



TOWN OF RICHMOND HILL

COUNCIL

September 29, 2009

SRPD.09.104

Planning and Development

Planning

**SUBJECT: Designating By-law for the David Dunlap Observatory Lands (SRPD.09.104)
File No. D12-07228 – 123 Hillsvie Drive**

PURPOSE

The purpose of this report is to address the comments received at the September 14th, 2009 Council meeting with regards to the designating By-law No.100-09 for the David Dunlap Observatory Lands located at 123 Hillsvie Drives.

RECOMMENDATIONS

- a) That the SRPD 09.104 dated September 29, 2009 be received;
- b) That By-law No. 100-09, attached as 'Appendix A' to SRPD.100.104, be passed as the designation by-law for the David Dunlap Observatory Property, 123 Hillsvie Drive, including land and buildings, as a property of cultural heritage value or interest under Part IV, Section 29, Ontario Heritage Act, R.S.O. 1990, Chapter 0.18, as amended;
- c) That staff be directed to establish an archive to retain historical information and research materials regarding the David Dunlap Observatory Property for the future good of the site, and that these materials be made available to the public with required permission; and,
- d) That staff be instructed to commence a cultural heritage review of Land Parcel "B" identified as the 'Panhandle Lands' located on 350 16th Avenue, such a review to be completed in time to inform the forthcoming David Dunlap Observatory Lands Planning and Conservation Management Study; and
- e) That staff be instructed to commence the David Dunlap Observatory Lands Planning and Conservation Management Study.

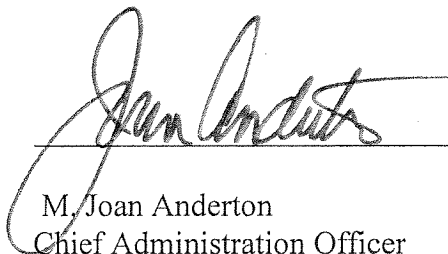
Contact: Joanne Leung, Manager of Urban Design at Extension 5498
Patrick Lee, Director of Policy at Extension 2420

Submitted by:

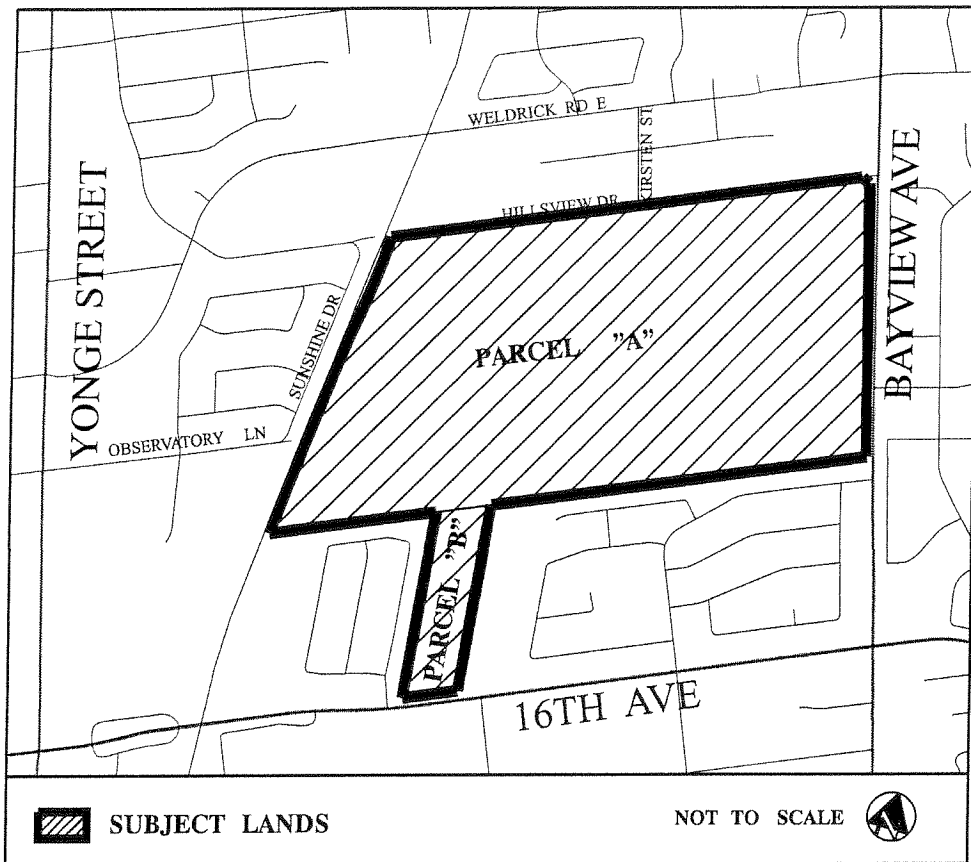


Ana Bassios
Commissioner of Planning and Development

Approved by:



M. Joan Anderton
Chief Administration Officer



BACKGROUND

The David Dunlap Observatory Lands are approximately 76 ha (189.78 acres) in area, located north of 16th Avenue and immediately west of Bayview Avenue in the Town of Richmond Hill. For the purpose of this staff report, the lands have been identified as Parcel "A" and Parcel "B" as shown on the Location Map. The current owner of the lands is Corsica Developments Limited who acquired the property from the University of Toronto in 2008.

The Parcel "A" lands are the majority of the land holdings and contain three main buildings that are part of the Observatory campus. Parcel "A" has a municipal address of 123 Hillsview Drive, and for the purposes of this report is referred to as the "Observatory Lands".

The Parcel "B" Lands have the municipal address of 350 16th Avenue, and are occupied by the Elvis Stojko Arena and a park that were built by and which are under lease to the Town. Parcel "B" is referred to in this report as "the Panhandle Lands".

The current designation process concerns only the Observatory Lands, which are shown as Parcel "A".

The Designation Process

Culminating from an original Notice of Intent to Designate the lands as a cultural heritage landscape in October of 2007, followed by a 7 day Conservation Review Board hearing in January 2009 and a decision of the Board in June 2009, a by-law has been developed to identify the lands, buildings and features that should be conserved and honored into the future.

On September 8th, 2009, Staff presented draft designating By-law 100-09 to the Committee of the Whole with the recommendation that the By-law be forwarded to the September 14th Council meeting for consideration and passage. The draft designating By-law 100-09 took its direction from the report of the Conservation Review Board (CRB) and was crafted with the assistance of the heritage consultant and legal counsel that represented the Town at the CRB hearing. The By-law implements all of the recommendations of the CRB and identifies key heritage attributes; associative and historical values; and contextual values of the property.

At the September 14th Council meeting, Council received additional comments from a number of deputants, and in particular, an amended version of the draft By-law by the Richmond Hill Naturalists (attached as 'Appendix B' to SRPD09.104). Staff have been directed by Council to consider the additional input and report back.

