

COMMUNITY HERITAGE COMMISSION

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

**SUBJECT: ADAPTIVE RE-USE FOR FAIRACRES GARAGE AND STABLES
BUILDING**

RECOMMENDATIONS:

1. THAT Council authorize staff to advance the adaptive re-use of the Fairacres Garage and Stables building into design development, subject to funding approval as outlined in this report.
2. THAT Council authorize the use of Gaming Reserves in the amount of \$125,000 to finance further design, as outlined in this report.
3. THAT a copy of this report be forwarded to the Parks, Recreation and Culture Commission for information.
4. THAT a copy of this report be forwarded to the Financial Management Committee for information.

REPORT

The Community Heritage Commission, at its meeting held on 2020 September 10, received and adopted the attached report seeking authorization for the use of Gaming Reserves to finance design work to support the adaptive re-use of the Fairacres Garage and Stables building at 6344 Deer Lake Avenue.

Respectfully submitted,

Councillor C. Jordan
Chair

Councillor J. Wang
Vice Chair

Copied to:	City Manager Director Planning & Building Director Parks, Recreation & Cultural Services Director Corporate Services Director Engineering Director Finance
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TO: CHAIR AND MEMBERS
COMMUNITY HERITAGE COMMISSION

DATE: 2020 September 1

FROM: DIRECTOR PLANNING AND BUILDING
DIRECTOR PARKS, RECREATION AND
CULTURAL SERVICES

FILE: 77000 05

**SUBJECT: ADAPTIVE RE-USE FOR FAIRACRES GARAGE AND STABLES
BUILDING**

PURPOSE: To request the use of Gaming Reserves to finance design work to support the adaptive re-use of the Fairacres Garage and Stables building at 6344 Deer Lake Avenue.

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4. **THAT** a copy of this report be forwarded to the Financial Management Committee for information.

REPORT**1.0 BACKGROUND**

The Fairacres Garage and Stables building (also known as the “Ceperley Barn”) was constructed in 1911 as part of the Fairacres Estate, which was subsequently purchased by the Municipality of Burnaby in 1966. The estate mansion became the Burnaby Art Gallery, and the Garage and Stables building was used for storage by the Parks, Recreation and Cultural Services Department (PRCS). It was later used by Scouts Canada for storage.

In 1992, the original Fairacres Estate buildings were designated as protected City of Burnaby heritage resources. The Garage and Stables building underwent a major heritage restoration in

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Director Parks, Recreation and Cultural Services
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2011 that included replacement of its roof, restoration of its wood casement windows, and repainting of its exterior to a 1911 colour scheme.

The building was damaged by a fire in January 2018. At its 2018 February 01 meeting, the Community Heritage Commission requested heritage planning staff monitor the condition of the building and report to the Commission at a future meeting on the status of repairs.

Repairs and upgrades were subsequently completed through an insurance claim. The project made significant improvements to the building, including replacement of the roof rafters and installation of engineered trusses designed by a structural engineer. A report to the Parks, Recreation and Culture Commission on 2019 July 23 noted that use of the building for community/commercial storage is not permitted under the City’s Zoning Bylaw. An alternate storage location was subsequently arranged for Scouts Canada through the Parks, Recreation and Cultural Services Department.

At its 2019 November 28 meeting, the Community Heritage Commission provided direction to staff through its Two Year Work Plan to provide recommendations to Council on an appropriate adaptive re-use of the building (a copy of the Two Year Work Plan was subsequently received by Council at its 2019 December 16 meeting).

The following sections of this report summarize the result of the Adaptive Re-Use Study, propose an overall estimated project cost and schedule, and request authorization for use of Gaming Reserves for design development.

The 2020-2024 Financial Plan includes funding for design development in the amount of \$125,000 through the Gaming Reserves. With authorization from Council, a consultant will be engaged through an RFP process to complete the necessary design studies.

2.0 POLICY FRAMEWORK

2.1 Corporate Strategic Plan

Conservation and adaptive re-use of the Fairacres Garage and Stables building for community use aligns with the following goals and sub-goals of the *Corporate Strategic Plan*:

- ***A Safe Community***
 - Community amenity safety – Maintain a high level of safety in City buildings and facilities for the public and City staff
- ***An Inclusive Community***
 - Serve a diverse community – Ensure City services fully meet the needs of our dynamic community
 - Create a sense of community – Provide opportunities that encourage and welcome all community members and create a sense of belonging

- **A Dynamic Community**
 - City facilities and infrastructure – Build and maintain infrastructure that meets the needs of our growing community

2.2 Heritage Policy Framework

Burnaby’s Official Community Plan includes the direction under its Heritage Policy that the City continue its stewardship of civic heritage resources. The Municipal Heritage Policy for Municipally-Owned Buildings and Sites (1991) and Deer Lake Master Plan (1999) identify a significant grouping of municipal heritage assets at Deer Lake, and identify conservation and adaptive re-use of Deer Lake heritage buildings as long-term goals. Conservation and adaptive re-use of this protected heritage building within Deer Lake Park supports the City’s heritage policy objectives.

3.0 FAIRACRES GARAGE AND STABLES BUILDING

The Fairacres Garage and Stables building at 6344 Deer Lake Avenue is a two-storey, 302.5 square metre wood frame building that is located adjacent to the Fairacres Mansion in Deer Lake Park (currently home to the Burnaby Art Gallery). This heritage landmark is sited prominently on Deer Lake Avenue, across from the City Hall complex, located at a primary gateway to the arts precinct. The building was constructed in 1911 by Henry and Grace Ceperley as part of their 20 acre estate “Fairacres” (see *Attachment 1*). The four surviving outbuildings at Fairacres are a rare surviving architecturally designed ensemble of agricultural structures that exist in complementary harmony with the mansion (see *Attachment 2*). The Fairacres Estate is one of the primary historic features of Deer Lake Park.

The Deer Lake Master Plan (1999) recommends use of heritage buildings as arts facilities, and several examples of adaptive re-use of heritage buildings for cultural purposes can be found at Deer Lake. In addition to the seven protected heritage resources included within the Burnaby Village Museum, there are several heritage resources in Deer Lake Park used for cultural programming and administration, including Anderson House, the William and Mary Mathers Residence, and the Fairacres Steam Plant. An artist-in-residence program is being developed for the Drs. Blythe and Violet Eagles Estate and Dr. William and Ruth Baldwin House. While the Fairacres Chauffeur’s Cottage and Fairacres Root House are currently used by the PRCS Parks Division to support care and maintenance of the gardens and grounds at Deer Lake Park.

