

## Histories of Change: Unearthing Sixty Years of Transformation at Burns Bog

Neither land nor water, but a balancing act between the two, wetlands are landscapes constantly in flux<sup>1</sup> holding within them histories of change. Between the south arm of the Fraser River and Boundary Bay in Delta, BC, peatlands – wetlands characterized by layers of peat formed through the accumulation of partially decayed organic matter – which we now know as Burns Bog, span 3000 hectares. Dense layers of sphagnum moss blanket the land, storing carbon, supporting rare plant and animal species, and helping preserve the stories which exist within this landscape. These peatlands exist on the traditional, unceded territories of the Tsawwassen, Semiahmoo, Stó:lō, Katzie, Kwantlen, Kwikwetlem, Musqueam, and Tsleil-Waututh First Nations, and have only carried the name ‘Burns Bog’ for the last 80 years. The histories held by the land travel far beyond its name. From the beginning of its formation 11,000 years ago at the end of the Fraser Glaciation to its transformation to a raised bog ecosystem around 3,000 years ago<sup>2</sup>, Burns Bog can and should be thought of through a lens of deep time. However, as we reflect upon sixty years of landscape architecture in British Columbia, examining the vast transformations which have shaped the bog over this shorter time scale can help to simultaneously reveal transformations in the cultures of design, development, and conservation within the profession. Landscape architecture, much like Burns Bog, is not easy to define – both are continually being made and remade through shifting practices and the formation of new relationships.

Looking back sixty years finds Burns Bog in a growing state of ecological devastation. The hundred years prior had been largely dedicated to the colonial drainage and conversion of its wetlands into ‘productive’ and ‘profitable’ agricultural land. The bog, however, resisted this transformation as water levels continued to rise, flooding farm fields and drowning cattle on the ranch of Dominic Burns (a wealthy businessman and the namesake of the bog)<sup>3</sup>. With the land deemed unsuitable for agriculture, a new extractive relationship with the bog was formed. While the BCSLA was born in 1964, peat mining was rapidly intensifying at Burns Bog with the development of new extraction methods, including hovercrafts equipped with large clamshell

---

<sup>1</sup> Daniel Wolff and Dorothy Peteet, “Why A Marsh,” *Places Journal* (May 17, 2022).

<sup>2</sup> Jonathan Ho, Sarah Howie, David Tsang, and Rachel Wiersma, *A Comprehensive Guide to Burns Bog*. Delta: Burns Bog Conservation Society (2004).

<sup>3</sup> Ho et al., *Guide to Burns Bog* (2004).

diggers and air-floating barges<sup>4</sup>. Peat mining began at the bog in the 1940s, supplying the United States government with peat to utilize in the formation of firebombs during World War II, as well as being used for agricultural and household heating purposes. Within forty years, over 1600 hectares of the bog had been subject to peat extraction and/or the impacts of associated processing plants and transportation routes<sup>5</sup>. The water table of Burns Bog was significantly lowered in the process, leaving dry and flammable upper layers of peat which resulted in more frequent and severe fires in the bog, and allowed tree species such as birch and lodgepole pine to encroach and outcompete bog plants<sup>6</sup>. Peat mining operations in the bog ceased in 1984<sup>7</sup> as it became less profitable and competing interests for the bog's land grew.



Fig 1. Peat extraction at Burns Bog, BC Archives, (1947).



Fig 2. Patterns left in the bog from peat mining, City of Delta, (n.d.)

Over the next twenty years, Burns Bog was used as a landfill for the City of Vancouver, a site for cranberry monocropping, and as land for private hunting clubs, while other proposed developments for the bog included a deep-sea port, a sewage lagoon, a racetrack, and a “Disney-like” theme-park<sup>8</sup>. At this point, the exploitation of the bog could be read in the land itself. Portions of peat, water, and plants were forcibly confined to property lines<sup>9</sup>, hindering the natural ebb and flow of water through sphagnum and rendering the bog as a static landscape in the

<sup>4</sup> Bill Burns. 1997. *Discover Burns Bog*. Vancouver: Hurricane Press.

