

#### 4.2.1

### Nithvale Bridge

Score: 60

North Dumfries Township



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## Documentation

### Builder

The builder of the original wooden Nithvale Bridge is unknown. The replacement bridge constructed in 1857 was designed and built by Mr. William Scrimger of Galt. The current bridge built in 1873 was constructed by Mr. Alex Mathison for \$1,426.00.<sup>7</sup>

### Age

In 1847, the original wooden truss bridge was built. This bridge was replaced in 1857 and later replaced again in 1873 with the current truss bridge. The current Nithvale Bridge was built at the beginning of the truss bridge era and is very important because it is the oldest of all of the truss bridges in the Region.<sup>8</sup>

## Technology

### Materials

The current bridge deck is made of 2x4 planks covered with pitch and tar.”<sup>9</sup> The bridge frame is made of iron and steel.<sup>10</sup> Using both steel and iron makes this bridge important as most older bridges built with iron have now been replaced.

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<sup>7</sup> Taylor, Andrew W. Our Today's and Yesterdays. Ontario Canada: 1970.

<sup>8</sup> Taylor, Andrew W. Our Today's and Yesterdays. Ontario Canada: 1970 & Historic Bridges of Michigan and Elsewhere, “Promoting the Preservation of our Transportation Heritage”, January 20, 2006.

<sup>9</sup> Spanning the Generations – Phase 1: Inventory, “Nithvale Bridge,” May 2004, p. 1.03 -1.04.

<sup>10</sup> Robinson, Stephen & Seedhouse, Tracie. Grand Old Bridges: The Grand River Watershed Bridge Inventory Report Prepared for the Grand River Conservation Authority. April 6, 2004.



## Design/Style

The Nithvale Bridge is an 8-paneled, single span, pin-jointed, Pratt Through Truss bridge.<sup>11</sup> Being a pin-jointed bridge, the Nithvale Bridge was easily constructed by hand. If it were riveted together, it would have required the work of highly skilled bridge crews and equipment.<sup>12</sup>

## Prototype

The Nithvale Bridge is one of the first built (1873) steel Pratt Truss bridges still in existence within the Region. The late 1800s was a time of transition in material usage, where wrought iron was being superseded by steel.<sup>13</sup> This is probably why the current bridge has been constructed with both materials.

## Structural Integrity

In 1856, the Nithvale Bridge was repaired at the same time that the Ayr (Piper Street) bridge was being replaced: a saw miller, “Robert Anderson supplied planks and timbers, and Robert Hall put them in.”<sup>14</sup> In 1883, Lachlan McIntosh received \$125 for repairing the Nithvale Bridge after severe flooding on the Nith River damaged the structure.<sup>15</sup> In 1914, the Hamilton Bridge Company added a span to the south end of this bridge – a short steel girder bridge.<sup>16</sup> Since 1967 the bridge has been closed to vehicular traffic due to safety concerns. In 1990, it was stated that it was in poor condition: “the north end (of the bridge) had dropped about ten inches” and “some of the metal support beams [had] rusted



<sup>11</sup> Historic Bridges of Michigan and Elsewhere, “Promoting the Preservation of our Transportation Heritage” & Spanning the Generations – Phase 1: Inventory, “Nithvale Bridge,” May 2004, p. 1.03 -1.04.

<sup>12</sup> Spanning the Generations – Phase 1: Inventory, “Nithvale Bridge,” May 2004, p. 1.03 -1.04.

<sup>13</sup> David Cuming, Discovering Heritage Bridges on Ontario’s Roads, 1988 Part 2, p. 41.

<sup>14</sup> Andrew W. Taylor. Our Today’s and Yesterdays. Ontario Canada: 1970, p. 224

<sup>15</sup> Andrew W. Taylor. Our Today’s and Yesterdays. Ontario Canada: 1970, p. 224 & Ayr News. “Ayr’s Bridge over Untroubled Waters Gets Regional Historical Designation,” February 15, 2006.

