

Final Proposal & Planning Justification Report

850 Highbury Avenue North

Old Oak Properties



November 2022



Contents

1.0	INTRODUCTION	2
2.0	PLANNING ACT, RSO 1990	3
3.0	PROVINCIAL POLICY STATEMENT 2020 (PPS)	6
4.0	THE LONDON PLAN	14
5.0	SECONDARY PLAN AMENDMENT	17
6.0	ZONING BY-LAW	17
7.0	EXISTING CONDITIONS	18
7.1	ENVIRONMENTAL CONDITIONS	19
7.2	ARCHAEOLOGICAL	19
7.3	CULTURAL HERITAGE RESOURCES	19
8.0	SUBDIVISION DESIGN	20
8.1	EXISTING SERVICES – OVERVIEW	21
9.0	SANITARY SERVICING	23
9.1	PROPOSED SANITARY SEWERSHED	23
9.2	SERVICING STRATEGY	23
9.3	SANITARY OUTLETS	24
10.0	WATER SERVICING	25
10.1	WATER SERVICING STRATEGY	25
10.2	PROJECTED WATER DEMANDS	26
11.0	STORMWATER MANAGEMENT	26
11.1	STORMWATER ASSUMPTIONS	26
11.2	PROPOSED STRATEGY FOR STORMWATER	28
12.0	TRANSPORTATION	30
12.1	TRANSPORTATION IMPACT STUDY	30
12.2	INTERNAL ROAD NETWORK	31
12.3	EXTERNAL ROAD NETWORK	32
12.4	BICYCLE AND PEDESTRIAN CONSIDERATIONS	33
13.0	PARKS PLANNING	34
13.1	NATURAL HERITAGE SYSTEM	34
13.2	PARKLAND AND OPEN SPACE	34
13.3	TREE PRESERVATION	34
14.0	FINANCIAL CONSIDERATIONS	37
14.1	SUMMARY OF REVENUES	37
14.2	SUMMARY OF CLAIMABLE COSTS	37
15.0	MISCELLANEOUS	38
15.1	PHASING AND TIMING	38
15.2	NOISE ASSESSMENT	40
16.0	RESPONSES TO INITIAL PROPOSAL REVIEW MEETING	40
	Appendix 1 - Sanitary Flow Estimate Table	
	Appendix 2 - Figures 7 through 13	
	Appendix 3 - Estimated DC Revenue & CSRF Claim Worksheet	
	Appendix 4 – Tree Removal Plan and Inventory of Tree Removals	

1.0 INTRODUCTION

Zelinka Priamo Ltd., on behalf of Old Oak Properties, is pleased to submit this Final Proposal and Planning Justification Report for the property located at the southeast corner of Highbury Avenue North and Oxford Street East known municipally as 850 Highbury Avenue North and known legally as Part of Lot 8, Concession 1, Parts 1-40 Plan 33R-20053 and Parts 1-8 Plan 33R-19935.



Figure 1: Subject Lands

The lands are known as the former London Psychiatric Hospital (“LPH”) and contain a complex of buildings and landscape features that have been identified as having provincial and local heritage value.

The lands for subdivision (subject lands) are a generally rectangular parcel with frontage on Highbury Avenue and Oxford Street East. The subject lands have an area of 58.13 hectares (143.64 acres) with a frontage of 730.4 m (2,395.0 ft) along Highbury Avenue North, and frontage of 584.9 m (1,919.0 ft) along Oxford Street East. The subject lands also abut, and have potential vehicular access to, Howland Avenue and Rushland Avenue to the east. The subject lands are designated Transit Village, and Green Space in the London Plan. In addition the subject lands are within the London Psychiatric Hospital Secondary Plan (‘LPHSP’), which has additional land uses designations and policy framework. The subject lands are currently zoned Regional Facility (RF) in the City of London Zoning By-law.

The proposal seeks to rezone the subject lands to facilitate development consistent with the policies of the London Plan Transit Village Place Type policies, and the recently amended LPHSP.

2.0 PLANNING ACT, RSO 1990

In considering a draft plan of subdivision, the Planning Act states that regard shall be had for the items in Section 51(24). The proposed draft plan of subdivision addresses the items as follows:

- a) the effect of development of the proposed subdivision on matters of provincial interest as referred to in section 2;*

The proposed development is consistent with the matters of provincial interest referred to in Section 2, particularly the conservation of built, and culturally significant features on the subject lands, including buildings, and structures used by the former psychiatric hospital, and the mature trees that line many of the internal roadways. While conservation of all features is not feasibly possible, adaptive re-use of the four designated buildings are being explored (including opportunities for affordable housing projects), and the mature trees will be maintained where conflicts between development and features can be mitigated, including upgrades/improvements to the existing road network. The proposed subdivision provides for a wide range of residential, and commercial opportunities, as well as open space and parkland areas to provide appropriate levels of outdoor activity space. A full analysis of the applications consistency with the Provincial Policy Statement is provided in Section 3.0 of this report.

- b) whether the proposed subdivision is premature or in the public interest;*

The former LPH lands are within a built-up area in the City of London. There is existing stable development on all sides of the subject lands. The subject lands present a unique opportunity within the City to provide a large infill project which would negate the need to extend services and facilities further out into the surrounding area. Furthermore, the subject lands are designated for a wide variety of land uses in the City's OP (London Plan), and are planned for residential, commercial, and institutional development and will create a new community within the City. It has been demonstrated that sufficient servicing capacity exists for the proposed development, although some of the existing on-site services will need to be replaced or upgraded. As such, the proposed subdivision is not premature and is in the public interest.

c) whether the plan conforms to the official plan and adjacent plans of subdivision, if any;

The proposed draft plan of subdivision is consistent with the London Plan (2016 Official Plan). While amendments to the London (and LPHSP) are being proposed, those are primarily in response to market changes that have occurred in the 10 years since the LPHSP was initially developed and approved. The proposed lot/block layout is generally consistent with the LPHSP schedules, with some slight deviations to address proposed land uses not currently within the LPHSP (e.g. Low density residential), and to avoid compatibility issues with adjacent land uses (light industrial). The proposed layout transitions the proposed subdivision into the adjacent established communities by using similar land uses, and transitions to higher intensity uses as you move away from adjacent sensitive land uses. As part of the subdivision design, extensions to Howland Avenue, and Rushland Avenue, will provide access from the proposed community to the Plan of Subdivision of the adjacent community consistent with the intended road network for the subject lands. A future connection to Spanner Street is also contemplated; although, it is not anticipated to be constructed until such a time as adjacent lands transition out of industrial type uses.

d) the suitability of the land for the purposes for which it is to be subdivided;

Portions of the subject lands have been designated through a Provincial Heritage Trust Easement, and a City of London Heritage Designating By-law to protect built and cultural heritage features. Those features will be properly addressed through the development process. There are no other features or constraints on the subject lands that would restrict or hinder development. The majority of the lands are flat or gently sloping, and are well situated for the proposed development.

e) the number, width, location and proposed grades and elevations of highways, and the adequacy of them, and the highways linking the highways in the proposed subdivision with the established highway system in the vicinity and the adequacy of them;

Access to the proposed subdivision will be from multiple accesses along Highbury Avenue North, and Oxford Street East. Additional access to the east via Howland Ave, and Rushland Ave, and a future connection to Spanner St have been previously mentioned. The internal road network is consistent with the amended LPHSP. In order to maintain/conservate existing heritage features, some roadways will need alternative design standards to protect existing mature trees, and maintain the character of the area as described in the LPHSP.

f) the dimensions and shapes of the proposed lots;

The proposed lot/block layout is appropriate for the subdivision, and meet the market demands of today's planning and development industry. The single detached lots are consistent with the adjacent low density neighbourhood to the east, and the block sizes are consistent with development projects of this scale.

g) the restrictions or proposed restrictions, if any, on the land proposed to be subdivided or the buildings and structures proposed to be erected on it and the restrictions, if any, on adjoining land;

As noted previously the subject lands have significant built and cultural heritage features, which will need to be addressed as development of the subject lands move through the development process. Towards the southeast there is an adjacent light industrial land use area which have impacts (noise) to the proposed development. While efforts have been made to buffer from those land uses through parkland placement, additional studies/reports may be required through the detailed design stage (or Site Plan Approval). The proposed Zoning is consistent with the intended land uses are designated within the London Plan, and LPHSP.

h) conservation of natural resources and flood control;

The subject lands have no natural resources nor are they subject to flood work.

i) the adequacy of utilities and municipal services;

It has been confirmed that the subject lands can be serviced by existing sanitary and water services. A new on-site Stormwater Management Facility will provide the necessary stormwater retention for the proposed subdivision.

j) the adequacy of school sites;

The subject lands are well serviced by various school boards, with existing schools already within the surrounding communities; however, the need for a new school block has been identified in the consultation process. As such, a school block has been proposed to facilitate a new facility within the proposed development.

- k) *the area of land, if any, within the proposed subdivision that, exclusive of highways, is to be conveyed or dedicated for public purposes;*

Several parkland, and open space blocks, including lands for a SWM pond, are proposed to be conveyed to the City as part of the overall LPHSP objectives. Additional lands around the built heritage features may be conveyed at a later date once the re-purposing of those structures is confirmed and built-out.

- l) *the extent to which the plan's design optimizes the available supply, means of supplying, efficient use and conservation of energy; and*

The plan promotes active mobility through pedestrian and cycling facilities and supports higher order transit. The plan creates direct and efficient vehicle connections to the arterial street system, which forms part of the future BRT system. Energy saving construction materials will be utilized where possible in the construction process.

