

AN ANALYSIS OF THE CHANGING
LAND-USE MORPHOLOGY OF WATERDOWN
1795 - 1960

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1795 - 1960

By

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A reconstruction and description of the settlement and land use patterns of the village of Waterdown in Southern Ontario, at four periods of time: 1841, 1880, 1920 and 1960. The primary source of data used were Registry Office Documents concerning land transactions. The resulting maps are analysed using a regression analysis to isolate some factors which have been considerations in any decision to locate within the settlement and through them to predict where future locations are most likely to occur.

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TABLE OF CONTENTS

		Page
	SCOPE AND CONTENTS	ii
	ACKNOWLEDGEMENTS	iii
	TABLE OF CONTENTS	iv
	LIST OF MAPS	ix
	LIST OF PICTURES	x
	LIST OF DIAGRAMS	xii
	INTRODUCTION	xiii
 CHAPTER		
I	CHOICE OF DATES TO BE MAPPED	1
	Sources	4
	Registry Office Documents	5
	Official Documents	7
	Assessment Rolls	9
	Maps and Plans	10
	Photographs	11
	Field Notes and Mapping	12
	Interviews	13
	Journals	14

CHAPTER		Page
	By-Laws	15
	Methods of Mapping Buildings and Roads in the Landscape using Primary Sources	16
	Mapping Restrictions	19
	Methods of Construction of Land Use Maps	20
	Manufacturing Industries	22
	Commercial	22
	Public and Semi-Public Land	23
	Choice of Factors & Methods of Analysis Common To All Periods Mapped	24
II	THE BEGINNINGS	27
	Location of Study Area	27
	Lot 7	34
	Lot 6	36
III	1841	41
	Roads	44
	Commercial District	46
	Industrial	47
	Residential	48
	Public and Semi-Public Use	49

CHAPTER		Page
	Agricultural	50
	Summary	51
IV	1880	52
	Roads	57
	Commercial Properties	59
	Industrial	60
	Residential	64
	Public and Semi-Public	66
	Agriculture	68
	Summary	69
V	1920	71
	Roads	73
	Commercial	74
	Industrial	75
	Residential	78
	Public and Semi-Public	79
	Agricultural	79
	Summary	80
VI	1960	81
	Roads	82

CHAPTER		Page
	Commercial	84
	Industrial	85
	Residential	85
	Public and Semi-Public Lands	87
	Agricultural Land	88
	Summary	89
VII	ANALYSIS	91
	Summary Observations of Land Use Patterns	91
	Method of Handling Data	95
	Percentage of Variation	97
	Summary	99
	Examination of Simple Correlations For All Periods	99
	Roads	99
	Distance	99
	Rivers	100
	Slope	101
	Analysis of Factors	101
	Roads	101
	Distance	104
	Rivers	107

CHAPTER		Page
	Slope	109
	Examination of Residuals	110
	Predictions of Future Locations in Unoccupied Areas	111
	Residual Values in Occupied Areas - Error of Prediction	114
VIII	CONCLUSIONS	118
APPENDIX		
	LIST OF REFERENCES	128
	EXAMPLES OF DOCUMENTS CONCERNED	133

LIST OF MAPS

MAP	PAGE
1. E.C. Griffin's Plan of the Village of Waterdown 1853	9a
2. Waterdown 1875, Wentworth County Atlas 1875	9b
3. Location of Study Area in East Flamborough	27a
4. Site of the Future Village of Waterdown Circa 1795	32a
5. Land Ownership in 1835	34a
6. Mill Sites Grindstone Creek Valley	39a
7. Occupations in Business District Circa 1838	42a
8. Distribution of Buildings and Roads 1841	44a
9. Land Use 1841	44b
10. Distribution of Buildings and Roads 1880	55a
11. Land Uses 1880	55b
12. Land Divisions Under the Will of E.C. Griffin	56a
13. Village of Waterdown, Wentworth County Atlas 1913	61a
14. Distribution of Buildings and Roads 1920	71a
15. Land Use 1920	71b
16. Distribution of Buildings and Roads 1960 - Burlington Planning Board	84a
17. Land Use 1960	84b
18. Newly Built Up Areas 1968	106a

LIST OF PICTURES

PICTURE (*See Appendix)

1. Corner of Mill Street and Dundas. Site of first land divisions
2. Board and Batton Cottage Dundas St. East of Grindstone Creek before 1841
3. Stone Rowhouse Mill South circa 1841
4. Bell House Dundas Street
5. Flamborough Township Hall
6. Valley Inn south end of Kent Griffin's Road (Main St.)
7. Stock's Store and Reid's Harness Shop N.W. corner of Mill Street
8. Post Office and Harness Shop Main St. South
9. A & B - Howland's Mill in Smokey Hollow and Howland's Mill before and after fire
10. Brick House on Dundas St. late 1800's
11. The Ontario Classic Venacular
12. Smokey Hollow turn of the century
13. Smokey Hollow before 1880
14. Baker's Rake Factory circa 1884
15. A & B - Waterdown Common School (High school and Public) and Remnant now Scout Hall
16. A & B - Fire in central business district
17. A & B - Dundas St. in early 1900's and Dundas St. in 1967

PICTURE

18. Reid's Dam
19. In background) Bridge to Leather Street
20. A & B - Nicholson and Stetlers Jam Factory and Dean's Basket Factory
21. New boiler being installed at Lumber Mill
22. Wooden sidewalk south of Smokey Hollow on the Alder-shot Road

LIST OF DIAGRAMS

DIAGRAM		PAGE
A	Block Diagram of Site	28a
B	Method of Collecting Data	95a
C	Road Pattern Superimposed on Predicted Values 1841	103a
D	Change in Road Pattern	103
E	Public and Semi-public Uses	108a
F	Percentage of Occupied Land Predicted Location Within One of Actual	108b
G	Residuals in Unoccupied Land	111a
H	Residuals in Occupied Land	114a

Note

No block diagram
of site p. 28A

INTRODUCTION

PURPOSE

The main purpose of this study is to examine and describe the settlement of Waterdown through land use maps in a degree of order as it developed from the time of its inception in the early eighteen hundreds to the present day; and to throw some light on certain factors which seem to have contributed to the development of the patterns as they have changed through time. This can only be done by choosing particular pieces of information from original sources as they were found, and as they seemed significant, and from these to hypothesize that this or that may have had a role of some importance in shaping the apparent changes in the settlement's lifetime.