<sup>16</sup> Spanning the Generations – Phase 1: Inventory, “Nithvale Bridge,” May 2004, p. 1.03 -1.04 & North Dumfries Township Local Government, “LACAC Historic Ayr Walking Tour”, February 11, 2003.

through.” Soon after it was decided that the bridge should be repaired, and these repair costs would be paid for by government subsidies.<sup>17</sup> Now, the bridge is in such poor condition that transport ministry engineers recently declined to perform a “stress test” on the bridge because they were concerned that the bridge could not withstand the weight of the testing equipment.<sup>18</sup> Also, it would fall on the water pipe located directly below it and temporarily shutdown the wastewater treatment facility that it feeds.<sup>19</sup> Therefore, the bridge is only used as a pedestrian bridge.<sup>20</sup>

## **Bridge Aesthetics and Environment**

### **Visual Appeal**

Presently, the Nithvale Bridge is difficult to view and even find because it is almost fully hidden by foliage along Piper Street. This provides a sense of mystery to the viewer, where one can only see parts of the truss structure. This intrigues people to go and see what is actually located there.<sup>21</sup>

It has also been said that the Nithvale Bridge is located in one of the “most picturesque locations in Southern Ontario”, that represents the former location of the settlement of Nithvale, now a part of the village of Ayr.<sup>22</sup>

### **Integrity**

The bridge has been replaced several times, however there is no evidence indicating that the Nithvale Bridge location has been moved.

### **Landmark**

The Nithvale Bridge is a landmark because it is the only remaining feature that reminds people of the previous existence of the Village of Nithvale.<sup>23</sup> The settlement of Nithvale and the bridge are both identified in the North Dumfries Historical Driving Tour and the LACAC Walking Tour of Ayr.

### **Gateway**

The Nithvale Bridge crosses the Nith River and previously connected Township Road 11 (Nith Road) to Piper Street to the north.<sup>24</sup>

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<sup>17</sup> The Cambridge Reporter. “Township worried bridge may be dangerous”, November 14, 1990.

<sup>18</sup> Cambridge Reporter, “Ayr Bridge to be Closed,” December 5, 1990.

<sup>19</sup> Ibid.

<sup>20</sup> Spanning the Generations – Phase 1: Inventory, “Nithvale Bridge,” May 2004, p. 1.03 -1.04 & Cambridge Reporter “Ayr Bridge to be Closed,” December 5, 1990.

<sup>21</sup> Spanning the Generations – Phase 1: Inventory, “Nithvale Bridge,” May 2004, p. 1.03 - 1.04.

<sup>22</sup> North Dumfries Township Local Government, “LACAC Historic Ayr Walking Tour”, February 11, 2003.

<sup>23</sup> Lynda Schneider, Personal Interview, January 31, 2006.

<sup>24</sup> Spanning the Generations – Phase 1: Inventory, “Nithvale Bridge,” May 2004, p. 1.03 -1.04.

## Character Contribution

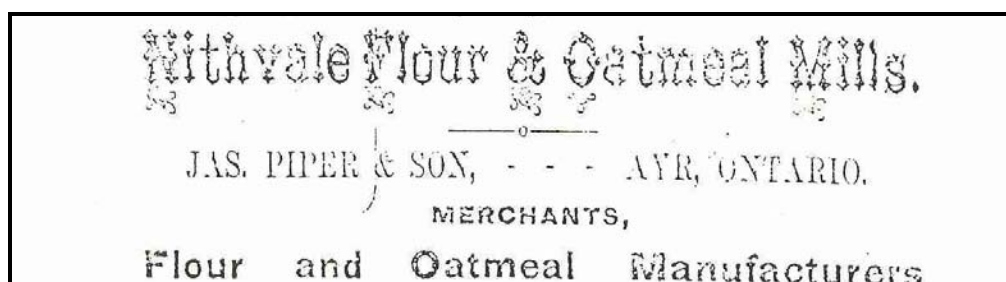
The Nithvale Bridge is one of a series of bridges at the same location. The other bridges in the same area include the Stanley - Piper Street and Piper Street Steel Truss (Slabtown/Nithvale) bridges.<sup>25</sup> All of these bridges are built using the design techniques and materials available during the time of their construction.

## History of Nithvale

Today, the Nithvale Bridge is the only remaining evidence of the previous existence of the Village of Nithvale.<sup>26</sup> The history of Nithvale is relevant to the understanding of the development of Ayr.

In 1822, Absalom Shade was the only recorded landowner in Nithvale.<sup>27</sup> He chose Nithvale because “apparently he was impressed by the prospects for good water power” located there.<sup>28</sup> In 1824, Abel Mudge, a squatter, built a sawmill at the intersection of Smith’s Creek (Nith River) and Cedar Creek dam. The village later located north of Nithvale was called Mudge’s Mills. To the east of Mudge’s Mills was Jedburg, and to the west, Nithvale.<sup>29</sup> Nithvale was home to two sawmills and a flourmill.

