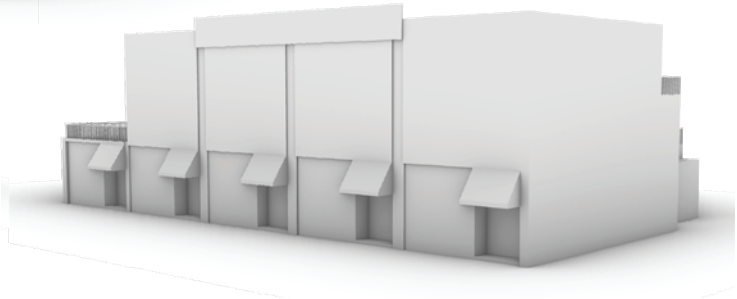

Figure 16. Mixed -use Units

Mixed-use
24’ mixed-use buildings along King Street East contain commercial uses at-grade and residential uses above, similarly to live-work-type units. Corner units’ facades and internal layout are envisioned to wrap around where appropriate to frame and face the Central Park or the main entrance off King Street. Parking for residents is located in a rear-lane accessed attached garage, while commercial/visitor parking is provided in a series of nearby surface parking lots.

2.4 STREETS & STREETSCAPES

2.4.1 Circulation Network

A highly integrated and fine-grained street network creates pedestrian-friendly development blocks appropriate for the development of a range of built forms and a mix of uses.

This pattern of streets and blocks is typically found in traditional historical centres such as Downtown Cobourg. It promotes a fundamentally different development pattern than the large lot and/or large parking configuration that typical suburban development creates.

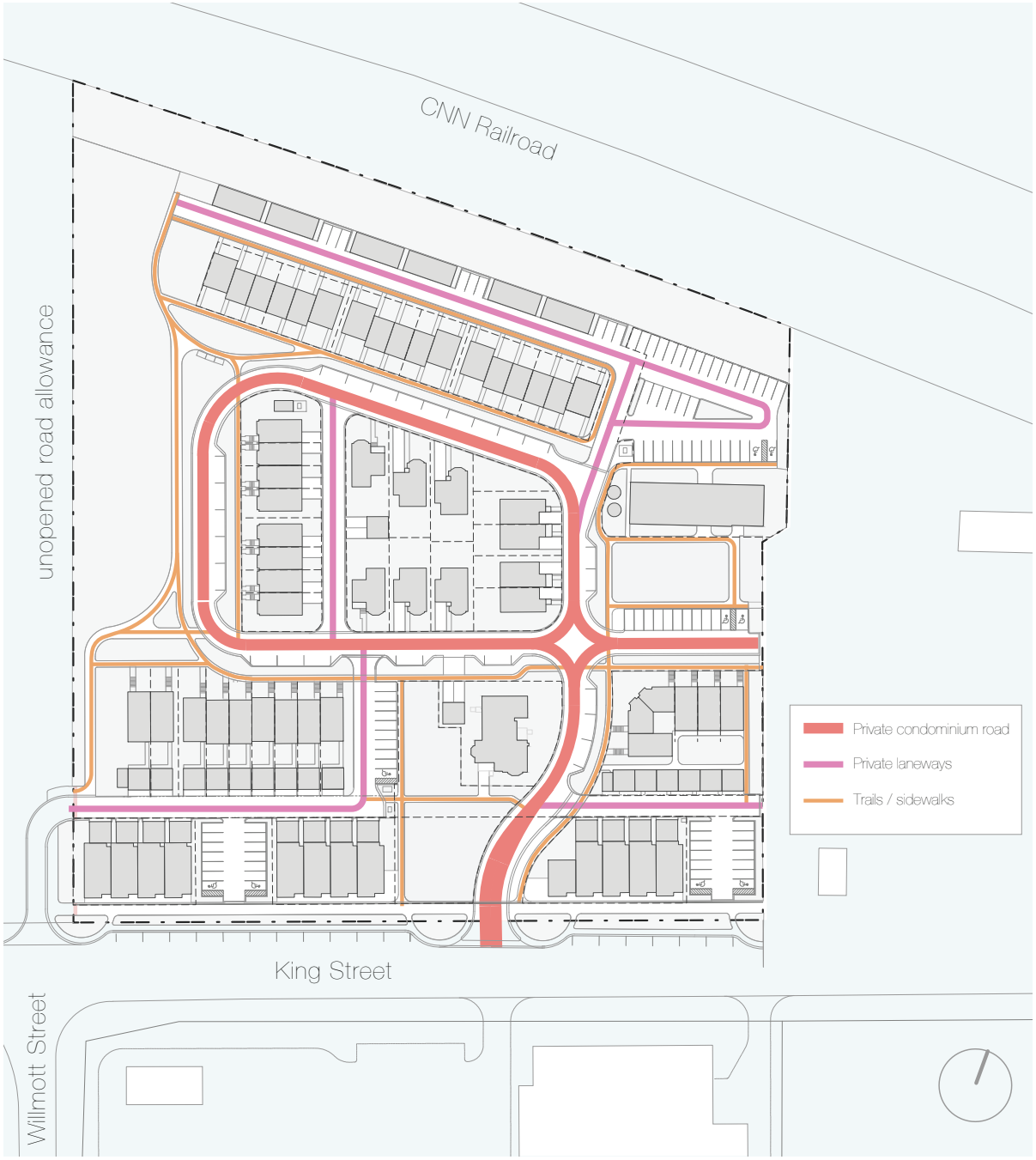

Figure 17. Circulation Network

The proposed development of the Sunnyside Village demonstrates a distinctly vibrant neighbourhood that relies on a modified grid of a looping condominium road complemented by a network of condominium laneways with blocks that accommodate a variety of residential and mixed-use typologies. The street and block pattern illustrated on the plan (FIGURE 17) is to deliver on the following principles:

1. It delivers a strong street hierarchy of a local condominium road and condominium laneways;
2. It provides a well-connected, integrated, and permeable transportation network connecting the proposed Sunnyside Community to King Street;
3. It facilitates the development of a range of built forms and mixed uses;
4. It provides for appropriate development interface conditions to the surrounding neighbourhoods and road networks;
5. It functions as multi-purpose streets, which are both transportation corridors and pedestrian-oriented places;
6. It balances the demands of pedestrians and cyclists, as well as vehicles, by creating attractive and comfortable streets; and,
7. It creates a beautiful streetscape design with street trees as an essential component of its engineering.

Figure 18. Bird's-eye view - Central Park and Private Condominium Road

2.4.2 Street Typologies

Streets are the single most significant component of the public realm, and attention to their aesthetic and functional design ensures the achievement of the vision set out in this document.
In the development of the proposed Sunnyside Village vision, special attention was paid to the development of beautiful and functional condominium streets by:

1. Ensuring that street trees, on-street parking, and multi-modal character elements (pedestrian, cycling, and vehicular) are included in the design of the street;
2. Ensuring a relatively consistent building edge is delivered to provide for definition and containment to the street. Specific front and exterior side setbacks are established to require buildings to locate their front and exterior sidewalls at a distance from the condo right of way that delivers a defined and comfortable pedestrian environment;
3. Ensuring traffic calming strategies are used, such as the proposed corner bump-outs to allow pedestrian crossings safely and provide an attractive landscape feature; and,
4. Ensuring the location of utilities within the condominium right of way as well as condominium properties are clustered or grouped where possible to minimize visual impact. Streetscape features, such as lamp posts, do not obstruct sidewalks.

This section describes each type of condominium street design found within the proposed Sunnyside Village development. All cross-sections identify the location of sidewalks, street trees, and on-street parking.

Condominium Laneway
Rear lanes help create beautiful streets because parking driveways and service areas can be located along them while permitting full front-elevation buildings to face the street. A 6.0 m laneway is proposed, as illustrated in the following cross-section.

Condominium Road
Sunnyside's central road is envisioned as a highly pedestrian and cycling street providing vehicular access to the larger community. The road loops within the community intersecting King Street opposite to the future commercial plaza access point. The road's layout is predicated on the preservation of the existing heritage home and associated agricultural landscape of the silos and barn complex while defining the eastern edge of the environmental regeneration area. The road provides pedestrian and vehicular access to the proposed blocks and an internal private laneway system.