- m) *the interrelationship between the design of the proposed plan of subdivision and site plan control matters relating to any development on the land, if the land is also located within a site plan control area designated under subsection 41 (2) of this Act or subsection 114 (2) of the City of Toronto Act, 2006. 1994, c. 23, s. 30; 2001, c. 32, s. 31 (2); 2006, c. 23, s. 22 (3, 4).*

Several blocks within the Plan of Subdivision will require Site Plan Approval at a later date once development schemes are prepared for the individual blocks. The block layout has been designed in such a way as to achieve the Urban Design policies of the LPHSP to ensure that when a SPA is sought for any block, the development can achieve the goals and objectives of the London Plan policies, and the Site Plan Control By-law. The single detached lots within the plan are not subject to Site Plan Approval.

3.0 PROVINCIAL POLICY STATEMENT 2020 (PPS)

The proposed development is consistent the policies of the Provincial Policy Statement. The proposed development is within the Urban Growth Boundary and identified by the London Plan as lands intended for mixed use development. The site has full access to city services and is intended to be developed as a comprehensive, transit-oriented mixed-use development, which will be a major infill project within the City, while protecting cultural and built heritage resources. The following is an analysis of applicable PPS policies relating to the proposed Plan of Subdivision, and Official Plan and Zoning By-law Amendments.

1.1.1 Healthy, liveable and safe communities are sustained by:

- a) *promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;*

- b) *accommodating an appropriate affordable and market-based range and mix of residential types (including single-detached, additional residential units, multi-unit housing, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs;*
- c) *avoiding development and land use patterns which may cause environmental or public health and safety concerns;*
- e) *promoting the integration of land use planning, growth management, transit-supportive development, intensification and infrastructure planning to achieve cost-effective development patterns, optimization of transit investments, and standards to minimize land consumption and servicing costs;*
- f) *improving accessibility for persons with disabilities and older persons by addressing land use barriers which restrict their full participation in society;*
- g) *ensuring that necessary infrastructure and public service facilities are or will be available to meet current and projected needs;*

The proposed development will create a new community within the City of London. The proposed land uses within the subdivision provide for a full range from low density residential to mixed-use/high density residential, commercial/office (mixed-use as well), open space/parkland, and heritage features. The proposal includes housing types from single detached dwellings to apartment dwellings (including live-work opportunities), and opportunities for senior housing options. Affordable housing projects are also being explored as a possible adaptive re-use of the former infirmary building existing on the subject lands. The subject lands are surrounded by existing built-up areas which are already well serviced by the necessary civil infrastructure and excellent public transit. The subject lands are also located along the planned Bus Rapid Transit ('BRT') system (Highbury Avenue North, and Oxford Street East corridors). The existing infrastructure systems have been shown to have sufficient capacity to service the proposed development at the intensities proposed. A new SWM facility is required, and is planned for within the plan of subdivision, which will serve the subject lands, and surrounding area, as infill and intensification continues along the proposed BRT corridors.

1.1.3.2 Land use patterns within settlement areas shall be based on densities and a mix of land uses which:

- a) *efficiently use land and resources;*

- b) *are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;*
- e) *support active transportation;*
- f) *are transit-supportive, where transit is planned, exists or may be developed; and*
- g) *are freight-supportive.*

Land use patterns within settlement areas shall also be based on a range of uses and opportunities for intensification and redevelopment in accordance with the criteria in policy 1.1.3.3, where this can be accommodated.

The proposed development has a range of proposed residential densities from low density, single detached dwellings to high density development proposed up to 300 units per hectare. Medium density uses are proposed up to 150 uph range, which can include, but are not limited to townhouses, stacked townhouses, and low to mid rise apartments. The proposed range of residential uses ensures residents affordable 'age-in-place' opportunities, and also diversifies the housing market within this area of the City. The development has a focus on providing opportunities for active transportation with extensive proposed pedestrian and cycling facilities, and with connections to existing path systems to the south and west through open space and parkland dedications. Public transit is available along Highbury, Oxford, and Dundas Street (south of the subject lands), and the future BRT is planned to service this area. The subject lands have frontage along Highbury Avenue North, and Oxford Street East, both of which are major arterial roadways within the City, with Highbury providing access to Highway 401 to the south, and Oxford providing access to the London International Airport to the east.

1.1.3.3 Planning authorities shall identify appropriate locations and promote opportunities for transit-supportive development, accommodating a significant supply and range of housing options through intensification and redevelopment where this can be accommodated taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs.

The subject lands have been identified as an appropriate and desirable location for transit-supportive infill/intensification through the LPHSP, and the Transit Village Place Type within the London Plan. The policies within the LPHSP Plan and London Plan provide for a wide range of land uses, and housing types which will help create a new community within the City and support

the existing and planned adjacent transit systems. The infrastructure systems serving the area are adequate, as are the public service facilities.

1.1.3.4 Appropriate development standards should be promoted which facilitate intensification, redevelopment and compact form, while avoiding or mitigating risks to public health and safety.

The proposed zoning for the lands will facilitate intensification and redevelopment in accordance with the LPHSP, and the London Plan. Standards will be refined through the ZBA process as it relates to the policy framework. It is anticipated the future development will be of compact form, efficiently utilizing available land, and servicing resources.

1.1.3.5 Planning authorities shall establish and implement minimum targets for intensification and redevelopment within built-up areas, based on local conditions. However, where provincial targets are established through provincial plans, the provincial target shall represent the minimum target for affected areas.

The London Plan has set a target of 45% of all new units within the City to be achieved through infill/intensification projects. While the subject lands are substantial, and include extensive open areas; they are within the City's built-up area already on municipal services. Therefore, the proposed development is considered as infill/intensification, and the created units will assist in achieving the target set by the London Plan.

1.1.3.6 New development taking place in designated growth areas should occur adjacent to the existing built-up area and should have a compact form, mix of uses and densities that allow for the efficient use of land, infrastructure and public service facilities.

As previously noted, the subject lands are surrounded by built-up areas, and the proposed development provides a wide range of land uses which will complement existing uses and facilities in the area so as to result in a new community within the City of London having almost all necessary services and facilities for its future residents.

1.3.1 Planning authorities shall promote economic development and competitiveness by:

- a) providing for an appropriate mix and range of employment, institutional, and broader mixed uses to meet long-term needs;*
- b) providing opportunities for a diversified economic base, including maintaining a range and choice of suitable sites for employment uses which support a wide range of economic activities and ancillary uses, and take into account the needs of existing and future businesses;*

- c) *facilitating the conditions for economic investment by identifying strategic sites for investment, monitoring the availability and suitability of employment sites, including market-ready sites, and seeking to address potential barriers to investment;*
- d) *encouraging compact, mixed-use development that incorporates compatible employment uses to support liveable and resilient communities, with consideration of housing policy 1.4; and*
- e) *ensuring the necessary infrastructure is provided to support current and projected needs.*

The proposed development incorporates mixed-use opportunities along its Highbury, and Oxford frontages, and along the main entrance road from Highbury to the central green space/heritage blocks (infirmary and chapel buildings). The intent is to allow for commercial, and office uses to establish within podiums and bottom floor locations along these corridors to provide a level of services based on their location. For example, the internal road would have uses that would cater to the residents of the immediate neighbourhood, while the uses along Highbury and Oxford would cater not only to residents of the immediate neighbourhood, but also to those in adjacent neighbourhoods, the traveling public, and the greater community. The size and location of employment uses will vary from block to block. It is anticipated that the proposed level of employment uses will be serviced by existing infrastructure; however, detailed analysis may be required at the Site Plan Approval stage.

1.4.1 To provide for an appropriate range and mix of housing options and densities required to meet projected requirements of current and future residents of the regional market area, planning authorities shall:

- a) *maintain at all times the ability to accommodate residential growth for a minimum of 15 years through residential intensification and redevelopment and, if necessary, lands which are designated and available for residential development; and*
- b) *maintain at all times where new development is to occur, land with servicing capacity sufficient to provide at least a three-year supply of residential units available through lands suitably zoned to facilitate residential intensification and redevelopment, and land in draft approved and registered plans.*

The former LPH lands provide a unique opportunity in the City of London for a large scale infill development. The scale of the proposed development will include a wide range of housing types from single detached dwellings, to high-rise apartment buildings. Additional opportunities for live-work units, and seniors housing is also contemplated as part of this development. The range of density anticipated will range from low (below 30 uph) up to 300 uph along the transit corridors of

Highbury Avenue North, and Oxford Street East. The existing servicing systems have been determined to have capacity to accommodate the proposed development, including the creation of a new SWM facility to service the proposed development and surrounding communities.

1.4.3 Planning authorities shall provide for an appropriate range and mix of housing options and densities to meet projected market-based and affordable housing needs of current and future residents of the regional market area by:

- a) establishing and implementing minimum targets for the provision of housing which is affordable to low and moderate income households and which aligns with applicable housing and homelessness plans. However, where planning is conducted by an upper-tier municipality, the upper-tier municipality in consultation with the lower-tier municipalities may identify a higher target(s) which shall represent the minimum target(s) for these lower-tier municipalities;*
- b) permitting and facilitating:
 - 1. all housing options required to meet the social, health, economic and well-being requirements of current and future residents, including special needs requirements and needs arising from demographic changes and employment opportunities; and*
 - 2. all types of residential intensification, including additional residential units, and redevelopment in accordance with policy 1.1.3.3;**
- c) directing the development of new housing towards locations where appropriate levels of infrastructure and public service facilities are or will be available to support current and projected needs;*
- d) promoting densities for new housing which efficiently use land, resources, infrastructure and public service facilities, and support the use of active transportation and transit in areas where it exists or is to be developed;*
- e) requiring transit-supportive development and prioritizing intensification, including potential air rights development, in proximity to transit, including corridors and stations; and*
- f) establishing development standards for residential intensification, redevelopment and new residential development which minimize the cost of housing and facilitate compact form, while maintaining appropriate levels of public health and safety.*

There are several opportunities throughout the proposed development, including the repurposing of existing buildings, to provide housing and facilities that are targeted towards low and moderate income households. With a wide range of housing types also being proposed, there are opportunities for a wide range of affordable housing types. The proposed densities will be able to fully utilize the existing infrastructure, transit systems (existing and proposed), parkland and open space area, and community facilities in the immediate area. The subject lands are designated as Transit Village in the London Plan, which is meant to be a focus of some of the highest intensity uses in the City in order to support the future Bus Rapid Transit (BRT) system, which will have a terminal point on the Fanshawe College Campus immediately east of the subject lands. The proposed land uses and densities will encourage a compact built-form oriented towards the transit corridors, and will emphasize the importance of conserving the cultural heritage features of the subject lands. The proposed development also supports active transportation as it places emphasis on pedestrian and cycling movements through the open space and parkland blocks, as well as in the ‘complete streets’ approach where conflicts with cultural heritage features can be avoided or mitigated.

