

# *Still A **Live** Wire !!*

*Dawson Falls Power Station*



*Where is it?*



*Dawson Falls  
Power Station*



# *What is it?*

- *Small stand-alone hydro power station opened in 1934 comprised of a:*
  - \* *concrete weir (for catchment)*
  - \* *steel penstock (624 metres long)*
  - \* *turbine / governor / generator / switchboard (all in the powerhouse)*
  - \* *open tailrace*

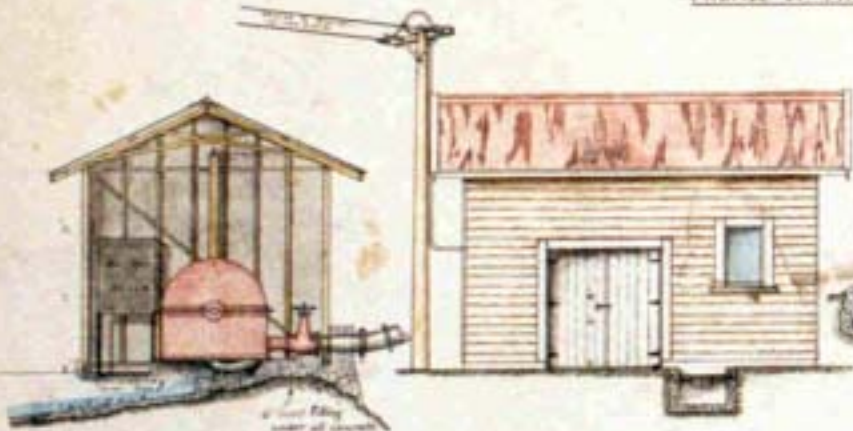


# *Key facts*

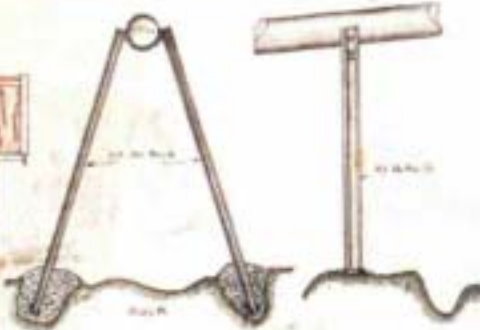
- *Designer:* Thomas Overton, MIEE
- *Owner:* DOC
- *User:* Dawson Falls Mountain Lodge



