A GEOGRAPHICAL STUDY OF THE TOWNSHIP OF WHITBY AND THE TOWN OF WHITBY

A Thesis

Presented to

The Faculty of the Department of Geography

McMaster University

Hamilton, Ontario

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Arts

Received and passed by the Department, April 1959.

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by

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February 1959

ACKNOWLEDGEMENTS

The writer wishes to express his thanks to Dr. L.G. Reeds for his advice and supervision of this study; to all those in Whitby Township, the Town of Whitby and Ontario County who provided much of the information.

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INTRODUCTION

The purpose of this study is to present a description of the natural and cultural landscapes of Whitby Township, and an analytical examination of the relationships which exist between them.

The study has been divided into three chapters, chapter one dealing with the physical geography under several headings, chapter two being a brief historical account of the Township's settlement and the evolution of agriculture. Chapter three seeks to relate the present land use of both Whitby Town and Township, with the physical and cultural features which have been important in development up to the present. In order to do this, the concept of a "development area" was adopted. Each development area, of which there are three, has its own particular character, which has developed due to the predominance of one or more of the physical or cultural features. The development areas should not, however, be thought of as being distinctly separated one from another. Rather, their division is by a transitional zone, which is difficult to map and has been represented in Figure 4 by a line which passes through the general area where a change in landscape is noted. Neither should these areas be thought of, in the final analysis, as being separate units within the Township. The summary of the study illustrates this as it attempts to depict the Township as a whole, and discusses the areas as a group on the

basis of present conditions and future prospects.

The field work for this study was carried out during the last two weeks of August and the first two weeks of September, 1958. The land use map represents conditions during this period. Mapping was done through field observations with the use of aerial photographs, the Ontario County Soil Survey and The Physiography of Southern Ontario by L.J. Chapman and D.F. Putnam. These aids along with other articles and books listed in the bibliography were of great help in writing the text of this study. Besides mapping, the field research included interviews with Town and Township officials, agriculturalists, and persons concerned with urban activity.

Most of the statistical information in the text was obtained from the Dominion Census Reports, either directly or by way of municipal brochures. Where the actual acreage of an area is given, the acreage has been derived from planimetric measurement, and where a proportion of acreages is given, it is the writer's opinion based on linear measurements.

CHAPTER I

PHYSICAL GEOGRAPHY

1. Location, Size and Shape

Whitby Township is located in Southern Ontario, in the county of Ontario, fronting on Lake Ontario. The eastern boundary of the Township lies 1 mile from the boundary of the city of Oshawa. The western boundary lies 9 miles from the edge of, and 17 miles from the centre of Metropolitan Toronto. Lying between these two cities the Township is in the northern flank of Ontario's hub, the industrial horseshoe which stretches around the western end of Lake Ontario from Oshawa to Niagara Falls (fig.1).

Whitby Township is bounded by Whitby East Township to the east, Pickering Township to the west, and Reach Township to the north. It is these Townships plus Scott and Brock which lie to the north, that are referred to as "surrounding Townships" in chapter III. Lake Ontario provides a natural southern boundary. The Township is roughly rectangular in shape being 5 miles wide by 12.5 miles long. This actually is only half the size of a regular township, as it was separated from Whitby East Township in the 1850's. In Area, the Township covers 30,700 acres or approximately 62.5 square miles.

2. Bedrock.

The whole of Whitby Township is underlain by

formations of Utica shale. A major part of it is the Collingwood formation, which overlies Trenton limestone and dips to the north. To the west in adjacent Pickering Township, the Utica shale passes gradually into the Lorraine formation, and the boundary between the Lorraine and the Collingwood is indistinct. The shale varies in thickness but the few borings which have been taken show it to be approximately 120' thick. As the bedrock is overlain with great thicknesses of till and glacio-lacustrine deposits, Whitby's soils owe their character to the bedrock formations of the areas from which the till was derived, and thus are not related to the bedrock underlying the township.

3. Glacial History.

The land forms, and parent materials of the township have been derived from glacial and glacio-lacustrine deposition during the Pleistocene period. Three definite advances of ice sheets have been recognized and the materials during the advance and retreat of the last one, the Wisconson, forming the parent materials of the existing soils. A study of the boulders of all three layers of till, which were deposited with each advance, shows that the ice each time came from the north-east, or east, and belong to an ice sheet centred in Labrador. The main laboratory for the studies which revealed the materials of these three glacier advances has been the Scarborough Bluffs, which lie eleven miles to the west

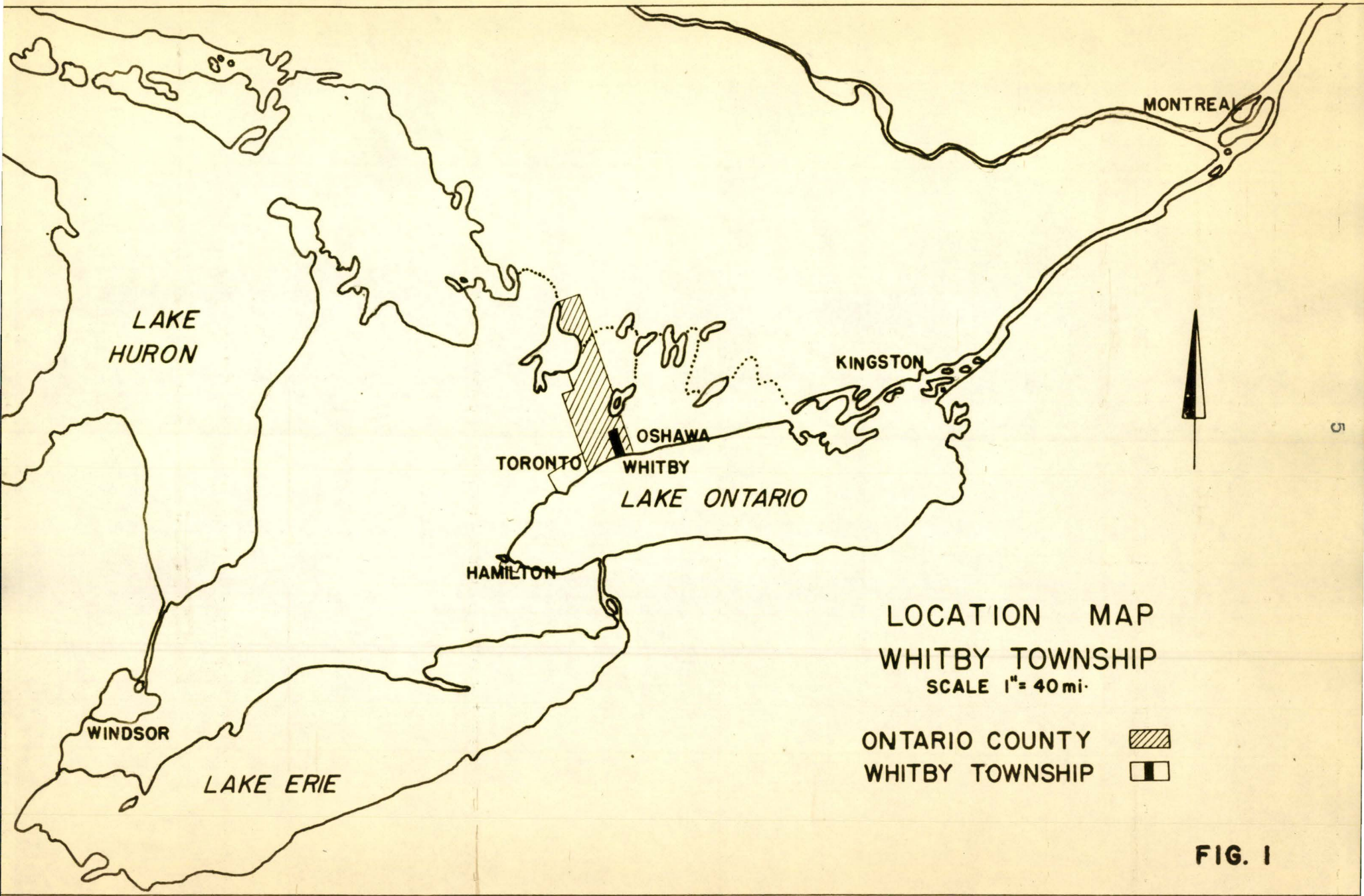
MONTREAL
LAKE HURON
KINGSTON
OSHAWA
TORONTO
WHITBY
LAKE ONTARIO
HAMILTON
WINDSOR
LAKE ERIE
LOCATION MAP
WHITBY TOWNSHIP
SCALE 1"= 40 mi.
ONTARIO COUNTY
WHITBY TOWNSHIP

FIG. 1

of Whitby Township. Information about the pre-Wisconson beds however is only fragmentary, and is not of great importance to this study. It is the deposits of the Wisconson ice sheet, and those of Lake Iroquois which was formed during the Wisconson ice retreat, plus subsequent erosion which have formed Whitby's surface features, and provided the material for soil formation. In two respects, however, the pre-Wisconson ice movements have left a legacy with Whitby Township.

> " A massive ridge of glacial drift runs east and west through the counties north of Lake Ontario. It forms the drainage divide south of Lakes Scugog and Rice, and extends from the Niagara escarpment in Caledon Township to the Trent Valley" (1)

This ridge is composed partly of pre-Wisconson materials, and passes only a few miles north of Whitby, and thereby has a profound effect on the drainage of the township.

Secondly, it is known that between each advance of the ice large lakes were formed by the melt water of the retreating sheets, and lacustrine deposits supporting this theory have been identified between the layers of till. The Wisconson ice followed a path similar to that of the previous ice sheet, and thus the load of the Wisconson sheet would include some of sand silt or clay deposited in

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(1) Chapman and Putman, Physiography of Southern Ontario, University of Toronto Press, 1951. p p 10.

lake Algonquin, and this would be incorporated with the new rocky grist. The grey calcareous clayey tills found in the northern section of Whitby Township are probably the result of this kind of mixing. The deposits of this glaciation were uncovered as the ice retreated from west to east.

It was the Ontario lobe of the Wisconson ice sheet which moved through the Ontario basin, across the land which is now Whitby Township. This township came free of ice between stages 8 and 9, of Putnam and Chapmens' description of glacial events. (2) In stage 8, the Ontario lobe extends as far as Streetsville Ontario, (west of Toronto), and in stage 9 the ice front is around Trenton. Between these two stages, the climate became warmer causing a split in the ice sheet overriding the inter-lobate morainic ridge south of Scugog and Rice Lakes, and the southern lobe retreated to a position near Rome New York, then curved across the frontenac axis, and then north-west in the direction of Georgian Bay. This ice front acting as a dam ponded the melt-waters which formed Lake Iroquois, the predecessor of Lake Ontario.

"Lake Iroquois is the best knwon and most completely mapped of the glacial lakes, since it's whole shoreline lies in a populous region well supplied with road cuts." (3)

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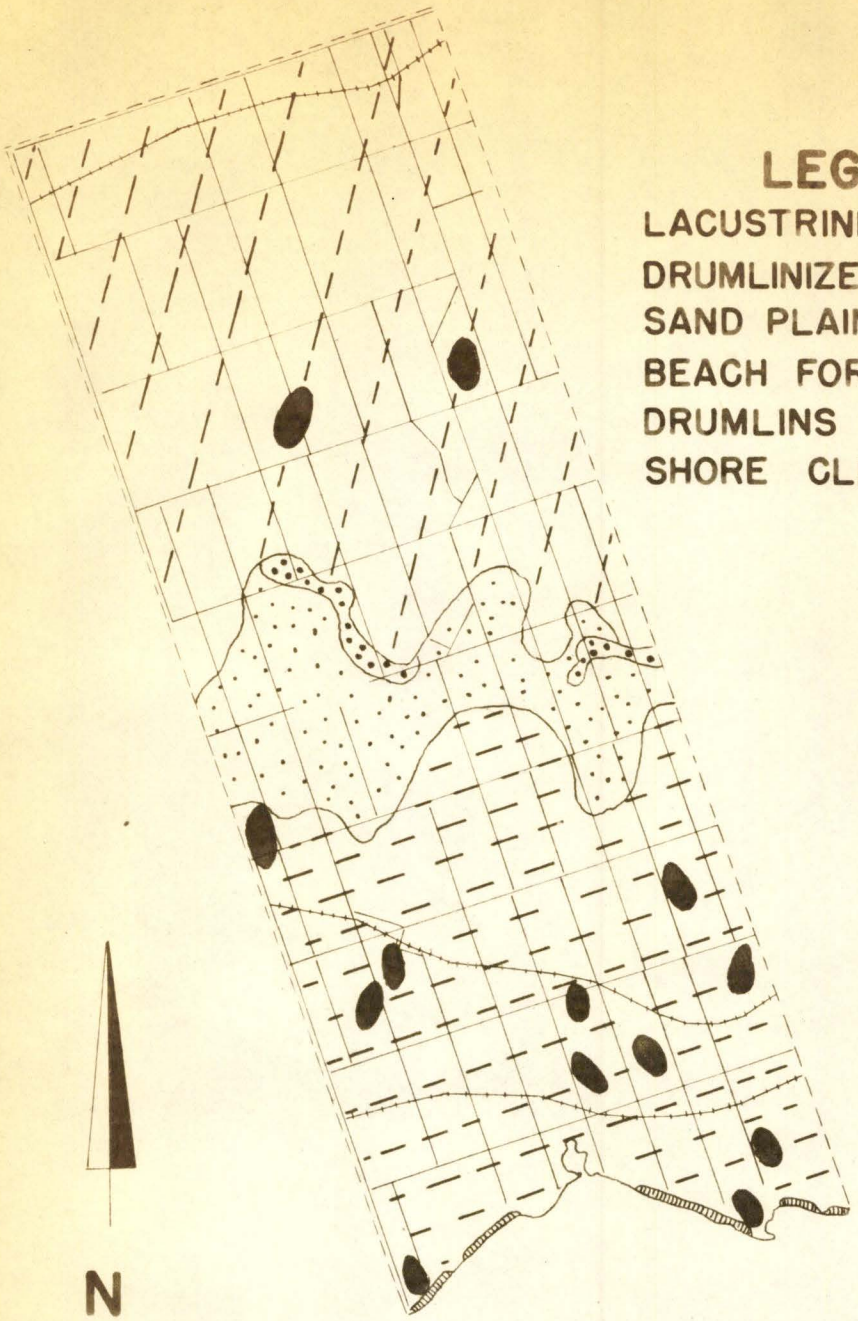
(2) ibid pp 32
(3) Coleman A.P. The Last Million Years, University of Toronto Press, Toronto 1941, pp 163



WHITBY TOWNSHIP
PHYSIOGRAPHY
SCALE 1" = 4mi.