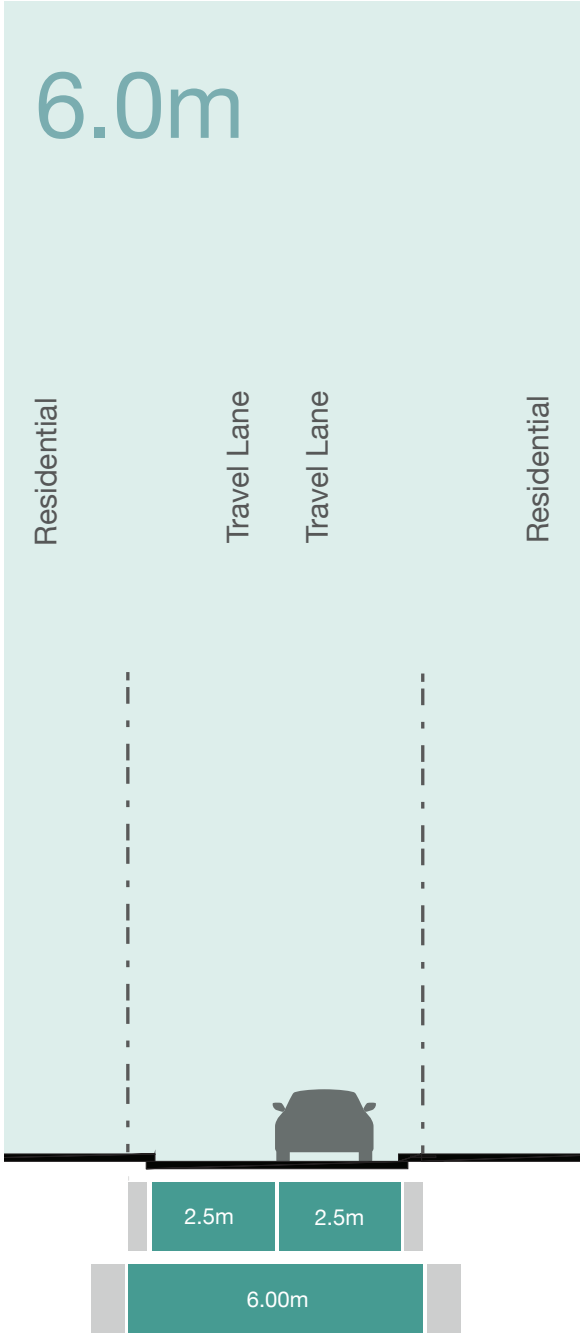

Figure 19. Condominium Laneway

The 14.0m condominium road's streetscape elements include:

- Two traveling lanes;
- On-street parking on one side of the road;
- A treed boulevard on one side of the road and a generous front yard setback for tree planting on the other side of the road;
- An accessible sidewalk;
- Safe pedestrian bum-out crossings at street intersections;
- A residential character along the street edge with an average 4.5m setback from the property line to the residential building's main façade to allow for a consistent residential privacy zone;
- A generous landscape zone along the environmental regeneration area to the west; and,
- A left turning lane at King Street.

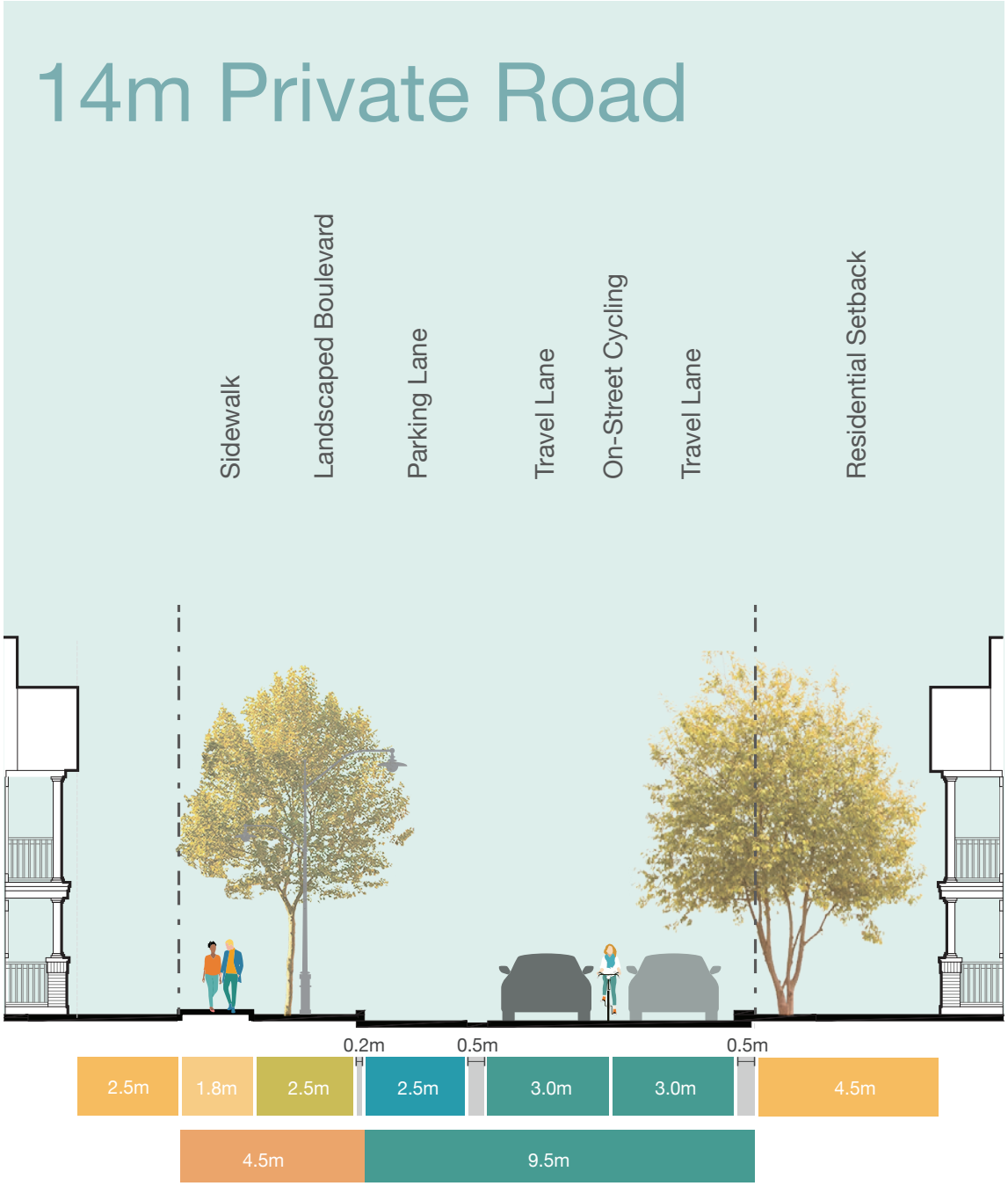

Figure 20. Condominium Road - Section A

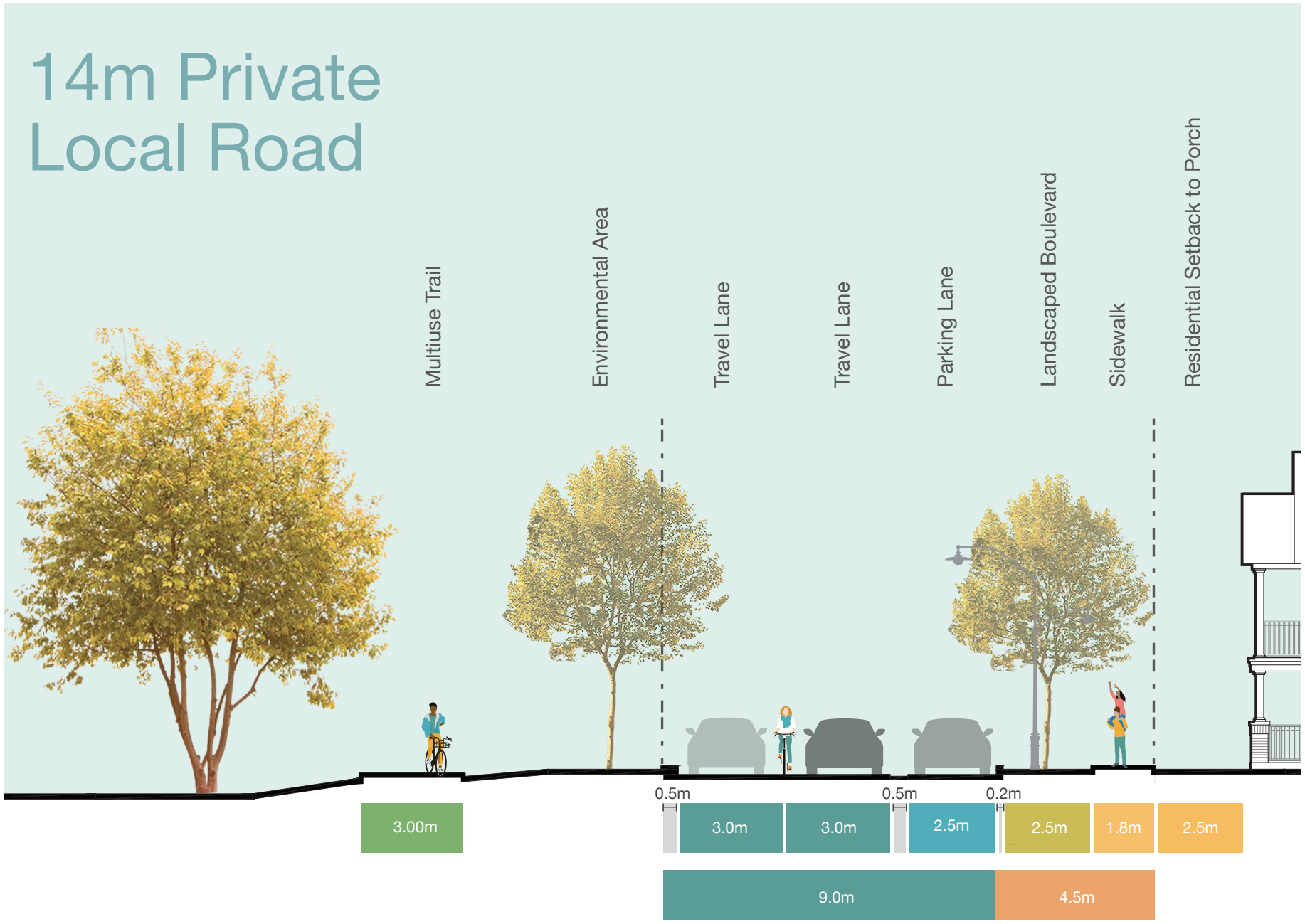

Figure 21. Condominium Road - Section B

2.5 PARKING

The Sunnyside Village parking strategy for residents and visitors alike is premised on the design of pedestrian-friendly streetscapes. It includes numerous traffic calming features to promote reduced vehicular speeds, minimize conflicts between road users, promote walking and improve neighbourhood environment. Key features in the parking strategy are the following provisions:

- resident's rear accessed garages for the majority of the proposed development blocks;
- on-street visitor parking along the central internal road;
- rear lane accessed commercial visitor discrete surface parking zones; and
- while all parking requirements are met internally within site, the notion and desire to see King Street evolve into a pedestrian-friendly environment is expressed in the identified on-street parking along this road.

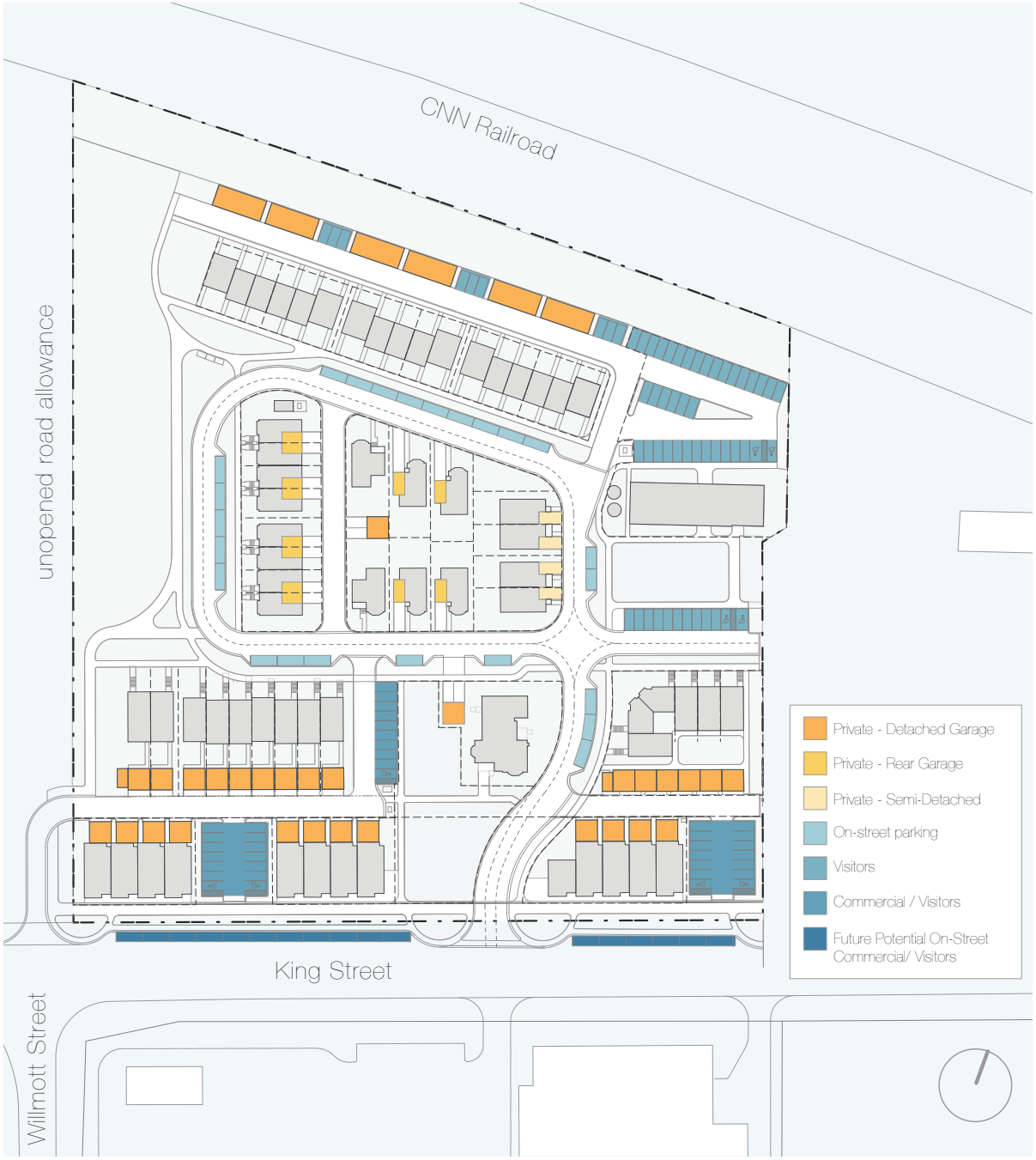

Figure 22. Parking Plan

Figure 23. Bird's-eye view - Parking Areas - East

2.6 OPEN SPACE

The Open Space Plan is designed to create strong visual and physical connections between each envisioned open space in a series of interconnected events that lead users across the community.
The community's open space structure is further complimented by semi-public and private open spaces associated with residential uses linked by pedestrian-oriented streets.
Key design elements reflected in the proposed development of the Sunnyside Village open space structure (as shown in FIGURE 24) include:

- A hierarchical, diverse, and linked public open space system that delivers a range of amenities from regenerative landscapes (Environmental Regeneration Area - Deciduous Swamp) to passive recreational (Central Park) and community focus activities (Barn Plaza);
- An open space system that incorporates and builds on the built and cultural heritage and natural heritage resources found on site, such as: The Environmental Regeneration Area to the west associated with the site's environmental layer, the Central Park associated with the historic heritage home and front lawn, and the Barn Plaza representative of the site's agricultural past; and

Figure 24. Open Space Layout

- A public open space system that reaches out and connects with the surrounding context at King Street as an integral part of the growth and evolution of the larger context.

Central Park

- The Central Park is approximately 0.13ha (0.33 ac) in size;
- The Central Park will include opportunities for passive recreation facilities such as open greens, playgrounds, walkways, seating areas, park pavilions, and interpretation displays; and,
- The majority of the park's perimeter will be bounded by roads with direct frontage onto King Street.

Barn Plaza

- The Barn Plaza is approximately 0.06 ha (0.16 acres) in size;
- The Barn Plaza is envisioned to include a variety of passive recreational facilities, including communal informal gathering spaces and sitting areas with significant road exposure and access.

Figure 25. Street View - Barn Plaza

2.7 CULTURAL HERITAGE

Barn Hub
The existing barn and its unique features are intended to be retained and adaptively reused as a privately owned community use. A parkette/plaza is located adjacent to the south side of the barn to provide additional open space for the community and serve as a gathering spot for residents. Visitor parking for the cultural hub is provided adjacent to the parkette and rear.

Heritage House
The former farmhouse building is planned to be renovated while preserving its historical and cultural character. A new detached garage structure is proposed to the west of the building to be accessed from the central road. A central open space surrounds the building, recreating the former notion of a grand farmstead entrance.

