GREENBELT SURROUNDS HUGE CANADIAN STEELMAKING PLANT

By Robert Dyment, Dunkirk, NY

The most significant new development in the history of Canada's steel industry was officially completed on September 16, 1980, with the opening of one of the world's most advanced integrated steelmaking facilities. But this event occurred after years of site studies and tests on how to protect the environment were first made by Stelco Inc. for its new Lake Erie Works at Nanticoke, Ontario.

Stelco's Lake Erie Works is a "greenfield" steelmaking plant—one started from scratch—on the north shore of the lake, and also the largest single venture ever undertaken by a Canadian steelmaker. Total cost of the first stage alone was $829 million which included $94 million for environmental projects when construction started at the 6,600-acre site in 1974.

At Stelco, which is headquartered in Toronto, company officials used more than instinct to ensure that they were right with their Lake Erie development. As far back as 1962, they knew the projected demand pattern for steel to the year 2000. They also knew what production facilities they would require to fill the demand.

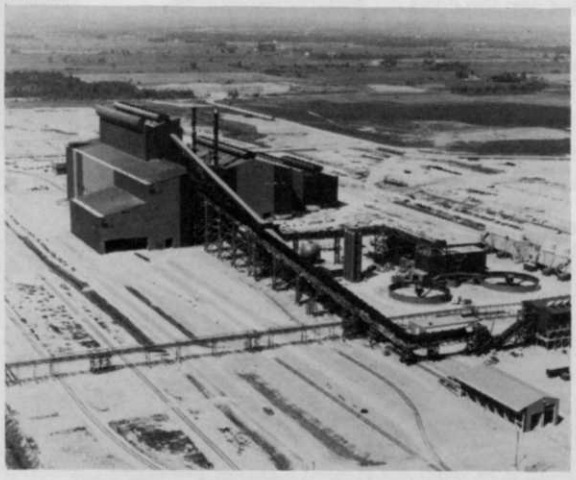
They analyzed the projected output of steel-using industries and where in Canada the greatest demand for steel was likely to be. This data determined the location for such a massive industrial complex, which has a projected annual capacity of 6 million tons.

And, even though at the outset they planned Stelco's Lake Erie Works as a greenfield project, they commissioned a further 45 studies prior to the start up of construction in order to ensure the minimum disturbance to the environment.

They studied Nanticoke's historical background, the atmospheric inventory, erosion, fisheries, historical ecology, land-use, wildlife resources, social needs, and the Lake Erie shoreline.

They planted 100,000 trees and created artificial hills and ponds. They undertook extended research in order that Stelco designers would build the most technologically advanced, cost-efficient, and cleanest steelmaking operation in the world.

Site studies prior to construction and plans to build a greenbelt around the facility played important roles in developing Canada's newest steel plant. This building is the basic oxygen furnace and slab caster complex at the Lake Erie Works.



A "greenfield" project means a company starts from scratch on a plot of land. In the United States, nearly all of the major steel plant expansions have been "brownfield," that is, expanding on site. A greenfield project is more expensive because the company has to put in the sewers, roads, utilities, and other basic structures before even constructing the plant.

But it has the advantage in that a project can be laid out for greater efficiency. Stelco, realizing it was entering a rural area, tried to make the plant less offensive to nearby residents by surrounding the complex with a greenbelt of trees, ponds, and hills. This greenbelt obstructs much of the facility's view from the roads.

Once the decision in favor of the Nanticoke site was taken, the process of land acquisition began and by 1968 Stelco had assembled 6,600 acres. Almost at once, work began on layouts for a fully integrated steel plant. This resulted in 3,600 acres of the property being set aside for steel mill development, approximately 2,400 acres being set aside for an industrial park, and the balance of the acreage being allotted to recreational and environmental purposes.

It was decided to develop a broad greenbelt to surround the steelmaking operation, separating it from the neighboring countryside. The first excavations helped to provide the material for developing a series of berms, or man-made hills, virtually concealing the plant from adjacent roads and minimizing the windborne spread of dust from raw materials.

Employees drive directly to their place of work—first, because the plant is so spread out that walking is totally impractical, and second, because acres of ugly parking lots at the plant entrance were never built.

From the very beginning, Stelco has taken a "total ecological approach" to the building of its Lake Erie Works. This concern for the environment goes far beyond the mere consideration of the effect of emissions from the plant.

Virtually every aspect of the development of the site has been undertaken with a view to its impact on the environment. In addition to the development and preservation of a landscaped greenbelt around the perimeter of the steelmaking site and the planting of thousands of trees and bushes at various locations, many existing woodlots and natural open space and watercourse areas were preserved and the latest in air and water quality control technology in the major operating plants were included.