WM 1958 AFTER PUTNAM AND CHAPMAN FIG. 2

This was a fresh water lake, and thus it's deposits were lacustrine, and were laid down during the seven or eight thousand years, that the ice front held it's ground in the Trenton area. During this period, the outlet of Lake Iroquois into the Mohawk gap at Rome New York remained constant, but the water plane fluctuated remarkably. In the north-east where the heaviest ice had been, the crustal rebound was much greater than in the west around Hamilton where the ice was thinner. Therefore the shoreline rises from 362' at Hamilton, to its highest point of 460' in the east. In Whitby Township, we find the Lake Iroquois shoreline standing at about 450' above sea level, 200' above the present lake level, which was established when the ice front left the St Lawrence lowland west of the Champlain sea, allowing access to the sea through the Hudson Mohawk gap.

Following the formation of Lake Ontario came the long period of drainage organization, and the establishment of a vegative cover.

4. Description of Land forms and Drainage.

The land forms of Whitby Township can best be discussed under the three divisions indicated in figure 2 the lacustrine plain, the sand plain, and the drumlinized till plain. A preliminary discussion of relief however will assist in picturing the general physical topography of the township.

The land rises from 250' at lake level in the south, to 925' at the northern boundary. The contours follow a generally east-west trend, curving northward at stream valleys,

and obvious variations from the general undulating topography. (i.e. drumlins). At the southern edge of the sand plain (fig 2) the land rises fairly steeply, (100 feet in less than a mile), and again just north of Brooklin, the slopes are steeper than the general lay of the land, rising 125 feet in a mile. A low ridge of land with elevations up to 425' separates the site of the Town of Whitby from Oshawa's site to the east. Where the Lynde Creek cuts through the sand plain in Concessions IV and V a steep sided valley has been cut, which in some places is over 100' deep.

Lacustrine Plain

The extent of this plain is shown in figure 2. It is composed of lacustrine clays, and till materials formerly covered by lacustrine deposits. The lacustrine materials were laid down in Lake Iroquois, over the till of the last ice advance. In the eastern part of the Township, an irregularly shaped ridge having the appearance of a former drumlin field occurs. It is likely that these drumlins were plastered on the till plain during the ice advance, and then submerged in Lake Iroquois. As the exposed materials to-day are derived from till, and the mounds do not have the characteristic drumlin shape, it is likely that the receding Lake Iroquois washed away its own deposits, exposing once more the till. Excepting these drumlins the lacustrine plain area is flat, tending in some places to be depressional.

Profiles of the material in this area are exposed in the low bluffs which form most of the present shoreline.

At the base of the bluffs, a very narrow sandy, gravelly beach has been formed by the waves of lake Ontario. In the area of Whitby Harbour, the Lynde and Pringle Creeks have formed flat marshy alluvium plains, bordered at their mouths by sand beaches

Sand Plain.

Adjacent to the lacustrine plain, is a sand plain lying to the north. This is very flat, the uniformity being disturbed only by the creeks cutting across it. These are the shore deposits laid down in Lake Iroquois, and they are bounded in the north by gravelly beach formations, which stretch in a broken line across the northern rim of the plain. The breaks in the gravel occur where post-glacial streams have cut through the formations. These streams have extended the sand deposits in long projections into the lacustrine plain.

Drumlinized till Plain.

North of the beach formation lies a drumlinized till plain, which was laid down under the last ice sheet advance, and was not subject to flooding by lake Iroquois. The physical topography here is slightly undulating to rolling, and the soils are clay loams. Only two Drumlins occur in this section of Whitby Township and are located in figure 2.

Drainage.

Two small creeks and their branches flow through the Township. In the east the Pringle Creek, which is the smaller of the two winds its way in a shallow valley from concession IV into the bay of Whitby Harbour. The Lynde Creek which has two main branches is considerably larger, the western branch having its source near Glen Major, and

A drumlin on the Drumlinized Till Plain.

Low shore cliffs east of Whitby harbour.

the eastern its source in Chalk Lake, which is a Kettle lake in the Oak Ridges moraine. Generally, the valleys of these two branches are narrow and shallow, but as they pass over the sand plain, they deepen and widen, before taking on their characteristic shape again on the lacustrine plain. The confluence of the branches is just above Highway 2, west of Whitby, and they empty into Lake Ontario, just east of the town, through a large marshy area.

5. Climate.

The township lies within two climatic zones, as designated by Putnam and Chapman in 1938.(1)

(a) Lake Ontario Shore: Lake Ontario is bordered by the plain of glacial lake Iroquois, beyond which the land rises sharply into a till plain area. The rise is high enough to have a pronounced effect on the climatic conditions, thus the Lake Ontario shore region merits differentiation from the higher south slopes region. The Iroquois plain rises very gradually from 250' at lake level, to approximately 450'. The 450' contour in Whitby Township winds from the fourth concession at the western boundary, into the third concession in the central portion, twists backinto the fourth concession and comes south to the second concession as it leaves the township. This then is the

(1) Putnam and Chapman, Climate of Southern Ontario April 1938, page 407.

northern boundary of the Lake Ontario Shore climatic region. Here the moderating effect of Lake Ontario is in evidence, as the extreme high and low temperatures are less than inthe South Slopes region. The mean annual temperature is 44°F., 1°F warmer than that of the south slopes.

The seasonal mean temperatures are as follows

winter ... 21°F

spring ... 41°F

summer ... 66°F

autumn ... 40°F

(b) The South Slopes: This region adjoins the Lake Ontario shore region to the north, and due to its greater elevation does not enjoy the moderating effects of Lake Ontario to the same extent. Here the extreme winter temperatures average between 27°F and 30°F which is nearly the same as the plain area, but the extreme high of 105°F is two degrees higher than the region to the south. The average seasonal temperatures vary from the lake plain, and are as follows

summer ... 66°F

fall ... 47°F

winter ... 18°F

spring ... 41°F

The mean daily range of temperature is 19°

Here the average length of the frost free period is somewhat shorter, being somewhere between 133 and 147 days. The last Spring frost may be expected to occur between May 11 and May 20 while the first fall frost usually comes between September 28 and October 3. The annual precipitation is about 33", and a little less than half falls between April 1 and Sept 30. During June, July, and August an average of between 7.0" - 9.6" rainfall occurs. Snowfall varies a great deal throughout the region depending on elevation, and averages range between 50" and 90". The section of Whitby lying in this region being of moderate elevation, might expect around 70" of snowfall.

6. Natural Vegetation.

The Township of Whitby lies within the Huron-Ontario section of the Great Lakes - St Lawrence Forest Region, as classified by W.E.D.Halliday in 1937. (1) Within the township there three broad classes of soils which affected most of the natural vegetation, the lake Iroquois clays and shore sands and gravels, and the loams of the till plain. Before the period of agricultural development, the prevailing association was a broadleaf cover. This was a post glacial development as the pre glacial cover was coniferous, but its

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(1) Halliday, W.E.D. A Forest Classification for Canada Canada Dept of Mines and Resources, Lands, Parks, Forests Branch. Ottawa 1937.

Stands dominated by White Cedar are found on the poorly drained sandy soils.

dominance in post glacial growth was hampered by the new terrain, and the fact that climate favoured the return of decidurus trees. The whole of Whitby township was in pre-agricultural times, forested. On the clay and loam soils, Sugar maple and beech were the dominant types, and these were mixed with basswood, white elm, yellow birch, red and white oak, white ash and red maple. There may have been the occasional occurrence of balsam fir, groups of hemlock, and white pine, along with a widespread distribution of the large-toothed aspen, ironwood and black cherry. On the belt of light sandy soils cutting through the middle of the township, there can still be found large areas of White and red pine, mixed with some of the decidurus types. In river bottoms, stony areas and poorly drained land, white cedar blue beech and silver maples can be found.

The development of the township for agriculture necessitated the clearing of most of the land. The only sizeable stands of timber remaining are those indicated on the land use map (fig F1), in the sandy soil zone. This being poor farm land, it was only partially cleared, and there remains nearly 800 acres of mixed forest, with a strong tendency towards white cedar in the eastern areas, and white pine and some hardwoods in the west around Devils Glen. The rest of the woodland in the township is found in much smaller woodlots, and in these deciduous types dominate over coniferous.

7. Soils and Land Types

The soils of Whitby Township have been classified by the Ontario Department of Agriculture into fourteen types. For the purposes of this study, these fourteen soil types have been grouped into seven land types on the basis of similarities of texture, drainage and relief. The overlay to the land use map indicates the positions of these various land types. (fig F1)

Land Types:

I This type includes Bondhead and Darlington loams, and covers about 15,000 acres in the township which is just under half of the total land area. Both these soil types belong to the Grey-Brown Podzolic great soil group, have good internal drainage and are slightly stony. The topography of this land type is undulating to rolling , and in a few cases is steeply sloping. Erosion control here should be practised due to the rolling nature of the land, and in most cases, the farmers are aware of the problem, and take measures to control erosion. Land type I is rated as good crop land, and is very suitable for the cereals, hay, clover, alfalfa and pasture. For ensilage corn, canning crops and fruit trees it is rated good to fair, while for potatoes it is rated only fair.

Profile of Bondhead Loam.

Ao Thin matt of partially decomposed leaves etc.

A_1 0 - 4" very dark grey, fine crumb structure few stones,

pH - 7 - 1.

A_{21} 4 - 10" yellowish brown weak platy structure sandy loam, few stones pH - 70

A_{22} 10" - 16" pale brown, sandy loam, weak platy structure few stones pH 6 - 8

A_{21} and A_{22} are the leached layers, with A_{22} having slightly more precipitated minerals in it.

B_2 15 - 22 inches, dark brown, clay loam, blocky structure, few stones p H - 7 - 1

C Pale light brownish grey, calcareous loam till pH - 8 - 0

Total depth of profile 22"

Darlington loam.

A_o A very thin mat of partially decomposed leaves etc.

A_1 0 - 4" very dark grey, crumb structure few stones pH 7 - 2

A_{21} 4" - 10" light brownish yellow, loam, weak platy to fine crumb structure, few stones pH 7 - 0

A_{22} 10" - 15" light grey loam, fine crumb structure pH 6 - 9

B_2 15" - 23" dark brown, clay loam, blocky structure pH 7 - 0

C Light brownish grey loam to clay loam calcareous, few stones pH - 8.0

Total depth of profile 23"

Undulating topography of Land Type I

Cattle watering hole on Land Type II.

II Land type II consists of Guerin and Whitby loams and covers approximately 2000 acres. Again both soil types belong to the Grey Brown Podzolic great soil group, and are differentiated from I mainly on the basis of topography, and drainage. The land of this type is flat to gently undulating, and is imperfectly drained. The slower drainage is due mainly to the lower slopes on which the soils occur. Stoniness ranges from slightly to moderately stony, and the soils are slightly alkaline. Crop adaptability here is rated good to fair, the land being only fair for winter wheat, barley, alfalfa, ensilage corn and canning crops, while it is good to fair for hay, clover and pasture. For potatoes and tree fruits it is fair to poor. Erosion is not a serious problem in this type, and with improved drainage it can be made more suitable for fall wheat and alfalfa.

Soil profile of Whitby loam.

A 0 - 8" very dark brown, loam to silt loam, medium crumb structure, very few stones, pH 7 - 0.

A_2 8" - 15" brown, loam, medium blocky structure, mottled, few stones, pH 7 - 1

B_2 15" - 25" yellowish brown, clay loam, medium to large blocky structure, mottled, pH - 7-0

C light brownish grey, loam to clay loam till mottled, few stones, pH 8 - 0

Level clay plain of Land Type III.

The better sections of Land Type IV on the sand plain are used for pasture.

Guerin loam.

A_o 0 - 9" very dark brown brown, loam, fine crumb structure few stones, calcareous pH 7-8

A_2 9" - 15" very dark grey brown, loam, fine blocky structure, mottled calcareous; pH 7 - 6

B_2 15" - 20" yellowish brown; clay loam, medium blocky structure, mottled, calcareous, pH 7-9

C light brownish grey, loam, gritty calcareous till pH 8.0

III Land type number III covering 4000 acres, occupies the third largest area in the township. Smithfield clay loam, and Schomberg clay are grouped to-gether to form this type mainly on the basis of the similarity of the origin of the parent materials. These are the soils formed on the lacustrine deposits of glacial lake Iroquois. Topography ranges from level to gently undulating, while drainage is good to imperfect, the Schomberg soils being the better drained of the two. The soils of this land type are stonefree, and slightly alkaline. Land type III A is similar to type III in all respects except drainage, and consists of the Simcoe series of the Schomberg catena, being the poorly - drained member of the family. Only 700 acres of this type are found in the township. The Schomberg soils are very fertile, and suitable for growing a wide range of crops, the only limitation being slow drainage in the Smithfield and Simcoe series. These land types also have the advantage of location for agriculture, lying

in the Lake Ontario shore climatic zone, thus enjoying slightly moderated conditions. Both the Schomberg and Smithfield soils are rated as good crop land, the Schomberg series being slightly better for winter wheat, and alfalfa, while the Smithfield series is the best for ensilage corn. Tree fruits have an advantage on the Schomberg soil because of its better drainage. The Simcoe soil (land type III A) is rated fair to poor for all crops excepting pasture, for which it is good to fair.