Since Council's direction to initiate the heritage designation of the David Dunlap Observatory Lands in 2007, the Town has been following a rigorous and transparent designation process in accordance with the *Ontario Heritage Act*, which included the public Notification of the Intent to Designate with a 30 days appeal period, as well as a public hearing conducted by the Conservation Review Board as a result of the objections filed by the Richmond Hill Naturalists, the Observatory Hill Homeowners Association, and Corsica Developments (Metrus), the purchaser of the property.

The Conservation Review Board proceedings respecting the David Dunlap property extended over 7 hearing days (January 15 and 16, 2009; January 19 to 23, 2009). A total of 7 expert witnesses testified during the proceedings as well as a number of concerned residents and staff (both former and current from the University of Toronto). The CRB Recommendation Report was released on June 3rd, 2009, and it recommended that Council proceed with the protection of property known as 123 Hillview Drive (David Dunlap Observatory) under Section 29 of the Ontario Heritage Act.

By-law Development

The development of a designation by-law is rooted in the content of the Notice of Intent to Designate.

S. 29 (4) of the *Act* outlines the content of the Notice, which has two requirements that are important for the By-law process:

1. an adequate description of the property so that it may be readily ascertained;
2. a statement explaining the cultural heritage value or interest of the property and a description of the heritage attributes of the property (heritage statement/description)

The Notice took its guidance in format and approach from the *Ontario Heritage Tool Kit*, which is published by the Ministry of Culture (extract see 'Appendix C' to SRPD 09-104). A Legal Description of the Property, a Statement of Cultural Value, and a Description of Key Heritage Attributes including the proposed boundary of the Cultural Heritage Landscape had been clearly stated reflecting the structure and content demonstrated in the *Ontario Heritage Tool Kit*.

In order to establish the cultural heritage value of the property, the Town's heritage consultant has also applied the criteria of Ontario Regulation 9/06 under the *Ontario Heritage Act* in evaluating the attributes and features of the property. This approach considers the property against three sets of cultural heritage values: design/physical, historical/associative, and contextual; and provides a rational framework within which assessment can be made regarding an element's heritage significance.

Town staff, the Town's heritage consultant, and the Town's outside legal counsel are all of the opinion that the content and form of the property description and the heritage statement/description, as found in the Notice of Intent to Designate have met and/or exceeded the requirements of the *Act* and provided required information and descriptions for the by-law process.

In reviewing the establishment of the Cultural Heritage Landscape for the Observatory Lands, the Board concurs with the Town's approach through the application of the criteria of Regulation 9/06 of the *Ontario Heritage Act* on the buildings and other elements on the property. Overall the Board commends the Town in its effort to initiate the designation process, and its demonstrated diligence in ensuring that the reasons given to designate the property under the *Act* were well researched.

Regarding the Town's Notice of Intention to Designate, the Board finds that it,

"...shows the level of detail, historic and investigative rigor, and clear language that is ideally expected for a property of this significance...; and that,

Even given the time constraints forced upon the Town from the sale of the property of U of T, the Town engaged in public consultation and crafted a well-reasoned approach that offers the creation of a cultural heritage landscape..." (P.49 CRB)

In light of the detailed direction provided by the Conservation Review Board in its decision of June 3, 2009, Town staff with the assistance of legal counsel for the CRB hearing and the Town's heritage consultant compiled the by-law to designate the Observatory Lands as a cultural heritage landscape.

The Draft By law is derived directly from the CRB decision's discussion on the level of details on the statement of value and the descriptions of the attributes, and has incorporated all changes that were recommended by the CRB.

DISCUSSION

A total of 18 deputants appeared before Council on September 14th to outline their concerns. This included a draft of the by-law presented by the Richmond Hill Naturalists.

Staff has categorized the comments (including the Richmond Hill Naturalists' version of the by-law) into six areas. These comments are discussed below within the context of the Conservation Review Board recommendations and the larger framework of heritage conservation practice in Ontario, as guided by the Ministry of Culture through its publication *Ontario Heritage Tool Kit* (extract see 'Appendix C' to SRPD 09.104).

A. The Treatment of the Panhandle Lands (Parcel "B")

The inclusion of the Panhandle Lands into the Designation By-law of the Observatory Lands (Parcel "A") has been raised a number of times both during the CRB hearing and also at the Committee of the Whole on September 8, 2009 and Council on September 14th. At the September 8th Committee of the Whole meeting, the Town's outside legal counsel at the CRB hearing presented his opinion on why the Panhandle Lands could not be part of **this** Designation Bylaw.

Under the *Act*, any application of Section 29 designation applies to the legal description of the real property. The Board is bound to define its scope of enquiry for a proceeding as the real property identified in the Notice of Intention to Designate. And as such, the Board has stated in the Scope of Inquiry that,

For the purpose of these proceedings, it is agreed that the subject property is defined only encompassing Part 1, Plan 65R-29959, of the David Dunlap Observatory property, therefore excluding any direct evaluation of Parts 2 and 3, Plan 65R-29959, also known as the Panhandle Lands. (P.18 CRB)

This definition of scope of inquiry had indeed been agreed upon by all parties during the 7 days CRB hearing in January 2009, and that Mr. Lord, legal Counsel to the Naturalists, agreed that real property is governed by the designation process under the *Act*, and that the Town can consider a lesser area as they have with Part 1 (Parcel "A") of the real property.

As the public Notice of Intent to Designate did not include the Panhandle Lands, nor has there been any proper study of the land's heritage values, the lands cannot be included within the designation process for Parcel "A" within the context of this By-law. The Board, however, recognized the potential cultural heritage value of the Panhandle Lands, and recommended that a

separate heritage review be undertaken; and Recommendation (d) of this staff report addresses this matter.

B. The Extent of the Cultural Heritage Landscape and Boundary

The question of designating the entire area of Parcel 'A' as a cultural heritage landscape was raised by a number of deputants at Council. Regarding the effort to designate the 100% of the lands as a cultural heritage landscape, the CRB report provided clear guidance as follows,

In all, the proposal of the Naturalists is well researched and a very thorough attempt to compel protection of all of Part 1 as a cultural heritage landscape. However, behind the text, the extensive archives of photos and other historical research (seemingly ready for display in a museum), and the uncharacteristically common themes that tie together reports prepared by independent experts, the Board finds that the Naturalists do not present a case for heritage conservation that truly differentiates itself from the Town's proposal. The Board recognizes the case to protect all of Part 1 through a cultural heritage landscape, and also understands other benefits in keeping the entire parcel of property intact, but does not believe that the Ontario Regulation 9/06 test has been met to justify such an outcome (P. 51 CRB)

The Board summarized in the decision the extent of the Cultural Heritage Landscape proposed by the four parties to the hearing. The position of the Town presented was to identify the westerly half of the Observatory Lands as comprising the cultural heritage landscape. The position of the Naturalists, supported by the Homeowners Association, was that all of the Observatory Lands should be protected as cultural heritage landscape. Finally, the case presented on behalf of the owner was that a much smaller area located adjacent to the Observatory, the Administration Building, and Elms Lea should be protected as cultural heritage landscape.