1.5.1 Healthy, active communities should be promoted by:

- a) planning public streets, spaces and facilities to be safe, meet the needs of pedestrians, foster social interaction and facilitate active transportation and community connectivity;*
- b) planning and providing for a full range and equitable distribution of publicly-accessible built and natural settings for recreation, including facilities, parklands, public spaces, open space areas, trails and linkages, and, where practical, water-based resources;*

The proposed development will be planned for with the City of London ‘complete streets’ approach where possible. There are several areas that conflicts will arise between proposed ROWs and the cultural heritage features that are required to be preserved. The proposed road network and open space/parkland system will provide safe pedestrian and cycling connections throughout the areas within this proposed community. The proposed open space/parkland system will provide for pedestrian connections from Dundas Street in the south to Oxford Street East in the north. An east-west linear park is also proposed which will help preserve some of the cultural heritage features, and when coupled with the larger park block along the east side of the subject lands, the SWM facility, and other open space blocks, the subject lands have an extensive pedestrian connection system without relying exclusively on the public ROWs.

1.7.1 Long-term economic prosperity should be supported by:

- a) promoting opportunities for economic development and community investment-readiness;*
- b) encouraging residential uses to respond to dynamic market-based needs and provide necessary housing supply and range of housing options for a diverse workforce;*
- c) optimizing the long-term availability and use of land, resources, infrastructure and public service facilities;*
- e) encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including built heritage resources and cultural heritage landscapes;*

As previously noted, the proposed development will have a wide range of residential and commercial uses through the subject lands. A 'mainstreet' corridor is proposed from the main entrance along Highbury Ave North leading to the central open space system. This mainstreet is planned to provide mixed-use opportunities, and to provide a sense of place for residents, and workers alike. The main transit corridors bounding the subject lands to the west and north are anticipated to provide opportunities for commercial uses targeting local residents and the travelling public along the future BRT system. The range of proposed residential uses will address all areas of the housing supply market from single detached dwellings, to mid- and high-rise apartments, and opportunities for affordable housing and seniors housing.

2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

The subject lands contain several built, and thus cultural heritage features relating to the former psychiatric hospital use, and its facilities. These features are protected by an Ontario Heritage Trust Easement, and a heritage designating by-law by the City of London. These features will be conserved, and the buildings re-purposed where conflicts and impacts can be avoided or mitigated. It is anticipated that some of the mature trees will be impacted as site grading and construction standards will require some removals. Alternative design standards can be applied in certain areas to assist in preserving features where removal would be required if the standard road width were applied.

2.6.2 Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.

The subject lands have been highlighted as an area of potentially significant archaeological finds. The subject lands have been extensively investigated as part of the Ontario Heritage Trust process with several multi-stage investigations carried out in several areas throughout the property. These investigations have been reviewed by the Ministry and deemed satisfactory. It is not anticipated that additional archaeological investigations will be needed as development of the subject lands move forward.

Based on the above analysis the proposed development, and applicable Planning Act applications are consistent with the Provincial Policy Statement (2020).

4.0 THE LONDON PLAN

The subject lands are designated the subject lands as Transit Village and Green Space in the London Plan (2016 Official Plan). The policies below are the Vision and Role policies from the London Plan relating to the Transit Village Place Type.

806_ Our Transit Villages will be exceptionally designed, high-density mixed-use urban neighbourhoods connected by rapid transit to the Downtown and each other. They will be occupied by extensive retail and commercial services and will allow for substantial office spaces, resulting in complete communities. Adding to their interest and vitality, Transit Villages will offer entertainment and recreational services as well as public parkettes, plazas and sitting areas. All of this will be tied together with an exceptionally designed, pedestrian-oriented form of development that connects to the centrally located transit station.

The proposed development will complement the predominantly commercial and industrial westerly half of this Transit Village with a wide range of uses from high density/mixed use developments to low density residential, with additional commercial, community facilities and parkland within the subject lands. While the Transit Village Place Type is meant to be one of the highest intensity Place Types in the City it is intended that height and intensity will transition between transit stations and surrounding neighbourhoods. The large area of the subject lands allows this to be accomplished with opportunities for areas of low density residential, and large parkland/open space areas, not typically achievable within the Transit Village Place Type. In addition to the parkland and open space blocks, through the SPA process additional private-public spaces can be incorporated into the development plans of the individual blocks. Thus the subject lands will this a unique Transit Village ('TV') within the City.

807_ Second only to the Downtown in terms of the mix of uses and intensity of development that is permitted, Transit Villages are major mixed-use destinations with centrally located rapid transit stations. These stations will form focal points to the Transit

Village neighbourhood. Transit Villages are connected by rapid transit corridors to the Downtown and allow opportunities for access to this rapid transit from all directions.

The LPH lands are bounded by the proposed BRT route on two sides (Highbury Ave North, and Oxford St. East). It is anticipated that transit stations will be located along these frontages and incorporated into the site design of the adjacent blocks. The transit stations will be focal points of the community, and the BRT system will be readily accessible to the residents of this community and the surrounding areas.

808_ They are intended to support the rapid transit system, by providing a higher density of people living, working, and shopping in close proximity to high-quality transit service. Through pedestrian oriented and cycling-supported development and design, Transit Villages support a healthy lifestyle and encourage the use of the City's transit system to reduce overall traffic congestion within the city.

The corridors along the proposed BRT system will have increased density permission to implement the desired building heights of the London Plan policies. This increase in density will ensure a transit supportive population is placed along the corridors, with supporting secondary uses for the residents and traveling public. The proposed development will also follow the City's 'Complete Street' development approach to ensure pedestrian connectivity to the transit corridors and stations, and provide opportunities for alternative active modes of transportation.

809_ The Transit Villages identified in this Plan are located in existing built-up areas. However, all of these locations have opportunities for significant infill, redevelopment, and an overall more efficient use of the land. A more compact, efficient built form is essential to support our transit system and create an environment that places the pedestrian and transit user first.

Again, the subject lands are a unique part of a TV within the City as they are mostly vacant and are a significant opportunity for re-development and infill compared to the other TVs within the City which are primarily fully developed with only limited opportunities for re-development or intensification. The relatively 'clean-slate' of the subject lands can provide for a compact, and efficient built form with emphasis on alternative modes of transportation, and development that is transit oriented and pedestrian oriented. The LPHSP policies already give priority to pedestrian movement. It must be noted that the existing built, and cultural heritage landscape features will provide a constraint in some aspects of compact development, as features will need to be retained/protected, and viewsapes preserved.

810_ We will realize our vision for Transit Villages by implementing the following in all the planning we do and the public works we undertake:

1. *Plan and budget for rapid transit services, and locate stations at strategic central locations within Transit Village areas.*
2. *Plan for intense, mixed-use development around transit stations within Transit Villages. This may involve significant restructuring and redevelopment of existing, often single use commercial complexes at these locations.*
3. *Transition height and intensity between transit stations and surrounding neighbourhoods.*
4. *Require transit-oriented development forms.*
5. *Plan for, and invest in, the civic infrastructure required to support intense Transit Villages.*
6. *Plan for high-quality urban park spaces, plazas, and seating areas.*
7. *Plan for retail and service commercial uses, plaza spaces and attractive outdoor seating areas, accessible to the public, located adjacent to transit stations.*
8. *Support the provision of a choice of dwelling types with varying locations, size, affordability, tenure, design, and accessibility, so that a broad range of housing requirements are satisfied, including those for families.*
9. *Secondary plans may be prepared for a Transit Village to guide redevelopment, establish street and pathway networks, identify park spaces, establish more detailed policies for land use, intensity and built form, and establish transitional and interface policies.*
10. *Where a secondary plan does not exist, a master plan guideline document may be prepared to establish a conceptual road network or a conceptual block plan that will guide the redevelopment of the larger Transit Village area.*
11. *Design guidelines may be established for Transit Villages.*

The proposed development, and the amended LPHSP are consistent with the above noted policies. The proposed development directs the highest, most intense uses to the transit corridors where the transit stations will be located and scales back on intensity and building heights as development moves towards the built heritage features and adjacent low density uses to the east. The proposed development is an important component of a complete Transit Village community with wide range of residential uses, commercial uses, parkland/open spaces, and community facilities. There are opportunities for affordable housing projects, and seniors housing providing for aging in place for residents of the surrounding neighbourhoods. The LPHSP also contains Urban Design policies relating to the development of the subject lands.

Based on the above the proposed development is consistent with the London Plan Transit Village policies. The amended LPHSP aligns with the London Plan policies, but ensures that the vision and objectives of the LPHSP remain intact in order to create a unique TV within the City of London.

More specific land use permissions, and building heights will be further refined through the Zoning By-law Amendment process, which is addressed in Section 6.0 of this report.

5.0 SECONDARY PLAN AMENDMENT

The LPHSP has been recently amended as part of the initial planning process for the proposed development. Given the amount of time since the LPHSP was initial prepared and approved, significant changes have occurred in the planning industry, including the introduction of the London Plan (2016 Official Plan), and BRT system. The former LPHSP referenced policies from the former OP, and contained density permission that were no longer appropriate, and the LPHSP had to be revisited in order to made consistent with the London Plan, and planned function for the subject lands. Furthermore, the Heritage Conservation Easement came into effect after the LPHSP was created, and the amending process provided an opportunity to better align policies between those two documents.