But some of these activities were not so noticeable, and related to some of the unique features of the property. For instance, throughout the industrial park site along the north side of Stelco's property are several former farm woodlots that have been preserved in their natural state. In the midst of these, particular concern has been paid to ensure that the meeting grounds for a flock of great blue heron would not be disturbed.

Plans for a rail route through the north section of the

property took into account the preservation of a location frequented by a colony of Hungarian partridge. Extensive changes were made to the raw materials receiving dock, so that the existing sandy shoreline of Lake Erie would be maintained and fish swimming patterns along the shore could continue. The dock had originally been designed as a solid causeway, but was changed to allow a bridge section out from the shore.

All of these considerations, large and small, add up to the essence of this total ecological approach. This massive industrial development attempts, as much as possible, to blend into and co-exist with the surrounding topography. It has meant spending about $94 million on environmental projects and equipment at the Lake Erie Works—more than 10 percent of the total construction cost for Stage One.

In addition to the 45 studies undertaken to assess the environmental impact of the impending development, there were separate studies of such matters as Lake

This century-old house is located in the middle of the greenbelt area along the east side of the steelmaking property at the Lake Erie Works. Stelco restored it as part of its environmental program.

Erie water temperatures and movement, its quality and chemistry, weed bed locations, fish migration and growth, plankton and bottom fauna, and observation of ice cover.

The greenbelt project affects a half-mile-wide slice of land along the east side of the property, plus a wide section between the lake and the steel site. The contoured mounds were formed by earthmovers and then planted with grasses, bushes, and trees to form a visual screen as well as a noise buffer and a barrier to reduce the effect of winds. On the east side, the greenbelt was interspersed with small settling ponds to capture surface run-off water before it reaches Nanticoke Creek.

An elegant and stately, century-old, country house is the crowning jewel in Stelco's showpiece greenbelt. The 15-room home, the original portion of which was built in 1870, is located immediately east of the steelmaking site, smack in the middle of the greenbelt along the west side of Nanticoke Creek.

As part of the company's overall environmental policy of preserving much of the scenic landscape at the site, the old house was refurbished to its 19th Century style and the surrounding grounds were groomed and preserved to enhance the property.

The property was part of the 6,600 acres of land purchased by Stelco for its industrial development. The restoration of the home was undertaken with the guid-

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SOD PRODUCER NEWS

Warren's Turf Nursery acquired by Curran

The Curran interests of Crystal Lake, Illinois, have acquired ownership of Warren's Turf Nursery, Inc., headquartered at Palos Hills, a Chicago suburb, through transfer of stock certificates.

The Warren firm has nearly 5,000 acres of land under cultivation and is one of the largest growers of sod in the world. Currently, it is developing European and Asiatic, Australian and African markets for its patented grasses.

Warren's is the only turf grower with a research department that has led to the development of improved lawn grasses. The A-34 was the only one rated excellent by Michigan State University for wear tolerance, a quality which makes it particularly suitable for athletic fields and sports grounds. The A-20 is noted for its deep green color and disease resistance.

Besides new grasses, the firm's contribution to the turf industry includes turf handling equipment such as sod cutters, sod harvesters, and sod washing machines for the removal of soil from newly harvested sod. Soil removal results in a much lighter product, allowing lighter pay loads, and it enables newly planted turf to knit to the site soil more quickly.

Another innovation of Warren's is the vacuum cooling of sod on hot days. The cooling system lowers the temperature of newly harvested sod to just above freezing within about thirty minutes. The company has also pioneered in the dehydration and preservation of bluegrass clippings for poultry and livestock feed.

The Curran people who have acquired Warren's Turf Nurseries are diversified, with interests in paving, trucking, and railroad equipment. They have indicated that the management of the Warren organization will continue under the direction of the Warren brothers.

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ance of Professor Eric Arthur of Toronto, a noted architect and historian, who verified the authenticity of the 1870 construction date. The home is the focal point of the company's community relations program at the Lake Erie Works.

Stelco has already planted well over 100,000 trees and shrubs within their greenbelt system and these will be supplemented by many more, including 6,000 flowering varieties currently being grown at their on-site nursery. This nursery, incidentally, is located next to the old home that was restored.

The entire steelmaking development is surrounded by a greenbelt, which in places extends up to half a mile in width. The series of earth mounds, some up to thirty feet high, are but a few examples of the careful planning and millions of dollars spent on a greenbelt to make this one of the most environmentally attractive new steel plants on the North American continent. **WTT**