In 1861, Mr. James Piper, after whom Piper Street in Ayr was named, opened and operated a mill called Nithvale Mill. “He had a capital investment of \$14,000; used water power; employed three men and had a total monthly payroll of \$24. He used 24,000 bushels of oats valued at \$6,000 and he produced 2,000 barrels of oatmeal valued at \$8,000.”<sup>30</sup>



In 1876, it was stated that Nithvale’s flourmill was called “Clarks.”<sup>31</sup> Then, shortly after the Nithvale flourmills electrical equipment was removed in 1912, owner Mr. Walter A. Upton decided that he wanted to use the building to manufacture woolen and other goods. At this time, he constructed a larger dam that moved water through the race of the flour mill and solely manufactured flour, where he produced almost fifty barrels a day and marketed it under the slogan, “Pride of the Nith.” This enterprise lasted until Mr. Upton’s death in 1930.<sup>32</sup>

<sup>25</sup> Andrew W. Taylor. *Our Today’s and Yesterdays*. Ontario Canada: 1970.

<sup>26</sup> Lynda Schneider: Heritage Planning Advisory Committee North Dumfries. Personal Interview. January 31, 2006.

<sup>27</sup> Scarlett E. Janusas. *An Archaeological Perspective of an Historic Overview of the Regional Municipality of Waterloo*. “Ayr.” p. 38.

<sup>28</sup> Andrew W. Taylor. *Our Today’s and Yesterdays*. Ontario Canada: 1970, p. 15.

<sup>29</sup> John Fisher, *A guide to pleasant places and journeys of historic interest within the County of Waterloo*. Waterloo Trust and Savings Company: 1967.

<sup>30</sup> Andrew W. Taylor. *Our Today’s and Yesterdays*. Ontario Canada: 1970, p. 219.

<sup>31</sup> Andrew W. Taylor. *Our Today’s and Yesterdays*. Ontario Canada: 1970, p. 235.

<sup>32</sup> *Ibid.*, p. 237-238.

Despite all of its mills, Nithvale's location was never well known or considered to be "thriving." One interesting fact is that it was known as the "meeting and drilling place for Mackenzie's followers during the attempted revolution of 1837."<sup>33</sup> It was in Nithvale where Captain Rich, Captain Wilson and the Galt and Guelph volunteers were sent to arrest the alleged ringleaders including Hill, Webb, Kenny, Foster and Church. Foster, Webb and Hill were all caught. However, Foster was released along with Webb, although he was released only on the condition that he would keep the peace for a three-year period. Hall on the other hand died while in jail waiting on the results of his sentence. As well, a previous township tax collector, Mr. Sylvanus Wrigley spent time in prison for "having had the courage of his convictions, sufficient to join the rebel army."<sup>34</sup>

Eventually Mudge's Mill and Jedburg grew into larger settlements whereas Nithvale did not. Nithvale eventually amalgamated into these other settlements as new housing developments were built along Piper Street. Today, these three settlements now form the Village of Ayr.<sup>35</sup>

## Historic Association

### Bridge Group

The Nithvale Bridge and the Piper Street Steel Truss Bridge (Slabtown/Nithvale Bridge) form a set of two truss bridges in North Dumfries Township. The other bridges that also fall into the same group as the Nithvale Bridge within the Region are Wellesley Bridge #6, Holland Mills Road Bridge, Blackbridge Road Bridge, the Conestogo Bridge, the Haysville (demolished) Bridge, the Hartman Bridge and Shade Street Bridges.<sup>36</sup>

### Other Points of Interest

On January 9<sup>th</sup> of 1852, the United Counties of Halton, and Wentworth decided that the first funds that were raised were to be put towards the Nithvale Bridge. The council provided £12/10 for the bridges construction and appointed, James Piper, Walter Gladstone and Robert Anderson to ensure that it was correctly spent.<sup>37</sup>

The current Nithvale Bridge is the older of the two abandoned trusses in Ayr.<sup>38</sup> The other abandoned truss bridge in Ayr is the Piper Street Steel Truss (Slabtown/Nithvale) Bridge, located just south of the Nithvale Bridge on the Nith River.<sup>39</sup>

<sup>33</sup> Andrew W. Taylor. *Our Yesterday's*. Ontario Canada: 1952, p. 97-98.