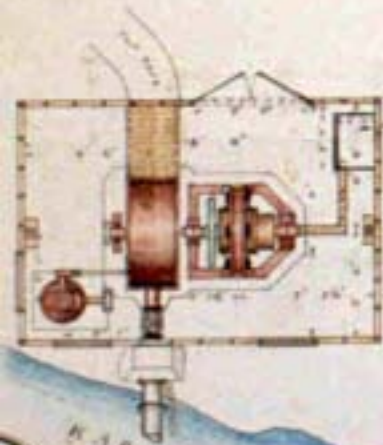
-PROFILE OF PIPE LINE-



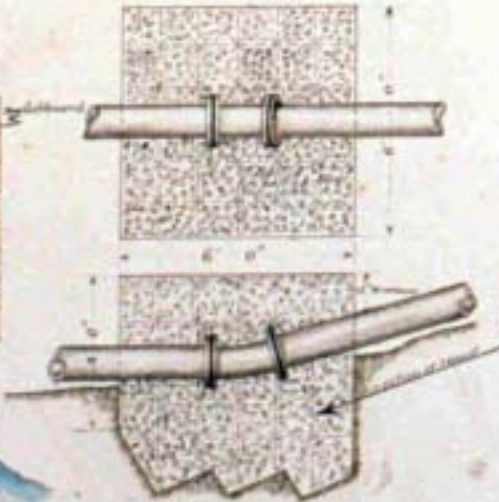
-POWER HOUSE-



-DETAIL OF RIVER CROSSING C&D-



KAPUKI RIVER



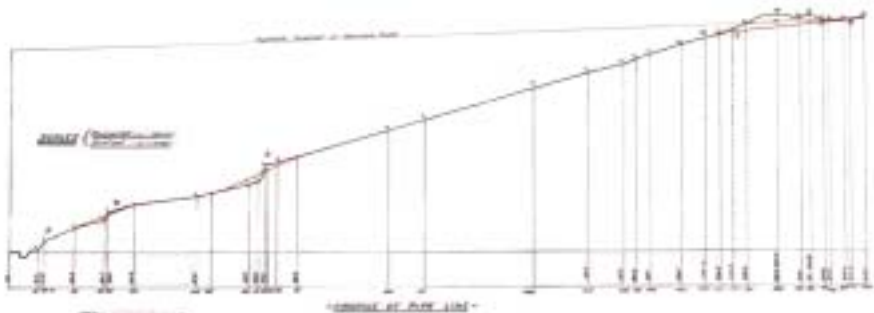
-DETAIL OF MAIN ANCHOR-



-DETAIL OF ANCHORS-

Scale 1 inch = 2 feet.

**-ECMONT NATIONAL PARK BOARD-**  
**HYDRO-ELECTRIC INSTALLATION AT DANFORTH FALLS**

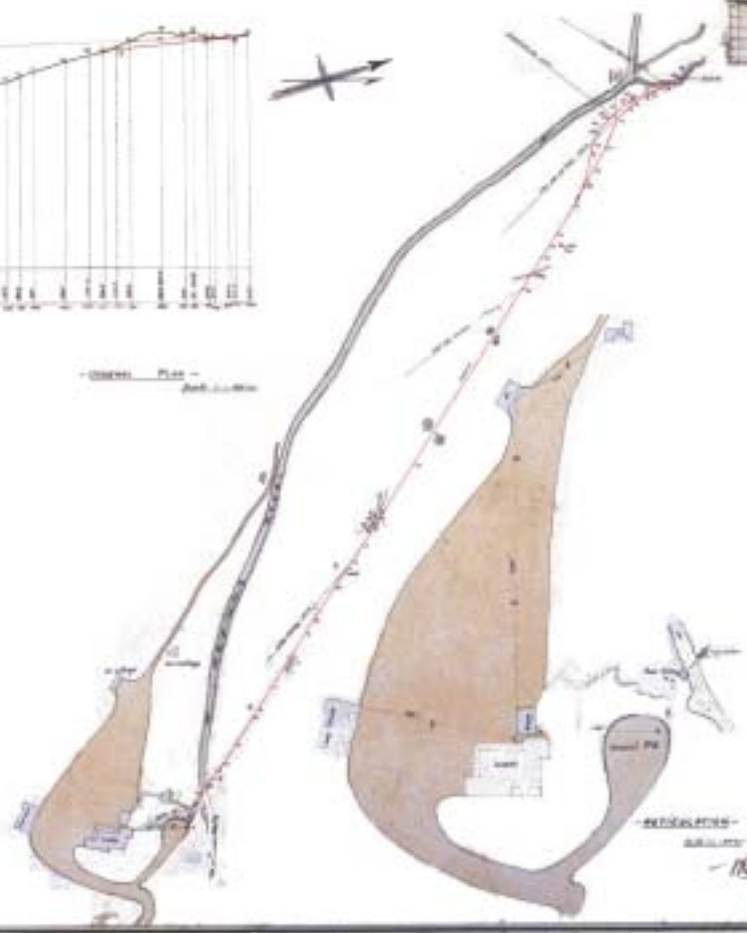


—ELEVATION OF DAM LINE—

—APPROXIMATE CONCRETE MASS—



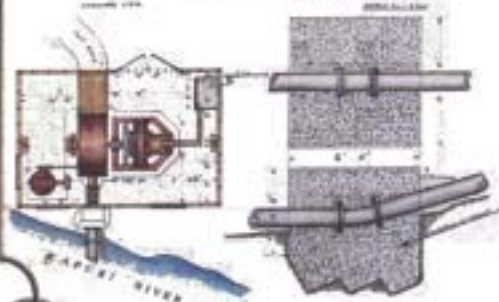
—GENERAL PLAN—



—REGULATED  
—SILL—



—POWER HOUSE—



—DETAIL OF MAN BRIDGE—

—DANFORTH RIVER—

*W. B. ...*  
**Consulting Engineer**

1914

# *Why Was It Necessary?*

- *1930s tourists demanded better lighting and heating facilities in the Lodge*
- *Connection costs to other electricity supplies were too great*