In considering the owner's proposed boundary, the Board finds it, "*too narrowly defines the area of protection, and that such a plan would lead to a dilution of the integrity of the significant cultural heritage value of the property.*" On the other hand, the Board feels that the proposal of the Naturalists and that of the Observatory Hill Homeowners Association is "*more of a blanket approach without sufficient evidence to justify the inclusion of many portions of the property.*" (p.56, CRB Report) The Board is recommending an approach that closely matches that proposed by the Town, with a modification to modestly increase the extent of the cultural heritage landscape.

C. Surveyed line of the Cultural Heritage Landscape Boundary

In consideration of the limits of the Cultural Heritage Landscape, the Board commented:

With respect to the location of a boundary line to the east, the Board recommends that a line be located and properly surveyed for clarity at least 150 metres east of the most eastern portion of the research tree planting line, and extend from the north to south lot

lines in a way that follows the north-south axial line found in the tree plantings. (P.56 CRB)

Following the Board's recommendation a site visit was conducted by Town Staff, a professional land surveyor, the Town's Heritage consultant, and the owner. Staff utilized Figure 7 "Plantings 1958-1960 on original 1938 Planting Plan" presented at the CRB hearing (See Map 1 attached to this report) to assist in locating eastern limits of the research tree planting line. A cluster of deciduous tree plants located on the fourth row to the east was identified on site. The surveyed line is measured 150 metres east from the easterly drip line of the tree cluster and oriented on the north-south axial line. The surveyed line as shown in the draft by-law accurately reflects the direction of the CRB decision.

D. Inclusion of a map as part of the By-law

As part of the submissions to the September 14th Council meeting, there were requests to include with the designating by-law, a map showing the location of the key heritage attributes. Staff have considered this request and recommend that a map not be included. The intent of a cultural heritage landscape is to identify a collection of attributes that work together to create a system. Such attributes can include buildings, landforms, plantings, viewsapes and field patterns. The attempt to delineate specific attributes on a map runs contrary to the purpose of a cultural heritage landscape which is to be a collection of attributes that work together. Most importantly, certain attributes, such as a viewscape, are very difficult to accurately map. Staff and the Town's legal counsel are of the opinion that an attempt to map the attributes may limit their spatial and/or functional delineation, and hence impair the future ability to protect the whole of the heritage resource.

The Conservation Management Plan that will implement the By-law will provide greater detail on the functional extent of the various cultural heritage attributes and provide a range of options to allow the attributes to be managed and conserved into the future.

E. Level of details and Description of the Attributes

In the draft By-law submitted by the Naturalists, there is an increased level of detail in the description of the cultural heritage statements, as well as many additional heritage attributes that were not specified in the CRB report.

With regard to the level of detail in writing the Statement of Cultural Heritage Value or Interest and the Description of Heritage Attributes for the by-law, the Board acknowledged the Naturalists' desire for a highly detailed approach in order to ensure optimal protection. The Board understands the approach of the Naturalists and commends them for the effort undertaken to document the history and significance of the DDO property.

However, it should be made clear that the function and purpose of a Designating Bylaw is to provide Council with sufficient detail with which to make decisions under other provisions of the

Act, notably requests for consent to alterations under s.33(1). The content of a designation bylaw meeting the requirement of the *Act* should serve, not as a resource for historical information, but rather, as an effective long term management tool for the property.

In the *Ontario Heritage Tool-Kit*'s instruction in the drafting of a designation bylaw, it is noted that the description of heritage attributes "...*is not an exhaustive account of the property's heritage attributes*" (P. 18 Tool-kit), and that according to the CRB, a by-law "... *should be an informative and instructive document that clearly and concisely conveys its intent. This may or may not require an itemized list.* (P. 42 CRB)

In addition, Mr. Sean Fraser of the Ontario Heritage Trust, a witness at the CRB hearing, also noted the importance of having a detailed bylaw for the benefit of interpretation and use in future years, and the need for a sufficient statement of cultural heritage value or interest, but not an exhaustive list and description akin to an historical tribute.

The *Ontario Heritage Tool-Kit* also outlined what is required by the *Act* for a Statement of Cultural Heritage Value or Interest:

"It should not provide a broad history of the property, but should focus on what makes the property important. A detailed description of the property's history can be included in the broader designation report and kept on file with supporting documentation." (P. 17 Tool-kit)

Having considered all of this evidence, the Board, as noted above, was generally supportive of the content and formatting proposed by the Town for the designation by-law. The changes recommended by the Board to the drafting have been incorporated within the by-law presented to Council for consideration. With respect to the additional information assembled by the Naturalists for presentation at the hearing, the Board acknowledged the Naturalists' extensive collection of documentation on the property and their request to have some of their submitted evidence archived with an appropriate body to serve this site over the long term.

Following the Board's recommendation, Town staff recommend that an archive be established to ensure that all supporting documentation and information is retained and made available to the public with any required permission (Recommendation c) of this report.

F. Telescope Details

At the September 8th Committee of the Whole meeting, Town's legal counsel, in describing the Provincial regulations and guidance, and the acceptable practices in the drafting of a designation by-law, stated that the preparation of the by-law is essentially an exercise in judgment and balance, where certain generalization must be built into the bylaw to complement the level of specificity in the identification of the key attributes.

Specific to the discussion regarding the interior of the Telescope dome, it should be noted that the Town's draft designation by-law, under item (d) within the Description of Heritage

Attributes, a list of attributes identified in the interior of the telescope dome is preceded by the following statement:

“Within this structure form, material and function are virtually indivisible. Thus all aspects of the interior are included, highlighted by, but not restricted to...”

The Town, as the bylaw administrator, has to achieve a balance between heritage preservation and the on going management of a site that would continue to function and evolve as a living place. The future of the Observatory relies on the ongoing operation of the telescope as a technologically functioning and evolving machine. A high level of specificity in identifying the machinery components as key heritage attributes within this complex scientific instrument may make static its future operation and function, and orient the Observatory to become more like a museum-piece than an operational and functioning place. In this sense, the Town’s concern is illustrated by the letter from the Royal Astronomical Society of Canada, the current operator of the Observatory. (see Appendix ‘D’ to SRPD09-104)

G. The Pump House

The letter from the Richmond Hill Naturalists dated September 11, 2009 requested that the pumphouse be identified as one of the key attributes in the Cultural Heritage Landscape. In the letter, reference was made to closed door sessions during the CRB hearing where an agreement among the attending legal counsels was reached with regard to the protection of the pumphouse. The Town’s legal counsel confirmed that such a discussion did not occur and that no agreement among the parties was made regarding the pumphouse. Indeed, the Board has provided a definitively statement regarding the structure:

The pumphouse is considered by the Board to be a purely utilitarian building. While it is interesting that its use was to supply water to the main buildings within the DDO precinct, the Board is not convinced that this role carried enough importance to deem this a heritage attribute. Also, while a case was made to demonstrate the significance of the pumphouse, less of a case was made to highlight the water pipe that was laid roughly 1.3km from this building to the observatory precinct buildings. The Board does not see the pumphouse or the water pipe as having cultural heritage significance. (P. 54 CRB)

Municipal Jurisdiction

The Board has clearly stated in its report that the *Ontario Heritage Act* is written and applied in a way that places the principal or first responsibility for the identification, evaluation, and protection of a cultural heritage property with the local municipality. As the bylaw administrator, the municipally must set the standard for the drafting of the bylaw.