<sup>5</sup> Wayne Biggs. 1976. “An Ecological and Land Use Study of Burns Bog, Delta, British Columbia.” MSc Thesis, University of British Columbia.

<sup>6</sup> Richard Hebda, Kent Gustavson, Karen Golinski, and Alan Calder. 2000. *Burns Bog Ecological Review Synthesis Report*. Environmental Assessment Office, Province of British Columbia.

<sup>7</sup> Jonathan Ho, Sarah Howie, David Tsang, and Rachel Wiersma. 2004. *A Comprehensive Guide to Burns Bog*. Delta: Burns Bog Conservation Society.

<sup>8</sup> Joy Foy, “No More Goofy Plans for Burns Bog - Shared Vision,” Wilderness Committee (1999).

<sup>9</sup> Cameron Butler, *From Reclamation to Conservation: A History of Settler Place-Making in Burns Bog, British Columbia*. MEnvr Thesis, York University, (August 31, 2019)

minds of many observers. However, as the late twentieth century progressed, a new level of attention was being given to ecological and hydrological study at the bog, and more conscientious thinking about landscape design and management prevailed. Scientists and conservationists increasingly fought developers' plans, advocating for the bog's restoration and educating the public on the benefits of the functional bog ecosystem, from water and air filtration to habitat for rare and migratory birds. Finally, after years of public outcry, four levels of government purchased Burns Bog in 2004, developing a management plan which was implemented three years later and placing most of the land under an ecological covenant.<sup>10</sup> As a part of the plan, a landscape architect with the City of Delta has been managing the hydrological restoration of the bog since 2005. More than 450 dams have been built in drainage ditches throughout the bog, successfully raising the water-table and encouraging the peat formation process.



Fig 3. Burns Bog Landfill, City of Vancouver Archives, (1986).



Fig 4. Natural regeneration of sphagnum moss at Burns Bog, City of Delta, (n.d.)

Today, only a small portion of the bog is accessible to the public through a five-kilometer trail and boardwalk known as the Delta Nature Reserve. The decision to minimize human presence in the bog was a conscious design choice guided by the prevailing logic that Burns Bog needed to be protected from public hands in addition to being saved from private hands<sup>11</sup>. This logic, of course, holds implications for Indigenous sovereignty by failing to recognize that Coast Salish stewardship and management systems have sustained these lands for thousands of years. While the Conservation Management Plan for Burns Bog states “respect[ing] First Nations rights that may exist to access Provincial lands for ceremonial and traditional uses” as an objective<sup>12</sup>, it

<sup>10</sup> Burns Bog Conservation Society, “Modern History of Land Use.”

<sup>11</sup> Joseph Ruttle, “Bog used for grow-ops.” *Delta Optimist* (June 3, 2006).

<sup>12</sup> Metro Vancouver, *Burns Bog Ecological Conservancy Area Management Plan*. Burnaby, (2007).

lacks specific action points to ensure Coast Salish access to the bog and instead focuses on diverting Indigenous practices away to other nearby sites<sup>13</sup>. Despite this, Indigenous land-use holds precedent. The Katzie First Nation continue to catch salmon along the Fraser River north of the bog, as well as gather berries and root plants in the wetlands, and the Tsawwassen Nation continue to visit important hunting, plant, and material harvesting sites at Burns Bog<sup>14</sup>.

Walking the boardwalk trail, one is kept at an intentional distance from the surrounding more-than-human life of the bog. It is hard to imagine all the histories embedded within the landscape – the hands of farmers, peat miners, landfill employees, hydrologists, and designers who have shaped this landscape over the past hundred and fifty years. And the hands of Coast Salish peoples who have largely been displaced by or erased from these narratives, but who maintain strong relationships with the bog. Landscape design and management has informed both the version of Burns Bog that was transformed and used intensively, and the version that was protected but not encouraged to be used by humans. In 2024, landscape architects are well positioned to collaborate with First Nations in imagining and realizing a holistic system where Burns Bog can be both protected and used responsibly. Through design decisions which may begin to encourage the gentle entanglement of human and more-than-human spaces, landscape architects can help guide restoration that focuses on relationships rather than productivity.