The incremental implementation of the Deer Lake Master Plan’s goals for conservation and adaptive re-use of Deer Lake heritage buildings for cultural activities enabled a cultural precinct to develop at Deer Lake, with a strong public demand for arts and cultural programming. The Garage and Stables building is located adjacent to the major cultural facilities at Deer Lake, including the Shadbolt Centre for the Arts and Burnaby Art Gallery.

4.0 PROPOSED NEW USE

4.1 Current Condition and Status

The current condition of the building is described in the Fairacres Estate Adaptive Re-Use Study by Donald Luxton & Associates (2020), which includes a structural assessment report by Ennova Structural Engineers. The report identifies that the building has a high level of architectural and historical significance, and many of its original heritage features are intact.

The structural assessment identifies several structural deficiencies required to enable use of the building for any form of occupancy, including upgrades to roof beams to add additional support to the new truss and rafters to increase the roof's capacity to support snow, upgrades to building structure to support floor loads resulting from use and occupancy, and seismic upgrades. The assessment provides recommendations to address the deficiencies to enable adaptive re-use of the building (see *Attachment 3*).

The building is currently without an approved use, as the six month hiatus of occupancy for repairs following the fire removed any previous non-conformities of both the BC Building Code and Zoning Bylaw compliance. The building, although repaired to an upgraded standard, does not currently meet BC Building Code standards for a compliant storage building, community use and/or public occupancy.

It is also noted that there is a lack of servicing to the building. While sewer and water connections are located adjacent to the building, these services are currently not connected. Building envelope upgrades are also required, as the building is currently un-insulated and not heated.

4.2 Adaptive Re-Use Study

An adaptive re-use study to review potential uses of the structure was undertaken by a working group comprised of City staff from Facilities Management, Parks, and Planning and the consultant team.

The Fairacres Estate Adaptive Re-Use Study (2020) provides recommendations for adaptive re-use of the Garage and Stables building for current consideration, and analysis of two other Fairacres estate outbuildings (the Chauffeur's Cottage and Root House) for future planning purposes. A Structural Assessment Report is included, as well as schematic designs for recommended uses, and Class D Cost Estimates.

Analysis of a range of uses was undertaken, including storage, programming, office, commercial, and public assembly uses. The uses were evaluated for their level of intervention to the building's heritage character, potential cost, and level of public benefit.

- **Low Level of Intervention:** Structural repairs and code upgrades, fire safety and security equipment installation, and minor functional upgrades could be implemented for a use that does not include occupancy (such as storage). Estimated cost: \$298,500.

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- **Medium Level of Intervention:** Structural repairs and code upgrades, fire safety and security equipment installation, and significant functional upgrades (including mechanical, electrical, and plumbing services) could be implemented for a non-commercial use that provides partial public assembly (such as cultural or educational programming on the ground floor, and non-commercial office use of the second floor). Estimated cost: \$1,243,000.
- **High Level of Intervention:** Structural repairs and code upgrades, fire safety and security equipment installation, and significant functional upgrades (including mechanical, electrical, and plumbing services), and full upgrading of the building envelope could be implemented for a full public assembly or commercial use (such as a restaurant or event rental venue). Estimated cost: \$2,178,000.

The report notes that higher levels of intervention result in higher costs, as well as higher levels of impact on the heritage fabric and character of the building (see *Attachment 4*). The report recommends the City pursue a medium level intervention use for the Garage and Stables Building (see *Attachment 5*). Combined programming and administration use is advanced as the best potential use for the building. This use would provide public access to the heritage resource while requiring interior upgrades that would enable retention of the historic character of the building.

4.3 Recommended Use

Staff support the consultant's recommendation that the best use of the building is to develop programming space on the ground floor, and to use the upper floor for related administration. This use requires a medium level of intervention.

The location of the Garage and Stables building adjacent to the Burnaby Art Gallery and Shadbolt Centre for the Arts within the Deer Lake Park cultural precinct provides an opportunity to incorporate operation of the building into the City's existing Cultural Services programming. The ground floor would provide space for visual arts programming space, and related administrative offices would be located on the upper floor. This use is permitted under the Zoning Bylaw, and is compatible with the recommendations of the Deer Lake Park Master Plan (1999) for adaptive re-use of Deer Lake's heritage buildings for public use, including arts programming.

As outlined in Appendix B of the Fairacres Estate Adaptive Re-Use Study (see *Attachment 6*), there is significant demand for visual arts programming at the Burnaby Art Gallery and Shadbolt Centre for the Arts that cannot be fully met by the existing facilities. Drop-in and registered visual arts programs are regularly over-subscribed, sometimes with wait lists exceeding the number of registrants. Demand for arts camps provides an example: in 2019 the combined waitlist for Pro-D day, spring break, and summer camps at the City's Deer Lake cultural facilities exceeded 1,100 registrants.

Visual arts programming offered by the City at Deer Lake is limited by lack of overall programming space, as well as the absence of a space designed specifically for visual arts

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programming. The Burnaby Art Gallery offers programming in the restored “Fireside Room,” at the Fairacres Mansion, but the space is not suitable for large groups or messy activities. The spaces used at the Shadbolt Centre for the Arts rely on participants being able to climb a set of stairs or negotiate a steep ramp, meaning that their visual arts programs are not fully accessible to students with mobility challenges.

Adaptive re-use of the ground floor of the Fairacres Garage and Stables building as an accessible, purpose-built visual arts space would increase access to visual arts programming and enable the City to expand programming to meet unmet demand.

While operating cost analysis was not included in this stage of work, it will be reviewed in detail at the design stage as part of an operating plan to be prepared by Parks, Recreation and Cultural Services. It is anticipated that registered programs will be run on a cost-recovery basis: program administration will be absorbed by existing staff, and program supply, marketing, and instructor costs will be off-set by program revenue. Building maintenance and depreciation costs will be included in the PRCS and Engineering base operating budgets should Council support the adaptive re-use of the facilities as outlined in this report.

5.0 PROJECT FINANCING AND SCHEDULE

Completion of an adaptive re-use study provides a schematic design and Class D cost estimates to enable the project to move into the design development phase.