The proposed applications are consistent with the amended LPHSP as they were prepared concurrently through the IPR process with the amended documents. Some of the items addressed in the amended LPHSP include, but are not limited to:

- Removal of Institutional Land Use and Academic Policies
- Revisions to the Road Network and Driveways
- Density and Building Heights
- Residential Areas – Low Density Residential
- Urban Design
- Heritage

6.0 ZONING BY-LAW

The subject lands are currently zoned “Regional Facility (RF)” in the City of London Zoning By-law. This zone was applied to recognize the former LPH institutional use on the subject lands. The proposed development will require a Zoning By-law amendment to bring the subject lands under new zoning consistent with the proposed land uses. The proposed zoning will also implement the policies of the Transit Village Place Type as per the London Plan. The proposed zoning will permit such uses such as medium density residential, mixed commercial/residential, high density residential, institutional, and open space/parkland. The proposed zones included in this Plan of Subdivision include:

- Residential (R5-7, R6-3, R7, R8-4, & R9-7)
- Business District Commercial (BDC)

- Neighbourhood Shopping Area (NSA3)
- Community Facility (CF2/CF3)
- Neighbourhood Facility (NF1)
- Open Space (OS1)
- Heritage (HER)

In addition to the above noted zones, some of the blocks have separate Density 'D', and Height 'H' regulations applied to implement the planned densities and building heights as set out in the LPHSP. The proposed zoning, including density and heights are meant to maximize the development potential of the subject lands as per the London Plan and LPHSP documents while remaining consistent with the goals and objectives of preserving the built and cultural heritage landscape features of the subject lands. The proposed zoning for the existing heritage buildings is intended to provide a wide range of permitted uses to encourage a successful re-purposing of each of the buildings.

It is recognized that the proposed zoning framework for the subject lands, as attached to the application, will require special provisions in order to implement the results of the OPA policy review process.

At the site design stage, special provisions may be needed; and those will be addressed through a Minor Variance application or separate Zoning By-law Amendment application at that time. The proposed zoning may be further refined through the review process with City staff. A proposed Zoning Map of the subject lands has been provided in the application submission package for review and comment.

7.0 EXISTING CONDITIONS

The subject site is located in the eastern portion of the City of London and is bounded by Oxford Street East to the north, existing residential and industrial properties to the east, existing industrial properties and a Canadian Pacific (CP) Rail corridor to the south and Highbury Avenue North to the west. The site is currently developed as the former London Psychiatric Hospital complex but is not currently in operation. The site also includes various private driveways, heritage buildings, sport fields and open spaces.

The site has significant topographic variation with elevations ranging from approximately 269.0 m in the northern portion of the site near Oxford Street East to 259.5 m at the south end of the site near the CP Rail corridor.

Adjacent land uses are as follows:

- North – Oxford Street East, existing secondary school (John Paul II Catholic Secondary School), existing single family residential dwellings (MN#1368-1390 Oxford Street East, MN# 100-134 Roehampton Avenue);
- East – existing single family residential dwellings (MN#1499-1451 Oxford Street, MN#645-645 Ayreswood Avenue, MN#1500-1501 Howland Avenue, MN#1496-1501 Mardell Place, MN#1502-1503 Rushland Avenue), existing industrial development (MN#535-571 Commercial Crescent, MN#1495 Spanner Street), Howland Avenue, Mardell Place, Rushland Avenue, Spanner Street;
- South – existing CP Rail corridor, former industrial property (MN#840 Highbury Avenue North); and,
- West – Highbury Avenue North, Existing Industrial and Commercial Properties (MN#1299 Oxford Street, MN#847-955 Highbury Avenue North).

7.1 ENVIRONMENTAL CONDITIONS

There are no significant environmental constraints that would limit or restrict development on the subject lands. The Province conducted a series of Environmental Site Assessments (Phase I & II) prior to putting the subject lands to market. The Phase II ESA documented soil and groundwater conditions. The Phase II ESA did not suggest the existing conditions would present as an issue to future development. Through the IPR process the UTRCA has confirmed that the subject lands are not impacted by their regulated area, and that they have no concerns or comments regarding the proposed development.

7.2 ARCHAEOLOGICAL

Prior to the subject lands being tendered by the Province, Stage 1 & 2 Archaeological Assessments were conducted on the lands. While small pockets of archaeological finds were located, none met the criteria needed for a Stage 3 assessment. That being said, there was some reports that a burial ground associated with the former hospital use may still be located on the subject lands (graves were relocated to a nearby cemetery). Ground penetrating radar studies were conducted on the lands, and no evidence of burials were located. No further investigation is anticipated for the subject lands.

7.3 CULTURAL HERITAGE RESOURCES

Portions of the lands are subject to a Heritage Conservation Easement. Any demolition, construction, reconstruction, renovation, restoration, alteration, remodeling of the buildings or landscape features within the easement will require the approval of the Ontario Heritage Trust.

Discussions have begun with the Ontario Heritage Trust regarding the development of the lands, including potential changes to the easement boundary and the approval process for development within the easement.

The entire property is subject to the Ontario Heritage Act, as it is designated under Part IV.

The municipal heritage designating By-law (By-law No. L.S.P.-3321-208) for the site, dated November, 9, 2000 is proposed to be amended to reflect the Statement of Cultural Heritage Value identified in the Ontario Heritage Trust easement agreement. Because the province completed extensive research for the property, it would be beneficial to align both documents to establish a clear framework upon which future decisions can be made.

Currently the entire site is subject to the municipal By-law, and any development and/or site alteration is subject to approvals under the Ontario Heritage Act and the Ontario Planning Act. Heritage Alteration Permits will be required, along with other heritage studies which may include, Heritage Impact Assessments. A Strategic Conservation Plan has been prepared to guide overall conservation of the site, and set the direction for future design and reporting.

Further discussion is required to determine how the management of the cultural heritage of the site will be addressed. A Heritage Impact Assessment has been prepared in support of the proposed applications; however, it is anticipated that more detailed impact assessments will be required as the individual blocks come forward for development through the Site Plan Approval stage.

8.0 SUBDIVISION DESIGN

The proposed development is intended to be a residential area which acts as a transition zone between the industrial areas west of Highbury Avenue North integrated with an existing low-density residential community to the east.

The proposed development is to be situated within walking distance of Fanshawe College and local sport fields at John Paul II Catholic Secondary School, and will include a number of recreation spaces within the heritage easements and open space blocks.

The proposed subdivision plan consists of 30 single family lots, ten (10) medium density blocks including two (2) that will include mixed commercial uses, eight (8) high density/mixed use blocks, three (3) parkland/ open space blocks, one (1) institutional block, one (1) Stormwater Management block, and six (6) heritage blocks ranging in size from 0.54 to 2.28 ha. Densities within the subdivision will transition from the highest densities along the arterial roads (Highbury Avenue North and Oxford Street East) and dropping from west to east across the site.

8.1 EXISTING SERVICES – OVERVIEW

Sanitary: Existing infrastructure consists of a 525 mm diameter private gravity sanitary sewer located at the south end of the subject site within Open Space / Heritage Block 54 that conveys sanitary drainage south across the CP Rail corridor and the adjacent Humane Society project site towards an existing 600 mm municipal sanitary sewer on Dundas Street East. There is also an existing 450 mm diameter municipal sanitary sewer located on the west (far) side of Highbury Avenue North. Based on City of London mapping, it is noted these sewers converge at the intersection of Highbury Avenue North and Dundas Street East and ultimately route to the Vauxhall Pollution Control Plant (PCP) via a 750 mm diameter municipal trunk sanitary sewer.

The subject site is currently serviced by a variety of private on-site sanitary sewers that will be removed as a result of the proposed development. While the majority of the site outlets to the previously mentioned 525 mm diameter private sanitary sewer, some studies have indicated a portion of the site may outlet to a second 250 mm private sanitary sewer outlet located at the southwest corner of the site. This sewer is believed to connect to the municipal sewer on Highbury Avenue after crossing other property, and is not likely to be viable as a sewer outlet to these lands. In fact, considering the amount of disturbance to the adjacent Department of National Defence (DND) lands southwest of the site as part of the environmental remediation being completed there (as of the date of this report), it is unlikely this southwest sewer remains active. As Highbury Ave. flanks the west limit of the development, it has been suggested in previous engineering analysis of the campus that the west blocks of this development could be serviced independently into Highbury Ave. Discussion is ongoing with the City to provide service connections for these phase 1 blocks as part of the future reconstruction of Highbury Ave. for the implementation of the Bus Rapid Transit (BRT) GMIS project.

A sanitary flow monitoring program was undertaken (June to October 2020) in the 525mm trunk sewer outlet and select sewer video inspections were commissioned in December 2020 in order to inform a condition assessment. The hydrograph data has been processed with reference to rainfall events at a nearby City rain gauge (ref. **Figure 13**). From a review of campus sewer videos, a number of local areas of concern were identified which likely contribute to wet weather flows observed from this campus. On a unit areal basis, the scale of I/I flows observed in the campus sanitary network over this period appear consistent with City design basis values. The 525mm trunk sewer condition below the CP railway and treed allee is not considered suitable for continued use as a long term solution (Block 54). Based upon available profile information to date,

and notwithstanding some local blockages and profile irregularities, the uniform flow capacity of the existing 525mm trunk sewer is estimated to be on the order of 155 L/s.

Water: Existing potable water infrastructure consists of a 400 mm diameter municipal watermain on the west (far) side of Highbury Avenue North, a 300 mm diameter municipal watermain on the south (near) side of Oxford Street East, an existing 150 mm diameter watermain stub on the north side of Howland Avenue and an existing 150 mm diameter municipal watermain stub on the south side of Rushland Avenue.