Soil Profile of Schomberg clay loam

A_o 0 - 9" very dark grey, clay loam granular structure pH 7-2

A_2 9" - 15" light brownish grey, clay loam, fine blocky structure pH 7 - 0

B_2 15" - 23" yellowish brown, clay, large blocky structure calcareous pH 7-2

C light brownish grey, clay, stone free, calcareous pH 8-0

Smithfield

A_c 0 - 7" very dark grey, clay loam, coarse granular structure, pH 7-2

A_2 7" - 13" grey-brown, clay loam, medium blocky structure mottled pH 7 - 0

B_2 13" - 21" dark brown, clay, large blocky structure, mottled calcareous, pH 7-3

C light brownish - grey, clay, calcareous pH 8-0

Simcoe

A_c 0 - 7" very dark brown clay loam, medium granular structure, slightly calcareous pH 7-2

G 7" - 18" grey clay, mottled, medium blocky structure calcareous, pH 7-3

G_2 18" - 24" yellowish brown, clay, mottled, medium to large blocky structure, calcareous, pH 7-3

C light brownish grey clay, sometimes varved, calcareous, pH 8-0

IV Next to type I, type IV covers the largest area in the township, occupying 5,000 acres. Texture is the distinguishing factor here, as Brighton sandy loam has been combined with Tecumseth sandy loam to form the land type, which cuts across the middle of the township as a sand plain. The topography is level to gently undulating, with steep slopes where the streams have cut deeply into the plain. Drainage is good to imperfect, and the soils have very few stones. The one exception to this is the gravelly type of Brighton sand loam, and the areas where this type occurs have been mapped separately as land type IV A. In both of these land types the crop adaptability is fair to poor for all crops except potatoes for which the better drained areas are rated as fair to good. The coarse grains, and low organic matter in the soils of these types account for their low fertility and poor crop adaptability ratings

Profile of Brighton Sandy loam

A_c 0 - 6" dark greyish brown, sandy loam, weak crumb structure, pH 6-5

A_{21} 6" - 18" brownish yellow sand, single grain structure pH 6-8

A_{22} 18" - 21" very pale brown sand, weak platy or single grain structure pH 6-8

B_2 21" - 24" strong brown sandy loam, weak medium blocky structure pH 7-0

C Light brownish grey sand, calcareous pH 7-8

Tecumseth

A_c 0 - 7" very dark grey brown, sandy loam, medium crumb structure, pH 7-0

A_2 7" - 12" pale brown sand, mottled, weak platy structure, pH 7-0

B_2 12" - 17" strong brown sandy loam, weak blocky structure mottled pH 6-8

C Pale brown sand, calcareous pH 7-4

V This land type consists of Granby sandy loam, and covers 1,000 acres of land of a depressional nature. There are very few stones, and since the land is depressional, the drainage is poor. Most of the occurrences of this type have not been cut over, and stands of white cedar can be found. The soil is rated fair to poor for pasture and poor for all other kinds of agricultural use.

Profile of Granby series.

A_o 1 - 0" decomposed leaf litter.

A_1 0 - 7" very dark brown sandy loam, fine crumb structure, pH 7-2

G_1 8" - 14" light brownish grey sandy loam, mottled, single grain structure pH 7-0

G_2 14" - 19" yellowish brown sandy loam, mottled medium weak blocky structure, pH 7-2

C Pale brown sand calcareous pH 8

VI Marsh comprises this land type which covers 500 acres in the township along the shore of lake Ontario at the mouth of the various creeks which empty into the lake. For most of the year the marshland is flooded, and supports a vegetation cover of sedges, cottails and rushes.

VII Bottomland or floodplain land covers about 1,100 acres along the courses of the Lynde and Pringle creeks. It is made up of recent alluvial deposits, is very flat, and is subject to flooding. The profiles, texture and drainage of bottomland vary, but the fertility is usually high, and thus this often makes good pasture land, even though it be unimproved. Where the drainage is good, crops are often grown. Stream erosion of banks is the only erosional problem here, and generally is not too serious.

CHAPTER TWO

HISTORICAL GEOGRAPHY

1. History of Settlement to 1820

The White settlement of Whitby Township did not begin until after 1800. Up to 1857 Whitby Township included East Whitby township, and their division took place in that year. Prior to 1800, there was virtually no settlement in the area of the Township at all. No major Indian trails came near the area, nor does the Township have any navigable rivers, both of which were important in the location of Indian settlements. The only part the township would have played in Indian life would be that of a hunting ground. In the same manner, the area was of no importance in the French period, and it was not until the British came into comflict with her American colonies in 1775, that the eventual settlement of this area could be foreseen.

United Empire Loyalists began their migrations to Nova Scotia, the Upper St. Lawrence, and Niagara in that year. It was the overflow from the St. Lawrence settlement region that provided the first settlers for Whitby Township. This settlement however did not reach the township until after 1800. John Graves Simcoe was appointed Governor of Upper Canada at this time, and it was his settlement policies which provided the basis for the Lake Ontario townships of South Central Ontario. Settlement to the east of his headquarters, York, was slower that that to the west and

north as his radial roads were built in those directions first. The survey of Whitby town and Township was conducted between 1791 and 1795.

The survey consisted of laying a base line parallel to the lake, and cutting off the irregular lake front. This line formed the base of concession I in the Township. Nine concessions were laid out 100 chains apart, and these were divided vertically into lots 25 chains wide. The concessions number I to IX from the base line, while the lots number 18 to 35 from the east. (Due to later division of the township).

By 1799, the road between Toronto and Kingston was complete, but almost impassable; nevertheless, it permitted settlement in the township to begin. In the first twenty years of settlement, development clung very closely to the lake front, so that by 1821 only the land as far north as the top of concession III was occupied, and this only sparsely. Simcoe's policy had been to encourage American settlers, whether truly Loyalist or not to settle in upper Canada, as they had a first hand knowledge of pioneering. Whitby's first settlers were the late Loyalists, all of Anglo-Saxon extraction. By 1811, there were enough settlers to require a school and in that year one was built. Settlers up until 1820 had a very difficult time of maintaining a livelihood and were occupied mainly with clearing land and preparing it for planting. During this twenty years only enough food could be grown to supply the needs of each family and there was no

surplus for market. Settlers came to this area, with the intention of farming. Good farm land was chosen on the basis of the natural vegetive cover. Poor agricultural areas, characterized by open "park" land usually were left uncut, while the heavily wooded land, indicating good soil, was cleared.(i.e. There remains to-day much uncleared land on the coarse sandy soils of the Iroquois shoreline.)

2. EVOLUTION OF AGRICULTURE

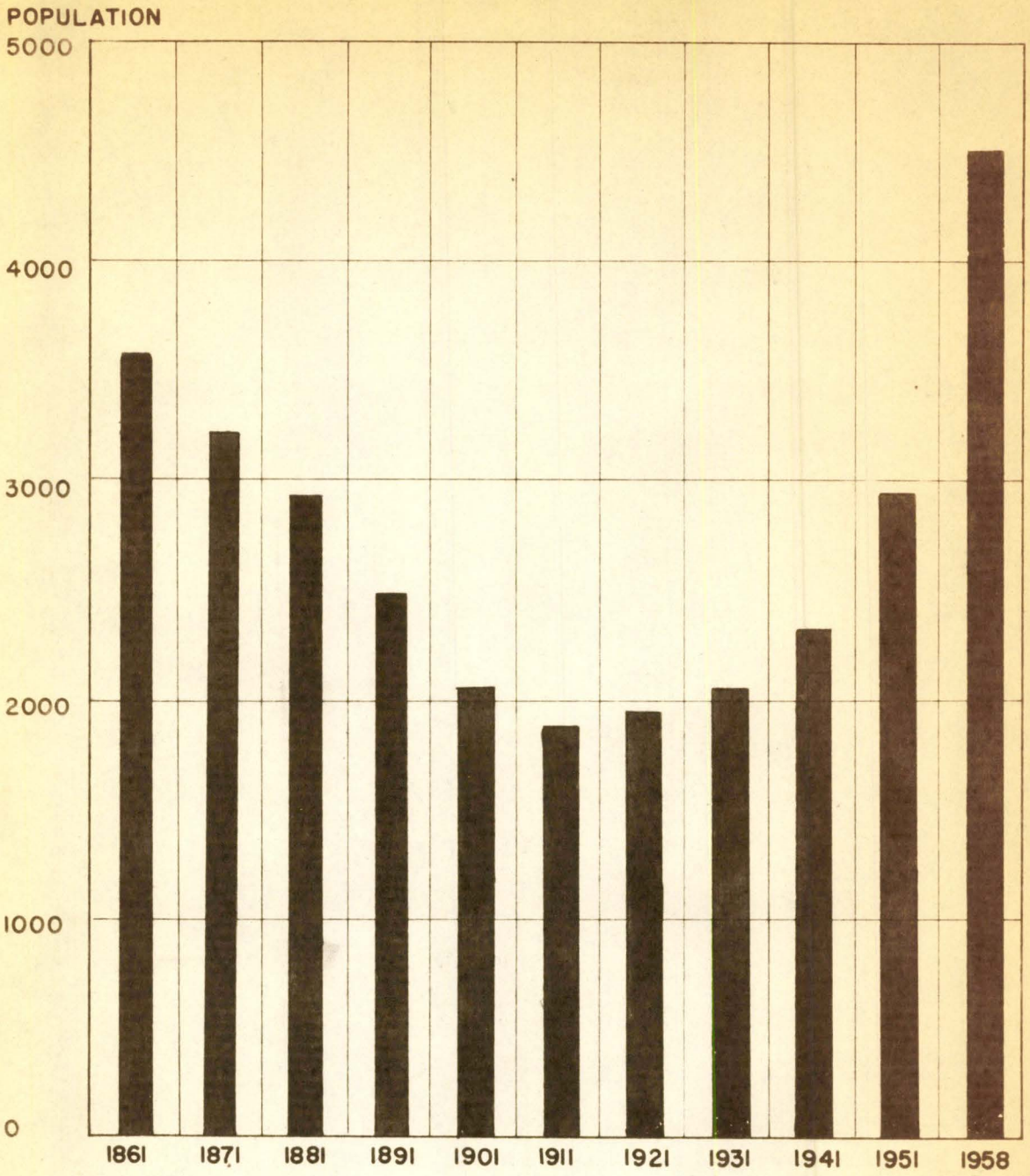
The agricultural development of Whitby Township was very closely connected with Port Whitby, the ancestor of the town of Whitby. The evolution of Whitby Town will be discussed at length later on, but some reference to it here is necessary to appreciate the growth of agriculture in the Township.

New areas were opened up in the Township only as road connections were made available, thus occupance and development worked its way back from the lake front, where settlement had begun. By 1843, Port Whitby had become the third ranking port in Upper Canada, with an agricultural hinterland as large as that of Toronto. Whitby Township was part of this hinterland. In the same year Port Whitby exported "28,562 barrels of flour, 29,674 bushels of wheat, 353,500 feet of lumber." 1 This indicates the nature of agriculture in the township at the time. Wheat production was almost the sole agricultural pursuit, while the sale of lumber from cleared land provided

1 - Spelt J. The Urban Development of South-Central Ontario Assen, The Netherlands, 1955, pp73

extra revenue. Whitby Township got its best chance to develop when in 1850 a plank road was constructed from Port Whitby to Port Perry. The townships around Lake Scugog, had developed much earlier than Whitby, due to their access from Kingston via the Trent system, and thus there was a wealth of trade in grain to be tapped here. The plank road provided a connection with this area but in doing so opened up the whole of Whitby Township for settlement. Port Whitby was at the disadvantage of having no water power for milling, so much of the grain brought from the Scugog area was ground at nearby Oshawa where there was a mill. The owners of a warehousing firm had foreseen this difficulty, and had erected a mill at the site of present day Brooklin in 1848, alongside the road to Port Perry. Although this was a poor mill pond site, enough water was available to operate the mill for part of the year. The mill still operates to-day under hydro electric power, and will be discussed later in connection with Brooklin.

Complete census figures are not available but it was after 1850 when livestock were introduced into the township in any numbers. The 1851 census reports 4365 acres of pasture land most of which would be unimproved, and 1383 cattle, along with 3315 sheep, and 1703 hogs. From these figures, the importance of sheep farming can be seen, along with the relative importance of cattle. Sheep farming was of minor importance earlier when a fulling mill was established at Oshawa, and it is very likely that the wool of Whitby's sheep



POPULATION TRENDS
WHITBY TOWNSHIP
1861 - 1958

FIG. 3

W.M. 1958

was sent there. In this year also, Whitby's population was at a peak, that was not surpassed until 1958. In 1851 the population was 3546, in 1958 it was 4,601. 1911 saw the population at its lowest ebb when it was only 1875. (Fig.3)

In the years between 1861 and 1911 the popultation dropped steadily. By 1861 most of the land had been occupied, but not a great deal of it was improved. Also in these years wheat production dropped off, and pasture land was increased to about 9000 acres. In the year 1911, the township was at its lowest ebb, milk and beef cattle dominated the economy but these were not great in number. Of the improved land, 1063 acres were in wheat, 1932 acres in barley, 4323 acres in oats, 596 acres in corn, 1372 acres in mixed grain and 5544 acres in cultivated hay. The dominance of hay and pasture indicates the importance of cattle, but farming was generally of a mixed type. There was not a great deal of change in the proportion of these acreages until 1951. In the period 1911-41, the amount of improved land remained constant at around 25,000 acres, wheat acreage increased by 100 acres, oats dropped 1500 acres, and the amount of pasture land dropped to 5527 acres, while mixed grain acreages increased to 3000 acres. These changes along with an increase in the number of dairy cattle, and a reduction of beef cattle and sheep, indicated an intensification of mixed farming, but no definite trend towards dairying.

The figures of the 1951 census indicate the start of the trends discussed in the next chapter. In this year the

population had risen to 2972, most of the increase being accounted for by urban populations. The trend towards dairying however was apparent, even though the number of milk cows, heifers and calves, had been reduced to 2691, due to a reduction of cattle in the southern part of the township, under the influences of urbanization. Wheat acreages increased to 2081 acres, cultivated hay to 5440 acres, and pasture to 8341 acres, a great deal of which was rotation pasture.