Fig 5. Hand-built dam in a bog ditch, City of Delta, (n.d.)

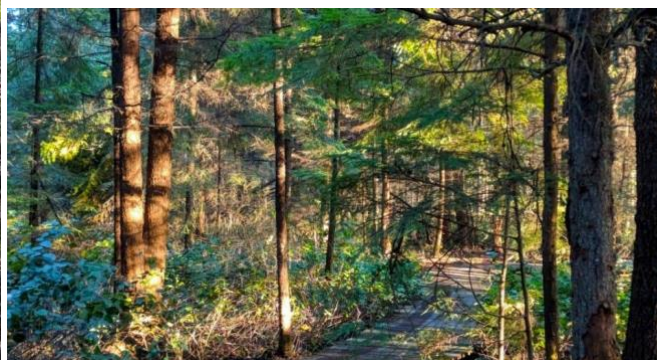


Fig 6. Delta Nature Reserve, City of Delta, (n.d.)

Burns Bog has changed drastically over the last 60 years in its physical reality, its ecological state, and in our human imaginaries. From peat mine to landfill to cranberry farm to

<sup>13</sup> Butler, Cameron, *From Reclamation*, (2019)

<sup>14</sup> Environmental Assessment Office, *South Fraser Perimeter Road Project Assessment Report* (2008).

natural reserve land, the bog has transformed alongside settler relationships to wetlands and the practices reflected by them. Burns Bog is constantly changing and will continue to do so, and landscape architecture can learn from these unearthed histories of change. Burns Bog encourages us to question notions of productivity both from a development and a conservation perspective, asks what it means to design for a landscape in flux between land and water, and brings attention to the potential of conservation to either uphold colonial human-land paradigms or to affirm Indigenous sovereignty. Like Burns Bog, landscape architecture as a discipline is always changing. How it changes, the relationships we foster, and the practices we use, may be unearthed in the land for generations to come.

### Bibliography

BC Archives. "Burns Bog, Delta", 1947.

Biggs, Wayne. "An Ecological and Land Use Study of Burns Bog, Delta, British Columbia." MSc Thesis, University of British Columbia, 1976.

Butler, Cameron. *From Reclamation to Conservation: A History of Settler Place-Making in Burns Bog, British Columbia*. MEnvr Thesis, York University, August 31, 2019.

Burns, Bill. *Discover Burns Bog*. Vancouver: Hurricane Press, 1997.

Burns Bog Conservation Society. "Modern History of Land Use - Society," July 16, 2020.  
<https://burnsbog.org/modern-history-of-land-use/>.

City of Delta. Burns Bog Photo Gallery. <https://www.burnsbog.ca/media-galleries/photo-gallery>

Environmental Assessment Office. *South Fraser Perimeter Road Project Assessment Report*, 2008.

Foy, Joy. 1999. "No More Goofy Plans for Burns Bog - Shared Vision," Wilderness Committee.

Hebda, Richard, Kent Gustavson, Karen Golinski, and Alan Calder. *Burns Bog Ecological Review Synthesis Report*. Environmental Assessment Office, Province of British Columbia, 2000.

Ho, Jonathan, Sarah Howie, David Tsang, and Rachel Wiersma. *A Comprehensive Guide to Burns Bog*. Delta: Burns Bog Conservation Society, 2004.

Metro Vancouver. *Burns Bog Ecological Conservancy Area Management Plan*. Burnaby, 2007.

Ruttle, Joseph. 2006. "Bog used for grow-ops." Delta Optimist, June 3, 2006.

Wolff, Daniel and Dorothy Peteet. "Why A Marsh," *Places Journal*, May 17, 2022  
<https://doi.org/10.22269/220517>.