5.1 Project Financing

Further study and design work is required, including design development, an operating plan, and landscape design. Design development work will be led by staff in Facilities Management, and include building design, servicing plans, costing, and code analysis as required. These expenditures are included in the 2020-2024 Annual Financial Plan and sufficient Gaming Reserves are available to finance the project outlined in this report.

Ceperley Barn Upgrades – Detail Design	\$125,000
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(BAX.0029)

Study and design work for an adaptive re-use of the Fairacres Garage and Stables building (also known as the Ceperley Barn). Work includes servicing plans, building code analysis, costing, and detail design.

Capital funding for construction will be submitted for consideration as part of the City’s 2021-2025 Financial Plan. The project is eligible for funding through the City’s Gaming Reserves. Based on the schematic design to-date, a total project cost of \$1,300,000 has been estimated, excluding taxes.

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5.2 Project Schedule

A project schedule has been produced based on the schematic design developed to-date and is included below:

Milestone	Date
Council Approval of Adaptive Re-Use and Design Development Funding	September 2020
Design Development and Contract Documents	November 2020 – August 2021
Council Approval of Design and Construction Funding	Fall/Winter 2021
Tendering	Spring 2022
Construction	2022

6.0 RECOMMENDATIONS

It is recommended that the Community Heritage Commission recommend Council authorize the use of Gaming Reserves in the amount of \$125,000 to finance further design, as outlined in this report.

At the completion of the detailed design phase, a further report will be advanced to the Community Heritage Commission and Council for approval of the detailed design, as well as funding approval for construction.

It is further recommended that a copy of this report be forwarded to the Parks, Recreation and Culture Commission, as well as the Financial Management Committee, for information.



E.W. Kozak, Director
 PLANNING AND BUILDING



Dave Ellenwood, Director
 PARKS, RECREATION AND CULTURAL SERVICES

LC:sa

Attachments

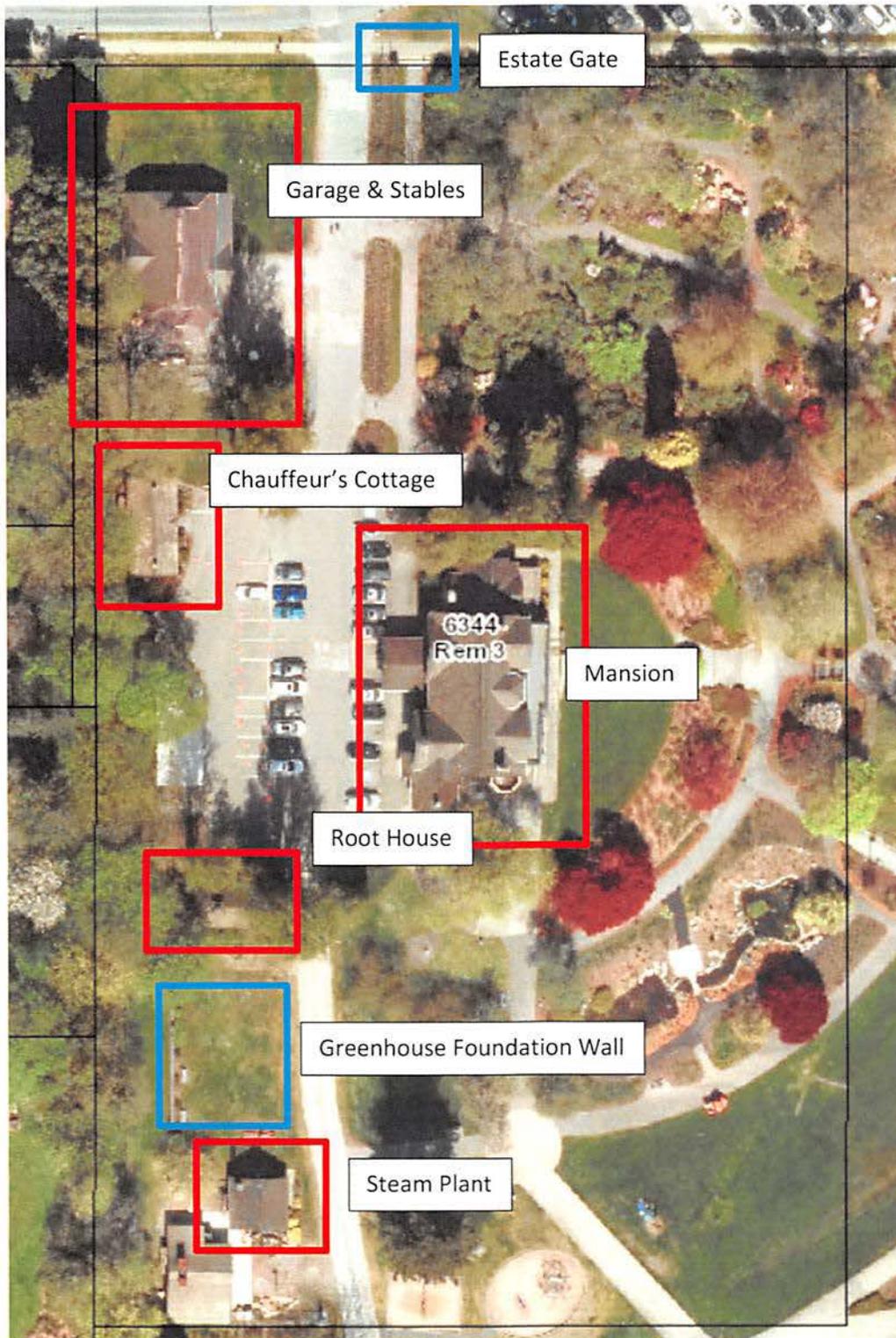
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 City Clerk



A 1915 photograph of the Fairacres Estate, with the Garage and Stables building visible on the right. Henry and Grace Ceperley are on the lawn in front of the mansion with their three children. (CBA 241-009)



Garage and Stables Building, 2019



Designated heritage resources comprising the Fairacres Estate. Buildings are outlined in red and landscape features are outlined in blue.