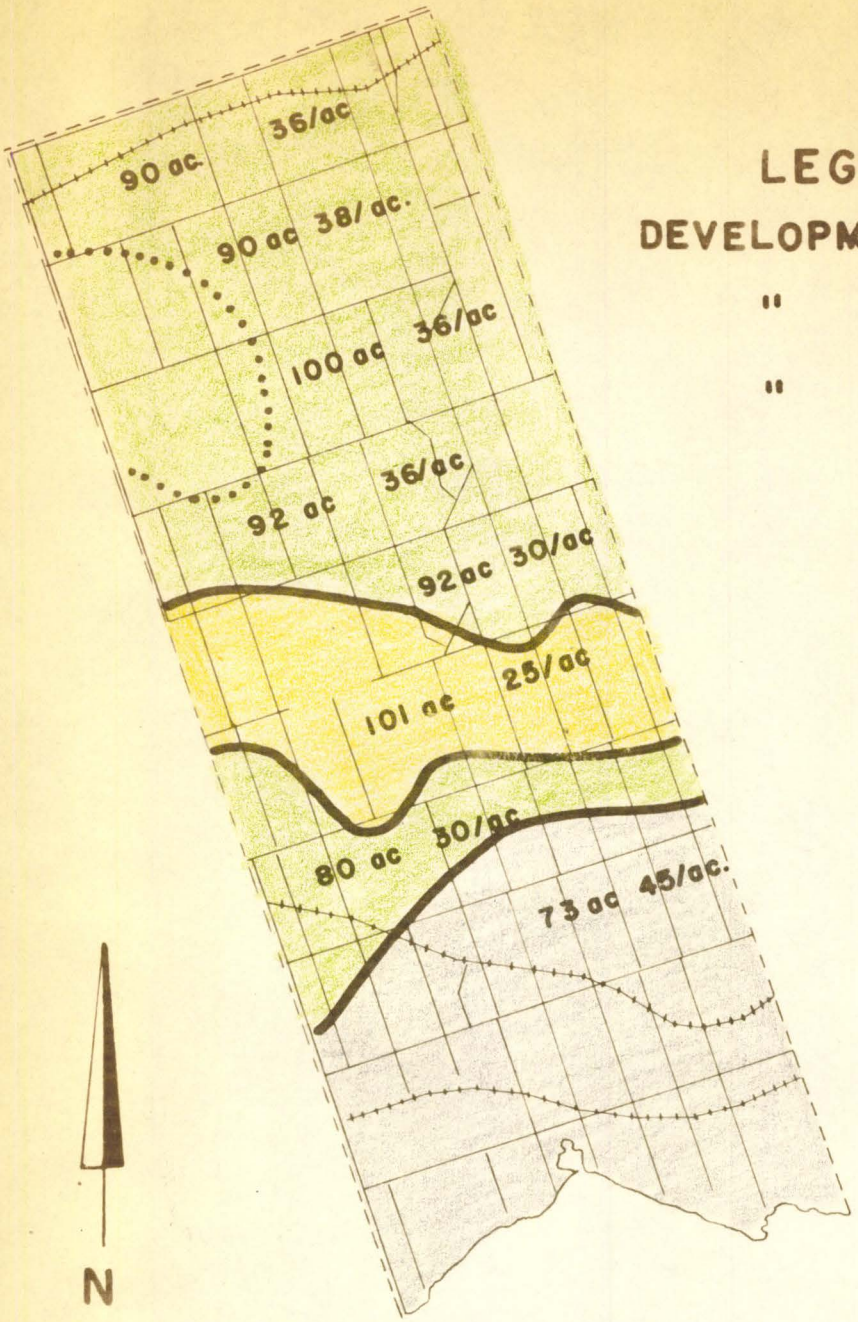
Changes in farming methods were also apparent. The number of horses in the township in 1931 was 1071, and in 1951 this had dropped to 393. Horses had been replaced by tractors which were over 250 in number. Farmers were also paying more attention to soil building as 662 acres were lying fallow, more than ever before.

There were changes also in the secondary agricultural pursuits. Sheep which had been declining in numbers ever since 1861, showed an increase to 2490. Hog raising reached an all time high with a total of 3132. Poultry which had reached unprecendented numbers of 58,565 birds in 1941, dropped to 10,821 in 1951.

Since the beginning of the 20th century, orchards, small fruits, and market gardens had occupied an important part in the agriculture of the southern part of the township. In 1911, there were 1119 acres devoted to orchards and 499 for small fruits, and market gardens. Since then market garden production

has fluctuated severly, but in 1951, there were still 481 acres put to this use. Orchards on the other hand have steadily declined, so that in 1951 only 460 acres were still in orchards.

This brief discussion of the evolution of agriculture in Whitby Township, provides a basis for a detailed discussion of present land use, and trends in farming types. In the next chapter the concept of development areas, already defined, will be introduced. The development areas represent an important stage in the growth of the township, as the effects of urbanization and a growing dairy market become apparent, and are manifest in various sections of the Township.



LEGEND

DEVELOPMENT AREA I

" " II

" " III

WHITBY TOWNSHIP DEVELOPMENT AREAS

SCALE 1" = 4mi.

WM 1958

FIG 4

CHAPTER THREE

DEVELOPMENT AREAS

1. Development Area I

From the lake front to concession two, and projecting into concession three there is an area which is at the present time experiencing extensive urbanization. This development is taking place in two ways. In a zone around the Town of Whitby particularly between Whitby and Oshawa to the east, subdivisions have been developed, creating a rural-urban fringe. Throughout the rest of the area agriculture persists, but has been affected by the urban spread. What was once a dairying region, is now predominately used for cash crops. Many farms have been bought on speculation, but are still operated as farms on a year to year basis, there being no great investments made in this area for agricultural improvement. The township plans to zone this whole area for urban uses, the land east of the Town of Whitby for industry, and the land to the west for residential, and commercial along highway 2.

This area then is in transition from predominately agricultural land use, to urban uses.

LAND TYPE

I	3500	acres
III	4800	"
IIIA	400	"
IV	600	"
VI	500	"
VIII	200	"
TOTAL	10,000	"

See soils and land types section for descriptions, also (fig F1)

Land values in this area are higher than in the areas to the north. This again is due to the expected urbanization, and to the location factor, and are not particularly related to the land type, except in cases of flood plain land and marshes. This does not show as clearly as it might in the assessment figures, which only take into account, land type from the point of view of agriculture, and the location factor, which reduces the assessed value of the land by one per cent for each concession. The land in this area is assessed at an average of $45.00 per acre which is only $5.00 under the assessment per acre for top farm land indicating the amount of good farm land here.

Land Use.

(a) Agriculture. Agriculture in this area is mainly on a cash crop basis. There are very few dairy farms left, although at one time dairy farming predominated. Of the agricultural land in this region, cereal grains occupy the largest area, covering nearly 2000 acres. Most of this grain is sold, and is not used for feed on the farms on which it is grown, for there are few cows. There is about half as much hay grown as there is corn, the hay occupying about 1100 acres. The use of this hay can be grouped in three categories. On farms where dairy cows are kept it is naturally used for feed, otherwise the hay may be grown on market garden land as a soil builder, and be plowed under in the fall, or finally it may be sold to farmers in surrounding areas, whose larger herds require more

fodder. There is considerable corn grown in this area, some of it for fodder, and some of it for canning in the Stokely Van Camp plant at Whitby.

An important part of the agriculture here, although not a large part, is the tree fruit and market gardening. Approximately 700 acres are put to this use, which is particularly suited to this area because of the moderate climate. Again some of the produce is handled by Stokely Van Camp in Whitby. Apples, tomatoes and peas all being processed and canned for marketing by this company. The rest of the fruits and vegetables are sold in Toronto and Oshawa.

The remainder of the agricultural land is devoted to pasture. Pasture land here is not nearly as extensive as in the rest of the township, and the milk herds are much smaller. The average dairy farm here keeps only ten to fourteen milk cows, and depends on the sale of crops for the rest of their income. Recent innovations in milk marketing, is speeding the departure of the dairy industry in this area. Very few dairies will buy milk from farmers who have not installed the bulk cooler for transport by tank truck. The dairy farmers knowing that their days are numbered, are reluctant to go to the great expense of installing the coolers. By the same token, they are reluctant to invest in beef herds, due to the length of time that it takes and the output involved. Thus the cattle industry is fast disappearing in this area, and within a very short

will not exist.

Land types I and III cover the largest portion of this area and nearly all of the agriculture is carried out on them.

It was pointed out earlier that land type I was rated as good for cereal crops, especially winter wheat, of which there is a definite concentration east of the town of Whitby where most of the land is type I. West of the town on land type III there is more variation of crops, cereals, corn and hay occupying equal acreage, and more land used for fruit and truck crops, for which land type III is particularly suited.

Hog raising which is lower per acre in Whitby than in any of the surrounding townships is less concentrated in this area than in the rest of the township, which is accounted for by the general trend away from farm animals as urbanization increases. On the other hand, the poultry industry in Whitby compares favourably with surrounding townships on a per acre basis, and this area has a good proportion of poultry population. This is by virtue of the fact that one of the townships major poultry farms is located in this area on highway 2, west of the town of Whitby. This farm keeps between 8 and 10,000 birds, which is about 1/9 of the total number of birds in the township. The poultry products are marketed in Toronto, Whitby and Oshawa. Several of the other farms keep a number of birds, but market on a smaller basis, wherever the best price can be obtained which often means private sales.

Below the base line in the eastern section, production is specialized being mostly cereal grain for sale. The average sized farm all through this area is 73 acres, which is significantly less than in most other parts of the township. This is the result of many farms being split up for sub-divisions, and small acreages being sold off for single lots.

Urban Uses.

(a) Residential. Since the last war urban development has mushroomed in countless Ontario towns, spilling beyond the boundaries of the towns into the adjacent townships, Whitby township has been no exception. North and south of highway 2, subdividers have bought up many farms, put in streets, and divided the land up into 50' lots, using every square inch available. Later in our discussion of Whitby these sub-divisions will be described in detail, suffice it here to refer to illustration 13, where the type of house is portrayed. Approximately 800 acres have already been subdivided in this manner, while an equal amount of land has been purchased and is lying idle awaiting subdivision. Most of this development has occurred between Whitby and Oshawa, and north of Whitby astride highway 12. East of the town towards Toronto the development has mainly been the construction of single houses on one to five acre lots, such houses being of a better type than the subdivision houses. These mixed with the older farm houses, gasoline stations and various other commercial enterprises present a very tangled picture to the passer-by, as the lack of planning is much in evidence.

In the main, the township has not been able to keep up with the development, thus in several cases unimproved roads, and open ditches are to be found. The problem of servicing subdivisions has slowed down the development considerably; thus there are large acreages slated for subdivision, but awaiting services.

Away from the major areas of urbanization the standard brick or stone farmhouse prevails. These are all large, many having eight or ten rooms, and are in good condition. One exception to this are the homes on farms of small acreage (under 20 acres). These usually represent the splitting of a larger farm, and in many cases the land is used for market gardening. The homes here are smaller, often frame, and are not accompanied by the usual farm buildings.

Finally on the lake front in lot 20 a very small area is devoted to summer cottages. These are all over 10 years old, are quite spacious and are well kept. A dirt road winds along the lakefront, and nearly all the cottages are between the lake and the road. These are summer residences only, belonging principally to Toronto people.

(b) Commercial Uses: All of the commercial establishments in this area front on highways 2 and 12. Due to the large map scale it was not possible to plot these on the township land use map, but they consist mainly of service stations, restaurants and market produce stands. Commercial assessment accounts for only 5% of the total township assessment, and nearly all of this comes from other parts of the township,

indicating the limited extent to which commercial activity has developed in the area. As we shall see in our discussion of the Town of Whitby, when commercial development is also limited, the City of Oshawa performs many of the necessary commercial functions for the whole area, thus alleviating the need for this development in the adjacent areas.

Industry Industry like commerce is very poorly developed in the township, accounting for only 4% of the total assessment. This is located in other areas. The prospect for industry however is very important. In the official plan which is being prepared for the township, nearly all of the land between Whitby and Oshawa, half way up the third concession is being tentatively zoned for industrial use. This is a reasonable development as all the transportation facilities are here, the lakefront is close at hand, giving an unlimited supply of water, and both Whitby and Oshawa are expanding their harbours. Solid industrial development here however, will play havoc with the existing residential areas, unless careful planning provides the isolation necessary for a residential area of reasonably high standard. Under this same zoning plan, the land west of the town of Whitby will be devoted to residential uses, which will include all types of residences from multiple family dwellings to spreading rural style homes.

Development area one then can be thought of in terms of present and expected future development. In terms of the size of the area, (excluding the town of Whitby) agriculture is still dominant on a per acre basis, but the transition from rural to

urban uses is everywhere in evidence, and the days of agriculture will be short.

The Town of Whitby is a very important part of this development area, even though its zone of influence goes far beyond the areas boundary. Due to the size of the town, its particular history of development and its present function, the next two sections of this chapter are devoted to a discussion of Whitby's origin, evolution and present function.

THE TOWN OF WHITBY

(a) SITE, ORIGIN, EVOLUTION AND POPULATION

Whitby the seat of Ontario County lies on the north shores of Lake Ontario eleven miles from the boundary of Metropolitan Toronto, and half-way between Montreal and Windsor on trans-provincial routes. The site of the town is the flat clay plain of old Lake Iroquois, the only significant variations in relief being the shallow valleys of the Lynde and Pringle Creeks (Fig. F2) and there partially buried drumlins which rise about 35 or 40 feet above the surface of the plain. From an elevation of 250' at the lake, the plain gently rises about 100' to the northern edge of the town which is about two and a half miles from the lake. Low shore cliffs characterize the town's lake front, and these are broken by a bay into which the Pringle and Lynde Creeks empty. The bay has been partially enclosed by a curving spit from the west bank, forming an excellent harbour site. The low flat land around the bay at one time was very marshy, but has since been filled in and used for building sites. To the east of the bay a small gravelly beach has been formed, and this stretches for about two hundred yards in an easterly direction and then joins the low shore cliff.

The site of Whitby was probably visited first by whitemen as early as the year 1615. Settlement however did not begin until the end of the eighteenth century. The history of settlement of Whitby is linked with that of

of the township, and the history discussed here should be thought of as occurring simultaneously with the history of the Township discussed earlier.

Both Town and Township came under an organized government settlement plan. Thus surveyors were the first officials to visit the site. It was the custom in these surveys to lay out with each Township a town site. In the case of Whitby which fronts on Lake Ontario, a lake site was chosen for the Town. If there had not been a good harbour site, the Town of Whitby would have been located on Lake Ontario, halfway between the north-south boundaries. As there was a good harbour site further west than the usual position for a town, the surveyors chose this for the town site. Town and Township were surveyed between 1791 and 1795, at which time the town boundaries were established, and have since been changed only once, with the addition of a small piece of land in the south-west. The base line for the town is the same as that for the Township, running parallel to the lake front, in a straight line, cutting off the irregular shoreline. The first road to be constructed was along this base line, but this first road was not destined to become the Town's main road. The Town lots were arranged symetrically around a road, which ran from the harbour northward a short distance, to the limit of the settled area. The intersection of this road and the base line formed the Town's first centre. These lots were of farm size and were again subdivided along the main roads into lots of 50' to

100' frontage.