# *What are its characteristics?*

- *Began:* *June 1934 (70 years ago)*
- *Potential output:* *74.8 kW (100 hp)*
- *Actual output:* *about 29.5 kW (40 hp)*
- *Supply:* *340 A at 220 VDC*

# *Why has it lasted so long?*

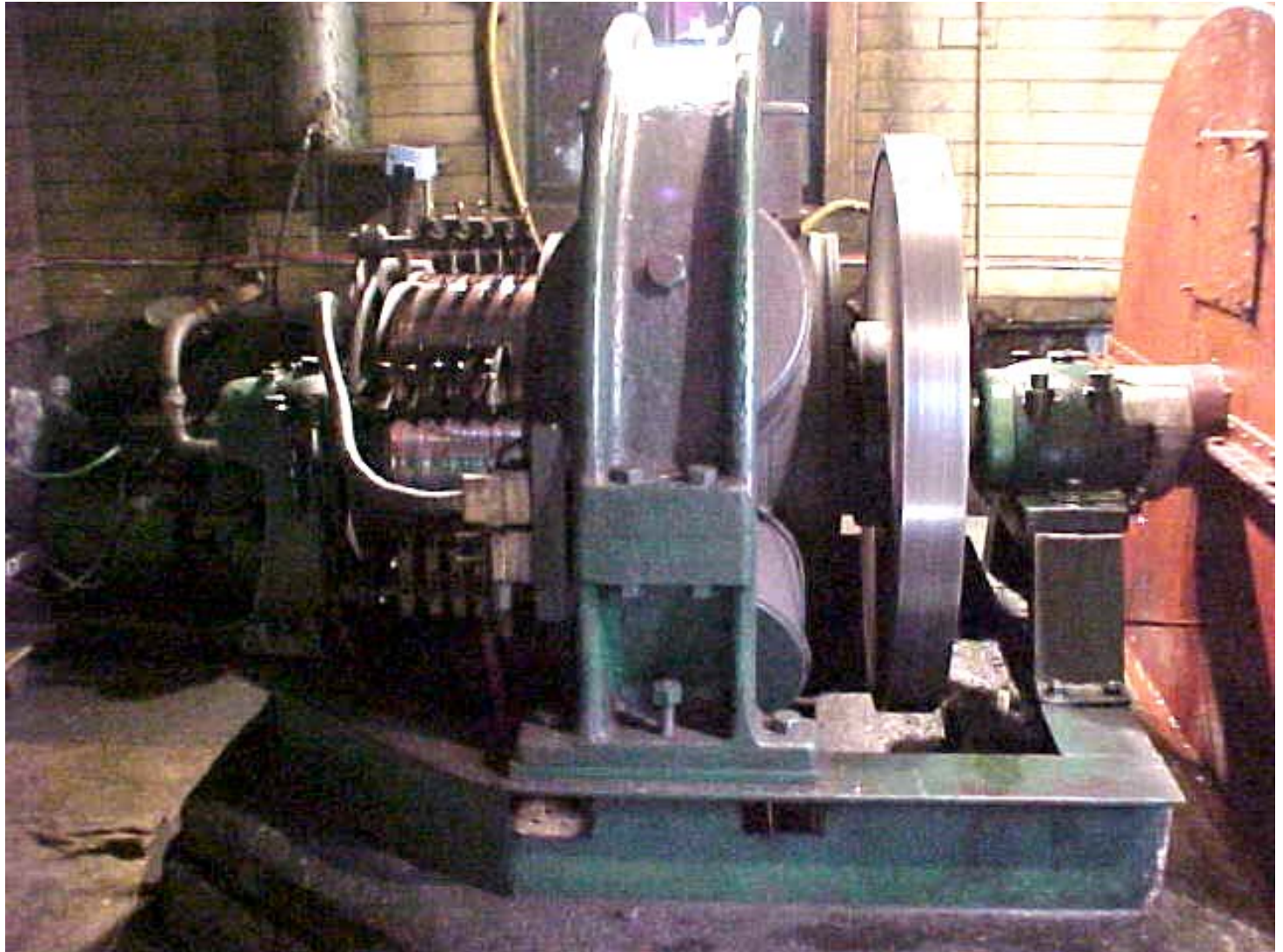
- *Reasonably reliable*
- *Well maintained during its life*
- *Limited demand for its output  
(about a third of its capacity)*
- *Lack of resources to replace it*