Recommendations (Reference SK1-SK5)

A. Barn Building

1. Reinforce or replace the built-up 2x10 beams that support the roof trusses.
2. Reinforce the intermediate line of built-up 2x4 beams that support the roof rafters or shorten the span of the built-up beams with addition supports between existing posts.
3. Place addition support under the valley of the west dormer.
4. Reinforce the floor joists to support both floor and roof load. Additional transfer beams will be required under heavy point loads from the roof structure.
5. Reinforce or replace the existing 6x6/6x8 beams in the north-south direction. Reinforce or replace the end span of the 6x6 beam in the east-west direction which is more than 9 foot long.
6. Add lintels above all windows and doors on the main floor.
7. Reinforce or replace the damaged joist over the crawl space.
8. Connect the timber posts and beams to the concrete foundation with steel plate or angles, fastened with drilled in anchors.
9. Seal off the crawl space floor or address the ventilation in the crawl space to minimize moisture built up in the crawl space.
10. Along the wall between the main building and the carriage storage adjacent to the raised floor, cut the existing floor plate near the base of the wall and lap on new studs to the existing studs to eliminate the hinge effect near the base of the wall.
11. Along the north wall of the garage and carriage stall, cut the continuous lintel on either side of the door openings and lap on new studs to eliminate the hinge effect.
12. Verify if there are footing at the foundation wall. Retain a geotechnical engineer to provide input on the bearing capacity of the existing foundation wall. Underpinning of the foundation walls may be required.
13. Add anchor bolts to connect the perimeter walls to the concrete foundation.
14. Replace the landscape masonry foundation on the west side of the carriage storage with reinforced concrete foundation wall.
15. Add plywood to the inside face of the exterior wall to improve the shear resisting capacity of the building. Strap down the ends of the wall with steel straps and hold down anchors.

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16. Depending on the future use of the building, replace all or part of the existing concrete slab on grade in the main building with new reinforced concrete slab on grade. The new slab on grade will be properly leveled and stepped to eliminate tripping hazard. The new slab can be tied in with the underpinning of the perimeter foundation if recommended by the geotechnical engineer.

B. Cottage Building

17. Remove the finishes on the exterior face near the bottom of the perimeter walls to check the physical condition of the existing floor beams. Replace and reinforce the beams as required.
18. Strategically place new concrete grade beams between the existing concrete piers at wall corners to provide addition lateral stability to the building or replace the concrete piers with reinforce concrete foundation walls around the perimeter of the building. Fasten the floor beams to the concrete foundation with steel angles and anchor bolts.

C. Root House

19. If the root house were to be used for any occupancies other than storage for which there will a number of occupants in the building regularly, the exterior walls should be reinforced to protect its occupants.
- Scan the wall for presence of reinforcing.
 - If the walls were already reinforced, no additional work will be required on the wall.
 - If unreinforced, one solution is to add continuous steel plates or angles to the inside face of the walls.
 - Alternately, construct new plywood shear walls or light gauge steel stud walls with diagonal steel straps around the inside face of the perimeter walls to act as shear walls and to support the exterior walls in the out of plane direction.
20. Strengthen the existing roof diaphragm with new plywood sheathing with proper blocking and nailing. Check and reinforce the connection between the exterior walls and the roof as required.

Closure

This concludes our report. We trust that the information provided in this report meets the project requirements at this time. Please contact the undersigned if there are any comments, concerns or questions.

Best Regards

Ennova Structural Engineers Inc.



Tim lam, P.Eng., Struct Eng.

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FAIRACRES ESTATE ADAPTIVE REUSE STUDY

3. GARAGE & STABLES



3.1 DESCRIPTION

Designed in the British Arts and Crafts style, the *Fairacres* Garage & Stables is a two-storey wood frame building located on the *Fairacres* estate, situated to the north of the Chauffeur's Cottage; at the south end of the structure is a single vehicle garage and to the north are several stables for carriage, riding, and draught horses, a coach house, and tack room; the upper floor was originally a hay loft.

3.2 HERITAGE VALUE

The outbuildings at *Fairacres* are a rare surviving architecturally designed ensemble of agricultural structures that exist in complementary harmony with the main estate house. Architect R. Mackay Fripp was retained by the Ceperleys to design all of the original outbuildings on their estate at the same time as the main house was constructed.

The barn was described originally as having space for five horses and two cows, harness room, hay loft and sleeping rooms for the coachmen. This building is important as a record of its era when transportation modes were in transition and the horse-drawn carriage, while still in use, was giving way to the automobile. The relative spatial arrangements within the building are a valuable indication of the economy of space associated with the automobile, as compared to the horse. The extent of the stabling

FAIRACRES ESTATE ADAPTIVE REUSE STUDY

arrangements signifies not only the use of carriage horses but also the continued reliance on draught horses in farming activities in this era. As well, it is an indication of the fashionable nature of equestrianism for wealthy families during this time.

The building is important as a demonstration of the aesthetics of the Ceperley family in having an architect-designed outbuilding and obtaining craftsmanship and materials of the highest quality for each structure on their estate.

Key elements that define the heritage character of the *Fairacres* Garage & Stables include its:

- location within easy reach of the main house and in close proximity to the Chauffeur's Cottage;
- floor plan with the garage at one end, close to the Chauffeur's Cottage, and stables and equine facilities at the other;
- variety and complexity of the roofline, including gable wall dormers, gable-on-hip roof ends, and half-hip extensions;
- Arts and Crafts architectural features of the exterior such as the shingle wall cladding articulated with a chevron-patterned course of shingles at the first floor level; casement windows; and deep eaves with additional purlins to support the overhang;
- original stable doors with hand-made forged-iron door hardware; and
- multi-paned wooden-sash windows, some retaining original wire glass.

Despite the recent fire damage, there are a number of interior features that represent the building's original uses and should be conserved, such as the original configuration of the floor plan, interior framing and tongue-and-groove siding.

3.3 BUILDING CONDITION ASSESSMENT

In 2010, a Condition Survey was undertaken of the Ceperley Barn, leading to a conservation project in 2011 that include structural upgrades to the roof and replacement of its asphalt shingles with cedar shingles.[Eric Pattison, Architect; Ennova Structural Engineers Inc.]. The building was subsequently damaged by fire, and architectural drawings for Fire/Water Damage Repair were prepared by Scott Gordon Architect in May 2018, with structural drawings by Envista Forensics, dated May 2018.