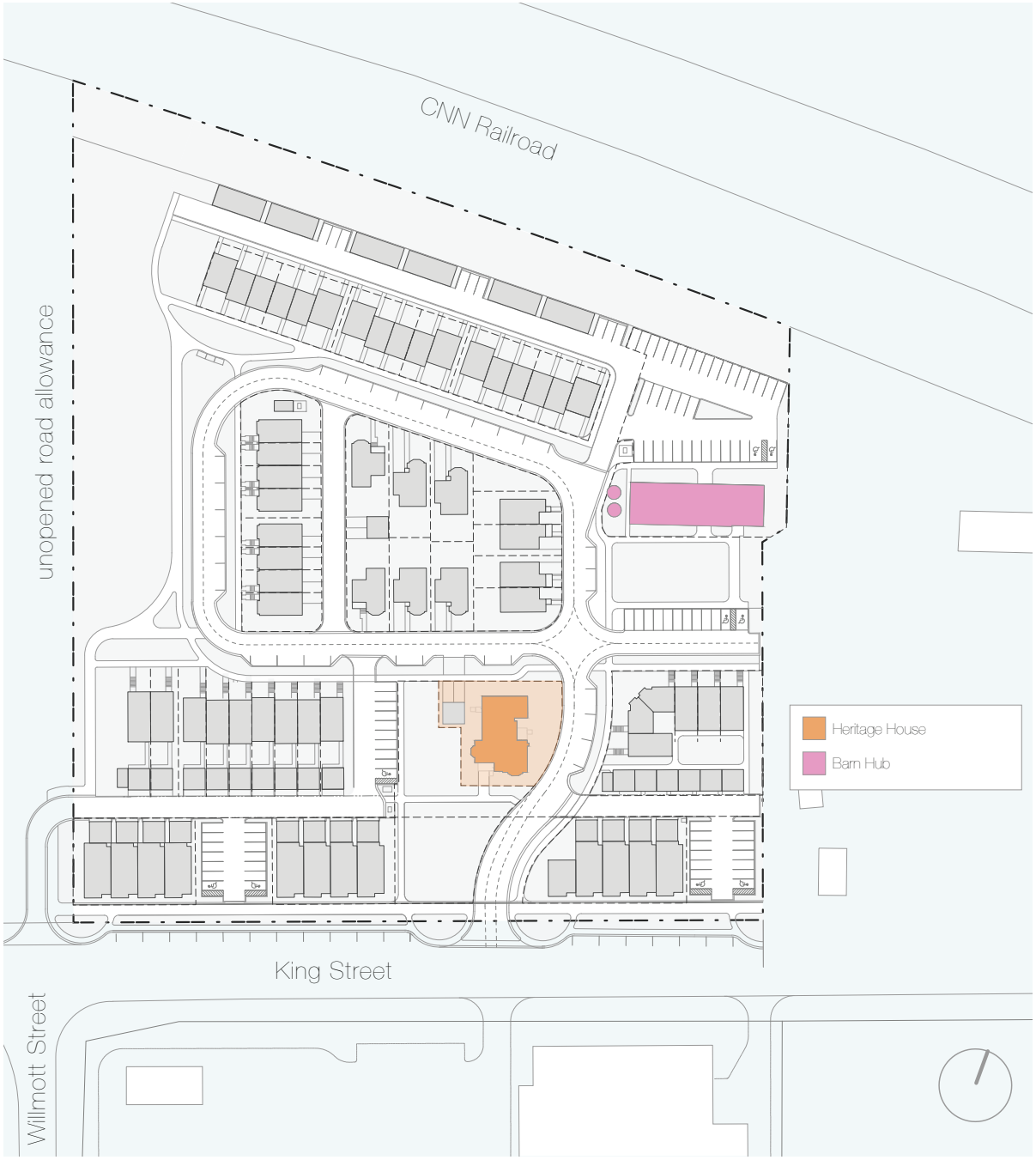

Figure 26. Cultural Heritage Buildings

Figure 27. Barn Hub

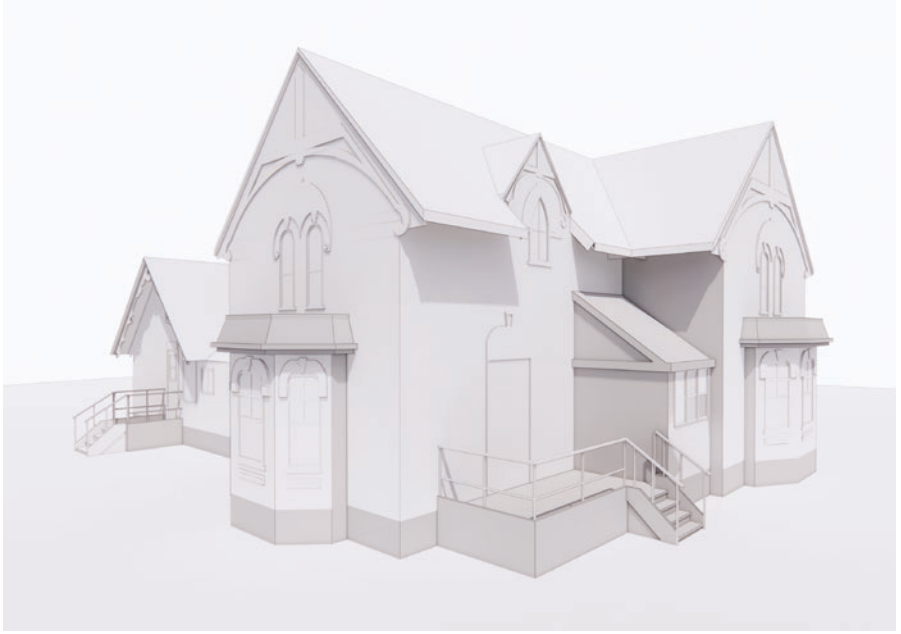

Figure 28. Heritage House

2.8 ENVIRONMENT

2.8.1 Storm Water Management

Stormwater management is a key component in developing a resilient and sustainable community. The Sunnyside Village envisions the installation of two underground cistern systems located under the Central Park and the Barn Plaza. Future site plan-specific details on the stormwater management system and layout, as well as its impact on the open spaces landscaping, will be undertaken at the site plan stage.

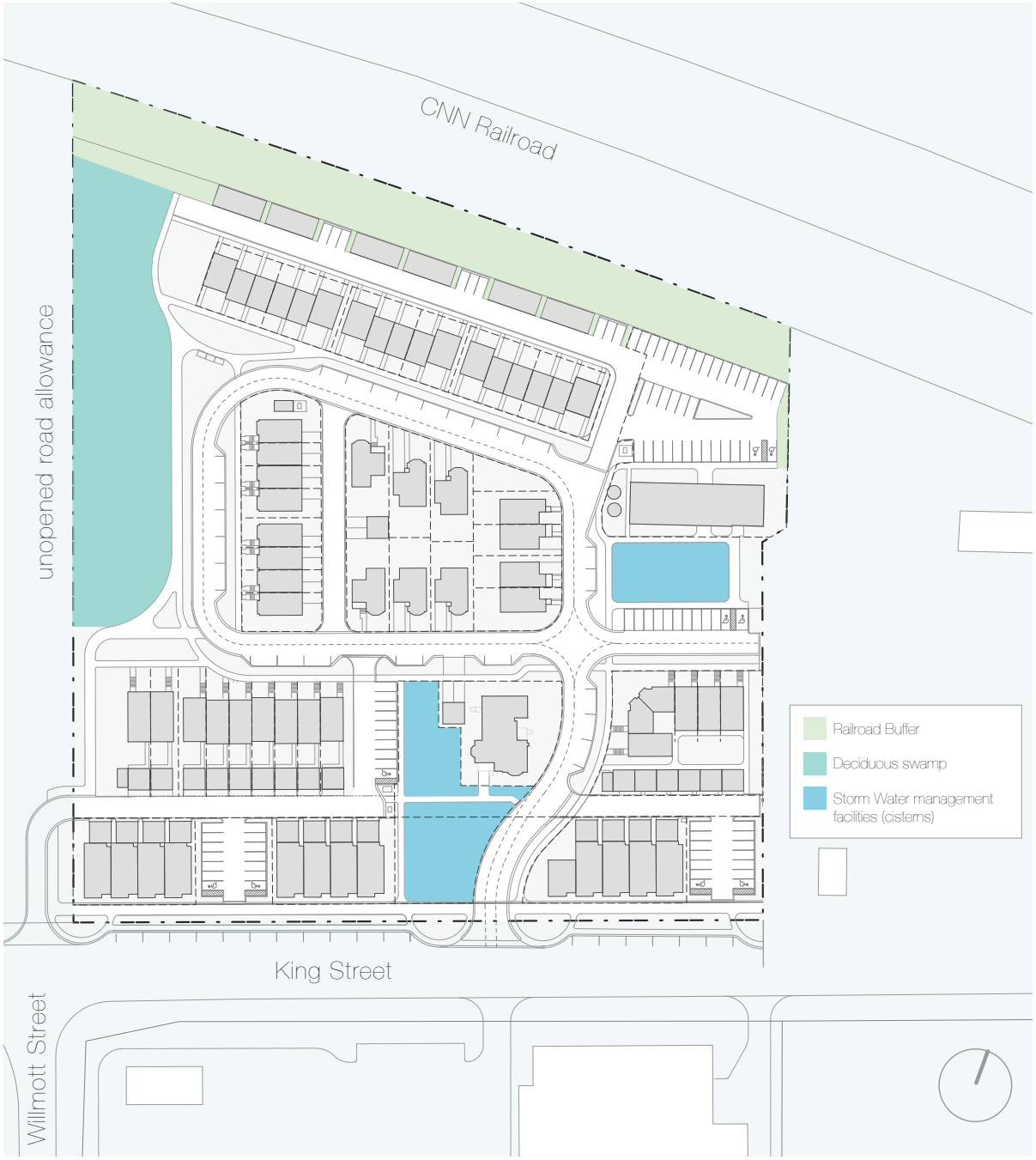

Figure 29. Storm Water Management Plan

2.8.2
Green strategy

Urban Canopy
The proposed Sunnyside Village plan envisions the replacement and planting of additional open space and street trees to ensure a healthy urban canopy is delivered. A detailed tree planting strategy will be developed at the site plan stage to ensure tree survival.

Key design principles to be considered include:

- Street trees should be planted along both sides of the central road;
- Maximize tree planting within the proposed open space areas, storm water management system permitting;
- Maximize appropriate tree plantings within the environmental Regeneration Zone;
- Plant trees along the railroad noise attenuation berm and fence as well as the west and east property lines; and
- Where appropriate, provide a private property tree planting option (as part of the purchase plan).