As a conservation management tool, the bylaw needs an operational component as it affects a living site, and should be user friendly to allow anyone to understand the intent of the designation

when managing the cultural heritage value or interest of the property into the future. The By-law should be clear, concise and user friendly, and it should,

"...provide Council with sufficient detail in order to make decisions under other provisions of the Act, notably requests for consent to alterations under Section 33(1)." (P. 42 CRB)

Language Meeting the Act's Requirements

The Board is supportive of the Town's approach to the drafting of the heritage statements and the description of the heritage attributes as provided in the Notice of Intent to Designate. The wording of the Notice as it was before the Board was considered to be a sufficient basis for drafting any potential By-law, and that the Notice can transfer, with modification resulting from this hearing, to the designation bylaw.

It is for these reasons that the Board recommends that Council maintain their current approach to detail, but that the language of the property description, the statement of cultural heritage value or interest and the description of heritage attributes be updated to contain accurate information, specifically capturing any changes flowing from this Board hearing. The current draft By-law 100-09 (attached as 'Appendix A') is fully consistent with the CRB report.

In terms of any recommendation on specific wording of a bylaw, the Board suggests that the Town's current approach is appropriate and that some further consultation with resources such as the Trust may be appropriate in finalizing some of the language and treatment in turning the Notice into a bylaw. Indeed, the Board,

...refrains from delving specifically into recommended language and detail on specific interior and exterior elements in this case, given its confidence in the Town's current approach. (P.57, CRB)

And the Board recommends that,

"...Council maintain their current approach to detail, but that the language of the property description, the statement explaining the cultural heritage value or interest of the property, and a description of the heritage attributes be updated to contain accurate information specifically capturing any changes flowing from this Board meeting." (P. 42 CRB)

As suggested by the Board, staff have contacted Ontario Heritage Trust and obtained their feedback with regard to the level of detail and the language in writing the Statement of Cultural Heritage Value or Interest and the Description of Heritage Attributes to be included in the By-law.

Discussions with the Richmond Hill Naturalists

Staff met with the Richmond Hill Naturalists and Professor Tom Bolton, the eminent University of Toronto teacher and researcher. At the meeting, the Naturalists presented a much more detailed by-law than that proposed by staff. The additional detail and information provided at the meeting was carefully considered and assessed in view of the CRB decision. While some small change to the by-law reference in respect of the *Ontario Heritage Act* (as amended) has been made, staff maintain that the level of detail in draft By-law 100-09 (attached as Appendix "A") is the most appropriate to allow for both conservation and management of the cultural heritage landscape well into the future.

FINANCIAL/STAFFING/OTHER IMPLICATIONS

Funding for the cultural heritage review of the Panhandle Lands would be from the General Government D.C. Resource Fund. The exact quantum will be identified and funding requested when staff report back with a terms of reference.

RELATIONSHIP TO THE STRATEGIC PLAN

Adoption of the by-law to designate the Observatory Lands as a cultural heritage landscape is in keeping with Goal 3 – Outcome 1 of the Strategic Plan which is to "Respect the past" through promoting the awareness of the Town's heritage, in part by showcasing local history." This By-law will also implement the direction to "steward Richmond Hill's heritage resources". Lastly, the adoption of the By-law will implement Outcome 2 of Goal 3 which is the promotion of a sense of identity and place through "the celebration, promotion and enhancement of the Town's unique places".

CONCLUSION

Staff have reviewed the draft by-law (attached to this report as Appendix "A") in light of the findings of the Conservation Review Board Hearing, Ontario Regulation 9/06, the Ontario Heritage Tool Kit as well as the submissions of deputants to the September 8th Committee of the Whole and September 14th Council meeting. In the matter of providing more detail as proposed by the Richmond Hill Naturalists', Staff consider that it would be contrary to the Town's coherent and consistent approach that was supported by the CRB and would not otherwise substantially enhance the level of protection afforded the Observatory Lands through the designation process.

Staff are of the opinion that the By-law is properly before Council, represents an appropriate level of detail and will serve to provide for conservation and management of the cultural heritage landscape known as the David Dunlap Observatory Lands.

Additional future work that will implement the conservation of the David Dunlap Observatory Lands includes a cultural heritage review of the “panhandle” lands as well as a conservation management and land use study. Stemming from this work will be policies to be incorporated into the Town’s forthcoming new Official Plan and ultimately a secondary plan for the property.

APPENDIX CONTENTS

- “A” Draft By-law No. 100-09, A By-law to Authorize the Designation of 123 Hillview Drive, David Dunlap Observatory Lands, under the *Ontario Heritage Act*.
- “B” Letter from Ms. Yakes and the proposed amended draft Bylaw submitted by the Richmond Hill Naturalists on September 14th, 2009
- “C” Extract from the Ontario Heritage Tool Kit
- “D” Letter from the Royal Astronomical Society of Canada, dated September 21, 2009

DRAWING

Map 1 – Figure 7 “Plantings 1958 – 1960 on Original 1938 Planting Plan”

THE CORPORATION OF THE TOWN OF RICHMOND HILL

BY-LAW NO. 100-09

A By-law to Authorize the Designation of
123 Hillsvie Drive
David Dunlap Observatory Lands under the
Ontario Heritage Act

WHEREAS Section 29 of the *Ontario Heritage Act, R.S.O. 1990, c.0.18, as amended* authorizes the Council of a municipality to enact by-laws to designate real property to be of cultural heritage value or interest;

AND WHEREAS the Council of The Corporation of the Town of Richmond Hill has caused to be served on the owners of the lands and premises known as 123 Hillsvie Drive, Richmond Hill, and upon the Ontario Heritage Trust, notice of intention to so designate the aforesaid real property and has caused such notice of intention to be published in a newspaper having general circulation in the municipality;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWN OF RICHMOND HILL ENACTS AS FOLLOWS:

1. That the real property located at 123 Hillsvie Drive, being Part of Lots 42 and 43, Concession 1, (former Township of Markham), more specifically described as Part 1, 65R-29959, Town of Richmond Hill, Regional Municipality of York is hereby designated under Part IV of the *Ontario Heritage Act, R.S.O 1990., Chapter 0.18, as amended*, as being of cultural heritage value or interest.
2. That the Clerk is hereby authorized to cause a copy of the By-law, together with a statement explaining the cultural heritage value or interest of the property and a description of the heritage attributes of the property to be served on the owner of the property and on the Trust, and publish a notice of the By-law in a newspaper having general circulation in the municipality.
3. That the Town Solicitor is hereby authorized to cause a copy of this By-law to be registered against the property in the Land Registry Office.
4. Schedules "A" and "B" attached to By-law No. 100-09 are declared to form a part of this By-law.