<sup>34</sup> Ibid.

<sup>35</sup> North Dumfries Township Local Government, "LACAC Historic Ayr Walking Tour", February 11, 2003.

<sup>36</sup> Spanning the Generations – Phase 1: Inventory, "All Bridges," May 2004.

<sup>37</sup> Andrew W. Taylor. *Our Today's and Yesterdays*. Ontario Canada: 1970, p. 45-46.

<sup>38</sup> Spanning the Generations – Phase 1: Inventory, "Nithvale Bridge," May 2004, p. 1.03 -1.04 & Ayr News. "Nithvale's Bridge's Days are numbered for Vehicular Traffic." November 14, 1990.

<sup>39</sup> Spanning the Generations – Phase 1: Inventory, "Piper Street Steel Truss," May 2004, p. 1.09 -1.10.

## Nithvale Bridge (Abandoned)

**Location** At the end of North Dumfries Township Road 11 (now Nith Road), Concession VII, Lot 38, 0.05 km. south of Piper St, in Ayr, Township of North Dumfries.

### General Information

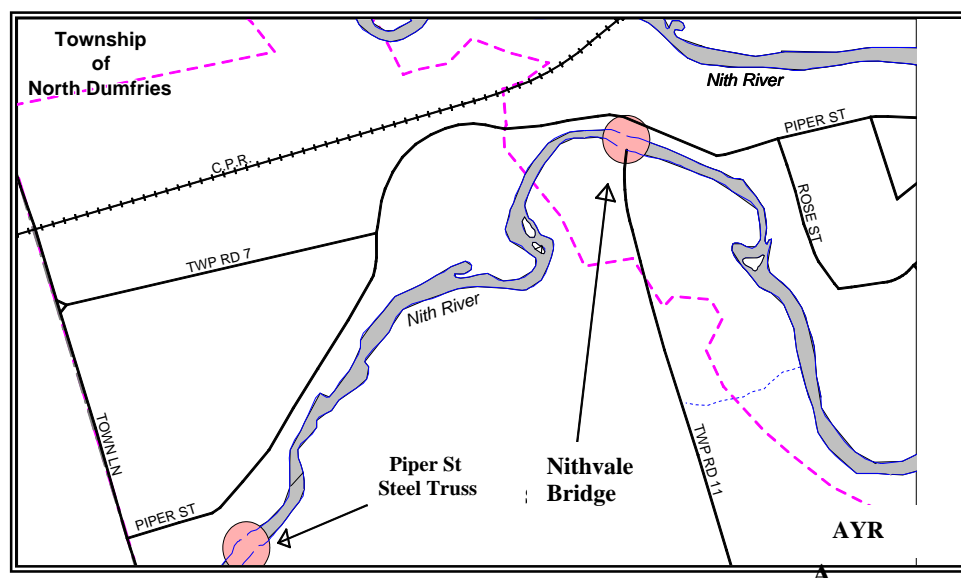
|                     |               |
|---------------------|---------------|
| <i>Bridge No</i>    | N/A           |
| <i>Jurisdiction</i> | Not known     |
| <i>Year built</i>   | 1883          |
| <i>Drawings</i>     | Not available |

### Physical Components

|                   |                          |
|-------------------|--------------------------|
| <i>Type</i>       | through Truss            |
| <i>Spans</i>      | 1                        |
| <i>Dimensions</i> | Length 30 m<br>Width 5 m |
| <i>Load Limit</i> | None posted              |

### Descriptive details

This bridge is almost completely concealed by the Piper Street foliage. In 1967 this bridge was closed to vehicular traffic, but remains in use for pedestrians. The deck consists of 2x4 planks covered with pitch and tar. Of the two abandoned trusses in Ayr, this bridge is most likely the older of the two. The difference is in the nature of its construction, since this bridge is pin-jointed rather than riveted. Riveting bridges together required highly skilled bridge crews and equipment whereas pin-jointed bridges could be fastened by hand. In 1914 the Hamilton Bridge Company added a span to this bridge—a short steel girder bridge at the south end of the truss.





## **Nithvale Bridge (Abandoned)**

East View



Detail of wooden planks