Figure 30. Green Strategy Plan

Environmental Regeneration
A continuous open space along the community's western edge is envisioned as an environmental regeneration area. This area is intended to re-establish the area's environmental functions (Refer to environmental Report) while ensuring the area becomes an intrinsic part of the community's interconnected open space system.

Through the site plan process, detailed planting and regeneration strategies will be advanced to include interpretational, educational, and First Nations components. From the community design perspective, the area is envisioned as a communal, safe, and accessible pedestrian zone with trails and passive recreational areas such as sitting areas.

Figure 31. Street View - Environmental Regeneration Area

3 SUSTAINABILITY & URBAN DESIGN FRAMEWORK

3.1 INTRODUCTION

The Sunnyside Village project emerges from the Town of Cobourg's vision for a strong, livable, and healthy community and meets the Growth Plan's objectives of building complete neighborhoods. The community's vision is based on provincial and municipal policies, including:

- The Provincial Policy Statement (2020)
- The Growth Plan for the Greater Golden Horseshoe (2020)
- Northumberland County Official Plan (2016)
- Town of Cobourg Official Plan (2018 Consolidation)
- Zoning By-law 85-2003

Formulated with community planning best practices in mind, the Sunnyside Village is designed under Cobourg's Community Development and Design Principles as listed below.

Community Development Principles:

- Distinctive Community Image
- Protect the Natural Environmental Heritage
- Healthy and Economically Viable Community
- Financial Feasibility

Design Principles:

- Protect the Historical, Natural, and Cultural Heritage
- Encourage Compact, Mixed-Use Development
- Promote Active Transportation
- Promote Sustainable Development
- Provide a Variety of Housing
- Provide a Vital Setting for Employment Uses
- Create and Celebrate Public Spaces
- Promote Healthy Lifestyles and Physical, Mental, and Spiritual Wellbeing

Grounded on these principles, the Sunnyside Village respects the site's cultural heritage, offers compact and accessible development, varied living and working opportunities, and a wide range of services. It supports active transportation, social engagement, and healthy and sustainable living.

The One Planet Living framework was chosen to encompass all of the intertwined concepts considered for the community as they converge with and complement Cobourg's vision and principles.

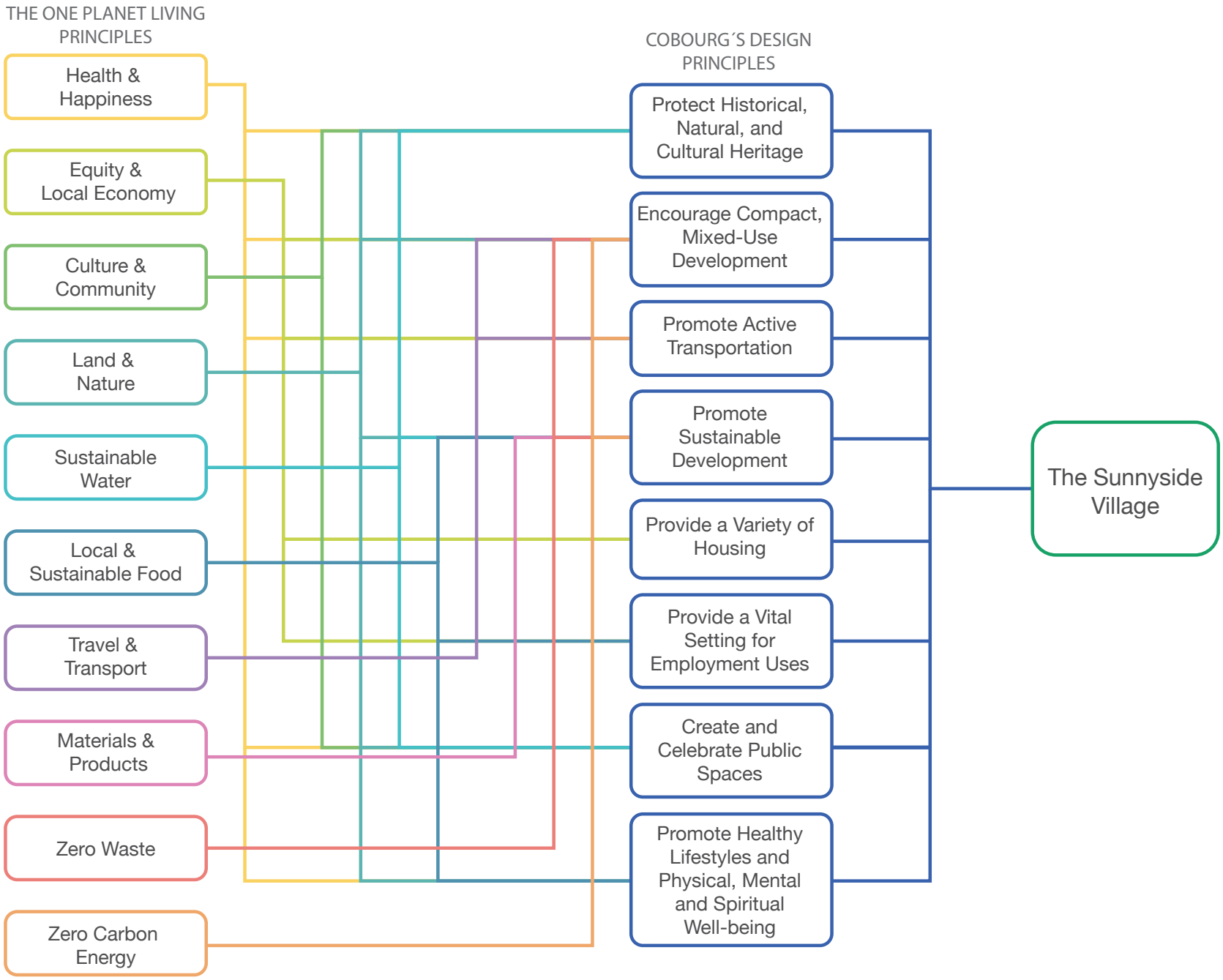

Figure 32. Diagram - The OPL and the Cobourg's Planning Principles

HEALTH AND HAPPINESS
Encourage active, sociable, meaningful lives in all aspects of community design to promote good health and wellbeing for people of all ages and abilities

EQUITY AND LOCAL ECONOMY
Create safe, equitable places for people of all ages and incomes to live and work which support diversity, local prosperity and international fair trade

CULTURE AND COMMUNITY
Nurture local identity and heritage, inspire and empower the community and promote a culture of knowledge sharing and sustainable living

LAND AND NATURE
Protect, restore and integrate land and local ecological systems throughout the community for the benefit of people and wildlife

SUSTAINABLE WATER
Use water efficiently, protect local water sources and implement sustainable technologies in the public and private realm to reduce flooding and drought

LOCAL AND SUSTAINABLE FOOD
Promote on-site food production and support sustainable humane farming and healthy diets oflocal, seasonal organic food and vegetable protein

MATERIALS AND PRODUCTS
Use recycled materials and durable materials from local and sustainable sources and promote products which help people reduce consumption

TRAVEL AND TRANSPORT
Reduce the need to travel, and encourage walking, cycling and lower carbon transportation options including transit and car and bikeshare programs

ZERO WASTE
Prioritize waste as a resource and reduce consumption, reuse and recycle to achieve zero waste and zero pollution

ZERO CARBON
Design, locate and manufacture buildings and open spaces to be energy efficient and supply energy on site, and/or through partnerships

All design elements reflect the principles of the One Planet Living and Cobourg's Planning framework and consider social, historical, physical, functional, and environmental features. The varied housing blocks, mixed uses, walkways, complete streets, open spaces, natural areas, and shared spaces make Sunnyside Village a high-quality development integrated into Cobourg's unique context that offers a growth opportunity for the entire community.

3.2
THE OPL PRINCIPLES

3.2.1 Health and Happiness

1. Provide community facilities to support and encourage social events.
2. Incorporate elements of nature to promote mental, physical, and social health.
3. Provide open spaces for active and passive recreation.
4. Locate buildings to frame streets and open spaces to enhance comfort and safety.
5. Prioritize pedestrian safety through complete streets.
6. Promote safe cycling to support active transportation.

PRINCIPLE 01

Figure 33. Axonometric Diagram - Health & Happiness

1. **Provide community facilities to support and encourage social events** – The entire complex is designed to encourage social gatherings, from casual sidewalk encounters to formal events in Central Park or Barn Plaza. Place activation encourages people to meet, stay longer and create a vibrant and welcoming environment fostering wellness.

2. **Incorporate elements of nature to promote mental, physical, and social health** – Proximity to nature is essential for a healthy life. Therefore, the development incorporates natural elements in its shared and public spaces. All streets and open spaces have shaded areas and native foliage. Moreover, the community design respects the site's natural heritage through the enhancement and transformation of its western edge natural system into an environmental revitalization area. This area is visually and physically accessible to the community through walkways and contemplative views.

3. **Provide open spaces for active and passive recreation** – All open spaces are envisioned to accommodate a range of activities for people of all ages and abilities. From walking meditation near the natural revitalization area to attending a musical event in the Barn Plaza or a casual volleyball game at Central Park, the site offers a variety of options for passive and active recreation.