READ A FIRST AND SECOND TIME THIS 14TH DAY OF SEPTEMBER, 2009

READ A THIRD TIME AND PASSED THIS 14TH DAY OF SEPTEMBER, 2009.

Mayor

Clerk

DRAFT

SCHEDULE "A" TO BY-LAW NO. 100-09

REASONS FOR DESIGNATION DAVID DUNLAP OBSERVATORY LANDS 123 Hillview Drive

1. Description of Property

The Property comprises Parts of Lots 42 and 43, Concession 1, former Township of Markham, more specifically described as Part 1, on Plan 65R-29959, with the municipal address of 123 Hillview Drive in the Town of Richmond Hill. The Property is known as the David Dunlap Memorial Observatory.

The heritage designation applies to a **cultural heritage landscape (chl)** on a portion of the Property extending from Hillview Drive in the north to the fence line at the boundary of Lot 41 to the south and from the CNR tracks in the west to a surveyed line located 150 metres to the east of the easternmost row of the University of Toronto's former experimental tree plantation as shown on Schedule "B" to the By-law. This area encompasses a wide range of important cultural resources. Principally these include: the Observatory Building (originally known as the Great Telescope Dome) and telescope; the Administration Building; *Elms Lea* (Observatory House); the Radio Shack; the natural topographic rise and earthwork enhancements in the area of the Observatory Building; the designed landscaping associated with the Administration Building; the vestigial landscape elements and plantings associated with *Elms Lea* and the University of Toronto's Department of Forestry's experimental tree plantation.

2. Statement of Cultural Value

(a) Summary

The David Dunlap Observatory (DDO) is a place of high cultural value manifest at all currently recognized levels/categories associated with heritage significance. Its cultural heritage landscape is comprised of a 19th century farmstead overlain with the University of Toronto's remarkable astronomical research campus conceived as well as a memorial to the husband of the facility's donor and patron. The three major structures within this landscape each exhibit a particularly high quality of design and use of materials – *Elms Lea* as an 'architect' designed 19th century farmhouse; the Observatory Building (originally known as the Great Telescope Dome) manifesting 'leading edge' functional innovation as the envelope for the great telescope and the Administration Building profoundly combining the ceremonial and scientific in the Beaux-Arts form of the period. The building interiors each have outstanding features such as: the 74" telescope, largest in the Commonwealth when installed, within the Observatory Building, and its *raison d'être*; the first floor plan of the Administration Building with the main axis set to the cardinal points which intersect at the memorial at its core; and the main winder stair at *Elms Lea* which appears to be almost floating. The site has formidable historical associations ranging from the locally significant Alexander Marsh family, to the rise of astronomical research at the University of Toronto (and Canada generally) and culminating with important contributions to the world's understanding of astronomical phenomena.

(b) The Cultural Heritage Landscape

The David Dunlap Memorial Observatory Site is a complex cultural heritage landscape comprised of the overlay of a 20th century 'state of the art' astronomical observatory on a 19th century farmscape. There are two major layers/themes which are represented. The first is that associated with the farmstead of Alexander Marsh. Marsh, the grandson of area pioneer Robert Marsh, inherited Lot 42, Concession 1 Markham Township from his grandfather in 1852 and established a prosperous farm there (as well as on adjacent Lot 17 to the east) through the second half of the 19th century. His farmstead came to include

300 acres, three houses, and seven barns and/or stables. Originally occupying a frame house on the site which may have dated to the original patentee he had a new home for his family designed and built c.1864. This fine dichromatic brick house which came to be known as *Elms Lea* brought together eclectic influences in a picturesque composition. Sited on a rise deep within the property reached by a long lane from Yonge Street and screened by a stand of spruce, it later became the residence of C.A. Chant and subsequent directors of the DDO.

The second layer/theme grew out of the dream of C.A. Chant, often referred to as 'the father of Canadian astronomy', who recognized in a local high point of land, just east of the village of Richmond Hill, the potential site for a world class astronomical observatory. This dream was able to be realized through the support of Jessie Donalda Dunlap, whose husband had been dedicated to Chant's vision prior to his death. Since its establishment in 1933 the David Dunlap Memorial Observatory has been the site of much important astronomical research (including several 'ground breaking' discoveries), the cornerstone of astronomical education for generations of University of Toronto students and the site of pioneering efforts in Radio Astronomy spearheaded by the late Donald MacRae, also a DDO director.

The property, encompassing Lot 42 and the south half of Lot 43, was originally selected as the Observatory site for its topography - a pronounced rise relative to the surrounding area - lack of light pollution and relative accessibility to the University. Major earthwork further enhanced the natural knoll selected for the Observatory creating a podium like plateau. The circular observatory structure was designed and prefabricated in Great Britain to house the 74" telescope, largest in the British Empire at that time. The telescope, with its 5,000 pound mirror, is supported by the 'great pier', the concrete core of the building, constructed prior to the arrival and erection of the building shell in 1933. The large copper dome is built to rotate and there is a 15' wide section (shutters) which retracts for siting the telescope. The Administration Building, designed by Mathers and Haldenby, is a particularly fine example of Beaux-Arts classicism which also incorporates three copper observatory domes. The siting of the two structures, placed at right angles to each other and at cardinal points, (the Observatory at compass north) is indicative of the formal landscape which was originally planned for the site, the key axis being the approach to the Observatory from the south. The realization of this concept was only achieved, in modified form, with the landscape improvements of 1959 which featured an elliptical island within the new driveway, designed such that symbols within the paving, the bronze sundial and the pedestrian path through the island expressed cosmological laws. Also in the 1950's the Radio Astronomy program was established with the associated construction of a 'Radio Shack', (designed as a picturesque cottage), pyramidal horn antenna and 'zig zag' antenna directly east of the Administration Building.

In the early 1960's a new approach road from Hillview Drive was established, its curvilinear form intended to ensure that the Observatory not be affected by the headlights of approaching cars. The new road was named Donalda Drive, the middle name of the site's great patron. In this period too the University of Toronto Forestry Department undertook a series of experimental plantings featuring both native and exotic species. Planted in rows formed of (approximately) square individual plots their general alignment again followed the north-south orientation seemingly so essential to all aspects of the lay-out of the property.

At its opening in May 1935, attended by Prime Minister Mackenzie King, the David Dunlap Memorial Observatory was proclaimed "a gift to science all over the world" and the Royal Train carrying King George VI and Queen Elizabeth II, the Queen Mother, stopped in acknowledgment of the importance of the site during their visit of 1939.

Achievements directly associated with the Observatory such as Helen Hogg's work on variable stars in globular clusters and C.T. Bolton's investigation of Cygnus X-1 as a black hole as well as the determination of the absolute flux density of Cas A at 320 MHz through radio astronomy have indeed significantly contributed to our understanding of the universe.