The subject site was formerly serviced by an extensive private watermain network that was connected to the existing municipal watermain on Highbury Avenue North and included premise isolation. This old plumbing system has now been shut down by City forces due to unauthorized tampering / damage to the backflow equipment. In consideration for the new ROW alignments, grade changes and infrastructure age, none of the onsite watermain will be maintained in service for the new subdivision development.

Storm: Existing infrastructure consists of a 375-600 mm municipal storm sewer system located on the east (near) side of Highbury Avenue North and a 375-600 mm diameter municipal storm sewer on Oxford Street East. There is also an existing storm sewer located at the southeast corner of the property (SWM block 59) outletting east towards Potterburg Creek. In recent discussions with the City BRT team, upgrades to the Highbury Ave storm sewer system are anticipated concurrent with ROW surfacing improvements and utility relocations.

Existing drainage on the site is split between two tributary areas. The west side of the site is tributary to the South Thames River via the aforementioned Highbury Avenue municipal storm sewer. The central and east parts of the campus are tributary to Pottersburg creek via the private storm sewer located at the southeast corner of the site.

The review of December 2020 campus sewer videos has identified local areas of concern (pipe structure and joint integrity) in some areas.

Transportation: The primary road connections to the subdivision will be from Highbury Avenue North and Oxford Street East with minor connections to both Howland Avenue and Rushland Avenue. Provision for a future extension of Spanner St. across a railway spur line can be facilitated in future but is not proposed under the current draft plan. This approach is supported by Traffic Impact Study recommendations.

9.0 SANITARY SERVICING

9.1 PROPOSED SANITARY SEWERSHED

The existing and proposed municipal sanitary sewershed in the vicinity of the subject site is identified in **Figure 8**.

The proposed site has a total area of approximately 58.1 ha which will contribute to existing downstream infrastructure. This parcel of land is surrounded by previously developed residential and industrial properties and will represent the furthest upstream reach of the proposed sanitary sewer system (Vauxhall sewershed). As such, the need for capacity allowance for additional upstream sanitary flow through the proposed system is not anticipated.

The Developer is anticipating densities in excess of those outlined in the City of London’s Design Specifications and Requirements Manual (DSRM, last updated ~~August, 2019~~ *March, 2022*). Currently, the Developer is seeking densities of ~~600~~ 250-365 units/ha for high density areas and ~~420~~ 150 units/ha for medium density areas. The total population and sanitary flows for the proposed development have been estimated and are summarized below in Table 1. Refer to the design sheet provided in Appendix 2.

Table 1 – Summary of Assumed Design Population

Development Area (ha)	Estimated Population	Q _{people} (L/s)	Q _{infiltration} (L/s)	Q _{total} (L/s)
58.1	13,111	109.0	5.8	114.8

9.2 SERVICING STRATEGY

It is currently anticipated the sanitary drainage from the proposed development will be split with Phase 1 to be serviced directly from the existing 450mm diameter municipal sanitary sewer on Highbury Avenue North and the remainder of the property to be serviced from a new municipal sanitary sewer to be constructed under the adjacent CP rail line and across external lands towards Dundas Street. While the existing 525mm diameter private sanitary sewer crossing the CP railway towards Dundas Street was initially considered to be utilized to service the proposed development, recent CCTV camera inspections found the sewer to be in poor condition and not suitable to be utilized as a future municipal trunk (discussed in further detail in Section 8.3). Both the Highbury and Dundas street outlet sanitary sewers converge at the intersection of those two roads before ultimately draining towards the Vauxhall PCP. No external flows will be routed through this development.

Based on preliminary design, it is anticipated that this development will consist of a combination of cut and fill conditions. It is anticipated that final construction grades will generally fall from north to south across the site, mimicking the existing site topography and creating favorable conditions for sanitary servicing. The subdivision is currently being presented as a multiple phase development (ref Section 14.1).

9.3 SANITARY OUTLETS

There are two (2) sanitary outlets potentially available for use with this proposed development, both of which ultimately discharge at the same wastewater treatment plant. The subject site is not indicated on any area plans/design sheets as yet provided by the City's Geomatics group. Sewage leaving the development, will flow towards the intersection of Highbury Avenue North and Dundas Street East and continue south and west terminating at the Vauxhall PCP.

As part of a study being conducted for Infrastructure Ontario in 2015, Development Engineering (London) Limited (DevEng) discussed the prospective development of the subject site with the City's Wastewater and Drainage Engineering (WADE) group. At the time, WADE indicated the Vauxhall PCP had capacity issues during wet weather flows. The City also indicated they were looking into ways to mitigate the wet weather capacity constraints and that they believed Vauxhall should have adequate capacity for the proposed development once wet weather flow issues were resolved. The City went on to indicate they were undertaking modeling of the Vauxhall tributary area which was anticipated to be completed in February 2015. Further discussions with the City are anticipated beyond June 2020 inquiries to verify if this modeling has been completed and what, if anything, has been done to mitigate the wet weather flow concerns in the tributary area in support of the proposed development. It is also understood that an existing upstream municipal sanitary pump station located on Paardeberg Crescent (northwest of the intersection of Highbury Avenue N. and Oxford Street E.) currently outletting into the Highbury Avenue municipal sanitary sewer will soon be redirected to the Clemens St. sewer under the City's infrastructure renewal program. This will have the added benefit of freeing up capacity (approximately 21 L/s per the ELSS Master Plan, rev. Sept. 2018, CH2M Hill) in the Highbury Avenue municipal sanitary sewer flanking the LPH campus.

As of the date of this report, the Developer has completed both a four (4) month flow monitoring program (June-October, 2020) as well as a CCTV camera inspection of the existing 525 mm diameter private concrete sanitary sewer under the allee which was initially intended to be re-utilized as the sanitary outlet for much of this development. The results of the flow monitoring program, which were circulated to the City's WADE group on November 19, 2020 indicated an

average flow rate of 2.33 L/s with elevated flow levels approximately correlating with storm events as logged by the City's rain gauge at the AJ Tyler Operations Centre. Given the site had only light occupancy during the flow monitoring period, the fact that there was consistent flow through the pipe for the entire monitoring period indicates that upstream I&I related to this campus is currently an issue that can be addressed through the proposed development by replacement of damaged sewers. This hydrograph information is appended in **Figure 13**.

The results of a targeted December 2020 CCTV camera inspection indicated while the concrete structure of the existing 525mm diameter sewer appears generally in good condition, there are multiple locations at pipe joints where improper gasket installation as well as possible differential settlement over time has caused infiltration of water and ingress of tree root systems which will impact capacity. Based on the results of this inspection, it is not anticipated the existing 525mm diameter sewer will be re-utilized to service Phases 2-3 of the proposed subdivision, but rather a new sewer will be constructed.

It is assumed that the 250 mm diameter sewer at the southwest corner of the property has previously been capped/abandoned. The pipe in question crosses the adjacent DND lands which have been substantially excavated as part of ongoing environmental remediation of the property by the Federal Government. No further reuse of this old sewer is contemplated.

10.0 WATER SERVICING

10.1 WATER SERVICING STRATEGY

The entire development will be serviced by connecting to the existing 400 mm and 300 mm diameter municipal watermains located on Highbury Avenue North and Oxford Street East respectively, as well as connections to the existing 150 mm municipal watermains on Howland Avenue and Rushland Avenue to create a closed loop system with multiple levels of redundancy.

There are no external lands requiring servicing through this development since all perimeter properties have previously been developed.

In response to an Official Plan and Zoning Bylaw Amendment application filed by the developer, the City of London provided comments dated October 4, 2021 identifying the need for a scoped review of the City's water distribution network. The purpose of this study was to identify what, if any, external upgrades would be required in order to support the proposed development. The investigation was completed by C3 Water and summarized in a report entitled "Hydraulic Analysis for the LPH Development", dated February 18, 2022, which was subsequently reviewed and approved by the City of London. The report investigated a variety of densities for the proposed

development ranging from 5,000 to 14,000 people. The investigation found the existing 300mm diameter municipal watermain on Oxford Street experiences significant head losses under existing conditions due to demands as well as the pipe's age and the losses would reach a critical point once the LPH Subdivision population reached 9,000. The report recommended the watermain be upgraded from 300mm to 400mm diameter once this critical population is reached; this is currently anticipated to occur following the completion of Phase 2 of the Subdivision.

10.2 PROJECTED WATER DEMANDS

No special design considerations are anticipated for the successful completion of this development other than phasing logistics. The existing and proposed water network in proximity to the proposed development is identified on **Figure 9**.

Based on the water design flows and peaking factors as outlined in the City of London's DSRM, the projected water demands for the subject site are approximated as follows:

- Average Day Domestic: 38.7 L/s;
- Max Day Domestic: 135.5 L/s;
- Peak Hour Domestic: 301.9 L/s;
- Fire Flow: Ranging from 76-150 L/s.

Detailed hydraulic modelling has not yet been undertaken for the proposed development but will be completed during the Design Studies phase. It is understood that water analysis conducted for the Secondary Plan included water connections at Dundas Street and Spanner Street in addition to those described in Section 9.1. While these connections would provide additional redundancy and looping to the development, it is not anticipated they will be required to maintain pressures and turnover to the subdivision in accordance with the City of London Design Specifications & Requirements Manual.

In accordance with the City of London's IPR comments, any future redevelopment of the DND lands flanking the southwest corner of the property is to be serviced for water from proposed municipal watermains within this subdivision. As such, sizing of the subdivision watermains are to be completed with this future development in mind

11.0 STORMWATER MANAGEMENT

11.1 STORMWATER ASSUMPTIONS

The proposed storm servicing strategy across the subject lands is shown in **Figure 7**.