4. **Locate buildings to frame streets and open spaces to enhance comfort and safety** – The site layout is arranged with building facades and active uses fronting shared spaces such as streets and green areas. Building blocks facing two main streets are designed with a continuous corner facade to give the environment a sense of continuity, comfort, and human scale.

5. **Prioritize pedestrian safety through complete streets** – Walking within the site fosters community involvement, togetherness, and an active and balanced lifestyle, which are essential for a healthy life. Pedestrian safety is addressed through high-quality street design practices such as on-street parking, wide boulevards, and narrow car pavements.

6. **Promote safe cycling to support active transportation** – A road-sharing strategy with as of right cycling routes on internal streets is proposed throughout the site to encourage physical activity and shorten travel times in and out of the development.

Figure 34. Street View - Main Entrance / Pedestrian Crossing

3.2.2 Equity and Local Economy

1. Provide a range of amenities within walking distance to all residents.
2. Provide public spaces that exceed the principles of universal design.
3. Support unique and flexible spaces that reinforce a sharing economy.
4. Locate mixed uses at grade to support active frontages.
5. Integrate varied housing typologies.

PRINCIPLE 02

Figure 35. Axonometric Diagram - Equity & Local Economy

1. **Provide a range of amenities within walking distance to all residents** – A walkable neighborhood is not only physically walkable but one that has points of interest that can be visited. The Sunnyside Village project has various amenities (i.e., local businesses, future amenity/cultural hub, natural areas, and barn plaza) within a 5-minute walk, facilitating a pedestrian and cycling culture and enabling equity among residents.

2. **Provide public spaces that exceed universal design principles** – The design of all streets and boulevards provides safe and unhindered access and circulation. Pedestrian pathways and sidewalks are designed to comply with the Ontario Disability Act. The design of all street corners is complemented by an extended boulevard zone intended to shorten the pedestrian crossing of vehicular lanes. In addition, a range of flexible facilities and furniture in the public realm supports the accommodation of a wide variety of individual abilities and preferences.

3. **Support unique and flexible spaces that reinforce a sharing economy** – Sharing resources requires social trust and engagement, demanding physical spaces where social interactions are possible. A Barn Plaza, a Central Park, and a network of human-scaled pathways support collaborative economy practices and contribute to the community's social capital and equity.

4. **Locate mixed uses at grade to support active frontages** – Mixed uses benefit residents and businesses, as potential customers for the local retail, offices, or personal services are just a few steps away. Mixed uses are situated on a street level to support accessibility, eyes on the street, and a growing local economy.

5. **Integrate varied housing typologies** – Diverse dwelling sets support the varied demand and spectrum of affordability among society, bring equity, and recognize social diversity within the community.

Figure 36. Street View - Streetscape in front of Stacked Townhouses

3.2.3 Culture and Community

1. Provide a future community hub to celebrate local culture.
2. Encourage community focus and educational activities.
3. Provide public art that celebrates the history of the site.
4. Provide welcoming open spaces to foster community cohesion.
5. Reinforce a strong gateway or entryway to distinguish the site as a unique destination.
6. Use materials and design language that reflects the history of the site.
7. Maximize public access through privately owned public space (POPS).

PRINCIPLE 03

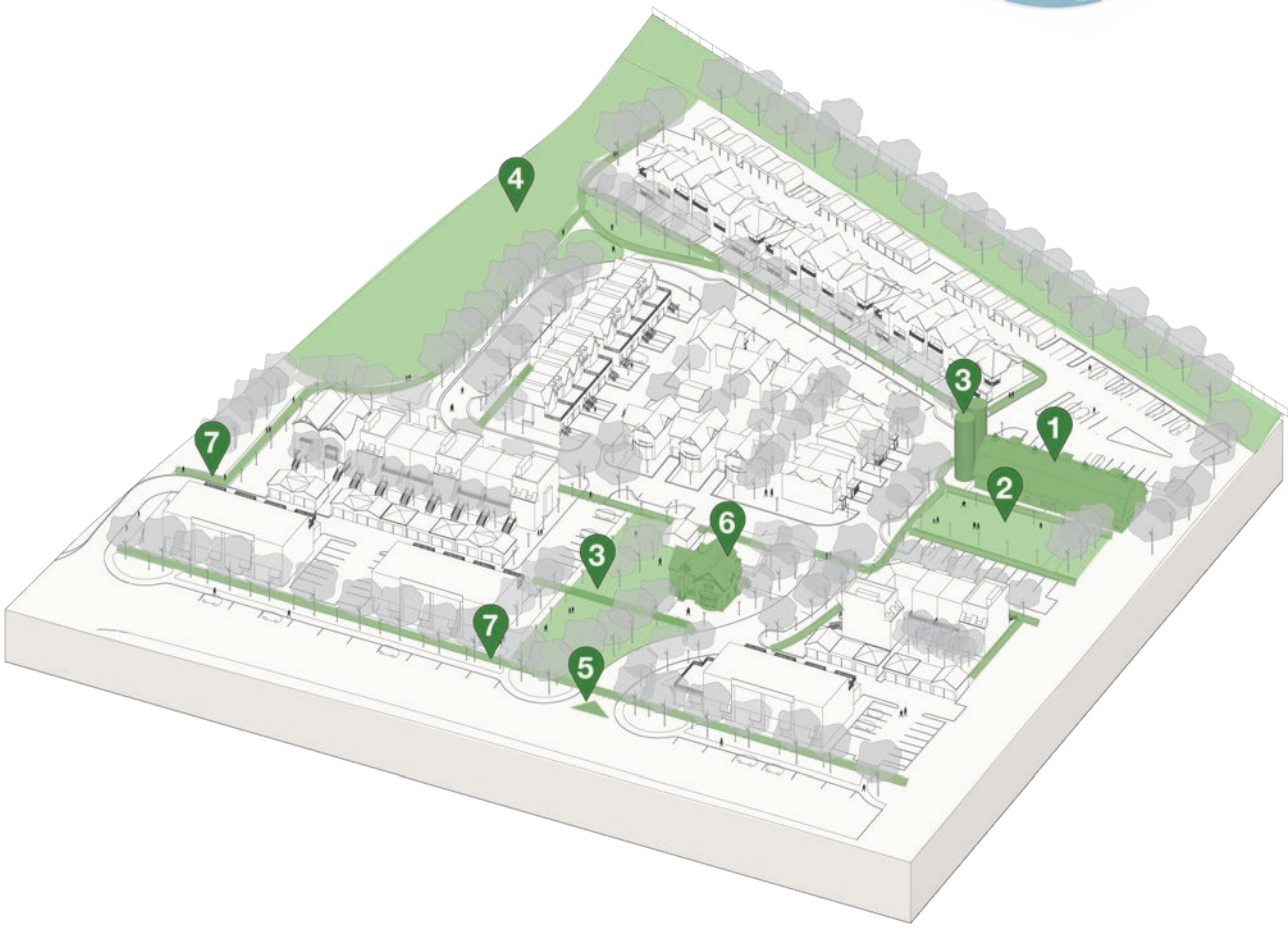

Figure 37. Axonometric Diagram - Culture & Community

1. **Provide a community hub to celebrate local culture** – Reinventing and reusing contextually meaningful spaces empowers cultural identity and heritage. A potential privately owned community and cultural hub in the former barn connects the site's traditional uses with the contemporary values and needs and provides a vibrant environment for creativity and innovation.

2. **Encourage community focus and educational activities** – A socially focused programming in the shared amenities ensures integration and inclusiveness. In addition, partnerships with local groups and artists benefit the community's sense of belonging, promote social engagement, and boost local creativity. From the natural revitalization area to the Barn Plaza, the community offers a series of spaces where educational, interpretative, and community-building programming could be implemented.

3. **Provide public art that celebrates the history of the site** – The site layout provides spaces that could be intervened with public art, such as the barn, the silos, the central park, and along King Street. Publicly accessible art enriches the culture and serves as a landmark in the urban environment, offers variation in the landscape, and encourages a sense of identity and belonging.

4. **Provide welcoming open spaces to foster community cohesion** – A harmonious relation between hardscape and softscape elements suggests a welcoming and safe ambiance. The development proposes a set of green and open spaces that offers a balanced environment. It is adaptable to different uses that foster social cohesion, such as open-air cinema, snow sculptures, outdoor yoga, and food truck events.

5. **Reinforce a strong gateway or entryway to distinguish the site as a unique destination** – Along with the heritage house and the central park, the primary entryway on King Street introduces the Sunnyside Village's unique character. Establishing a recognizable image in the urban landscape with the site's distinctive historic agricultural past and architectural and landscaping features offers variety to the urban layout and a sense of identity to the local community.

6. **Use materials and design language that reflects the history of the site** – Buildings, streets, and open spaces are designed to celebrate the site's heritage while looking towards the future. The creative reinterpretation of historical components through the reuse of traditional materials, light standards, and design features fosters a lifestyle connected with the site and its surroundings.

7. **Maximize public access through privately owned public space (POPS)** – A permeable street network and a set of open spaces avoid urban isolation and increase legibility, connectivity, and accessibility for residents and visitors. In addition, it benefits active transportation, social cohesion, and community integration in the urban environment.

