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**Conservation Examination and Assessment of Public Art
Burnaby Mountain, Kamui Mintara Sculpture Park
Burnaby Art Gallery**

**Allison Collins
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City of Burnaby, BC**

***Project Report 2024 for Kamui Mintara, “Playground of the Gods” Burnaby Mountain,
Kushiro Park.***

A conservation assessment project to decide best steps to preserve the pieces that compose the work Kamui Mintara, Playground of the Gods has been carried out as proposed, 11 May 2023.



Summary Overview

The sculpture installation, Kamui Mintara “Playground of the Gods” was completed in 1990 and officially opened on Burnaby Mountain’s Centennial Park in July 1992. The artwork was carried out by Japanese Ainu artist, Toko Noburi, with the assistance of his son Toko Shusei. Previous

examinations and recommendations by AT Conservators Ltd. have been provided to the City of Burnaby for the past 21 years at this point. Many of the conditions noted over the years have been dealt with through rotating annual treatments. The results have kept the sculptural installation in a stable state over that period of time. AT Conservators was first involved in a survey beginning in 2003 and developed a treatment plan for preservation which has been carried on since the first treatment project took place in 2006. Subsequent treatments have taken place on a rotational basis over the years since then.

The sculpture installation has been visited several times in 2024 to make observations, perform tests and record information. Photographs were taken of the installation from different angles as well as overall shots of each part of the installation and details of areas of concern. The photographs are all in digital format and stored in our files at AT Conservators Ltd. Copies of the photographs can be supplied on request. Diagrams of each unit, from #1 - #12, were produced in the past and remain available in our files, along with an overall diagram of the site.

As time continues to pass, levels of deterioration have increased and steps to counter the wear and weathering of the surfaces and structures have become more challenging. The compulsion to carry on as usual with repetition of treatments that have worked in the past is at a stage requiring serious review.

Categories of Findings

The findings of conservation examinations of the entire installation in 2023 and 2024 can be broken down into three large general categories, 1.) surface deterioration of the wood, 2.) structural weakening and movement of the wood and 3.) landscape effects on the individual units. All of these factors of condition have to be seen in the perspective of safety to the public and any staff or workers on the site.

I will review the 3 categories of condition assessment from the general overall condition of the landscape first; structural issues secondly, and then the surface conditions.

Landscape Effects

The landscape as an issue has to acknowledge the slope of the site. The larger main units of the installation are on the steeply sloping upper half of the whole site. The slope descends westward down to a relatively flat area which holds another significant number of the sculptural units, some of these units are smaller, and this is one of the areas where concern lies now.





There have been 2 significant issues that have occurred in this area. In 2007, Unit #7 “Whole Ocean” (whale on frame), totally collapsed in a windstorm. Structural failure occurred at the base of all four vertical beams of this unit and were observed at the time to be the result of active fungal rot taking place at the ground level. This collapse was followed by a total rebuild of the original structure with all new, engineered products, and the reinstallation of an original sculptural form (the whale), on top of the new sculptural structure. This new installation took place in 2015 and photos of the preparation of the in-ground concrete foundations for the structure reveal apparently moist soil. Attention to analysis of the soil conditions were not considered important at this time as concrete foundations were being cast in place for support of the new wood columns.

The second serious issue in the landscape category, was the collapse of a standing pole unto its mate pole of Section A, Unit #7, part of the ensemble “Whole Ocean” which was noted for the first time 15 October 2020. The collapsed pole ended up leaning safely against the other half of the two part unit. The pole had to be removed from its location as soon as it was recognized as a failure and danger. During the removal in July 2021, it was observed and photo-documented that the ground level area of the pole was completely infiltrated with the same fungal rot as witnessed earlier in the very close-by location. The 2nd remaining standing pole appears to still be stable in the ground, but it is of concern now given these observations of possible ground water build-up in the area below the large slope of the parkland. The possibility of ground water retention in this area would contribute to the growth of fungal rot leading to deterioration at ground level.

These two incidents of natural failure due to fungal rot caused by excessive moisture and lack of drainage in the area are cause for further concern. I continue to monitor this location and the remaining poles in the vicinity, but it is difficult to ascertain the extent of potential failure without conducting serious intervention to the bases of the poles in the area. I also am recommending ground stratification testing in these areas with moisture level readings taken at the same time.

In-ground issues remain constant around the whole site, but the above defined areas encompass a significant part of the collection and further monitoring needs to be carried out. Another part of the whole installation, referred to as Unit #2, “The Direction” is also a sculptural unit requiring further investigation and on-going monitoring. This 2024 report concludes with the same recommendation for on-going monitoring and further testing. This unit with the long extended pole is supported by a 2 post and cross beam structure which have been observed with deteriorating conditions in the past. Other issues, involving access and climbing have gone on for years with difficulties in terms of management of the public and the potential for harm from falling. The 2023 report states the structure itself is a concern for its stability. This 2024 report concludes that it is still an on-going concern.



Overall, of the western slope of the site, Unit #2, “The Direction”, centre, is noted as in need of monitoring on a regular basis.



Unit #2, "The Direction", is noted as in need of monitoring on a regular basis.



Unit #1, "The Gods & the People", is noted as in need of monitoring on a regular basis.

Structural Issues

Structural conditions as noted from frequent and recent 2024 examinations appear to be relatively stable at present around the site in general. The central Unit #1 "The Gods and the People", has deterioration in the attachment areas of the added poles attached to the principal 6

standing in-ground poles. Other poles with attached elements also need continued monitoring for structural changes. For example, Units #3&4 both have attached beaks and Unit #8 has attached carved post elements. These attached elements have all been examined with assisted binocular views and appear to be stable at present.