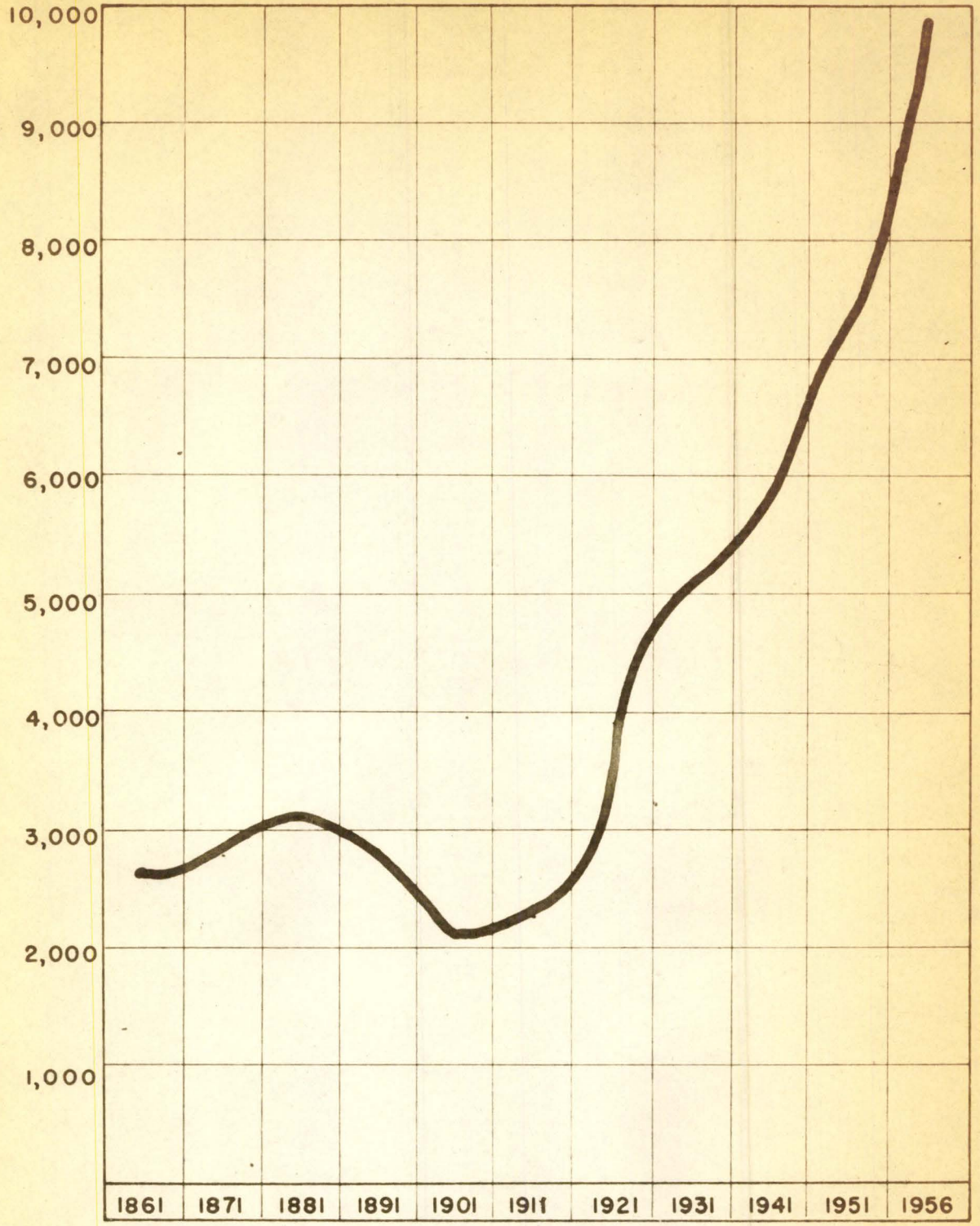
There was no provision made for parks in the original plan of the town, as there had been in some other contempary Ontario towns. It is quite possible that the tiny community of people living in close settlement at that time did not foresee the necessity of such a provision.

The surveyor's choice of a site for the new settlement was a good one, and soon grain from the new farms was finding its way to market through the port of Whitby. At first the settlement had been called Windsor, but was later changed to Whitby after the Yorkshire town, to avoid confusion with another Ontario town. The small hamlet developed along the road leading to the harbour around the base line. Whitby's harbour was important as early as 1833 when John Welsh built a tramway and storage sheds in the harbour area for the shipment of wheat and flour. Later Whitby's centre of activity shifted northward, when the Toronto-Kingston road was built through the town, but the harbour continued to be important, and, for a while, the town had two centres. In 1836, Peter Perry a very energetic settler from Kingston was instrumental in extending the north-south road, (now highway 12) to Lake Scugog, where it tapped the expanding agricultural production for shipment through Whitby. The importance of the harbour continued to grow and in 1842 the Windsor Warehouse was built for the storage of grain and flour, and a warehousing company was formed. Earlier in 1833-4 the government had begun work on harbour improvement, having built piers and small ship

berths. It was not an uncommon sight to see the road to the harbour lined with carts loaded with grain, and up to thirty ships waiting to receive it. It is interesting to note here that the development of the harbour did not include milling facilities. This was mainly due to the lack of good mill sites close to the harbour, and an abundance of them within a radius of twenty miles. Peter Parry, who has been mentioned earlier, was also greatly interested in the construction of a Whitby-Georgian Bay railway, which would have increased Whitby's grain shed enough to make her one of Ontario's leading ports. He died however before the plans were complete, and they fell through soon after. In 1852, the Whitby, Lake Simcoe, Scugog and Huron Road Co. purchased Whitby harbour and the road leading to it. Their plans called for harbour and road improvements, but these were to no avail. Competition from railways and other similar harbours had reduced Whitby's trade a great deal, and most of it was gravitating towards Toronto which was growing more rapidly than any other centre in Ontario. The volume of traffic in Whitby's harbour was soon reduced to that of minor important.

The Toronto-Kingston road had sparked new life into the town this was to be of continuing importance so that when shipping fell off, the town did not suffer as severely as it might have. In fact the population continued to increase from 1861 when it was about 2,600 to 1881 when it exceeded 3,000. Activity was now centred around Hammers corners 1

1. Whitby the County Town, edited by Charles Chaytor, Centenial Publication, 1956



TOWN OF WHITBY
POPULATION TRENDS

FIG. 5

W. M. 1958

the intersection of the Toronto-Kingston road (Hwy 2) and Peter Parry's road (Hwy 12). Whitby's survival after the failure of the harbour was based on two things. In 1852, Ontario county had been separated from York county, and Whitby became the new county seat. Its new administrative function did not do much to increase the town's population, but was important commercially as people were drawn to the town on business, and often did shopping while there. Secondly, small industries had grown up during the harbour period, and these remained important, among them was a buckle factory, a tannery, a machine shop, two harness shops, three wagon shops, and two liquor stores. Beside these industries which were in fact commercial establishments too, because they retailed their own products, there was a post office, general store, and a few other commercial outlets.

Growing along the side of Whitby, 4 miles to the east, was the town of Oshawa which got its start in 1822 when a fulling mill was built there. For a long time Whitby dominated Oshawa, and it was not until the McGlaughlin Carriage Company located there that Oshawa became a serious rival, and eventually surpassed Whitby. The McGlaughlin Carriage Company was the ancestor of General Motors, which has been largely responsible for Oshawa's growth.

From the very beginning Whitby was an English settlement. The town being named after a Yorkshire town, indicated the origin of the early settlers. To-day people whose forefathers

were from the British Isles still dominate as in 1941, they composed 86.6% of the population. The next decade saw the influx of many continental Europeans, and in 1951 the percentage of people descended from the British Isles stood at 84.6, a drop of 2%. From the year 1881 to 1901 the town experienced a steady decline in population, which was a reflection of the levelling off process, following the decline of harbour traffic, and the subsequent attraction of other centres for labour. The period 1911-21 showed a marked rise in population, as it rose from 2400 to nearly 4000. This is probably due to the increased war production in Oshawa, the new war workers finding homes in Whitby. A similar increase was experienced in the period 1941-51, when the population rose from over 5000 to 7500.

Finally Whitby experienced her greatest period of growth in the years between 1951 and 1958 as the population now stands at nearly 10,000. Most centres in southern Ontario have experienced a similar expansion since the last war, and Whitby has been no exception. Her population increase is due mainly to increased industrial activity which has generated a need for a greater labour force. Expansion in Oshawa has also overflowed into Whitby and about 20% of the working force now living in Whitby works in Oshawa.

(b) FUNCTIONS AND FUNCTION ZONES

The functions and functional zones of Whitby are shown on the present land use map. (Fig.6) From the map it can be seen that the distribution of functional zones is related to the town centre, the harbour, and the transportation routes.

(a) Transportation

The town of Whitby lies on the two main trans-provincial highways, Highway 401 and Highway 2, halfway between Montreal in the east and Windsor in the west, and about 22 miles from the centre of Metropolitan Toronto. Along these two highway routes moves a large portion of the provinces truck transport traffic. The intersection of Highway 2 and Highway 12, which runs in a north-west direction, forms the commercial centre of Whitby. Highway 12 joins with Highway 7, another trans-provincial route, to the north of Whitby, thus giving the town excellent road connections with all parts of Ontario. Via these highways Whitby is served with a half hourly bus service with Metropolitan Toronto and nearby Oshawa.

The Canadian National and Canadian Pacific railways both have their main east-west lines running through Whitby, and provide sidings to major industries and an interconnecting switch line. The C. N. R. line runs parallel to and south of Highway 401, while the C.P.R. line lies in the northern part of the town and cuts through it from the north-west. Both lines have stations of standard railway design, situated by the tracks and close to Highway 12. The C. N. R. has spur lines running to the harbour area and lake front industries.

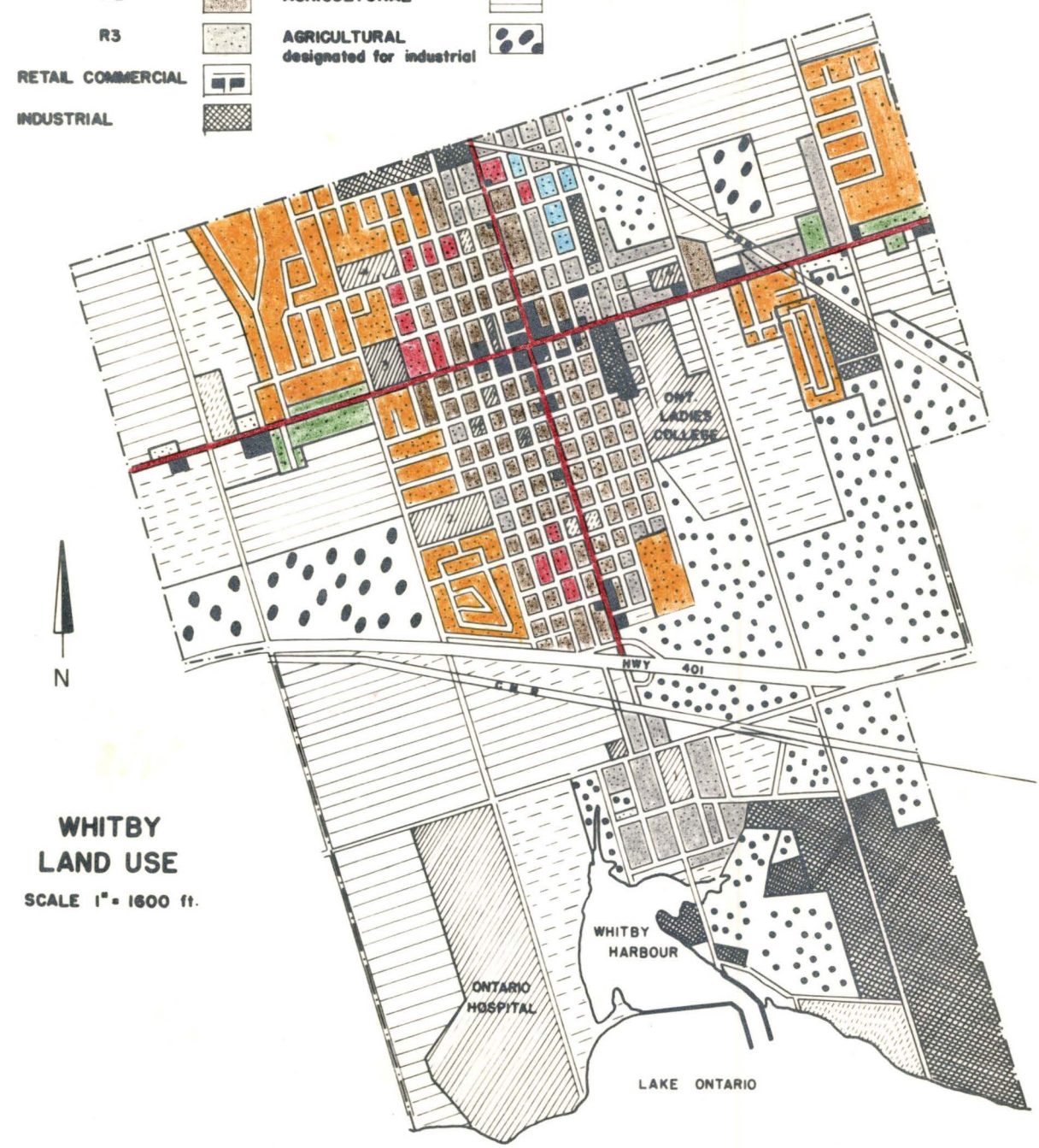

LEGEND
RESIDENTIAL RM
RS
RR
R1
R2
R3
RETAIL COMMERCIAL
INDUSTRIAL
RECREATIONAL
INSTITUTIONAL
IDLE
IDLE designated for industrial
AGRICULTURAL
AGRICULTURAL designated for industrial
ONT. LADIES COLLEGE
HWY 401
N
WHITBY HARBOUR
ONTARIO HOSPITAL
LAKE ONTARIO
WHITBY LAND USE
SCALE 1" = 1600 ft.
W M 1958

FIG.6

Air facilities are close at hand, with an air field in Oshawa, and another which is served by T.C.A., Malton lying 40 miles to the West.

Finally the harbour provides water connections with the whole world via the St. Lawrence seaway. At present the federal department of Public Works is engaged in a program of harbour improvement. Dredging operations are deepening the harbour so that large ocean going ships can be accommodated, and berths for 12 such ships are being built. Plans for the necessary port facilities are under way and already two applications for warehousing companies are being considered.

(b) Industry

Whitby's position in the industrial horseshoe, from Oshawa to Niagara Falls (Fig.1) makes it inevitable that she will experience industrial growth. This has already been evidenced since the war, and the expansion is expected to continue. In order that industry can thrive however, the town must be able to provide the necessary services. At the present time Whitby is able to pump 3,000,000 gallons of water per day, and expansion plans call for 12,000,000 gallons per day. There is adequate open space in the town for industrial and residential expansion; the great increase in population since 1951 indicates that the size of the labour force is keeping up with an expanding industry. It is interesting to note that Whitby, while providing services for the new industries, has in the last three years had a declining industrial tax rate, which is now the lowest in the town's

The Stokely Van Camp Canning factory.

The lake front industrial section as seen from Highway 401.

surrounding area.