Important internationally for the research it has produced it is also a local landmark to the suburban community which grew up around it and has been the site of many birthday celebrations and weddings.

(3) *Description of Heritage Attributes*

The following are the heritage attributes which express the physical/design value of the Property. The importance and complexity of a number of these elements, particularly the three main buildings (each worthy of Section 29 Designation in their own right) has dictated a form whereby they are included at the 'macro' level as attributes of the general site but then the features which define the heritage character of each of these main elements is also further broken down, forming, in essence, a subset of heritage attributes:

- (a) the siting of the Observatory Building and the Administration Building at the highest local elevation, enhanced and modified to a 'podium' form by significant earthworks for the placement of the buildings.
- (b) the laying out of the site to follow the cardinal points with the Observatory Building as due north and the Administration Building due east. This directional emphasis remained an essential design determinant for site layout right through the 1960's¹ and extended throughout most major elements of the site - including the interior plan of the Administration Building (see below), the siting of the Radio Shack, the location of the elliptical traffic island with north-south pedestrian walkway through its center and sun dial at its southern end, the placement of the flag pole, the orientation of the rows of the University's Department of Forestry experimental tree plantation.
- (c) *Elms Lea* c.1864, the picturesque dichromatic brick farmhouse originally designed for Alexander Marsh. While subject to several renovations and minor additions associated with its use within the DDO complex, the original exterior appearance is largely intact and the interior plan remains legible. It is an eclectic expression combining elements of Classical, Gothic Revival and Italianate derivation in a well integrated composition.

Key heritage attributes of the exterior include:

- the three bay symmetrical façade;
- the 'T' plan with original kitchen 'tail';
- the side gabled roof with relatively steeply pitched centre gable;
- the bracketed eave at the façade, eave returns and verges with distinctive pendant bracket;
- the dichromatic brickwork with buff brick accent detailing which include: quoins; stringcourses; arches; decorative 'reflecting' of brackets in brickwork and cross pattern with margins at gables. The Flemish bond coursing pattern at the façade and the complex cambered ('flat') arches in red brick.
- The treatment of openings including: the quarter round windows with quarter fanlights at the gables; the 6/6 small pane wood sash; the French doors flanking the center bay of the façade; the prominence given to the openings of the center bay including the main entrance with transom (with distinctive lancet light divisions) and sidelights and the semi-circularly arched opening containing French doors at the balcony which 'breaks' the eaves at the centre gable.
- the rear 2 storey gable roofed 'tail' with dichromatic brickwork and vousoired cambered ('flat') arches at the window openings.

Key heritage attributes of the interior include:

¹ The north-south axial emphasis continued into the 1980's reflected in the Town designed Observatory Park and Elvis Stojko Arena on what has become known as the 'Panhandle' (described as Parts 2 and 3 on Plan 65R-29959). The "Panhandle" does not form part of the Property and is not included here for designation.

- the centre hall plan;
- the grand winder stair and balustrade at main hall. The curved rail and soffit of the main stair create a spiraling, floating effect within the space.
- the plaster paterae featuring acanthus leaves in main hall and north reception room;
- the high wood bases throughout;
- the moulded door and window architraves;
- the remaining 4 panel doors;
- the original wood fireplace surrounds at the north reception room and 'tail' with c.1933 fireboxes and hearths;
- the tile floor, tiled dado and moulded tile dado cap at 'master bathroom';
- the king post truss roof structure of the main roof.

(d) the Observatory Building (originally known as the Great Telescope Dome), 61' in diameter, designed and built to house the 74" telescope, 2nd largest in the world at that time and prototype for the use of pyrex mirrors of that scale, with rotating copper dome incorporating retractable shutters for astronomical viewing. The building expresses the Machine Age aesthetic of the period, the building being an 'envelope' for the instrument and its function. The DDO 74" reflecting telescope, still the largest optical telescope in the country, is one of Canada's most significant scientific artifacts (as well as continuing to be a viable instrument for astronomical observation). A 'leading edge' technical achievement at the global level upon its fabrication, much innovative design went into its housing and support allowing for its rotation and the cleaning and re-aluminizing of its 5000 lb. primary mirror. Most of the apparatus and associated electrical system for these operations remains original (with some replacement parts) and these partake of the high level of significance of the telescope itself.

Key heritage attributes of the exterior include:

- the circular form broken only by the entrance vestibule facing due south;
- the hemispherical dome clad in flat seam copper panels;
- the galvanized metal cladding of the walls and the 'rhythm' created by the regular spacing of pilasters and louvered shutters;
- the symmetry of the façade;
- the beveled base into which the pilasters terminate;
- the network of steel stairs and 'catwalks';
- the double leaved metal clad paneled entrance doors with moulded surround and transom with tripartite geometric pattern.
- the retractable shutters.

Within this structure form, material and function are virtually indivisible. Thus all aspects of the interior are included, highlighted by, but not restricted to:

- the semi-circular corridor formed around the service core at the first floor with galvanized metal wall cladding;
- the multi-pane steel sash (louvered shutters on exterior);
- the telescope;
- the concrete support pier (formed independently from the building itself);
- the telescope tube;
- the interior stair and 'catwalk' system;
- the apparatus associated with the rotation of the telescope;
- the apparatus associated with the rotation of the dome and opening of the shutters including the cable pulley system;
- the carriage/elevator and all associated components such as the vacuum chamber, floor hatch and pulley system associated with the mirror cleaning/re-aluminizing process
- the electrical system with much original wiring.

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- (e) the Administration Building, a prototypical example of Beaux-Arts classicism rendered masterfully in stone and incorporating three copper 'observatory domes'. The Administration Building is a major architectural achievement. Mathers and Haldenby successfully combined an eloquent memorial to the patron's husband, David Dunlap, with a functional administrative and research facility supporting the astronomical Observatory. Literally at its core the building integrates the sacred and scientific bringing the cardinal point orientation of the site into the interior where, directly in line with the main entrance, at the termination of the building's eastern axis, accessed across the compass rose inlaid into the floor, through a monumental, temple-like double height space and then through a plastered arch, resides the memorial to David Dunlap. The memorial, incised and gold-leafed into a panel at the marble wall, is at the centre of the cross hall. At the cross halls the ceremonial space is further defined by fluted pilasters. Throughout this area both wall and floor finishes are marble and the ceilings arched. Around this sacred core and the highly articulated Library a functional lay-out of offices, laboratories and support services was arranged.