3.2.4
Land and Nature

PRINCIPLE 04

1. Provide extensive trees and landscaping to create a robust and continuous tree canopy.

2. Provide opportunities throughout the public realm to promote the value of nature.

3. Use native and drought-resistant species to restore local ecosystems.

4. Utilize the proposed environmental regeneration area to re-establish natural areas and maintain ecological continuity.

Figure 38. Axonometric Diagram - Land & Nature

1. **Provide extensive trees and landscaping to create a robust and continuous tree canopy** – The basis for sustainable integration in the site is to preserve as many trees as possible and replant more in strategic areas. The landscape design proposes planting trees along King Street and the loping internal condominium road serving as shade, traffic-calming, air cleaners, and visual amenities.

2. **Provide opportunities throughout the public realm to promote the value of nature** – The urban and landscape design offers opportunities to connect with the natural environment context of the development. Design strategies such as illustrated educational maps and signage can leverage the site's environmental assets and promote mindfulness for sustainable community life.

3. **Use native and drought-resistant species to restore local ecosystems** – All softscapes are envisioned to include a variety of local and drought-resistant vegetation suitable for Zone 6A climatic conditions, including trees, shrubs, and grasses. A diversified landscape attracts small wildlife and pollinators, provides bioswales, minimizes maintenance, and restores the local ecosystem.

4. **Utilize the proposed environmental regeneration area to re-establish natural areas and maintain ecological continuity** – The proposed environmental restoration area is envisioned as an asset for ecosystem restoration integrated into the landscape strategy. It ensures the continuity of an ecological network, reduces the heat-island effect, and serves as a visual and auditory buffer from the lands to the west and railroad operations.

Figure 39. Street View - Streetscape in the Northeastern Area

3.2.5 Sustainable Water

1. Design the placement and location of open spaces based on an integrated overland flow patterns approach.

2. Maximize permeability in the public realm through Low Impact Development (LID) techniques.

3. Utilize native and drought-resistant species to minimize irrigation requirements.

4. Utilize storm water collection technologies (cisterns) to minimize potable water requirements for irrigation.

PRINCIPLE 05

Figure 40. Axonometric Diagram - Sustainable Water

1. **Design the placement and location of open spaces based on an integrated overland flow patterns approach** – Natural water infiltration is an essential component of sustainable stormwater management. The development plan considers overland flow patterns to propose a sustainable stormwater management strategy. This strategy comprises enhanced recharge at the source and stormwater collection systems located under the proposed open spaces.

2. **Maximize permeability in the public realm through Low Impact Development (LID) techniques** – Maximizing permeability is crucial to preserving the hydrological cycle in sustainable development. Low impact development techniques such as bioswales, rain gardens, permeable paving, and a reduction of impermeable areas are considered throughout the site.

3. **Utilize native and drought-resistant species to minimize irrigation requirements** – Besides being vital for ecosystem preservation, local species' presence helps minimize maintenance and irrigation. The plan envisions locating plant species according to their sun requirements, ensuring plant survival, and lowering water demand. After the first two years, this approach avoids the need for a permanent irrigation system and allows water preservation for other purposes.

4. **Utilize storm water collection technologies (cisterns) to minimize potable water requirements for irrigation** – Storm water management and conservation are fundamental components of the site's resiliency and future environmental wellbeing. The site's storm water management strategy is predicated on the construction of two significant cistern zones located under Central Park and the Barn Plaza.

3.2.6 Local and Sustainable Food

1. Promote healthy food through education, information, and events

2. Partner with local restaurants and shops to sell locally produced food

PRINCIPLE 06

Figure 41. Axonometric Diagram - Local & Sustainable Food

1. **Promote healthy food through education, information, and events** – The site's range of open spaces and Barn Plaza offer the opportunity to host a range of food awareness activities, including a farmer's market. The future retrofitting of the Barn building is also envisioned to offer cooking and gardening courses, host food-focused events, and explore partnerships with the local market and food suppliers to help activate the shared spaces and raise food sustainability awareness.

2. **Partner with local restaurants and shops to sell locally produced food** – The Barn Plaza and the mixed uses along King Street offer opportunities to foster partnerships with local food producers, restaurants, and shops. The involvement of such participants in the community benefits a sustainable food cycle, boosts the local economy, and promotes social engagement.

3.2.7 Travel and Transport

PRINCIPLE 07

1. Provide a compact, well-connected mobility network through new streets.
2. Promote and support active transportation to minimize parking requirements and emissions.
3. Provide a pedestrian-supportive streetscape.
4. Design streets to prioritize pedestrians and cyclists on internal streets

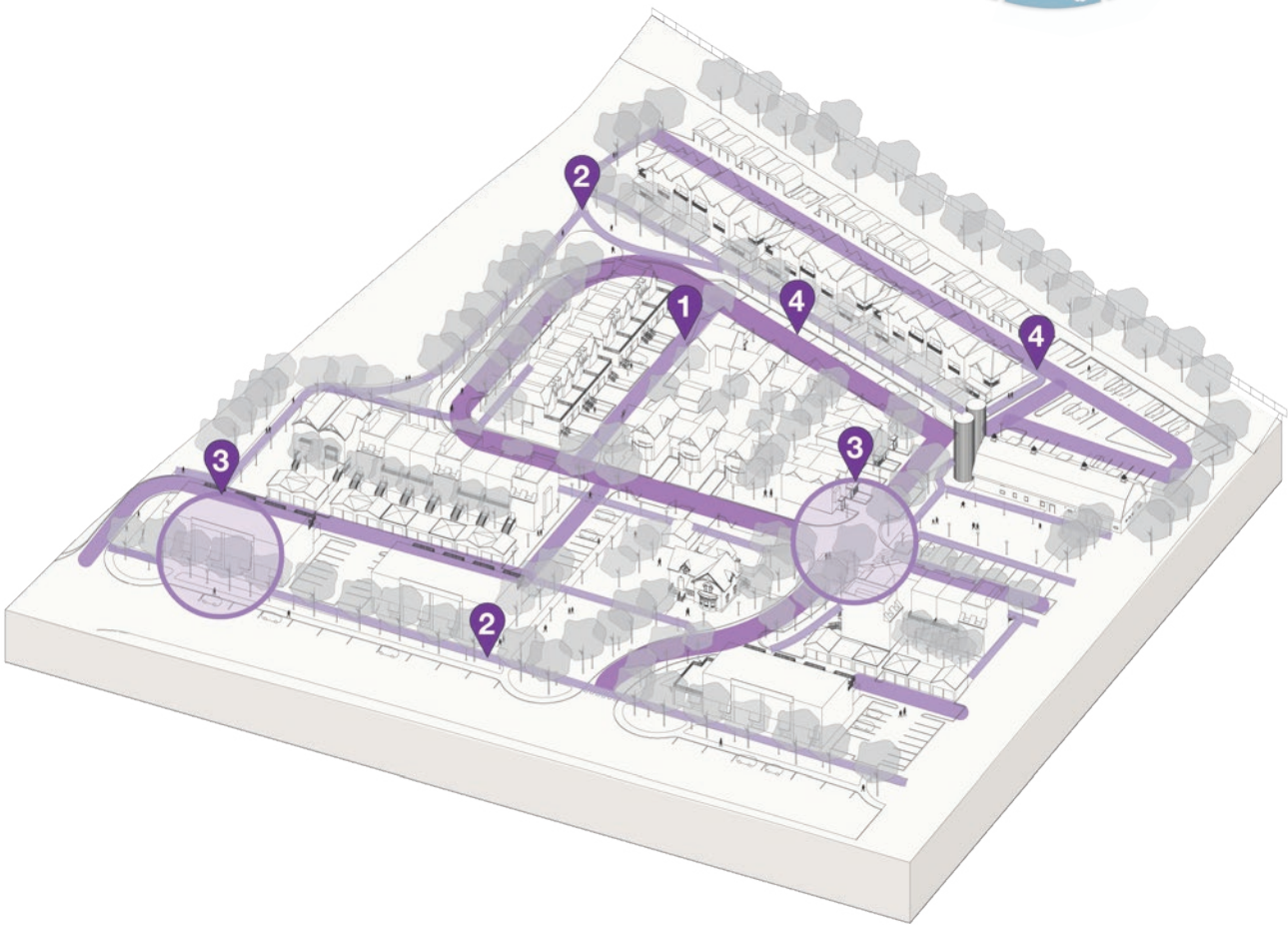

Figure 42. Axonometric Diagram - Travel & Transport

1. **Provide a compact, well-connected mobility network through new streets** –Complete and connected streets integrate a community and improve livability. The street network in the Sunnyside Village is based on a pedestrian scale and includes shared cycling facilities (sharrows), generous sidewalks, and a multi-use trail system adjacent to the deciduous swamp. Further pedestrian mobility is achieved by providing mid-block connections to mews/rear-laneways in all building blocks. Mid-block connections and mews/rear laneways are at-least 2.0m wide and 6.0m wide, respectively, providing natural light and enhancing views while facilitating better pedestrian circulation, reducing travel distances, and promoting active transportation.