Whitby's industrial areas can be seen in figure 6. There is a small group of industries along the C. P. R. tracks in the north, and along the interconnecting line north and south of highway 2. Other smaller industries which cannot be mapped on this scale are scattered throughout the town. The third industrial zone is the lake front area, and here are found the newer and heavier industries. In the group of industries along the C.P.R. tracks, we find Stokely Van Camp, a canning company, which processes the market garden crops and fruits of the Whitby district, and as far away as Lindsay, marketing them all through Ontario. Much of the land in the town which is still in agricultural use is rented by Stokely Van Camp, and crops specifically for their use are grown, these including corn and tomatoes which are the most important. Farther east along the tracks and on the interswitching line other smaller industries are found; Ajax lumber Company, Wright Electronics, Chicago Painted String Company and the Whitby Welding Works. The marketing of the products of these industries is more local than that of Stokely Van Camp, thus they depend on the railway to bring in the needed materials, but do their shipping by truck to the local and nearby markets.

In the appendix are listed all the industries located in Whitby. These include the small industries not mapped in figure 6, of which the Hillcrest Dairy is an example. This dairy is one of Whitby's few links with the agricultural hinterland, as it draws whole milk from the surrounding townships, and processes it for the consumers of Whitby and Oshawa.

In the lake front and harbour area are found the large new industries which have been instrumental in Whitby's recent growth. In the harbour area and making use of the harbour are Trinidad Leaseholds Company Limited (Texaco Oil) and MacNamara Construction Company, whose dredges are deepening the harbour. The Dunlop Rubber Co. located to the east of the harbour plans to make use of the harbour for importing rubber, and will have their own dock and storage sheds. Canadian Silico, and Bathurst Power and Paper plan to use the harbour also as soon as it is fitted for more and larger ships. The Dupont Company of Canada (nylon products) is considering using the harbour but as yet has made no decision to do so. All these industries are post-war arrivals in Whitby and are alike in that their raw materials are not derived locally, and their markets are spread all over eastern Canada. There location in Whitby is in keeping with the spread of industry away from the large centres all through the industrial horseshoe from Oshawa to Niagara Falls.

At the present time, there are twenty-nine industrial concerns already located or who have purchased sites in Whitby. The 1956 census figures show that industry employed 596 workers or 25% of the towns total labour force. Industrial wages in that year averaged $2,850 per employee, and totaled $1,716,000. This year the available labour force is almost 3,000, which, if the distribution of labour is in the same proportion as in 1956 would give industry a labour force numbering 750 workers. Only 60% of the available labour in Whitby however works in

Whitby's commercial core looking east on Dundas Street.

The new shopping centre on Brock Street South.

Four service stations have located on Brock Street South just north of Highway 401.

the town, the remaining 40% are employed in Oshawa and Toronto.

In the official plan of Whitby a great deal of land has been set aside for industrial use. Figure 6 shows the distribution of this land and its present use. Most of it is idle but some has remained agricultural, but it is expected that it will all be industrial land by 1980. The locational factors in this zoning are obvious from figure 6, the land reserved for industry being in the harbour area, and along the railway lines. Some of the areas designated industrial have already been fitted with municipal services, and is ready to be put into use. Such land can be purchased for a minimum of $1500 per acre.

(c) Commercial

Whitby's commercial growth has not kept pace with her industrial growth. With the population more than double what it was in 1921, there are not many more commercial outlets than there were at that time. Two reasons for this are apparent. Natural commercial growth should occur along the two main streets, Dundas and Brock. The town has constricted this development by zoning a block centred by the present commercial core as commercial, and permitting development elsewhere only in special instances. Residences however occupy the land zoned as commercial, and the town has not matured to the point where re-development will occur naturally. Consequently, nearby Oshawa, a larger centre, with a greater variety of stores, is accommodating part of Whitby's needs. All the large department

stores, and the better specialty shops are located in Oshawa, and most Whitby people will drive the mile and a half to Oshawa to do their shopping for major items.

The commercial core and town centre is built around the main intersection of Brock and Dundas Streets (highways 2 and 12). It extends three blocks west and two blocks east along Dundas Street, and one block north and three blocks south along Brock Street. (Fig. 6) The main intersection is typical of most commercial centres, having banks on two corners, a post office building on the third and a drug store on the fourth. The post office building however is now vacant as a new post office has been built one block east on Dundas Street. This section of the town has all the characteristics of a southern Ontario town's commercial area. The stores are all old, built of brick, and many of them have not been altered since their construction. The few that have been face lifted, stand out and look out of place. Most kinds of small shops can be found, shoe stores, jewelry shops, clothing stores, cigar stores, hardware stores and restaurants. Dundas Street West is perhaps the best commercial street, and here is found the office of the Times Gazette, the Oshawa-Whitby daily, a small medical building, two restaurants, and a variety of shops. On Brock Street north, the hotel is found standing beside an antiquated movie house. Across the street from the hotel is another restaurant and it is flanked by the inevitable shops. There is nothing in this commercial area that would indicate that Whitby is a

booming town, with a population of 10,000, nothing of the new Whitby with large modern lakefront industries and sprawling residential subdivisions.

Farther north on Brock Street the only commercial establishments are gasoline stations, which actually mar the dominantly residential atmosphere. East and West on Dundas street, a few commercial establishments have been permitted, including service stations and restaurants, which besides serving the town, serve the traffic passing through the town. Brock Street south, close to highway 401 has seen an interesting change in land use. In response to the heavy traffic coming off highway 401, three service stations have been built on the east side of the road, and one on the west. Just north of the service stations, a small five store shopping centre has been built. This has created a new and fairly important centre of commercial activity, but by no means is it indicative of the magnitude of the towns growth.

One commercial function that Whitby does not perform is the sale of farm implements. There is no implement dealer in Whitby, and this function has to be performed by Oshawa. It is somewhat surprising that the town whose origin and early growth was connected very closely with the agricultural hinterland, should have lost almost all contact with the rural scene. Yet when the matter is considered it is not difficult to see that farmers would be attracted to a centre which offers more services and more variety of products. Thus Oshawa has far more contact with the agricultural areas than does Whitby. This is not to say

that farmers do not do business in Whitby. All banks report having customers from as far north as Brooklin and as far east as Pickering, as do the specialty shops. In all cases however, it appeared that Oshawa drew more rural business than did Whitby, and this was confirmed when investigations among the farmers were made. Commercially then, Whitby appears to be only a local annex to Oshawa.

In 1951, Whitby's commercial sales were worth $5,992,000.00, this sum being accumulated through sixty-two business establishments. These sixty-two businesses employed 231 persons, or about 12% of the labour force.

There is a very limited wholesale commercial trade in Whitby, consisting of three trucking firms maintaining offices and warehouses, whose sales amounted to only one eighth of the value of the retail sales. Again wholesale trade is performed by Toronto and Oshawa, and is very poorly developed in Whitby.

(d) Residential

The present population of Whitby exceeds 10,000 people. As the only census figures available are those of 1956 when the population was 9,995, the figures used in this discussion will be based on that census. In 1956 there were 2,033 households giving an average of 3.8 persons per household. It can be assumed that nearly 90% of the households represent a dwelling as the only apartment development in the town took place after 1956.

The residences and residential areas have been classified by means of six groups, the criteria for the classification being

Modern Subdivision homes.

Row Housing subdivision style. Note the lack of landscaping and open ditches.

the age and value of the house, along with the location and lot size.

(i) RM These are multiple dwellings and are a recent development in Whitby. The apartment buildings have been built in only one section of town (Fig. 6), and consist of three storey buildings containing eight apartments, which rent for $80.00 to $110.00 per month depending on the size of the apartment.

(ii) RS These are the new subdivision type homes, built on lots with 50' to 60' frontages and valued between $15,000 and $25,000. These are all one storey and one and a half storey buildings, of similar design, lining treeless streets, which are of a basically rectangular pattern. These homes have all the municipal services, which the town has been very quick to provide, and so far has been able to keep up with the demand. The subdivisions are located on the outer edges of the settled parts of the town, and are in striking contrast with the older and more sedate residential sections. In 1955, 162 homes of this type were built, having a total value of $3,894,000. In 1956, building dropped off as only 82 homes were built, and the total value dropped accordingly. However, in 1957, 84 homes were built, but their value exceeded that of the 1955 building, thus indicating the trend towards larger more expensive subdivision homes in the $30 to $35,000.00 class.

(iii) RR In a very few instances along highway number 2 there are homes old and new which must be classed as rural

R 1 Home. Note the new house on older street.

R 2 Home. Old brick homes on large shaded lots.

R 3 Home. Poorer type of old home.

residential, non farm buildings. The old are built on large lots and still are surrounded by farm buildings. The new are ranch type homes, built on large well landscaped lots and have a definite rural atmosphere.

(iv) The houses of the old settled portion of the town are divided into three groups R1, R2, R3. The newer houses built since the war are R1, and they differ from the subdivision houses in location, landscaping and styling. Most often they are found singly between two houses of a different type, and thus are mapped only if more than three occur in one block. The value of this type of house ranges from $12,000 to $20,000 and they are usually found on the standard fifty foot lot, which has been mostly landscaped. The remaining two types are differential from the rest not only by the appearance of the house, but by the overall appearance of the streets on which they occur. The areas classified as R2 have the stately old homes of the town. They are often built on lots larger than a sixty-foot frontage but not generally. They are set back well off the streets,are well kept, have two storeys and are usually built of brick. The streets in R2 districts are tree lined and quiet, presenting a very pleasant picture of grandeur, without being ornate. Usually this type is found within a few blocks of the commercial core and forms the old residential core of the town. R3 homes are no older than R2 but are of a very inferior type. They are built on smaller lots, are in much poorer shape and are located closer to the railways and industrial areas than

the R2 homes. South of highway 401 is what is called Port Whitby, all the homes are of this type, and many are older than the R3 homes, north of the highway. This is the old centre of Whitby and while few of the original homes remain there is a distinct air of antiquity in the district.

The distribution of residential types as they have been classified in a sense tells the history of the town. The oldest buildings being in an area which is depressed now but formerly a centre of great activity, while the very new buildings enclose the stately middle-aged homes. Each type of home marks a change in the towns economic situation, and represents a period of growth, stagnation or degeneration.

(e) Institutions

Whitby is the judicial seat of Ontario County. In connection with this function, there are located in the town three county buildings. One block west of Brock Street and three south of Dundas the County Courthouse and Registry Office are located, the registry office being a new building annexed to the old courthouse. Four blocks west of Brock Street on Dundas is the new Fairview Lodge, the Ontario County home for senior citizens. Below highway 401 and east of Brock St. a new county jail has been built.

The town offices, police department and fire station are all located one block south of Dundas Street on Brock in buildings which were not built for the purpose they now serve. To the west on Dundas we find the Town library which is used extensively by the town's people. Whitby has four public

R 3 Homes. Very old homes of Port Whitby.

New Ontario County Registry Office with old Court House in the background.

Front of the Whitby Municipal Offices.

schools, two separate schools and one secondary school which serves as a district high school. In school construction the town has again kept pace with the demands of a growing population. In addition to the government and separate schools there is the Ontario Ladies College which is a private school for girls, established in 1875, and is attended by young ladies from all over the world.

Fronting on Lake Ontario and covering more than 200 acres is the Ontario hospital. This institution serves the eastern Lake Ontario region, and provides employment for many Whitby persons. On its lands are found all the works necessary for a hospital of this size, 100 acres of agricultural land where much of the food necessary for the hospital is grown.

Whitby has ten churches, none of which were mapped due to their small size, serving the mainly Anglo-Saxon population. In the 1951 census 2421 people claimed to belong to the United Church while 1920 said they were Anglican, 1125 Roman Catholic, 883 Presbyterian, and 538 Baptist.

(f) Recreation It was noted earlier that in the original plan of Whitby no land was set aside for recreational use, and as a result the town to-day does not have a good Municipal park. Three small areas have been set aside for public recreation use but none of them makes a good park. North of Dundas Street and west of Brock, a block on which the town water tower stands is used as a ball field and play area. A few large trees provide some shade but the area lacks the isolation necessary for a good park. South of Dundas Street and straddling

Heydenshore Park showing the gravelly beach.

Whitby Arena, home of the Whitby Dunlops.

Brock Street, another similar area is used for parkland. On one side of the street there is a play area and a few picnic tables, while on the other there is a very fine lawn bowling court, and some tennis courts. To the east of the harbour on the lakefront is Hegdenshore Park, a 19 acre site of poorly kept grass and gravelly beach. Development here has been very limited and although it serves the purpose, is most unattractive. A few picnic tables are distributed under clumps of trees, and lunches may be purchased at a refreshment booth that is most uninviting.

The town has no plans at the present time for any extension of park facilities. This would appear to be an example of poor planning as the already inadequate facilities will be very much over taxed if the population continues to increase at its present rate. There is however a distinct possibility that the Central Ontario Conservation Authority which has just been formed will turn some of the flood plain land in the town, which is at present idle, into park recreational use. The land shown in figure 6 as idle and not designated for any use, is mostly flood plain land and recreation would be a very suitable use for it.

Other than parks the town has a large arena which houses the towns very active hockey leagues, and is the home of the Whitby Dunlops, world hockey champions in 1958. There is also a swimming pool, and just north of the town limit a new curling rink is being built by the Whitby curling club.

(g) Agriculture Within the limits of Whitby there are approximately 600 acres of agricultural land. Most of this land is on the outskirts of the town lying adjacent to the township lands. Figure shows the land that is presently used for agriculture but is designated for industry, there is very little of this land left, most of the land zoned industrial has been sold and now stands idle. The agricultural land is put to a variety of agricultural uses, among these being corn for canning, tomatoes for canning, cash crops of grain and hay, and there is one orchard. Dairying used to be important in the southern part of Whitby township but urbanization has pushed back the dairy farmers, and the town farmers like their township neighbours in the southern area grow crops for sale, rather than for feed, as they keep no cattle.

(h) Idle Land A large proportion of the land within the town limits is lying idle. This is because most of it has been bought for industrial use, or is expected to be sold for industry. The farmers who used to own the land have collected their money and left the district, many of them retiring to other employment or leisure, while a few purchase new farms elsewhere, and the old farms grow weeds until they are converted to their new use. Figure shows very clearly that industrialization will occur mainly to the east of Whitby in the direction of Oshawa, as much of the idle land here is designated for industry.

In a few instances undesignated idle land occurs (Fig.6). As was previously mentioned this is bottomland that is subject to flooding and at the present time is restricted for any use. West of the harbour there is a large area of low marshy land that will be filled for dock facilities when the harbour improvement has reached that stage. At present it is idle and does not present a very pleasing appareance.