A further structural assessment has been prepared by Ennova Structural Engineers (see *Appendix A*), as follows:

- Review and assess the condition of the existing building structure
- Evaluate the conformity of the building structure to the current building code requirements
- Identify any code structural issues relating to the future uses of the buildings
- Discuss possible structural solutions to accommodate the future uses

The roof of the building was originally constructed with plank sheathing over 2x4 rafters spanning in the east west direction with collar ties. In 2011, the north gable end and lower hip was reconstructed with plywood sheathing on 2x6/2x8 framing and the shed roof over the single storey garage was reconstructed with plywood sheathing on 2x10 rafters. Repair work was also carried out on the east and west roof overhang where deteriorated rafters were replaced or reinforced. In 2018, the entire center section of the main roof was reconstructed with plywood sheathing on engineered wood truss following a fire.

FAIRACRES ESTATE ADAPTIVE REUSE STUDY



Current Interior Condition. Above: Ground Floor. Below: Second Floor.



DONALD LUXTON & ASSOCIATES INC.: AUGUST 2020

FAIRACRES ESTATE ADAPTIVE REUSE STUDY



Current Interior Condition. Above: Garage. Below: Rebuilt Extension.



DONALD LUXTON & ASSOCIATES INC.: AUGUST 2020

FAIRACRES ESTATE ADAPTIVE REUSE STUDY

In general, the Garage & Stables currently displays a number of structural deficiencies, as identified in the *Ennova Report 2020*. This include weaknesses with lateral force resisting systems, and the shear resistance of the building is estimated to be less than 65% of the code required capacity in the east-west direction. There are further deficiencies such as lack of strapping, anchoring and foundations.

Recommendations for structural upgrading are included in the *Ennova Report 2020*.



Garage & Stables in 1914. [City of Burnaby]

3.4 ADAPTIVE REUSE OPTIONS

3.4.1 POTENTIAL USES

Six potential permitted uses have been assessed as appropriate for the Garage & Stables. The commercial tenancy is not permitted but has been included for comparative purposes.

- **STORAGE:**
Use for storage would require minimal building upgrades, but would be a comparatively poor use for a heritage building, and would not allow public access to the interior.
- **PROGRAMMING SPACE:**
There is significant potential to introduce programming space into the building, either using all of both floors or else a split use with half the upstairs being staff offices. The City's Cultural Services department has expressed interest in taking over this building. A needs assessment is attached as *Appendix B*. Notably, the Shadbolt Centre does not currently have an accessible visual arts studio space, which could be provided in this building.

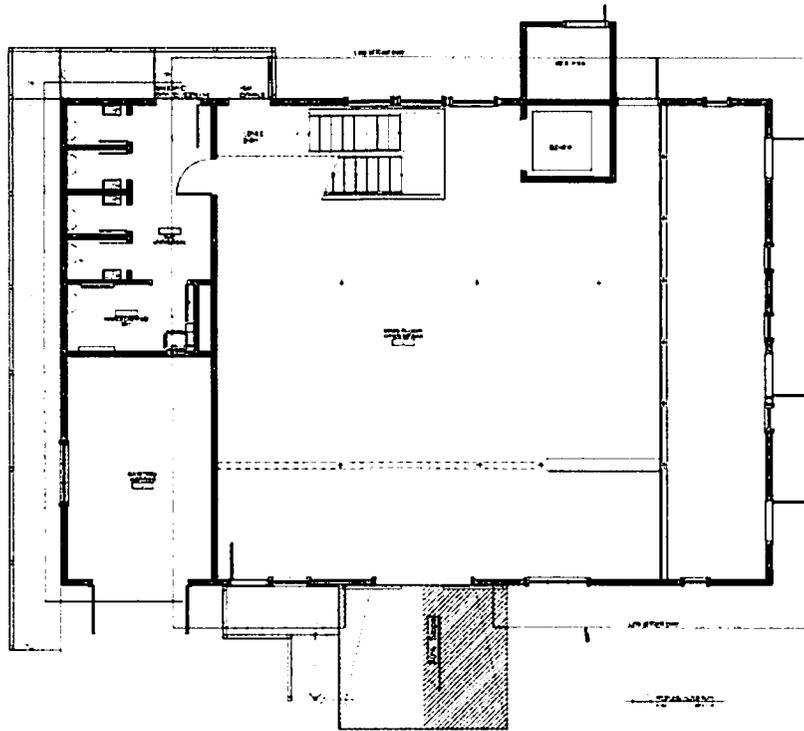
FAIRACRES ESTATE ADAPTIVE REUSE STUDY

- **NON-COMMERCIAL OFFICES:**
The building could be converted to office use, and could accommodate a maximum of 18 workers on the two floors.
- **PARTIAL PUBLIC ASSEMBLY:**
The ground floor could be turned into public assembly use on the ground floor, for event rentals, etc. This would, however, require structural upgrading to 4.8 kPa (100 psf), which would be exceptionally difficult to achieve while retaining the identified character-defining elements.
- **FULL PUBLIC ASSEMBLY:**
Upgrading the second floor to 4.8 kPa (100 psf) while significantly reducing deflection would have the greatest impact from a structural perspective, requiring interventions that would be highly visible and would also impact character-defining elements.
- **COMMERCIAL TENANCY:**
Commercial uses are not permitted by the Zoning Bylaw in a P3: Park and Public Use District, but were included for comparative purposes. Uses could range from a craft brewery to a coffee shop, small restaurant or gift shop. It is difficult to estimate potential revenue, as there are no viable comparables for this location, which lacks visibility and is not close to any significant populations. Commercial use would also require parking and signs, and may require significant tenant improvements, which could impact character-defining elements.

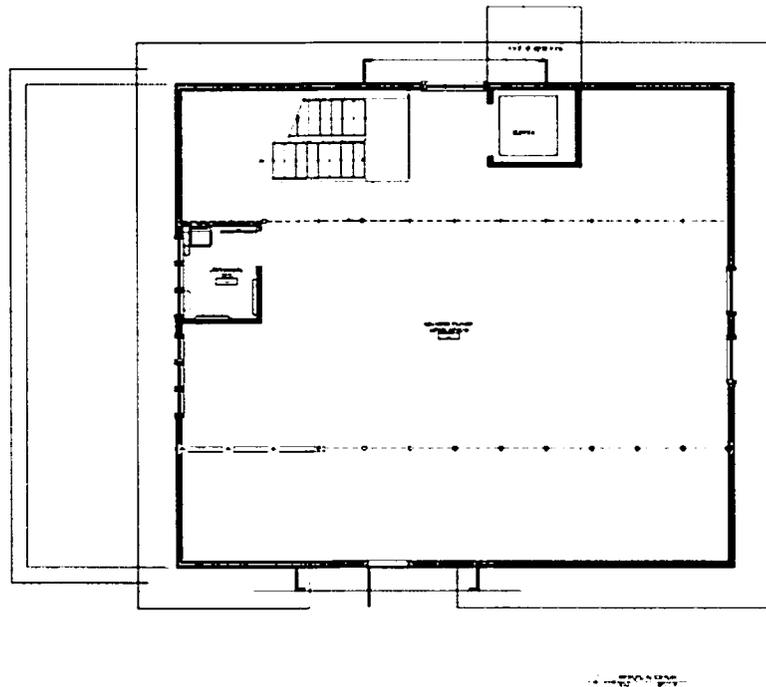
In order to determine base case potential costs, schematic layouts were prepared that would optimize efficient floor plans and circulation for any of these uses. The following assumptions were made regarding the level of functional intervention.