# *The Generator*

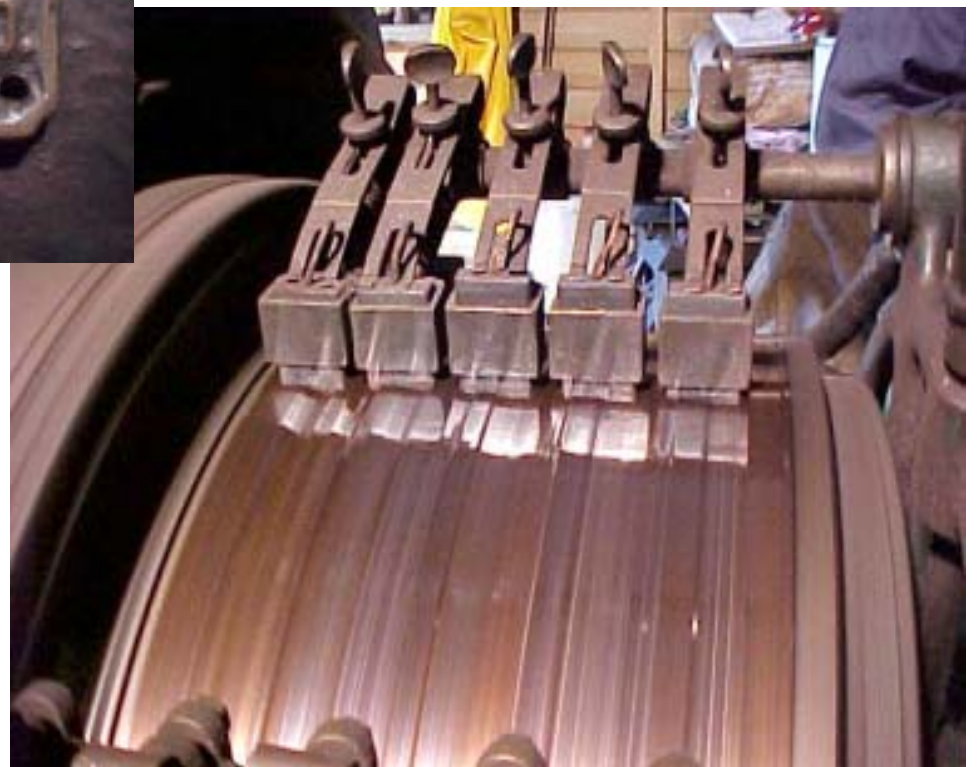
The “heart” of the station



# *The Generator*









# *Direct Current Generator*

- *Constructed about 1899 by GE of USA*
- *Sold by Defence Department in 1918*
- *Bought by Kelburne and Karori Tramway Co for £101 (today's equivalent is \$8,252)*
- *Acquired by Egmont National Park Board in mid 1930s from the Kelburn Cable Car winding house*
- *Operational at Dawson Falls from June 1934*

# *The Governor*



# *The Weir*





# *The Penstock*



# *The Penstock*





# *A “Gibalt” Joint*



# *What is its future?*

- *continue supplying power to the Lodge*
- *progressive upgrading*
- *improved interpretation on site*
- *improved presentation and visitor access*

# *Community Involvement?*

- *Strong community interest –  
echoing the innovative role that Taranaki had in the  
early 20th century in electrical developments in New  
Zealand*
- *Taranaki Energy Trust is contributing to  
the upgrading of the station*

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