The industrial, commercial, residential, recreational and institutional functions which have been discussed in this chapter, are all imposed on a basic grid pattern of streets, some of the new subdivisions have varied from this but not a great deal. This pattern originated in the survey of the town, as the land was divided rectangular, and the pattern was continued through the towns development. There being no major topographic barriers the town has grown fairly symetrically about its new centre, with a definite tendency to elongate towards the lake and the old centre.

Development Area II.

The largest area in the township which has experienced a particular type of development, is Area #II covering nearly 17,000 acres. Dairy farming here is the dominant industry. The area is actually in two sections, the southern one occupying most of concession three, while the northern section includes all of concessions VI, VII, VIII, and IX and the eastern half of concession V. Within the major area is a smaller area where beef cattle raising dominates, and this is found in the extreme western ends of concessions VII and VIII. (fig F.2). The northern section of the area has a greater density of dairy farming than the southern which has come partially under the influence of the urbanization of the area to the south but not nearly to the same extent. Aside from the cultural factors which have promoted dairying here, including an expanding dairy market in the Toronto region, it is possible to recognize a physical basis for its uniform distribution.

Land Types. Well over three quarters of the land in the northern section of development Area II has been classified as land type I, (fig F.1) which is rated good for all cereal crops, hay, clover, alfalfa and pasture. Much smaller acreages of land type II are found in this section (approx 900 acres), and even these are classified as good to fair for the same crops. In the south-east corner of the section there are about 400 acres

of land type V part of which with improved drainage has been cropped but with low yields. In the southern section there is more variation of land types. Equal acreages of types I and IV are found, with small acreages of types II and V completing the section. As there is less good crop land available here, this section has not experienced the same intensification of dairying, and there is still a considerable amount of mixed and beef farming.

The proportion of good farm land to poor farm land is shown very clearly in the assessment figures. Taking into account the location factor which reduces the assessment by 1% for each concession north of the lake front, the following average assessment figures for each concession indicate the amount of good farm land as classified by the assessor.

TABLE I

Concession	Maximum Assessment for top farm land/ac	Average Assessment/ac	% top farm land
IX	$ 40.00	$ 36.00	90%
VIII	41.00	38.00	92%
VII	42.00	36.00	85%
VI	43.00	36.00	83%
V east ½	44.00	33.00	75%
III	46.00	30.00	65%

The Dairy Industry. With the large urban markets of Metropolitan Toronto, Oshawa, and Whitby close at hand, the development of the dairy industry in Whitby Township is a natural one, and it has not yet reached

Well managed Dairy farm in the Brooklin Area, showing farm buildings and farm house that has been remodeled.

Milk Tank trucks carry some of the area's milk to the Hillcrest Dairy in Whitby.

its peak. In comparison with surrounding Townships, Whitby has a fewer number of milk cows, on a per acre basis than most. This of course is partly due to the reduction of dairying in the south, but is also connected with several cultural factors, and recent trends. As the above table shows this area of the township is capable of very intensive cropping, and a large portion of the pastureland is rotation pasture. There are in addition several areas where the land although not particularly suitable for cropping is rated good for pasture. The area then has the capacity for very intensive dairying, and the trend is towards this.

The innovation of the milk tank truck, and the bulk cooler has made considerable difference in the intensity of dairying. Farmers in order to sell their milk had to install the bulk coolers, at considerable expense, and in order to pay for this added expense, more milk had to be produced. The bulk coolers also reduced the number of farmers producing milk, so that the added production of those who did convert, was needed to keep up the supply.Figure 4 shows that the farms in this area average between 90 and 100 acres. Before the bulk cooler, a farm of this size had a milk herd averaging 28 animals including heifers and calves, 17 of which would be milk cows. Since the bulk coolers have been introduced, farmers have found it necessary to increase their heads, and this has been taking place at a rate of one cow per herd per year. This trend has

created a need for more pasture, hay, and grain feeds. In order to do this the farmer must use more intensive methods, or acquire more land. In this area it is not feasible for farms to consolidate because of the high value of the land. In the last five years, non-farm buyers have bought farms or parts of farms for non agricultural purposes, paying higher prices than the sale of the farm would normally bring. Although this development is by no means widespread it has been sufficient to raise the value of land, so that now $400 per acre is considered rather low for a good farm. For these reasons farm consolidation has not taken place to any significant extent. Rather the trend has been for farmers who need more land, to rent acreage from adjacent farms which are either engaged in non dairy agriculture, or have been sold to non farm people. This of course, is not always possible, and in many cases hay will be bought standing from fields in development area I (or similar areas in adjacent townships), which otherwise would not be cropped, as they are tied up by speculators. Grain feed can be supplemented in a similar way, and in several cases it comes from the cash crop farms of development AreaI.

It would be eroneous to portray this area as one that is devoted entirely to dairy farming. Although this is the dominant type of agriculture, beef cattle raising, and mixed farming have an important place. Indeed, until very recently, dairy herds were kept in association with cash crops, but the new trend in dairying makes this unprofitable.

Buildings of a Beef Cattle farm on Land Type I.

There are two areas where beef cattle raising is particularly prominent, these being sub sections of the main development area. The western portion of concessions VII and VIII has a higher portion of beef cattle than any other section of the area. There appears to be no physical reason for this, rather it is the result of the attitude of neighbouring farmers. In this area there are a number of farmers, getting on in age, who could not see the advisability of going to the expense of installing the equipment necessary for bulk coolers, instead they sold their milk herds, and invested in beef herds. These farms tend to be larger than the average size farms most of them being over 100 acres.

An example of a farm lying in this sub area will give an indication of the type and distribution of crops typical of a beef farm. The farm chosen for an example consists of 200 acres, 90% of which is good farm land. Crops grown and acreages devoted to each are as follows.

Hay	40 acres	rough pasture	10 acres
Wheat	12 acres	farm buildings	8 acres
Barley	6 acres	permanent and rotation pasture	92 acres
Rye	5 acres		

An average of 60 beef cattle are kept, along with 5 milk cows. The beef is marketed in Toronto being shipped by rail through Brougham, a small centre lying outside the township a few miles to the west.

Finally, mixed farming can be found throughout the area. On these farms, the farmer depends on the sale of milk and crops for his income, and in some cases his income is

supplemented by revenues gained through custom work done for other farms. This is the case when a farmer may have a heavy investment in a great deal of machinery, and he puts his machines to work on neighbouring farms.

In the southern section of this development area, where there is more variation of land types, all three of these types of farming occur equally.

Land Use: For the purposes of this discussion it is again necessary to divide the area into northern and southern sections. In the north where 90% of the area is land type I, the areal distribution depends on the type of farming being carried out, rather than on soil differences. As has already been indicated, dairy specialization dominates, therefore the proportions of land under each agricultural use will generally be typical of a dairy farm.

Pasture: Pastureland occupies the largest acreage in the area. In the north-west where 900 acres of land type II occur, most of the land is devoted to pasture, although a few field of grain and hay, and one orchard are found. On land type I most of the pasture is in rotation with some other crop, although it is often difficult to distinguish between permanent and rotation pasture. Where the Pringle and Lynde Creeks cut across the area, land type VII occurs, most of which is occupied by unimproved pasture.

	1951	1956
Acres in pasture	8341	7029

These figures are for the whole township, so that the drop in acreage is probably due to a reduction of pasture in Development are I rather than this area.

Grain: Grain crops covered the next largest acreage in this area. Again 90% of the land is rated as good for grain crops, so that distribution is fairly uniform. Only on land types II and VII is there any recognizable physical reason for lack of grain crops. In the sub area where beef cattle raising is important there is a noticable reduction in grain acreages, and pasture dominates.

TABLE II

Acres	1951	1956
wheat	2,081	2,607
oats	1,979	1,588
barley	331	191
size	-	35
mixed grain	2,501	1,424

These census figures are for the whole township. A considerable portion of these acreages would be in the southern part of the township. In the area with which we are concerned it is the practice to use most of the grain grown for feed, and cash cropping is not dominant, rather feed supplies are often supplemented by purchased feed.

Cultivated Hay: There is usually more hay grown in this area than the land use map indicates. Many fields from which a crop of hay had been taken in the early summer

were being used for pasture when the survey was made, due to the shortage of pasture which resulted from a droughty summer. Land types I and II are rated as good for alfalfa and clover, which constitutes most of the hay crop. Often there is not enough hay grown here, and winter supplies must be supplemented by hay bought from other farms. Some farms have used grass silage very successfully, but baled hay is still the main method of harvesting.

	1951	1956
CULTIVATED HAY	5440	5461

Census figures are for the whole township.

Corn: Corn occupies the smallest acreage of crop land in this area. It is often found on the imperfectly-drained sections of land types I and II, and sometimes on sloping land adjacent to land type VII. The corn is used for ensilage exclusively, although there are a few farms producing corn for canning. In 1956, there were 755 acres of ensilage corn in the township.

A few orchards (apple) are found through out this area but they are mainly very small and in poor condition. In some of the valley land woodlots mainly of cedar are found. In the Northwest approximately 200 acres of mixed woodlot are found in association with land type II, in a depressional area.

In the southern section of this development area, there is more of a correlation between land type and land use. Land types II and IV which occupy considerable acreages are devoted mainly to hay, whereas the spurs of land type I and III

Brooklin's Grist Mill, built in 1848.

Brooklin's shops are mainly converted dwellings.

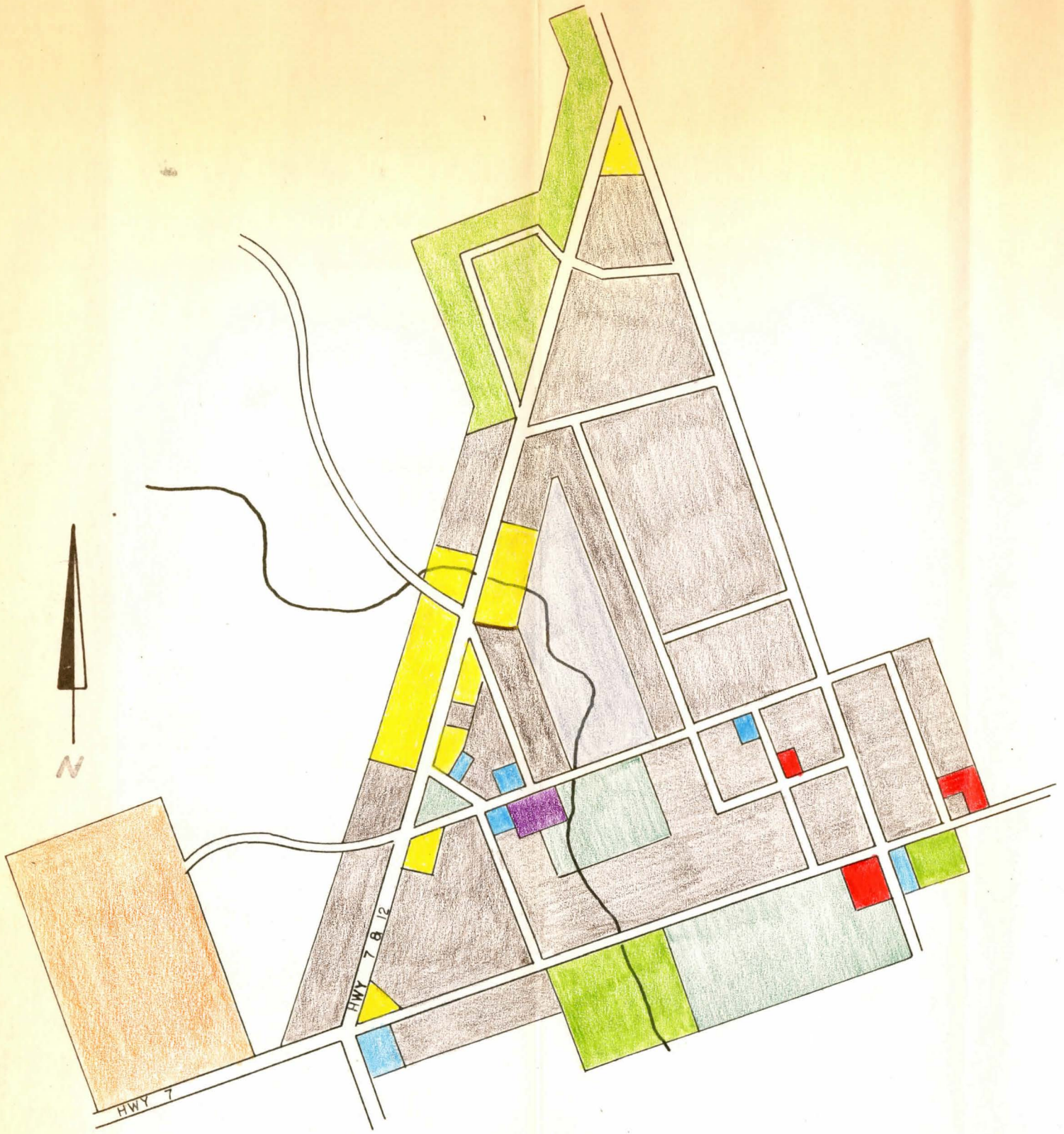
which extend into the area are used mainly for cereal crops. There is a definite concentration of pastureland here, which is a direct result of the poorer soils.

Urban Areas in Development Area II

There are three hamlets and one police village, performing urban functions in this area.

Brooklin: The Police village of Brooklin, has a population of 1,100 people, and is situated at the junction of highways 7 and 12. The village had its beginning in 1848 when a grist mill was built on the east branch of the Lynde Creek. The site was not a particularly good one for a mill as a large head of water could not be created, and the source of water was not always reliable, and on several occasions the mill pond dried up and the mill went out of operation for a while. From the point of view of location, however, the choice of this site was a good one, as it lay along side the new plank road from Port Whitby to Port Perry. Previously, Oshawa, because of its grist mill, had taken much of the export trade away from Whitby. With this mill beside the new route however, grain being drawn from the Lake Scugog area could be ground, and then shipped directly to Whitby for export. The road and the mill provided the nucleous around which Brooklin grew, and both remain and operate today.

Having originated because of an agricultural function, Brooklin has remained in close contact with the land. The functional zones of the village are shown in figure 7.



LEGEND

- OLD RESIDENTIAL
- RURAL RESIDENTIAL
- RESIDENTIAL SUBDIVISION
- COMMERCIAL small shops
- COMMERCIAL farm implements
- INSTITUTIONAL
- LIGHT INDUSTRIAL
- RECREATIONAL
- OPEN SPACE

BROOKLIN
PRESENT LAND USE
Scale 1" = 500'

W.M. SEPT 1958

Industrial: Brooklin's only industry is the mill which still operates. In the summer local grain is hauled by truck to the mill for grinding, and is then marketed through a major flour and feed company. In the winter local grain is not sufficient so western grain is imported to keep the mill operating. This is unloaded at Myrtle Station which lies to the north, and then drawn by truck to the mill.

