

Madawaska was built both as a colonization road and as a means of transporting freight to the lumber camps. Another highway serving the same purposes was opened up through the level ground of the valley bottom as far as Golden lake.

While the lumbering business was flourishing, the settlement and clearing of land in the neighborhood of Renfrew progressed steadily so that it became a place of some importance as a centre of population.

The first railway reached Renfrew in 1873, and later on we find the Canadian Pacific railway diverting its transcontinental line from the easier route following the Ottawa river to a more difficult one, in order to include the business which the town of Renfrew contributed.

There is a variety of good farming land in the vicinity of Renfrew. The district to the south, between the Bonnechere and Madawaska rivers has an undulating surface mostly covered with a thick sheet of boulder clay, whose weathered surface furnishes excellent soils. West of Renfrew there is a plain two to six miles wide and 12 miles long covered with stoneless marine clay over which the most approved farming machinery can be worked and where there is practically no waste ground (fig. 3). The soils to the north and east in the upland country are lighter in texture but nevertheless support a considerable farming population, on account of the presence of large areas of crystalline limestone underlying the drift.

Samples of the excellent products raised on the varied agricultural resources of this district form the principal attraction at the annual three days fair held in Renfrew exhibition grounds.

When the apparently endless forests of pine had disappeared from the Madawaska and Bonnechere valleys the commercial interest hitherto engaged in the timber trade had to adapt itself to changed conditions.

Flour mills apparently never ceased to operate on the water power at Renfrew from the time it was first used for that purpose.

Two mills producing woollen goods are also located on the river. A brick and tile plant produces burned clay wares from the marine clay which underlies the greater part of the town. This plant has the advantage of being able to produce buff or red brick owing to the fact that the lower part of the marine clay at this point carries such a high percentage of lime that it overpowers the red coloring tendency of the iron content of the clay and imparts a buff color in the burning process. The greater part of the lime has been leached by weathering from the upper part of the clay so that the iron can assert itself in giving the characteristic red color to the burned ware. Tile for draining the nearly

level marine clay plain west of Renfrew finds a considerable market over most of this area. Not a foot of this land need be unproductive if it is properly underdrained.

The crystalline limestone in the vicinity of Renfrew has been quarried for building purposes, the post office being an example of its use in architecture. Its glistening white surface will probably keep fresh for a long time in this situation, but in a large city it would soon become dingy.

Quite an extensive use of the crystalline limestone is made in the production of quicklime for building purposes, the lime kilns being situated on an outcrop of this rock within the town limits.

The remarkable mounds of sand, gravel, and boulders and the curious bowl-shaped depressions that accompany them which occur close to the rock escarpment just north of the town are features resulting from glacial ice drainage channels. The kames, as the gravel mounds are called, furnish abundant supplies of material for concrete construction or road-making and are freely drawn upon for this purpose.

All the industries so far mentioned have a purely geographical reason for being at Renfrew, as they make use of the local resources for local needs.

Natural resources such as convenient supplies of material for building purposes, productive land to supply food in abundance, plenty of room for the comfortable housing of labor, together with water powers are geographic advantages which tend to the growth of industries in the region.

The possession of these resources with the aid of transportation facilities offered by two lines of railway have made it economically possible to establish at Renfrew industries using raw materials like iron and coal which have to be hauled for long distances.

The power furnished by the Bonnechere river proved in time to be inadequate to the increasing demands made upon it and one of the waterpowers of the Madawaska river was recently developed in order to supply the deficiency as well as provide for future needs in power. The rapids at the outlet of Calabogie lake on the Madawaska river were used for this purpose, the distance between this point and Renfrew being 15 miles.

DOUGLAS.

The village of Douglas is on the slope of a low ridge on the north side of the valley of the Bonnechere, 12 miles west of Renfrew. The river comes close to the foot of this ridge and flows over outcrops of shaly limestones in a series of rapids and falls with a total descent of 27 feet.

A wide depression tributary to the Bonnechere valley runs northward from Douglas and forms a large part of Bromley township. This depression