Upon review of existing topography of the site and surrounding area, it appears very limited external storm drainage will enter the site from adjacent properties or ROWs as the north limit represents a drainage divide. The current hospital campus is known to support an extensive, aged private infrastructure network that will need to be decommissioned and removed to service this subdivision.

Implementation of onsite Permanent Private Stormwater Management measures (PPS) within the proposed development blocks are anticipated to include various controls (including LIDs) where feasible to comply with the 2011 SWM servicing Class EA (Stantec) and current stormwater management best management practices. It should be recognized that where such blocks require underground parking structures, implementation of lot level storm recharge measures are typically not feasible, regardless of native soil type. Per the geotechnical investigation for this subdivision, consideration has been given to potential for recharge as a water balance initiative (possibly in public ROWs and blocks where feasible), but subsoils are not generally conducive to vertical recharge and there are some areas of campus where APEC (Areas of Potential Environmental Concern) lateral mobilization risks are present (previous ESAs). As discussed with City SWED staff, consideration can be given to alternative LID measures in public ROWs such as enhanced bioswales, thickened topsoil, rain gardens with underdrains to storm sewers, and tree pits. During detailed design stage, professional QP staff on the project team will help inform the potential siting of such measures to avoid upgradient areas where mobilization risks could present over time.

The Oxford St. storm sewer system (north of site) directs runoff westerly toward Highbury Ave and then northerly. From historic City record plans, it does not appear the Oxford St. sewer included any allowance for drainage of the subject property. Similarly, beyond the eastern boundary of the campus, several local streets convey storm drainage easterly (away from the site). Along the west boundary of the lands, the Highbury Ave. ROW includes a storm sewer system that directs runoff southerly toward the CP railway and westerly toward the Highbury storm relief trunk sewer. In the vicinity of the existing railway spur line near SWM block 59, it is acknowledged there will need to be a spill containment channel designed on north side, but that would form part of the City GMIS pond design scope.

Pottersburg Creek is located south of the CP Railway corridor and several old storm drains of unconfirmed condition or capacity are understood to provide drainage outlet to most of the LPH campus in the southeast corner of the site. It is doubtful that these old drains could be retained for continued service to these lands, and we understand the City has some record of past investigations questioning their longevity. A targeted December 2020 sewer video program was

initiated to assess select storm sewer condition across portions of the campus where interim service to a repurposed Infirmary building 'Q' may be feasible prior to formal servicing of the ultimate ROWs through the central part of campus (phase 2 of development). From a review of sewer video reports, there were some identified sections of storm sewer pipe noted in poor condition.

11.2 PROPOSED STRATEGY FOR STORMWATER

All minor flow drainage from the development will be collected within local storm sewers and conveyed to either the Highbury Ave storm sewer system (flanking west blocks) or a new regional SWMF (City, GMIS) located in a new SWM block 59 in the southeast corner of the development. Major system drainage will also follow the proposed road network and be conveyed to the SWMF where feasible. Along the west flank of the site, development blocks will need to direct their major flows toward the Highbury Ave ROW due to topographic conditions, as identified in the previous SWM EA. The East Leg BRT contract includes removal of the aged and undersized Highbury Ave. storm sewer, and construction of a new storm sewer to provide sufficient conveyance capacity for the new BRT corridor and the 5-year peak runoff from the LPH campus existing conditions in accordance with the 2011 SWM EA modeling. Flow allocations for the Highbury Ave. blocks have been provided by the City's BRT consultant; however, exact stub locations need to be coordinated. At the south end of the site where the treed allee is located, some strategic deflection berming or flood wall features are anticipated to facilitate orderly routing of flood flows southeast toward the new SWMF; coordination with the landscape architecture team will be required to facilitate a design respectful of site constraints and the unique historic character of this campus.

The GMIS LPH regional SWMF has been planned for a catchment of approximately 61 ha and it is anticipated the control volume will need to be sufficient to mitigate flooding and erosion impacts to the adjacent CP Railway corridor after development. From the new SWMF, flows will be controlled and directed below the CP railway toward Pottersburg Creek. Such SWMF outlet will be constructed under the City's GMIS program as this may require sewer easements across other lands.

Similarly, it is anticipated the trunk inlet storm sewer and major overland flow route to the GMIS pond would need to extend in a municipal service corridor (Street H per proposed Draft Plan) along the east side of the treed allee (near where an existing sanitary sewer runs) to be stubbed near the south roundabout feature. As such, Open Space Block 54 might warrant further block definition for the required public infrastructure and maintenance access route / OLF spillway

adjacent Street H. The design of the LPH regional SWMF and inlet sewer / overland flow route is anticipated to fall under the scope of the City GMIS program. At this stage of the project, construction access to the SWM block is anticipated to be negotiated with the Developer making use of existing campus roads wherever possible and avoiding the need to cross the railway and external lands with all construction traffic.

Overland flow routing across the campus is complicated by a heritage easement which imposes elevated concern for grade changes where significant trees and landscape features would be impacted. Generally, the draft plan ROW network should be designed with a sense of practicality and modest consideration for grade change relative to key campus features, but there are several areas where significant grade change would be required to conform to the city's transportation design standards and create an orderly roadway network. In the southwest corner of campus, the proposed Street A ring road (west leg) would require on the order of 1.5m of fill in order to convey overland flows around the bend in the road toward the SWM block, and reduce overland flooding risk onto adjacent properties (i.e., DND lands).

The Street A/B (west) intersection elevation is governed by storm sewer profile, with minimum slopes required for stormwater flow conveyance and adequate pipe cover in a fill condition at the southwest corner of campus. This intersection elevation is much higher than the connecting Highbury Avenue roadway elevation and as such, any attempt to incorporate a high-point along a very short leg of Street B (west) from its connection with Highbury Ave. to contain major overland flow within the subdivision would result in a failure to meet City of London transportation requirements for vertical curves. The pending BRT widening of Highbury will only make this vertical curve condition worse. Accordingly, the preferred solution to avoid major overland flooding of Highbury via Street B west is to:

Abide by City of London transportation requirements and slope Street B (the portion west of Street A) down toward Highbury Avenue;

Provide sufficient inlet capacity along Street A upstream of the Street A/B intersection, such that major overland flow can be surcharged in the storm sewer system to prevent it from flowing west along Street B to Highbury Avenue. This requires filling of the southwest area of campus on Street A in order to achieve pipe cover;

Capture Street B's local drainage with storm inlets connected to the Highbury Avenue municipal storm sewer system to reduce hydraulic grade line interference and bypass/backup flooding from the LPH subdivision, as already coordinated with the City's BRT consultant.

A campus tree inventory and assessment has been completed by RKLA to inform the nature of various communities/stands and their criticality as a feature. The potential application of ROW LID features remains subject to feasibility analysis where hydrogeological collaboration and heritage easement impact review can be deduced.

The proposed campus grading and overland flow routing strategy is shown in **Figure 10**. Preliminary plan and profiles of the internal ROW network are shown on **Figures 12A to 12R** and these show schematically where existing trees in the vicinity of the ROWs would be impacted by construction (red circles).

12.0 TRANSPORTATION

12.1 TRANSPORTATION IMPACT STUDY

The proposed development is bordered on two (2) sides by existing arterial roads (Oxford Street East to the north and Highbury Avenue North to the west). Lands to the south are currently zoned as regional facility or community facilities, with existing light industrial and residential properties to the east. A Transportation Impact Study (TIS) compiled by Paradigm Transportation Solutions Inc. (2022) indicated that the intersections in proximity to the proposed development are generally operating with acceptable levels of service except for the intersections of Highbury Avenue North and Dundas Street (multiple approaches), Oxford Street East and First Street (northbound left turn approach) and Dundas Street and Hale Street (northbound left turn approach) under existing conditions. The report identified multiple turn lane upgrades being required at the various intersections to existing arterial roads to support the proposed development. These included storage length increases to 55m for the westbound turn lane to Street E from Oxford Street East, 95m for the southbound left turn lane and 15m for the northbound right turn lane to Rushland Avenue from Highbury Avenue North, .55m for the northbound left turn lane to Dundas Street from Hale Street. Finally, a left turn advance phase was recommended for the eastbound left turn lane to First Street from Dundas Street. Per the City of London's current Official Plan (the 'London Plan'), Oxford Street East and Highbury Ave North are classified as Rapid Transit Boulevards. It is anticipated that any works required to upgrade Highbury Avenue North and Oxford Street East for the proposed East Link Bus Rapid Transit program will be undertaken by the City over the coming years. The DevEng team has been in communication with the East Leg BRT Team and its consultant (Dillon) to discuss a number of overlap & logistics issues, including turn lane requirements in accordance with the subdivision TIS.

Per discussions with the City of London, it is anticipated that a new signalized intersections is are to be constructed to align with the existing Oxford Street E entrance to John Paul II Secondary

School at Street 'GE' as well as the existing Industrial Park Entrance for MN#951-959 Highbury Ave. at Rushland Ave. An existing signalized intersection is located on Highbury Ave at the entrance to MN#847 Highbury Ave Industrial Park. It is anticipated that this intersection will remain (albeit with road improvements including a transit stop) at the proposed connection to Street 'B'. It is anticipated that all other proposed intersections to existing arterial roads Street 'F' at Oxford St. E) will be restricted to right turn movements only.

12.2 INTERNAL ROAD NETWORK

Per the London Plan, it is anticipated that Street "D", the portions of Street "B" connecting Street "D" to Street 'A' (east and west leg) as well as the portions of Howland Avenue and Rushland Avenue from Street 'A' to the existing residential development to the east will be designated as neighborhood streets (20m right-of-way), as only local traffic will be serviced by these roads, with the remaining roads designated as neighborhood connectors (23m right-of-way).

It is anticipated that the south "roundabout" geometry (oblong shape) may will need to be maintained to meet heritage requirements. Given the non-standard roundabout shape, it is anticipated that this will be constructed as a splitter island, or public square feature, to maintain straight through traffic, while preserving the heritage geometry. A concept of this splitter island feature is shown on **Figure 10A**.