Commercial: Two classifications of commercial activity can be recognized in the village. The first is that dealing with farm implements.

Three separate farm implement dealers operate in the town, supplying farmers within the villages zone of influence, Secondly the villages' commercial district which consists of a few small shops, serves a new purpose connected with the highway, this being a service to tourists heading towards Ontario northern vacationland. In this commercial section are found two restaurants, two antique shops, one gift shop, one hardware store, one men's wear store, one use car lot, two gas stations, one barber shop and one bank. Two antique shops and a gift shop would seem out of place in a village of this size serving a normal commercial function. Highways 7 and 12 do not run through the geometric centre of the village, but along it, the commercial core has developed. Many of the shops are old houses which have been converted to a commercial use, and there has been no attempt to produce attractive store fronts. Besides serving the

tourists, the commercial area serves the people of the town, as is evidenced by the presence of a barber shop, hardware store mens' wear store, and a grocery store. There are however no speciality shops, so that for appliances and other major items, the residents of Brooklin must go to Oshawa, Toronto or Whitby. The bank is open five days a week during regular banking hours and serves the agricultural area as well as the town.

The trade area of Brooklin as determined through interviews stretches much farther to the north and west, than it does to the east and south. This is due to the presence of Oshawa and Whitby to the South and East, whose influence extends very close to Brooklin and in some services engulfs the village. Brooklins trade area reaches as far west as Kinsale a tiny hamlet seven miles to the west on Highway seven. Myrtle Station comes under the influence of Brooklin whose trade area extends into the morainic ridge 8 miles north, but not beyond it. On the other hand, the village has influence only 2 or 3 miles to the south, and approximately 4 miles to the east.

Residential: These classifications of residences are evident in Brooklin. The largest area of residential development is that classified as old residential. These are old brick homes, built on large shaded lots, which line generally unpaved streets. The buildings are in good shape and the lots are well cared for.

Secondly there are the rural residential, now farm homes.

An old frame Brooklin residence.

Brooklin's new subdivision. The subdivision is characterized by unpaved roads and open ditches.

These are relatively new buildings, constructed on lots of 2 - 5 acres and have a definite rural appearance about them

Finally there is Brooklins' new residential development, that of the subdivision. Lying tothe west of the village, but in association with it, a large new subdivision has beenbuilt. Subdividing is more difficult this far north as there are few urban services provided, thus each home has a septic tank, and the ditches are open. These houses are built on 50' lots and are too new to have any landscaping.

The people of Brooklin find employment in various places. The commercial centre, the implement dealers and the mill employ a few, but many work in Oshawa. Those living in the new subdivision have come mostly from Toronto, and still work there, driving the 60 mile round trip every day.

Institutional: Brooklin has one public school a fire hall, three churches, and a community hall which also houses the Whitby Township offices.

Recreational: A triangle of land south of the main commercial section is formed by the convergence of streets. Here the Ontario Department of Highways have made picnic tables available, for the convenience of travellers.

The towns main recreational area is the fair grounds which lies on the southern edge of the town. Here is found a race track spectator stands, a pavilion and an arena type building for display purposes.

A small parkhas been developed on the flood plain land

of the East Lynde Creek, next to the mill. Here there are a few picnic tables, and the grass is kept cut, but this is the only extent of the development. Again in recreation the role of the village in the life of the surrounding area is evident. The D.H. O. park is provided for tourists, and the fair grounds function for the agricultural area surrounding the village.

All functions being considered, Brooklins role as an agricultural centre is evident, with secondary functions being performed for tourists. Brooklin can be classed as a fourth order centre. (1)

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(1) Urban areas can be classified in various ways. One classification, based on the number and variety of functions performed, list six categories which an urban area might fit into. A centre of the first order would perform a great many commercial, industrial, institutional and recreational functions, while a sixth order centre would only have one commercial outlet, and a few residences.

The fourth order centre fits in between these two having limited commercial facilities, almost no industry, but fairly extensive residential areas, which are usually only slightly differentiated.

Myrtle and Myrtle Station:

The hamlet of Myrtle which is four miles north of Brooklin developed at the intersection of the Whitby - Port Perry road and the Stouffville road. This is a sixth order centre, consisting of a general store - post office a church and a school, surrounded by a few houses. The hamlet has a very limited trade area, which could almost be delimited as a school section 4 which is the area served by the school, being less than 2 miles in each direction.

Myrtle Station is the ancestor of Myrtle, owing its existence to the railway (C.P.R) which was built through concession IX around the turn of the last century. It is located three-quarters of a mile north of Myrtle and serves a wider area. As was mentioned earlier, grain is unloaded here for the Brooklin mill in the winter, and cattle, sheep and hogs from the surrounding area are shipped from this station to the livestock market in Toronto. Besides the railway station, and small storage sheds there is a general store and a few houses. One of the townships largest poulty farms is located just north of Myrtle Station. As a rule the shipping of poulty products from here is done by truck by way of highways 7 and 12, but any long distance shipping goes through Myrtle Station.

The hamlet of Myrtle Station looking north from the Station.

Ashburn: This hamlet lies 1½ miles to the west of Myrtle on the Stouffville road. It had its beginning when a road house located here around 1870. The centre did not develop much beyond this stage until the automobile era, when the road was paved and a service station was built. A school house along with 15 residences and a church comprise the rest of the settlement. The road house is now a residence. A general store has been built along side it, together with a service station.

Summary:

Development Area II is the major agricultural area in the township. It is dominated by good soils, and a trend towards dairy farming. The urban areas are closely related to the agriculture of the area, although Brooklin is showing signs of becoming attached to the large urban centres to the south, through its new commuting population and tourist function.

Development Area III

This is the smallest and least developed of the three development areas. The reason for this is mainly physical, as it consists of land types IV, IV A and V. None of these is good agricultural land, the soils being light, sandy and in some cases depressional and poorly drained. At the northern edge of the area, there are gravelly soils in a narrow, broken strip about a quarter of a mile wide. In the western half of the area, the deep valley of the Pringle Creek with its steeply sloping sides limits the possibility of agriculture even further.

There are very few farms here, and those that do operate usually are run on a part time basis. There being few farms, and the land being poor, the average farm size is considerably larger than in the rest of the township - being 105 acres. The agricultural land is assessed at $46.00 and $47.00 per acre. Most of the agricultural land is in permanent and unimproved pasture, indicating cattle raising, which is mostly beef. The functions of this area will be seen most clearly by a discussion of land use.

Agriculture: Approximately 1000 acres in this area is used for rough pasture, the majority of it being on land types IV A and VIII. On the better parts of land type IV improved pasture can be found, along with some hay, but the poorer parts that were cleared are either lying idle, or are reforested. Small occurences of land

type I project into the area and here grain crops are found most farmers supplement their farm income with seasonal employmentin Whitby or Oshawa.

Recreation and Woodlands: On the poorly drained soils of land type V and the gullied sections of land type IV, considerable acreages of woodland are found. These were recognised as poor agricultural soils by the first settlers and thus about 800 acres of woodland in this area were not cleared. The land use map shows two recreational areas in this woodland, in the valley of the Pringle Creek.

Spring Hill Park fronting on highway 12 consists of 80 acres of wooded valley land, that has been developed for recreation. The facilities include a large playground area with race courses and a baseball field, pony rides for the children a dance and refreshment pavilion and a swimming pool. The park receives heavy use from families living in Oshawa and Whitby, and large groups from Toronto. (i.e Sunday School, and industrial picnics) Lynnhurst Park which is a little larger offers similar facilities.

Gravel operations: The development of the Township depended on the construction of roads to provide access to the land. Plank roads were common in the very early days but gravel was soon found to be more suitable. At the northern edges of this area gravel

pits, in the Lake Iroquois beach formations were common. There are at the present time only three pits operating, but the scars of many others remain, and have been mapped as idle land. It was the gravel from these pits that was used to gravel the townships roads.

Zoning: Part of this area, that lying in concession IV will be zoned for urban development, in the townships' official plan. As yet, urbanization has not progressed this far north; Agricultural development has been limited due to the poor soils, so that this area is weakly developed. Consideration should be given to leaving a good portion of this area to serve as a greenbelt. This would not entail the presence of a great deal of idle land rather wise planning could provide for the extension of existing recreation areas so that all the wooded land would be used for this purpose. The lowest density of housing would also be suitable here, and this along with the reforestation of scared areas like old gravel pits and the poorer farms, would provide a pleasant break in a region that is bound to become a densely populated urban area. The reasons for such a programme of development are obvious. It would be easier to develop this area for greenbelt than any other in the township because the present physical conditions are suitable. (i.e there is considerable wooded area and the cut over land is poor enough to merit reforestation). The need for such an area will become more apparent as urban development to the south progresses.

Present plans call for a great deal of industry to locate here, open space will be needed for the relaxation of the industrial population, and a source of clean air. Residential development to the north in Area II is also a strong possibility. A belt of open land separating a basically industrial area from a residential area then appears very desirable.

SUMMARY AND CONCLUSIONS

1. SUMMARY Whitby Township is well endowed physically, for agricultural purposes. The soils, for the most part, are fertile clays and clay loams, and the topography is generally flat to gently rolling. The only significant exception is the strip of unproductive sandy soils which extend across the township in the 4th and 5th concessions. The climate is of a humid continental type, being modified in the lake Iroquois plain area, by Lake Ontario.

From agricultural beginnings, the township is now maturing, and urban developments in some areas are becoming important. On the basis of assessment, residential development is the most important in Whitby Township, as 48% of the tax revenue is derived from it; This is followed byagriculture which produces 35% of the tax revenue, while commercial and industrial activity, as yet poorly developed, provides only 9%. These assessment figures, very briefly describe the township as it is to-day. In the south around the Town of Whitby, urbanization has been extensive. In order to service the new developments, tax rates for residences have risen, until now, revenue from urban land exceeds that from agricultural land. This urbanization has been concentrated mainly in the south, due both to the location of magor transportation routes here, and the growthof urban areas previously existant.

Over most of the township however, agriculture still dominates Within the agricultural areas, concentrations of various types of farming can be noted. Increased land values, urbanization, and suitable soils, have led to cash cropping, and a decline of animal

husbandry in the southof the township, while in the north, dairy farminghas been firmly established as the result of the great and expanding market for dairy products all all along the north shore of Lake Ontario. In conjunction with the dairy farms, there is mixed farming, and beef farming, but these have become secondary to the dominant dairying.

There is a strip of poor agricultural land in concessions IV and V . Here agriculture has not been successful, and exists mainly as a part-time enterprise. Much of the land has not been cleared, leaving large wooded sections that are suitably used in two instances for recreation. Earlier in the township's history, sand and gravel operations here were important, but these materials have since been depleted, and the operations have declined.

In the beginning, the Town of Whitbyhad a very close connection with the surroundingagricultural areas of the township, and served as an outlet for their products. As the region matured however, other ports took over Whitby's trade, and it was left to survive on the commercial and industrial activity which had developed. For a long period Whitby experienced no growth, ratherit suffered population decline, and it was during this period that the Town-Township relationship was lost. As a result, Whitby is not primarily a retail shopping centre for farm people. Its ties are much closer to the industry of the 'Golden horseshoe', and its recent , rapid growth is due to the influx of industry.

In contrast the Village of Brooklin is closely connected with her agricultural hinterland. The mill, the implement dealers,

and the bank, all service an agricultural area, and provide much of the village's commercial income. Being on Highway 12 however, the commercial centre, small as it is, also serves tourists, on their north to the vacationlands. Brooklin's most recent growth is not connected with agriculture, rather it is again urbanization resulting from the general spread of city folk into rural areas, and is an indication of what might be expected in the future.

2. CONCLUSIONS: The township by itself is not a convenient unit for geographical study. Its boundaries do not represent any physical, economic, or social divisions, rather they are geometric divisions, devised by a surveyor, and they serve mainly administrative purposes. A study of this nature, having concerned itself with developments within the township boundaries, will not necissarily present a picture that is typical of the region within which the township lies. External causes for developments, could not be thoroughly investigated, but should be considered in drawing meaningful conclusions about the township.

Whitby Township is in a transitional period of development. This is evidenced by the fact that residential assessment is slightly higher than agricutural assessment, even though agricultural land use is predominant. The weak development of commerce and industry reflects the youthful stage, which urbanization is in. The encroachment of urban land use into previously strictly agricultural areas, indicates the development which Whitby Township might expect in the future. The great urban centres of Toronto and Oshawa, whose expansions have already have affected wide areas

have been and will continue to be major factors in the urban growth of Whitby Township. The Town of Whitby itself owes its industrial growth, in part, to the fact thatit is located on the main route between these two centres.

The physical characteristics of Whitby Township, especially in the northern sections, suit it for agricultural production. The proximity of this agricultural land to the large urban markets in the south has been a major factor in the development of a dairy industry. Experience in townships closer to Toronto however, has been that urban uses soon engulf good farm land, as the city expands. Thus as Toronto, Whitby, and Oshawa continue to expand there will be further encroachments on Whitby Townships agricultural land. Planning in the township then, should be carried out with this point in view. The township will not be forever agricultural, but the carefull control of urban developments, which could be hap-hazard, will assist in keeping good land in agricultural uses for a longer period, and permit the township to keep up with the supply of services necessary for urban areas.

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APPENDIX

List of Industries located in , or which have purchased sites in the Town of Whitby.

Dunlop Canada Limited
Bathurst Power and Paper Co. Ltd.
Whitby Malleable Iron and Brass Co. Ltd.
S.L. Trees & Co. Ltd.
Price Yards Ltd. (lumber)
Ajax Lumber Co. Ltd.
Pickering Farms Ltd.
Pal-O-Pak Ltd.
Beaver Lumber Co. Ltd.
Sweetman Transport Ltd.
Wm. J. Anderson Ltd.
Andrew Antenna Corpn.
McNamara Construction Ltd.
Wright Electronics Ltd.
Chicago Printed String Co.
Sklar Furniture Ltd.
British Drug Houses(Canada) Ltd.
Consolidated Dredging
Canadian Silica Corpn.
The Munns Press
Stokely-Van Camp of Canada Ltd.
Raltson Purina Co. Ltd.
Shorgas Lmt.
Trinidad Leaseholds(Regent Oil) Ltd.
North American Steel Equipment Co. Ltd.
Stafford Brothers Monumental Works
Ontario Machine and Tool Works
Whitby Welding Works