- Vertical access is grouped at the west side of the building, in a compact layout that takes advantage of the head height offered by the west dormer. The mechanical room for the LULA Lift is located outside the building in a shed structure on the west wall.
- A level ground floor is provided at the ground floor through the use of wooden infill structures that raise the floor to a consistent level, while leaving original concrete exposed.
- All ground floor entries are made accessible through the use of ramps.
- A staff entry is placed on the west side, to allow access to the upper floor that does not disturb operations on the ground floor. This could be further screened by partitioning, as required.
- Universal washrooms are provided on the ground floor in the southwest corner, in the original carriage stalls. This allows the washrooms to be accessed from both inside and outside, as required.
- An accessible washroom is provided on the second floor, positioned on the south wall so that the plumbing runs can connect to the plumbing below. Allowance has been made for a pipe chase on the ground floor.

FAIRACRES ESTATE ADAPTIVE REUSE STUDY



Above: Ground Floor, Schematic Layout. Below: Second Floor, Schematic Layout.



FAIRACRES ESTATE ADAPTIVE REUSE STUDY

3.4.2 LEVEL OF UPGRADE

Different uses will require different levels of code upgrades and interventions to the interior. As per **Section 2.1 Conservation Approach**, the following need to be considered for any adaptive reuse of the structure.

- All work will be undertaken according to the *Standards and Guidelines for the Conservation of Historic Places in Canada*.
- Any contemplated uses should allow for an approach of minimal intervention.
- Any interventions should demonstrate a high degree of compatibility and reversibility.
- Appropriate protection will be provided as required through life safety upgrades, including accessibility, sprinklers and alarms.
- Building upgrades, including mechanical systems, will respect the historic integrity and authenticity of the buildings.

The extent of potential intervention may be categorized as follows:

- **LOW INTERVENTION**

If the building is to be used for storage, there are no occupancy requirements. There are, however, life safety measures that must be introduced to ensure the safety of the resource, expected to include sprinklers and an appropriate alarm system. A number of measures in the ***Ennova Report 2020*** would also be required to ensure structural stability, and interior retrofits would be required to maximize the functionality of the space. The second floor would remain inaccessible. Costs would, however, be lower than would be anticipated for other uses.

- **MEDIUM INTERVENTION**

For most of the uses, a simplified approach to upgrading would be appropriate, as follows:

- Structural repairs and code upgrading as outlined in the *Ennova Report*.
- Installation of a sprinkler system throughout the building.
- Fire and security alarms as required.
- Constructing wooden platforms on the lower level to “fill-in” the old horse troughs to bring the floor to one level plane.
- Construction of a code-compliant stair to the second floor.
- Accessible access to the second floor would be provided by a lift system (LULA Limited Use/Limited Application hybrid between a commercial elevator and a wheelchair lift).
- Accessible universal washrooms would be provided on both floors.
- Limited upgrades to the wall assemblies and windows, retaining original fabric.
- Insulation of the second floor roof.
- Building / rebuilding of minimal demising walls.
- New MEP, including three utility sinks on the ground floor for cultural programming / art class use).
- New tongue-and groove panelling on the interior (no insulation).

FAIRACRES ESTATE ADAPTIVE REUSE STUDY

• HIGH INTERVENTION

In addition to the above, further cost would be added if there is a full upgrading of the building envelope to current code, including rain screening and insulation, which would result in the loss of original material and character-defining elements. In addition, some of the uses, such as full public assembly use or commercial use, may require a higher level of tenant improvements such as new flooring and drywall finishes throughout.

3.4.3 POTENTIAL COST

The final anticipated costs relate to level of intervention required to achieve necessary structural, code and functional upgrades. In general, the costs will be higher if the level of impact and intervention is higher, as these costs are directly related. The following preliminary cost estimates have been provided by the BTY Group, 2020; please refer to **Appendix E** for the full cost estimates.

	LOW INTERVENTION	MEDIUM INTERVENTION	HIGH INTERVENTION
Floor Area	1,830 sq. ft.	3,250 sq. ft.	3,250 sq. ft.
Cost per Square Foot	\$163 psf	\$382 psf	\$670 psf
TOTAL COST	\$298,500	\$1,243,000	\$2,178,000

3.4.4 PUBLIC BENEFIT

The public benefit of the adaptive re-use relates to:

- The extent to which the heritage resource can be used, experienced and enjoyed by a wider number of people, so the extent to which it is publicly accessible.
- A use that provide the greatest amount of public benefit (such as publicly accessible programming both inside and outside the building).

3.4.5 OCCUPANT LOAD

The potential occupant load is difficult to determine in advance of the development of a final design, and further consultation with the Authority Having Jurisdiction. Much of the floor area would be exempted (circulation, washrooms, etc.) and the second floor has space that is not full height, affecting the calculations.

Classrooms require 1.85 square meters / person [net floor area]; the interpretation for classroom use assumes rows of seating.

Group A; Division 2: Public Assembly

- Main Floor: ± 170 square metres Gross Floor Area [1,830 sq. ft.]
Assume Net 60% = 102 square meters NET = 55 total
- Second Floor: ± 132 square metres Gross Floor Area [1,420 sq. ft.]
Assume Net 60% = 80 square meters NET = 43 total

Vocational shops and office uses each require 9.30 square meters. Cultural or educational program space may allow a variety of options, including flexible seating, movable work tables, etc. and could allow use by some 35 to 40 persons on the ground floor. Use for a facility such as printmaking classes could accommodate up to 20 people. If the upstairs had partial office space and a large programmable space of about 40 square meters each it could accommodate about four office workers and about 20

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program participants; as program space it could accommodate approximately 35 people. Full use as office space would allow approximately 10 workers on the main floor and 8 on the second floor.