Key heritage attributes of the exterior include:

- the classical Beaux-Arts symmetrical form and footprint;
- the 5 bay main block with projecting central pavilion and angled side pavilions;
- the focal treatment of the center bay incorporating semi-circular main entrance portico with Corinthian columns and Tuscan pilasters and approached via stone steps, Palladian window (with moulded architrave and keystone), balcony with wrought iron railing, stepped (up) and splayed section of stone parapet incorporating stone balustrade and urns surmounted by the largest dome placed in symmetrical relationship with the smaller domes of the side pavilions.
- the wall treatment combining sandstone and limestone and contrasting the texture of the rock faced general coursing with cut stone accents (including quoins, stringcourses, parapet copings, window and door surrounds) and carved elements (including panels with swag and floral patera at the stone parapets, freestanding urns surmounting the central dome parapet, balusters at the central dome parapet, Corinthian columns at the front portico including circular dentillated entablature with fluted frieze and a floral patera above each of the column capitals;
- the main entrance treatment consisting of a wide door of 6 fielded panels (with original hardware), with both wood and stone surrounds. The wood surround includes fluted pilasters and architrave featuring 'the lamp of knowledge' in relief as its central motif and floral emblem at its raised corners. The stone surround is in the form of a moulded architrave.
- The window treatment typically incorporating a stone apron panel with bas relief floral patera at 2nd storey. The multi-pane window sash typically 12/8 at 2nd storey, and 12/12 at ground storey. Oculus windows with broached stone voussoirs at side pavilions and centre bay of rear elevation.
- The domes clad in flat seam copper panels;
- The symmetrical 9 bay rear elevation;
- The side entrances each featuring a door with six fielded panels (with original hardware), stone sill and moulded architrave, with semi-circular fanlight above, approached via stone steps and landing with curved wrought iron rail with newel set into 'return' of first step.

Key heritage attributes of the interior include:

- the symmetrical Beaux-Arts footprint and floor plan;
- the true cardinal point orientation of the halls and straight-line relationship between the main entrance and the memorial wall;
- the open two storey volume of the main hall and mezzanine with groin vaulted ceiling featuring the marble stair with swan necked bronze rail, tapered newels

- and alternating baluster types accented with floral motifs at every second baluster;
 - the relationship of the main stair landing to the Palladian window with fluted marble colonnade surround;
 - the chamfered marble cladding and flooring of the hall;
 - the compass rose of coloured marble inlaid in the marble floor;
 - the 'lantern' type light fixture suspended from the apex of the cross vault;
 - the patterned cast bronze vent covers;
 - the Greek key pattern in marble carried around the Hall at 2nd storey floor level;
 - the unifying use of decoration in marble, wood and bronze including the patera (spiral disc) and the stylized floral patera carried from the exterior;
 - the pilastered entry to the memorial space at the center of the cross hall from the north, south and west;
 - the fine jointed marble wall cladding and marble flooring of the dedication area;
 - the marble memorial bench;
 - the incised and gold-leafed dedication panel with red marble border;
 - the terrazzo flooring and brick wall finish at the remaining sections of the cross hall;
 - the barrel vaulted ceiling of the cross hall;
 - the original entrances to the rooms off the cross hall with transoms above the door openings;
 - the bronze framed panels along the walls of the cross hall designed to display images of astronomical phenomena illuminated with back-lighting;
 - the acorn light fixtures in the cross halls and Lecture Room;
 - all the finishes and features of the Library including: the plastered cornice, frieze with dentillation and fluting accented by a raised floral motif, pilastered fireplace surround with dentillated mantel and black marble at the firebox face and hearth, the paneled walls, built-in book shelves and display cabinet, the doors composed of three major panels with the top and bottom panels decorated with a patera (spiral disc motif) and architraves with gold leafed urn motif accenting the corners, the two original suspended bronze chandeliers;
 - the original raised dais, slate chalkboard in the Lecture Room;
 - the typical door type of six 'frosted' lights above two panels, simple wood entablature (from office side), patera centered on the lower panel and original bronze hardware;
 - the parquet flooring of the offices and Library;
 - the colonnade treatment which defines the mezzanine area with plaster wall finish between;
 - the doors with two large panels, each with patera at the bathroom entry
 - marble stalls and terrazzo floors at the bathrooms;
 - the 'Donor's Room', originally the office/reception space of Jessie Dunlap, finished with a marble fireplace with moulded and dentillated wood surround, moulded chair rail, base, plaster cornice and parquet floors;
 - the original built-in wood cabinets at the technical and shop areas;
 - the observatory domes including: their pulley rotation and shutter retraction systems; the 24" c.1960 telescope in the centre dome and most particularly the 19" telescope built by C.A. Chant's astronomical colleague at University of Toronto, R.K Young in 1929.
- (f) the elliptical island within the driveway with paving designed to represent Kepler's 2nd Law of Planetary Motion and walkway/axis through the center from sun dial to Observatory Building. The island, along with the curved hedge, flagpole and plantings around the Administration Building represent a 1950's attempt to realize something of the grand scheme originally envisaged for the site and continued the compass and cosmological orientation established from the outset.

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The following are the cultural attributes which express the associative/historical values of the Property:

- (a) landscape features such as the former lane to Yonge Street, the line of mature spruce which screen *Elms Lea*, the vestigial orchard to the south of the house, the row of hickories between the house yard and the field, the line of maples to the north of the lane and the old field pattern, which, along with *Elms Lea* itself, represent the 19th century Marsh farmstead era of the property;
- (b) *Elms Lea* c.1864, the Alexander Marsh family residence throughout the latter half of the 19th century, which, with the transformation of the site into the DDO in 1935, became Observatory House, the home of C.A. Chant, 'the father of Canadian Astronomy' and the visionary behind the creation of the DDO;
- (c) the Observatory Building (originally known as the Great Telescope Dome) from which major discoveries of international importance were made including Helen Hogg's work on variable stars in globular clusters and C.T. Bolton's investigation of Cygnus X-1 as a black hole. The Observatory Building and especially the telescope also represents an important period in the development of astronomy in Canada and particularly at the University of Toronto – a period in which astronomy grew from its infancy as a faculty to where major world class discoveries were being made, the best known of which being the confirmation of 'black holes' by C.T. Bolton;
- (d) the Radio Shack from which the determination of the absolute flux density of Cas A at 320 MHz was made;
- (e) the original components which comprised the DDO at its initiation/dedication in 1935 – the Observatory Building (originally known as the Great Telescope Dome), Administration Building and Observatory House (*Elms Lea*). This event was considered of national importance (attended by the Prime Minister), and indeed throughout the British Empire;
- (f) the complex overall land pattern within the identified area. Comprised of the original survey grid field pattern overlain with the formal geometry of the Beaux Arts observatory core and the curvilinear road network containing all fields, lawns and plantings;
- (g) Donalda Drive, the curvilinear 'new' approach road named to commemorate the Observatory's patron Jessie Donalda Dunlap; and
- (h) the experimental tree plantation planted by University of Toronto's Dept. of Forestry as representing one of the founding objectives of the facility, i.e., its use by other academic disciplines.