Figures 12A to 12R provide preliminary profiles and ROW geometrics to illustrate where deviations from City design standards may be appropriate to suit the constraints imposed by the heritage easement and secondary plan concept.

Additionally, as the campus heritage easements were not delineated to be right of ways, some curve geometry may will need to differ from current City of London standards. Following is a list of each of the proposed Draft Plan roads and a brief description of how they may be impacted by the Heritage and Secondary Plan Requirements, including non-standard modifications to the cross sections where required:

- Howland Avenue: Standard Neighborhood Street east of Street 'A', standard Neighborhood Connector west of Street 'A'. Includes Bike Lanes on Neighborhood Connector portion of road per Secondary Plan;
- Rushland Avenue: Standard Neighborhood Street East of Street 'A', standard Neighborhood Connector west of Street 'A'. Includes Bike Lanes throughout (share the road Sharrows on Neighborhood Street portion);

- Street 'A': Standard Neighborhood Connector throughout. Reduced minimum road curve radii to align Street with existing heritage pathways on each side of "roundabout". Traffic calming measures to be introduced to offset reduced radii. "Roundabout" itself to be non-standard as described earlier. Care shall be taken to minimize disruption to adjacent trees on existing heritage pathways on each side of "roundabout" although it is anticipated the trees adjacent to the southwest pathway will need to be removed/replaced due to the grade change required to maintain overland flows towards the subdivision SWMF;
- Street 'B': Standard Neighborhood Connector west of Street 'A', standard Neighborhood Street between east and west legs of Street 'A'. Includes Bike Lanes throughout (share the road Sharrows on Neighborhood Street portion);
- Street 'C': Standard Neighborhood Connector with Bike Lanes throughout. The median proposed in the secondary plan is to be deleted as including it would cause the paved surface to extend past the heritage trees on either side of Street 'C'. The widened right-of-way is to be maintained in order to push the City sidewalks (and shallow utilities) behind the trees;
- Street 'D': Standard Neighborhood Street with parallel parking layby around central green;
- Street 'E': Standard Neighborhood Connector with Bike Lanes;
- Street 'F': Standard Neighborhood Connector with Bike Lanes; and,
- Street 'G': Standard Neighborhood Connector with Bike Lanes.

The above noted modifications from standard City of London roadways were discussed in a meeting with the City's Transportation division on September 23, 2021. The feedback from that meeting was to include direction on the above as part of a scoped TIS study to be prepared by Paradigm.

Traffic calming measures will be provided in accordance with the requirements of the City of London Transportation Division. In particular, raised concrete intersections have been called out at the intersections of Howland Ave/Street 'E', Howland Ave/Street 'F', Howland Ave/Rushland Ave (west leg) and Street 'A'/Rushland Ave (east leg). The proposed raised intersection at the intersection of Street 'B' and Street 'A' may not be feasible due to the quantity of major overland flows being conveyed through this intersection. Alternative traffic calming measures may be necessary in this area to meet City Transportation Requirements.

12.3 EXTERNAL ROAD NETWORK

Currently, Highbury Avenue North maintains four (4) lanes of traffic, with two northbound, and two southbound lanes. Additional turning lanes are provided at the signalized entrance to MN#847

Highbury Industrial Park (Northbound left turn and right turn lanes, with a southbound left turn lane) and at the intersection of Oxford and Highbury (left turn and right turn lanes for both northbound and southbound traffic). It is anticipated that a new right and left turn lanes may will be required for the new intersection created at the extension of Rushland Ave. in accordance with Paradigm's 2022 TIS.

Oxford Street East currently maintains two westbound and two eastbound lanes of traffic, with an intermittent eastbound left turn lane for the entrance to John Paul II Secondary School and the east leg of Roehampton Drive. Left and right turn lanes are provided for both east bound and west bound traffic at the intersection of Oxford St and Highbury Ave. It is anticipated that channelization improvements may will be required for the new signalized intersection at Street 'E' in accordance with Paradigm's 2022 TIS and requirements of the City of London.

Both Highbury Avenue North and Oxford Street East have been designated for improvements as part of the City of London's Bus Rapid Transit (BRT) project. Construction of these corridors are tentatively planned for 2024 and beyond. The BRT works will include the installation of signalized intersection improvements and a raised concrete median that will restrict turning movements at all but the proposed signalized intersections (Rushland Ave/Highbury Avenue, Street 'B'/Highbury Avenue, Street 'E' and Oxford Street). DevEng has been in contact with the City's BRT team to coordinate possible servicing improvements for the high density blocks fronting Highbury Avenue.

12.4 BICYCLE AND PEDESTRIAN CONSIDERATIONS

Per City of London design standards, it is anticipated that sidewalks will be provided on both sides of all streets within the proposed subdivision for pedestrian traffic. An exception could be where significant heritage tree preservation interests govern. The City's Bicycle Master Plan and the Secondary Plan indicate a proposed bike route through the site running from Oxford Street through to Dundas Street. As such, it is anticipated that dedicated bicycle lanes may be required through the proposed subdivision to maintain bicycle connectivity between these two streets (refer to the specific streets anticipated to include bike lanes in Section 11.2). The inclusion of these sidewalks and bicycle lanes will allow for connectivity internally throughout the subdivision and to the abutting rapid transit boulevards. This is anticipated to promote the use of City buses, walking and bicycles as alternative modes of transportation.

13.0 PARKS PLANNING

13.1 NATURAL HERITAGE SYSTEM

There are no natural heritage features or natural hazards identified in the City's Official Plan (Schedule B1 & B2) for the subject site. Small pockets of the existing vegetation/tree lines are included within the Heritage Conservation Easement, and those will be protected where feasible as per the easement agreement in place. There is a Chimney Swift habitat within the existing infirmary building that may need potential further investigation. The Chimney Swift habitat does not preclude the infirmary building from being re-purposed; however, as redevelopment of this building will require that the chimneys remain intact and disturbance to the species is mitigated.

13.2 PARKLAND AND OPEN SPACE

As per the LPHSP and London Plan, a new public park block is being provided along the easterly property line adjacent the existing light industrial uses to the east. This block will be the primary active park block, with the anticipation that play equipment, sports fields, and other active recreational features will be installed here. The park block is connected to the SWM facility by a 15.0 metre wide connection along the easterly property line. It is anticipated that the SWM facility will be designed to include pathways around its perimeter to permit walking and cycling activities for the surrounding community. The SWM facility will connect pathways into the tree allee which will run pathways north-south connecting Dundas Street to the central heritage blocks, and onwards further north connecting to Oxford Street East via sidewalks, and another open space block at the north end of the subject lands. A linear open space connection is provided along the north side of Rushland Avenue. The main purpose of this open space is the preservation of some of the cultural heritage features. The linear system also provides an east-west connection across the subject lands. While the repurposing of the Infirmary Building and Chapel Building are still to be determined, it is anticipated that through the SPA process a portion of these sites may be incorporated into the north-south open space connection between Dundas and Oxford. Overall, due to the constraints provided by the built and cultural heritage features, the amount of Parkland and Open Space being dedicated to the City is approximately 10.6%, well above the required 5% as per the Planning Act. This figure does not include the SWM facility or lands surrounding the heritage buildings that are also anticipated to be incorporated into the open space system.

13.3 TREE PRESERVATION

In anticipation of site development, Ron Koudys Landscape Architects (RKLA) was retained to prepare a detailed tree assessment report for the 982 existing trees on the LPH lands. Each tree

was tagged with a unique number and assessed individually. Detailed information concerning each tree and the methodology used can be found in this report. (RKLA job #19-105, Prepared October 2019) The introduction to this report outlined the focus of this assessment where it states,

“The assessment not only captures the required technical tree health data that is typical of a tree inventory, it also considers the heritage value and habitat benefits of individual trees as well as the cultural value of groups of trees. The purpose of this inventory is to be a foundational document that will inform site design and direct the design team as they refine the conceptual site layout. There are several large specimen trees and tree allees along the internal road network of the site that will need to be considered as they contribute to the inherent character of the site. RKLA will work directly with the design team to make specific recommendations regarding preservation efforts that reflect tree species, age, form, health, habitat value, aesthetic value, and cultural value.”

An update to the original report was made in January 2021 where the heritage area was shown as well as hazard trees recommended for removal and those that were of particular value due to health, species, size and location. At the same time, a scoped report providing a snapshot of the detailed tree data for trees in the Ontario Heritage Trust Easement Lands (OHT Lands) was prepared to assist the planning team.

In addition, the design team requested that RKLA use our individual tree assessment data to create groups of trees that could be generally categorized based on each group’s overall physiological value. RKLA divided the trees into logical groups based on location, species composition, and relationship to existing features and placed them into one of four value ratings.

VALUE RATING ‘A’ - HIGHLY VALUABLE (GREEN HATCH ON DRAWINGS)

Most trees in area are highly valuable in terms of health, condition, form, species, ecological benefit, arrangement in the landscape, and/or cultural heritage. RKLA recommends that the design team explore potential alternate design approaches to preserve these trees.

VALUE RATING ‘B’ - FAIRLY VALUABLE (LIGHT BLUE HATCH ON DRAWINGS)

Most trees in area are fairly valuable in terms of health, condition, form, species, ecological benefit, arrangement in the landscape, and/or cultural heritage. RKLA recommends that the design team consider opportunities to preserve these trees.

VALUE RATING ‘C’ - NEUTRAL VALUE (YELLOW HATCH ON DRAWINGS)

Most trees in area do not have adequate physical or inherent qualities to warrant extraordinary preservation efforts. RKLA recommends that limited consideration for preservation is warranted.

VALUE RATING 'D' - MINIMAL VALUE (ORANGE HATCH ON DRAWINGS)

Most trees in area are considered undesirable due to poor health or condition, poor form, weak wooded species, species susceptible to common disease or pathogens, aggressive or invasive species. RKLA recommends that preservation is not deemed necessary.