3.4.6 ADAPTIVE REUSE SUMMARY

POTENTIAL USE	P3	POTENTIAL IMPACT	POTENTIAL COST	PUBLIC BENEFIT	COMMENTS
Storage	Yes	Low	Low	Minimal	Will require building upgrades
Programming Space	Yes	Medium	Medium	High: Public Access	Can be sensitively accommodated
Non-Commercial Offices	Yes	Medium	Medium	Low: Limited Access	Can be sensitively accommodated
Partial Public Assembly	Yes	Medium	Medium	High: Public Access	Can be sensitively accommodated
Full Public Assembly	Yes	High	High	High: Public Access	Requires more intrusive upgrades
Commercial Tenancy	No	High	High	Low: Limited Access	Requires more intrusive upgrades

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6. RECOMMENDATIONS

The historic outbuildings of the *Fairacres* Estate present a unique challenge for adaptive re-use, given many limiting constraints, including their:

- location within a public park.
- relative isolation within the park.
- relatively modest size and limited floor plates.
- fragile historic character, which could be easily damaged by intrusive alterations.

In order to determine the most appropriate uses for the building, this study reviewed a variety of factors, in order to determine the best possible balance of:

- heritage conservation.
- utility and function.
- minimal levels of upgrade.
- reasonable costs.
- level of public benefit.

Through this process, it was concluded that the following uses offered the best potential for successful adaptive reuse of the structures:

GARAGE & STABLES:

- A combined cultural programming and office/administrative use that occupies both floors.
- Upgrade as required for structural and life safety considerations.
- Minimal interior upgrading to retain the historic rustic vernacular character of the interior.
- Minimal envelope upgrading.

CHAUFFEUR'S COTTAGE:

- A cultural programming use.
- Upgrade as required for structural and life safety considerations.
- Sensitive interior adjustments to maximize available open floor space.
- Minimal envelope upgrading.

ROOT HOUSE:

- Minor interventions to support outdoor programming.

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B: NEEDS ASSESSMENT FOR VISUAL ARTS PROGRAMMING SPACE

CULTURAL PROGRAMMING IN THE DEER LAKE PRECINCT

The *Fairacres* Garage & Stables building is located in Deer Lake cultural precinct, where over 580,000 visitors annually access cultural programming offered by the City, including visiting the museum, attending concerts and performances, participating in special events, and attending art exhibitions. Cultural Services facilities in the precinct include the Shadbolt Centre for the Arts, Burnaby Village Museum, and Burnaby Art Gallery.

The Shadbolt Centre for the Arts delivers programming at the main Shadbolt Centre for the Arts building, as well as in adjacent buildings that include Mather's House, the *Fairacres* Steam Shed, and the outdoor wood-fire kiln. Anderson House serves as an administration centre for Cultural Services staff. The Burnaby Art Gallery is located in the 1911 *Fairacres* Mansion, and the Burnaby Village Museum is an outdoor museum located on a 10-acre site with several heritage and replica buildings used for exhibits, programming, and administration.

VISUAL ARTS REGISTERED PROGRAMS

Community participation in the arts includes registering for programs and workshops. More than 7,500 people register annually in visual and performing arts programs at the Shadbolt Centre for the Arts and Burnaby Art Gallery. Cultural Services also hosts a wide range of drop-in programs and events, including artist talks and special events. Annual attendance for drop-in programs at the art gallery exceeds 1,500 visitors, and attendees from some programs are turned away when attendance outpaces room capacity. Registered visual arts programming includes courses and workshops to teach a range of art forms that create a work that can be seen and touched, such as drawing, painting, photography, print-making, sculpture, and ceramics. Demand for visual arts programming is strong: 4,225 students registered for visual arts programs at the Shadbolt Centre for the Arts and Burnaby Art Gallery in 2019, with an additional 6,296 students participating in visual-arts based school programs offered by the gallery.

UNMET DEMAND

Waitlists provide evidence of unmet demand for arts programming. The Burnaby Art Gallery's wait list for spring break and summer camps in 2019 was 54 students. Though the total number is small, the ratio of wait list to registrations at the gallery is significant. The average wait list for summer camps at the gallery in 2019 was 7 students for camps that could hold only 10 to 12 students. One camp had 10 students registered and 16 on the waitlist, and another had 14 on the waitlist. The wait list for 2019 spring break camps exceeded the total number of children registered for the program. At the Burnaby Art Gallery, demand is far exceeding what the gallery can offer due to limited programming space.

In 2019, the Shadbolt Centre for the Arts had 854 students on their combined waitlists for performing and visual art spring break, summer, and pro-d day camps, while the Burnaby Village Museum had a waitlist of 284 students for their art and heritage themed camps in 2019. Combined, the City's cultural services facilities are unable to provide camp space to more than 1,100 students who are placed on waitlists (and an unknown number of others who do not put their names on waitlists).

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LIMITATIONS OF CURRENT VISUAL ART STUDIO SPACE

Harder to measure than wait-lists is the demand for programming that is never planned or offered because of a lack of purpose-built visual art studio spaces that support a wide range of visual arts programming. The Burnaby Art Gallery, in particular, is limited in the types of visual arts programming it can offer in its existing space. For example, the gallery is known for its exhibitions and collection of prints, but can only offer a very limited range of print-making courses due to the size of the equipment required, and the potential of inks to stain the heritage interior of the mansion.

Visual arts programming at the gallery is offered in the Fireside Room, which is a wood-paneled room originally designed as a billiard room for the 1911 designated *Fairacres* Mansion that is now home to the gallery. The room contains several architecturally-significant heritage features.

The Fireside Room can accommodate a maximum of 15 students for a class that requires use of tables and art supplies. Children's classes are generally capped at 10 to 12 students to allow sufficient room for instructors, supplies, and learning activities. The types of art activities that can be offered are limited: many wet and/or messy activities cannot be offered in order to protect the heritage features.

The Shadbolt Centre offers visual arts programming in multi-purpose rooms located on the second floor of Mather's house and on the ground floor of the Shadbolt Centre. The multi-purpose room dedicated to visual arts programming at the Shadbolt Centre is accessible only by stairs or a steep ramp, while the Mather's house does not have elevator service to the second floor. The SCA therefore has no fully accessible visual arts studio space, and has to turn away students with mobility challenges from many of its visual arts programs.