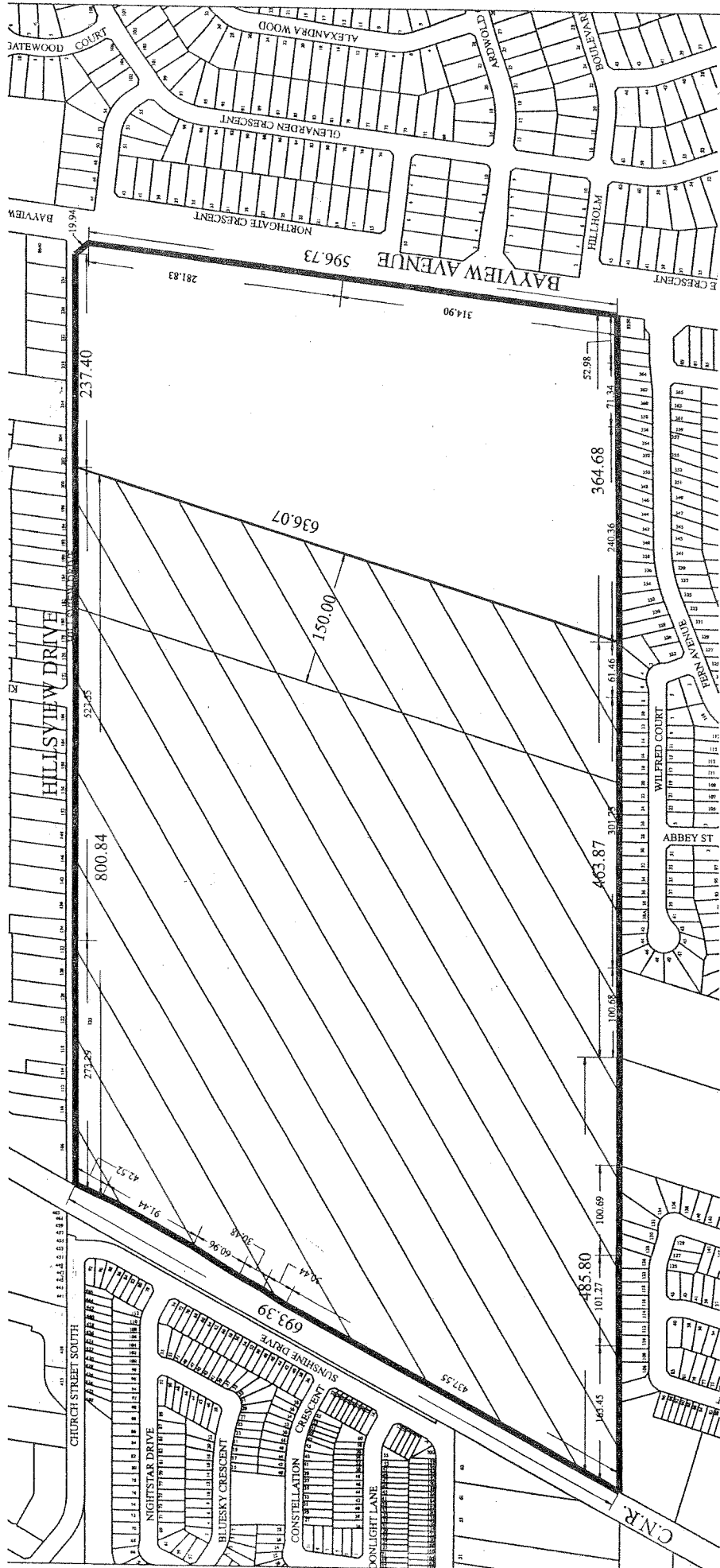
The following are the cultural attributes/relationships which express the contextual values of the Property:

- (a) as a result of its early insertion into the then rural landscape, its unique function and associated architecture, as well as its international reputation, the site is a landmark;
- (b) the traditional views to the west (toward Yonge Street) from *Elms Lea* and the Administration Building and the views to the Observatory Building and the Administration Building from the west (though now partially obscured by mature trees) reflecting the visual prominence of the structures sited at (the Observatory Building, the Administration Building) or near (*Elms Lea*) the top of the knoll ;
- (c) the views from the south to the Observatory Building, particularly along the direct north/south axis which was carried into the Town's design of Observatory Park on

the leased 'Panhandle' lands, reflecting its visual prominence having been sited at the top of the knoll;

- (d) the form of the Town designed Observatory Park, sub-division and adjacent buildings to the south reflecting the influence of the Observatory and its site design principles (the lands originally having been surveyed to provide an approach to the Observatory from the south);
- (e) the traditional relationship of the Observatory to the CNR line; and
- (f) the traditional relationship of the Observatory to Hillsview Drive, formerly the 'narrow lane' which divided Lot 43 into north and south halves.

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


Note: All dimensions are in metres

This is Schedule "B" to By-Law
 No. 100-09 passed by the Council
 of The Corporation of the
 Town of Richmond Hill on the
 14th Day of September, 2009.

SCHEDULE "B"
 TO BY-LAW NO. 100-09

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- Legend:
-  Cultural Heritage Landscape
 -  Observatory Lands

 Mayor Clerk

Appendix "B"
SRPD. 09-104
File(s) D12-07228



Richmond Hill Naturalists

Mayor Barrow and Council Members
Town of Richmond Hill
225 East Beaver Creek Road
Richmond Hill, Ontario
L4B 3P4

Without Prejudice

September 11, 2009

Mayor Barrow & Council Members:

**RE: Designating By-law for the David Dunlap Memorial Observatory Lands
Draft By-law No. 100-09, Contained in SRPD.09.092**

We would like to thank you and staff for again checking on our concerns regarding failure to receive notification of Town meetings regarding the David Dunlap Memorial Observatory Lands.

Following expression of our concerns made at the Committee of the Whole, September 8, regarding draft of By-law 100-09, designating of the David Dunlap Memorial Observatory Lands under the Ontario Heritage Act, we are providing you and planning staff (see attached) with changes to supplement the errors and omissions, resident in this draft.

We believe our requested changes are both reasonable and in accordance with recommendations made by the Conservation Review Board (CRB) and in agreement of closed door sessions among legal council of respective parties. In this respect, there was agreement the Pump House was to be protected.

As a time-saving courtesy, we have provided our requested changes in highlighted yellow, and in an unlocked document. We believe these changes help improve and further clarify the protective By-law of our Town's most valuable cultural resource, and to better conserve the property as required under the Ontario Heritage Act. In this regard, we have been succinct, and the nine-page draft By-law has only grown by 3 and a half pages.

In addition to these changes, we ask that the Schedules attached to the By-law be augmented with the addition of a third, "Schedule C", the map overlay used by Mr. Lee in his auto visual presentation to Council, with some amendments. Again, we believe this provide further clarity to the understanding of this matter. However, it would be more appropriate to a true representation of the features of the property, if the recent spring photograph was substituted for one taken in the fall. In this respect,

I offer use of our property photo, the exhibit exclusively relied upon at the CRB.

We believe using this photo of the property will resolve the placement of the far eastern line of the research tree plantations, which the Town has not yet correctly illustrated. Currently, the Town has

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