These reports served as an important reference for the design team as they developed plans for this site. Considerations such as site grading/drainage, road layout, servicing, historical interpretation, cultural value, aesthetics, and community relationships have referenced these documents in an effort to retain as many trees as possible. The RKLA team has worked closely with the civil engineers, architects, planners, historical consultants, and client to explore a variety of design options, always focused on the issue of reducing tree impacts and preserving trees where possible. This emphasis has been particularly important in addressing the historical context of the site and the Allee linking the site from Dundas Street.

It should be noted that the existing site is covered with many trees and despite best efforts, tree removal is unavoidable. A summary of the trees identified for potential removal is provided on the chart below and illustrated on the tree removals plans. In total 211 trees have been identified for removal. The reason for removal for most of the trees is that they are in the proposed road right-of-way. Some additional trees are recommended for removal due to significant site grading and service access associated with the road construction. Where possible, retaining walls, no trench servicing, prestressing, tree protection barriers and post construction monitoring will be undertaken to ensure those trees retained are protected from adverse impacts. These recommendations will be provided as detailed site plans are developed for approval.

Lastly, the focus of this report is to preserve trees as a result of infrastructure installation for the entire property and does not address the impacts of future development on the individual parcels. Specific tree preservation reports will be required for each of the individual sites as development applications are made.

14.0 FINANCIAL CONSIDERATIONS

Details for the preliminary financial calculations are provided on the Estimate of Claimable Works and Revenues Worksheet enclosed in the appendices. A summary is provided in Table 2 below.

14.1 SUMMARY OF REVENUES

A summary of anticipated revenues, based on the housing mix and number of units expected within the proposed development, is summarized below. The land use densities applied are proposed in accordance with bonus density provisions. Key assumptions applied during the financial review are as follows:

- 30 low density residential lots over 2.08 ha;
- 2806 medium density residential units over 18.68 ha;
- 2895 high density residential units over 10.44 ha;
- 36,540 sq.m. Commercial and mixed use area over 12.18 ha;

Table 2 – Summary of Estimated Revenues & DC Claims

Estimated DC Claims	Estimated CSRF Revenues
\$ 3,241,060.	\$ 142,757,620.

14.2 SUMMARY OF CLAIMABLE COSTS

At this preliminary stage of the planning process and subject to City review, potential claimable works costs for this subdivision development could include the following:

- Sewer upsizing (storm and sanitary) per DC bylaw provisions;
- Watermain upsizing per DC bylaw provisions;
- Internal roadway oversizing (ie. Bike lanes, enhancements around central green);
- Potential LID measures on ROWs; (subject to feasibility & impact review)
- Land dedication for SWMF per DC bylaw provisions;

The pending BRT East leg project scope by City of London will facilitate improvements to both Highbury Ave and Oxford St. flanking this campus. At a consultation meeting held on Jan. 20, 2021, the civil design team met with City staff and their consultant (Dillon) to discuss various coordination and timing issues. It was confirmed that the BRT project will likely facilitate various external roadway improvements, including dedicated BRT lanes, transit stop, utility relocations, traffic signalizations, storm sewer upgrades, possible sanitary sewer upgrades, watermain

upgrades, and sewer stubs to flanking blocks along Highbury Ave. The incorporation of right turn lanes at the LPH connecting ROWs could be confirmed by the campus traffic impact study and will inform the impact to ROW widenings and utility relocations.

At this stage, it has been assumed the timing of City BRT improvements will precede and govern over the phased subdivision external (channelization) works. Notwithstanding, the LPH design team is committed to continued engagement and collaboration with the City to facilitate successful coordination of perimeter ROW issues. Depending on BRT program (2024) construction scheduling, some local servicing works might potentially be initiated by the Developer in advance to support the phase 1 blocks flanking Highbury Ave.

As noted in table 2 above, the estimated DC claim value is based upon high level assumptions and will need to be refined during detailed design and work plan review stage. With regard to internal road widenings (bike lanes, etc.) as candidate DC claim items, it has been assumed that Complete Streets policies are to be applied to this subdivision design and further discussions with Development Finance staff over eligibility is anticipated as the design concept evolves. The draft FPR claimable works and DC revenue estimate worksheet is included in the Appendix. Considering the design population of 13,111, this unique development as proposed is at a scale warranting more than just local servicing and the City GMIS recognizes the SWM pond as a regional facility.

15.0 MISCELLANEOUS

15.1 PHASING AND TIMING

This project will be completed in multiple phases due to the complexity of demolition staging, removals and scale. It is anticipated that the grading and servicing phase of this project could potentially commence in ~~2024~~ 2024 where there are portions such as block 44 45 in the northwest corner of campus that abut full municipal servicing (Highbury Ave.). This timing would be concurrent with proposed Highbury BRT contract upgrades that include a new, deeper storm sewer. Of note, trunk storm and sanitary outlets for much of the campus are required in the south end, but the ~~Oxford~~ Highbury transit corridor is targeted for early phase development on the ~~north~~ west side ~~end~~ of campus.

A conceptual service phasing strategy across the subject lands is shown in **Figure 11**. At this stage, it is anticipated servicing could occur in these major stages:

- Phase 1A & 1B (starting with HD/Mixed Use Block 45) after hospital demolition is complete;

- Phase 2 (after City SWMF construction per GMIS);
- Phase 3;

As this unique project involves the demolition and removal of existing site services and integration of heritage easement features across the campus, the phasing strategy is complicated. Detailed design will need to give due consideration to various factors and parties (incl. utilities) that need to be involved to facilitate this development. It is worthy to note the heritage easement restrictions imposed on this campus present unique challenges beyond the traditional redevelopment of land, and at this time, a project timeline is difficult to forecast without having secured review agency buy-in to date on the strategy for impact mitigation.

The phasing will be primarily governed by the optimal routing of trunk storm sewers and major overland flow, during both the interim and ultimate conditions. Several scenarios were considered routing the trunk storm sewer across the campus with regard to optimization of trunk sewer depth and conveyance hydraulics. The Scenario 3 trunk storm sewer routing provided the best opportunity to meet City design criteria, while reducing impact to heritage areas and maintain cost-effectiveness. A trunk storm sewer alignment north of the GMIS SWMF along the east leg of Street D and along Street C toward Howland Ave. appears to provide topographic advantage and a spatially advantageous central campus location.

High Density – mixed use **Block 45** is located in the northwest corner of campus flanking both Oxford St. and Highbury Ave. It is currently understood that Old Oak intends to develop this site first, in advance of the regional stormwater management facility, by utilizing municipal storm, sanitary, and watermain within the Highbury Avenue right-of-way. Given the forthcoming Bus Rapid Transit right-of-way upgrades to Highbury Avenue (2024), it is anticipated sewer PDCs could also be installed to service this portion of the LPH lands. It is expected that PPS controls would be required on this block to restrict stormwater discharge to Highbury Avenue. The municipal watermain network is well looped in this area so it is anticipated that it could be used to provide fire protection and meet the domestic demands of this block.

It is expected a vehicle access directly connecting Block 45 to Highbury Avenue or Oxford Street would not be permitted due to proximity to the arterial intersection. As such, it is anticipated the west portion of Street A and Streets B and F will need to be included in the Phase 1 scope to provide block access, sanitary PDCs and water service from the internal road network. Previously, consideration was given to a strategy that would have involved interim road works pending future phase upgrades, but this current strategy would minimize throwaway works. For portions of this phase 1 internal street network, an interim storm drainage solution will be required

with local SWM controls at north and south ends (west leg of Street A) to facilitate drainage outlet to the Highbury system until such time as the GMIS SWM facility and ultimate storm sewers are extended north in phases 2 and 3.

The Infirmary building (Q) on **Block 50** could be subject to renovation and change of use where market timing may warrant occupancy. Third party Organizations have expressed interest in acquiring the existing infirmary building, which has heritage status, and re-purposing it for another use. At this time, in consideration of how the onsite campus watermain system has now been decommissioned and old campus sewers to the south are noted to be in poor condition, servicing of this heritage building is reliant on infrastructure upgrades under phase 2 of development.

15.2 NOISE ASSESSMENT

A noise assessment relative to the adjacent industrial lands located to the east of this subdivision was undertaken by RWDI in order to inform the configuration of blocks 56, 35 and 38.

It is expected that supplementary noise assessment reports will be required for those blocks located closest to adjacent arterial roads (Highbury Avenue North and Oxford Street East) as well as the CP Rail corridor and existing industrial properties. The noise assessments will be completed upon approval of concept plans during the Site Plan Approval process since more accurate information will be required regarding building orientation and site grading. The noise assessments will determine the level of noise pollution stemming from the movement of traffic along Highbury Avenue North, Oxford Street East and the CP Rail corridor as well as stationary noise from the industrial properties and indicate possible options for their abatement.

16.0 RESPONSES TO INITIAL PROPOSAL REVIEW MEETING

With respect to engineering-related issues, responses to many of the City's IPR comments have been identified in the FPR sections above. It is anticipated many of the IPR comments offered will result in a series of comprehensive Design Studies (ie. Geotechnical, hydrogeologic, water balance analysis, monitoring plans for dewatering, traffic impact, sanitary campus analysis, storm campus analysis, water campus analysis with surrounding boundary conditions, EIS, Road Geometrics) and updated models to be undertaken in subsequent stages as collaboration opportunity and design information evolves.

The Draft Plan as presented herein has evolved considerably from that presented in the IPR stage to implement a number of improvements resulting from City comments including a complete relocation of the Rushland Ave to Highbury connection to coincide with the City's BRT plans. Due to the various site constraints imposed on these unique lands (most importantly preservation of

the heritage features wherever possible), further collaboration with agency staff is required to rationalize opportunities for alternative design strategies where strict conformance to traditional design standards would conflict with these objectives.