BENEFITS OF A PURPOSE-BUILT VISUAL ARTS STUDIO

A purpose-built, accessible visual arts studio could be used for workshops and courses for a variety of visual arts processes, and be furnished and equipped to support a broader range of visual arts programming while enabling the City to include more students with mobility challenges in its visual arts programs.

Though a more detailed revenue and expense model will be developed in the detail design phase, staff anticipates that a significant expansion of visual arts programming could be offered at the *Fairacres* Garage & Stables building if it were used as a visual arts studio. Programs can be operated on a cost-recovery basis: program administration can be absorbed by existing staff, and program supply, marketing and instructor costs off-set by program revenue. The focus for expanded services will include: Burnaby Art Gallery school programs, visual arts camps, visual arts registered programs, and visual arts special events. Allotment use is also being considered.

Burnaby Art Gallery School Programs

At present, the Burnaby Art Gallery is limited in its ability to offer on-site school programs that include gallery tours and hands-on art activities. The Fireside Room programming space cannot accommodate more than 15 students at a time for hands-on art programming. The gallery therefore limits school visits to one class at a time, which is divided into two groups during the visit to enable half the class to experience a gallery tour while the other half engages in a hands-on activity.

The gallery's school program delivery model limits attendance, as many schools want to be able to take two classes to the same location for a field trip, to share the cost of bus transportation. Limitations on

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use of the space to protect its heritage character likely also reduce demand for school programming at the gallery, as other galleries in the region offer a diverse range of hands-on arts programming in purpose-built studio spaces.

To overcome space limitations and meet community need, the gallery offers outreach programs that can be delivered in classrooms by BAG instructors, or by classroom teachers. At present, there is significantly more uptake for the outreach programs than the gallery visits (in 2018, the gallery served 1,138 students through onsite programs, and 4,207 through outreach programs**).

It is anticipated that availability of programming space at the *Fairacres* Garage & Stables building would increase demand for on-site school programs at the Burnaby Art Gallery by enabling two classes to visit at the same time, and by allowing the gallery to offer a wider range of hands-on arts programming. As a comparison, the Richmond Art Gallery delivers on site school programs that feature gallery tours and hands-on art activities that served 2,817 students in 2018. The popular on-site school programs at the Burnaby Village Museum were accessed by 11,887 students in 2019. With these comparisons in mind, target attendance for the Burnaby Art Gallery's school programs with the use of a visual arts studio at the *Fairacres* Barn & Stables building is 3,000 students per year.

Spring Break, Summer, and Pro-D Day Camps

A visual arts studio at the *Fairacres* Garage & Stables with a capacity for 30 students could create 510 visual arts camp spaces, which could accommodate almost half of the students from the combined Cultural Services camp waitlists. Camps not only provide a rich learning experience for participants, but are also serve the childcare needs of many local families.

Visual Arts Registered Programs

It is anticipated that Burnaby Art Gallery school programming would be the primary user of the Garage & Stables studio space during weekdays when school is in session, and that camps would be the focus during spring break and summer. On weekends, late afternoons, and evenings the studio would be available for other visual arts registered programs, events, and allotments.

Capacity for registered programs (excluding camps) is estimated at 1,400 students per year, based on 100 programs per year with an average of 14 participants. At present, both the art gallery and Shadbolt Centre offer a broad range of registered programs which could be augmented by additional program offerings at the new studio space. In the case of the art gallery, operations would be shifted to offer most hands-on programming in the Garage & Stables studio, freeing up the Fireside Room for allotments, lectures, and some adult programming.

The Garage & Stables studio has the capacity to support expansion of the popular ceramics program, which is one of the highest demand visual arts programs offered by the City. The program serves local residents and draws visitors from throughout North America to participate in special programs and workshops. In 2019, there were 479 ceramics students on waitlists for 2,646 spots.

Existing facilities include dedicated ceramic studio spaces at the Shadbolt Centre and Mather's house, and a small indoor workroom and outdoor kiln adjacent to the Burnaby Art Gallery. Located adjacent to the outdoor kiln, a visual arts studio space at the *Fairacres* Garage & Stables building could be used to expand ceramics programming by allowing for retreats, workshops, and lectures to be held in the precinct, close to the ceramics studios and outdoor kiln.

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Visual Arts Events

Both the Shadbolt Centre and Burnaby Art Gallery offer drop-in visual arts programs, including artist talks, family drop-in programs, and tours.

At the gallery, professional development workshops for teachers, curatorial lectures, and Family Sunday drop-in programs regularly draw attendance that exceeds the allotted space. The limited space available for programs constrains, and sometimes prohibits, the visitor experience. Use of a visual arts studio at the *Fairacres* Garage & Stables building would allow the gallery to double its registration maximum for camps, public and school programs enabling increased enrollment to meet the demands of the growing community. An estimated attendance of 1,400 annual visitors is based on 40 events per year with an average of 30 participants.

Allotments

It is also anticipated that BAG revenues for allotments would increase if a studio space were created at the *Fairacres* Garage & Stables, as the Fireside Room will be more available for rentals. In 2019, allotment users generated \$5,493 in rental revenue from use of the Fireside Room. It is anticipated that this revenue would double with increased availability of the room if an alternate programming space were available.

There is also the possibility of accommodating allotments in the Garage & Stables building, possibly through development of an enclosed outdoor space. Landscape design will be part of the next phase of planning.

SUMMARY OF POTENTIAL PROGRAMMING

The table below provides a summary of potential visual arts programming attendance that could be offered at the facility by Cultural Services:

Program type	Anticipated annual attendance
Spring Break, Summer, and Pro-D Day Camps <i>Estimated 10 weeks of summer camps, 2 weeks of spring break camp, and 5 days per year of pro-d day camps.</i>	510
Visual Arts events (such as lectures, artist talks, and demonstrations) <i>Estimated 40 events per year with an average of 30 participants</i>	1,200
Visual Arts Registered Programs <i>Estimated 100 programs per year with average of 14 participants</i>	1,400
Burnaby Art Gallery School Program Visitors <i>Estimated 120 class visits with average of 25 students per class</i>	3,000
TOTAL	6,110

** 2018 figures have been used, as the gallery was closed for 3 months in 2019 for restoration of the Fireside Room. School program statistics for 2019 are therefore atypical.