2. **Promote and support active transportation to minimize parking requirements and emissions** – A pedestrian system and a bicycle network and parking are considered throughout the community. Furthermore, a generous sidewalk along King Street is envisioned to provide safe and comfortable pedestrian connections to and from the site, including the path to the food store across the street. Future cycling opportunities along King Street connecting the site to its larger surroundings will continue to be explored with the City. By encouraging active transportation, residents are encouraged to start embracing walking and cycling as viable modes of transportation.

3. **Provide a pedestrian-supportive streetscape** – A human-scaled streetscape prioritizes pedestrian flow in visual, physical, and functional aspects. The street scheme within the site considers a combination of design techniques such as street trees, wide sidewalks, street furnishings, and on-street parking to support pedestrians in these three dimensions. In addition to these, along King Street East, the development establishes a continuous frontage with active uses that enhances the pedestrian experience and connects the community to its surroundings.

4. **Design streets to prioritize pedestrians and cyclists on internal streets** – All streets use wide boulevards, sharrows, frequent crossings bumouts, and on-street parking to limit vehicle speeds. The laneways have a narrow cross-section that utilizes a curbless design to improve comfort and safety.

Figure 43. Street View - Mid-block Connection

3.2.8 Materials and Products

PRINCIPLE 08

1. Select materials that are durable and reflect the site's context.
2. Promote community facilities and programs that support a culture of sharing and swapping.
3. Maximize the use of local building materials.
4. Encourage the use of sustainably sourced and harvested materials .
5. Foster partnerships and business relationships to reduce material consumption.

Figure 44. Axonometric Diagram - Materials & Products

1. **Select durable materials and reflect the site's context** – A selection of energy-efficient, durable and sustainable materials ensures long-term endurance, reduces maintenance, and contributes to the formation of the development's identity. The site's proposed architecture is envisioned to be cladded in stone and brick that reflects Cobourg's agricultural past and locally available materials.

2. **Promote community facilities and programs that support a culture of sharing and swapping** – A sharing economy allows products to be reused or recycled, reducing waste and costs. The assortment of open and shared spaces is flexible to accommodate events based on a sharing principle, such as swap meets, lending clubs, flea markets, and garage sales.

3. **Maximize the use of local building materials** – A sustainable development approach involves using local products for construction. Wherever possible, the buildings and open spaces are proposed with local materials ideally sourced within 100 km of Cobourg, reducing freight and environmental costs.

4. **Encourage the use of sustainably-sourced and harvested materials** – The use of renewable materials and materials from sustainable sources reduces the environmental impact of the development. The future community will strive to use recycled materials wherever possible and prioritize the use of sustainably-sourced wood-frame construction.

5. **Foster partnerships and business relationships to reduce material consumption** – Fostering partnerships with local community groups (i.e., Sustainable Cobourg) and like-minded businesses with similar environmental values helps reduce waste associated with production and encourages a culture shift to a sharing economy.

3.2.9
Zero Waste

PRINCIPLE 09

1. Redevelop existing underutilized site into a higher-density mixed-use development.

2. Reduce waste by facilitating circular economy events.

3. Explore opportunities for on-site waste management and reuse solutions that prioritize waste as a resource.

4. Ensure construction methods that reduce waste.

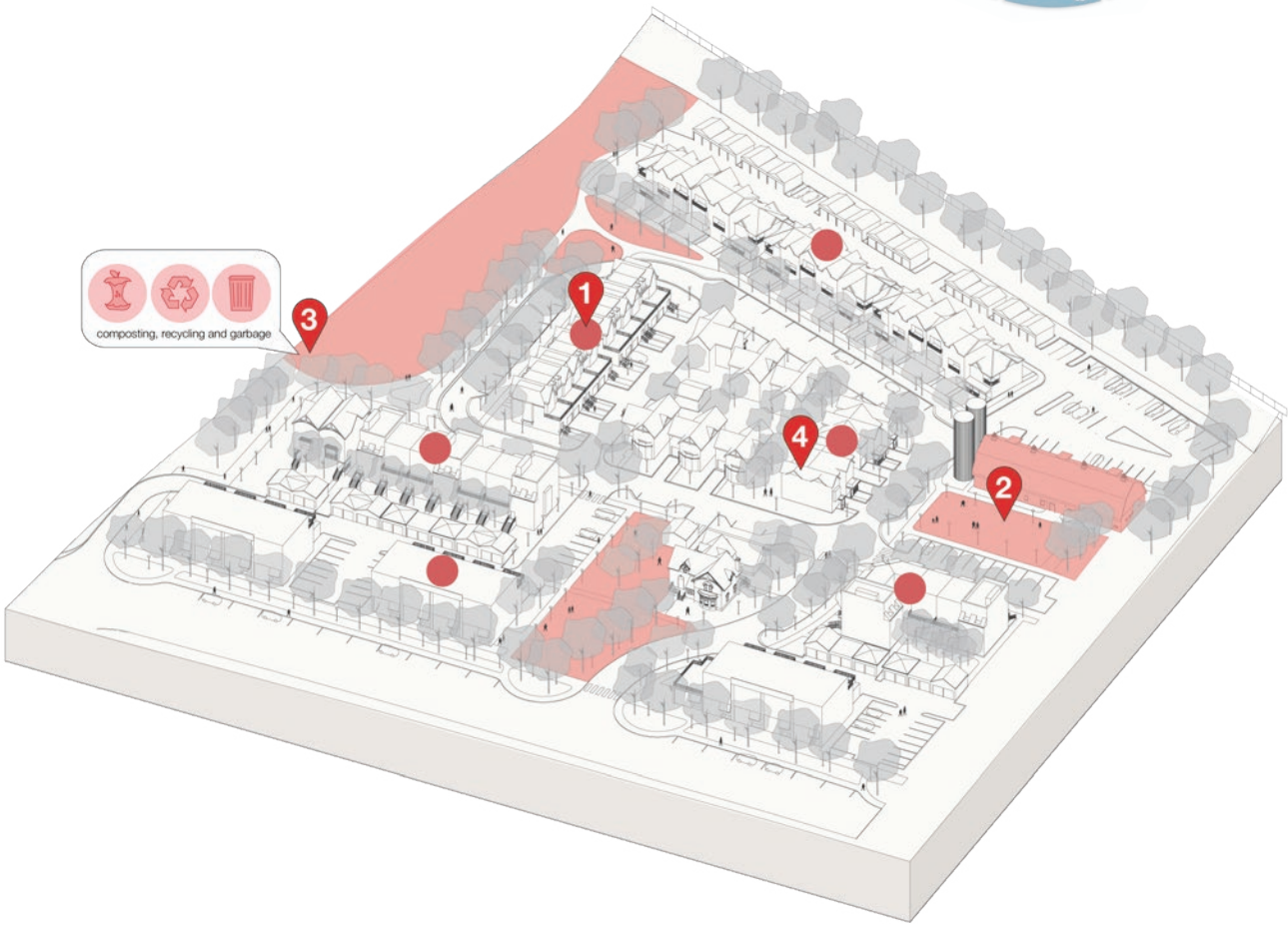

Figure 45. Axonometric Diagram - Zero Waste

1. **Redevelop existing underutilized site into higher-density mixed-use development** – Mixed-use and higher-dense developments such as the Sunnyside Village support urban efficiency and reduce waste by facilitating shorter travel distances and sharing the use of land in flexible spaces.

2. **Reduce waste by facilitating circular economy events** – A sustainable community acknowledges waste as a resource and thrives on reusing and recycling. Multiple events designed around this shift in culture and economy can be accommodated at the Barn Plaza, Central Park, and even around the naturalized area on the west.

3. **Explore opportunities for on-site waste management and reuse solutions that prioritize waste as a resource** – The community will implement on-site waste collection that accommodates all steams such as recycling, composting, and garbage, prioritizing waste as a resource and promoting a zero-waste culture.

4. **Ensure construction methods that reduce waste** – LEED or similar programs' construction strategies are encouraged and will be explored during the construction phase to ensure an efficient approach to development. Sustainable construction strategies help reduce waste, freight costs, construction materials, and costs and require less energy.

3.2.10 Zero Carbon Energy

PRINCIPLE 10

1. Explore opportunities to provide energy reduction and collection strategies.

2. Promote high-performance buildings designed and oriented to minimize carbon impacts throughout their life cycle.

3. Explore opportunities to integrate sustainable technologies within the public realm.

Figure 46. Axonometric Diagram - Zero Carbon Energy

1. **Explore opportunities to provide energy reduction and collection strategies** – Solar panels help harness energy and are to be considered on passive rooftops as appropriate.

2. **Promote high-performance buildings designed and oriented to minimize carbon impacts throughout their life cycle** – The building's massing is proposed to be further designed to take advantage of passive solar heating and cooling. In addition, the highest energy efficiency standards are to be considered for all units and shared spaces.

3. **Explore opportunities to integrate sustainable technologies within the public realm** – Sustainable technologies in the public realm reduce energy consumption and carbon footprint within the community. Some of these include small-scale intervention along the streets, such as LED light standards, and exploring the potential for integrating solar panels to supply adjacent buildings.

Figure 47. Street View - King Street East

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