In this 2024 report, it is being noted for the first time that the central solo pole column appears to be sloping more than in previous photo records. A recommendation to monitor movement of this unit and the poles in this area is a new addition to the overall monitoring of the elements of the installation.

Surface Conditions

The final category of examination is surface conditions. It has been noted now for several years that surface conditions are deteriorating at a noticeable rate. A map of the site names 12 individual groupings of carved poles. The actual inventory lists 29 poles or logs, or sections of logs. All of these units are bare wood. There is no surface coating on any of the elements except for end-grain caps of zinc metal on tops of the principal poles which were installed during the 2007-2008 treatment projects. Over the years of rotating annual treatments, surface applications of a water repellent coating were applied by hand sprayer. These coatings have probably been effective for periods of years allowing rates of deterioration to slow as long as their coating lifetime lasted. Deterioration of all surfaces is continuing throughout every season of the year. Since the 2018-2019 treatments, conditions are reported as continued weathering and somewhat stable for now.



Unit #1, detail of “The Gods and the People”. Note conditions of exfoliation of surface wood grain and surface weathering.

In 2016, during treatment, it was reported that the Playground of the Gods was suffering from extensive deterioration especially of the “The Gods and The People”, Unit #1. This principal Unit #1 of the Playground of the Gods, as mentioned, is composed of 6 large cedar poles set in the ground with a large number of smaller, thinner carved poles attached between 5 of the 6 larger poles. It was suggested that some of these attachment poles be replaced, as it was felt then that they were definitely deteriorating at a rate faster than the larger, red cedar structural poles in the ground.

Condition Summary and Maintenance Proposal

In this 2024 report, all of the wooden units are continuing to deteriorate to some degree overall with weathering a major factor and surface water or rising damp affecting the bases of most of the vertical columns and as noted with special concern for the flat region at the bottom of the slope. The overall weathering has affected the surfaces by wind abrasion and ultra-violet light breakdown of surface wood. Naturally forming checks and cracks exist throughout the entire installation. The direction of weather conditions has a predictable outcome on the wood condition. On the north sides of all poles, the surface remains damp longer and deterioration has advanced further. In these areas on some of the poles there is a lichen and moss growth. These biological factors are also contributing to moisture retention. Around the bases, the north side is slower to dry by evaporation and the resulting conditions of deterioration are further advanced.

Conservation Maintenance Recommendations

To address surface deterioration issues an overall conservation plan needs to be developed for the site with cleaning and borate preservation treatment recommended based on a new treatment proposal for a conservation program in 2025. Due to past cases of insect infestation a re-newed treatment with Tim-bor is advised to be included again in a new Treatment Proposal for the maintenance steps.

To address the potential structural issues, on-going monitoring of the site should be taken to a professional level with special notice of conditions in the vulnerable landscape locations. Monitoring methods should be moved to an engineering level in order to receive precise measurements. The recommendation to monitor sloping pole units in the central main grouping (the Gods and the People”) is important. This should be done at a professional level.

Curatorial input is needed to discuss a reinforcement system for the vertical poles. Security support intervention is recommended from engineering input for best methods. A conservation suggestion for discussion is to provide pole support by inserting new in-ground application of up to 3 new support poles per unit of vertical pole, to a recommended depth to be determined up to 4 feet (1.2meters), of a 4 inch (10cm.) diameter round support metal pipe to be driven into the ground next to the surface of the vertical pole units. Equipment is available to perform this operation after planning and approval. A structural metal band wrap could be considered if deemed necessary.

The overall conservation plan for the whole installation should involve curatorial staff of the Burnaby Art Gallery for input towards a long-term review of plans for the site.



The totem poles on the lower slope of the hillside are on flatter ground and are a concern for moisture retention and subsequent fungal rot of wood at ground level.

Plan for Treatment Recommendations

- This report recommends curatorial input to conservation planning.
- Engineering input is advised for monitoring angles of leaning units.
- Review proposed preventive steps in this report.
- Options decided from review to be developed into treatment proposals for approval.
- All treatments to be documented through all steps by photos and written report.
- Seasonal and long range site project planning with Park Event Planning.
- On-site preparations, barriers to protect the site. Barriers to BC Public Safety Standards.
- Set up scaffolding and supports as required, and/or provide “Genie” lift equipment for access to tops of poles on the lower bench area as agreed in curatorial consultations.
- Steps to include overall surface dry cleaning to remove dust and airborne particles by dry methods with various soft bristle brushes, soft wooden scrapers, as required, all by hand methods only.
- As required, stabilize deteriorated wood and consolidate with West System boatbuilding epoxy and fillers.
- Clean by aqueous and mild detergent cleaning.
- Follow aqueous and mild detergent cleaning with a complete rinse using spray of clean water, by hose from water supply.
- Apply borate wood preservative, 10% solution "Tim-Bor" to surface by hand sprayer.
- Remove or reduce any surface marks and graffiti mechanically.
- Allow surfaces to dry
- Prepare surfaces for new water repellent
- Apply water repellent to all surfaces overall.

- Provide any repair or reinforcement of zinc metal caps as required to end grain at the tops of the poles.
- Install new boron/copper rods “Genics Post-Guard” at 4 locations (NSEW) to all poles in the ground.
- Final clean up and take down of equipment on-site.
- Final report.



The location of the sculptures on Burnaby Mountain is difficult to access with lift equipment due to the angle of the slope. As a result, treatments in the past have been undertaken from scaffolding. It has been observed through on-site practical treatment work, that the poles imbedded in the slope of the hill appear to be more stable than those located on the lower flatter area of the installation.

I look forward to further discussions on the future steps for the installation.

Respectfully Submitted:  Andrew Todd

28 October 2024