The identity of the village of the nineteen sixties is very different from that of the village of the days before the Second World War. The Waterdown of the nineteen sixties was

largely populated by people who worked in the adjacent industrial city of Hamilton. Their families existed in an atmosphere of small town, low pressure life, supported by the industries of the Hamilton urban complex, the work place of the wage-earning member of the family. Their lives centred around their residential lot and the public and semi-public services of church and school, park and market, which had grown up to serve them. Only faint murmurs were audible, for those who wanted to listen, telling of the days before this influx of outsiders had virtually swamped all interest and knowledge of the days gone by. Many people had never heard of the mills that once lined the river banks, of the saddlers and harness makers, basket and rake makers, who had formed the foundation of the community of long ago. Few knew or cared that the names of many of the people who still worked in the village were names that years ago had graced the reports to Gourlay, the County minutes, the petition for municipal status, and the original grants from the Crown.

Only one map, assessment rolls, and village and county minutes, were commonly believed to record the past history of this small community. The answers to how it had started, what it started, what it was like then, and how it changed, were lost in a welter of rumour, gossip and speculation.

This apparent lack of detail presented a challenge to try to reconstruct the past forms of this settlement, and to try to determine if any plan or direction of development was discernible. Had the village just developed "catch as catch can" as a thing of chance, or had it followed some pattern driven by the aspirations of people in cooperation and conflict? Was it directed by the decisions of its inhabitants in their attempts to adjust their lives to the 400 acres in which they existed? What had been their reasons for locating in particular places within the site? How had it become the village of today?

Within the limits of the available data, this reconstruction, description and examination has been done. Land use patterns of those periods which seem representative of stages in Waterdown's development, have been mapped as exactly as possible. An attempt has been made to describe and analyze development both subjectively and objectively by extracting from the description of the development the factors which appear to have had a significant role in the decisions made by the inhabitants over the years as the settlement met the challenges imposed by its physical site, its people, and its position in the settlement of Southern Ontario.

CHAPTER I

CHOICE OF DATES TO BE MAPPED

Through this investigation it was obvious that every house, road and building had been established on its lot because some person or public body had decided that this was the best place to build. Whether the factors directing these decisions were measurable or not, they were made by men and women who had inhabited this site over the years. Their views of suitability or attractiveness of a certain lot for development were formed in the context of the conditions and climate of their time, created by themselves and their forbearers and willed to their descendants. In this light the mapped periods, although strongly tied to the availability of material, are in many ways representative of the four main stages in the life of the community. These periods can not be adequately expressed in maps or mathematical analysis alone. The decision of persons in groups to locate can

only be expressed, however inadequately, by an interplay of objective and subjective factors.

1841

This was the year of the establishment of Canada East and Canada West. The Rebellion of 1837 was over. In Waterdown it was a time of striving and struggling when the hard days of hacking a living out of the bush were still clear in many memories but when the satisfaction in accomplishments had not lessened the ambition to build an even better life. The first assessment rolls for Flamboro East had been drawn up, listing those living on lots 6 and 7 in the 3rd Concession as being of the Village of Waterdown. The first post office had just been established and the town plan of Ebenezer Culver Griffin was in use, although not yet registered. For some years sales and agreements had been registered at either the Toronto or Hamilton office of the Registrar of Deeds, documenting the development of the settlement lot by lot.

1880

By 1880 it was not necessary to strive so hard, for living was prosperous, social amenities cherished and the economic climate, at least on the surface, was healthy. However, mills which had burned were seldom reconstructed. This could be regarded as a period of invisible economic recession. In these years we note a great increase in the number of mortgages on property in

Waterdown. It is impossible to determine whether these were a sign of hope or of despair. Wentworth County issued an atlas in 1875 to record its progress. The written text shows little concern for Waterdown, but in it is found the first known published map of the Village. Assessment rolls for the Village were clear and concise and the number of sales of land were so great that it became increasingly difficult to follow each division of land as it took place.

1920

A quiet time. The First World War was over and the depression years soon to come. Little was being built of industrial or residential nature; business was slow and habitual. Most of those living and working in the Village were never to leave. Many had already gone to live in the growing cities. It was a period of stagnation, characterized by clapboard stores in need of paint, small factories, homes standing neglected or empty, mills silent or in ruins. The whole community lacked prosperity and growth. So little happened in these years that any building or razing of structures is clear in the minds of those who were there. Mapping became largely a matter of elimination from the structures of 1880 and 1960.

1960

Post war expansion which struck with such force in major Canadian cities, changed with equal violence the sleepy village of the 1920's. Primarily, growth took place in residential areas, more than doubling the population in a few short years. Shops and services rose to meet the demands of this residential group, but not nearly in proportion to the rise of population. Place of work and major shopping districts were now outside the small Village and its prosperity was no longer based within its limits. Land titles and transfers increased in number too rapidly to be completely accounted for. Assessment rolls were complete and accurate. The period was easily mapped from field observations. At the same time the dating of structures and razings and fills gave a clear picture of the changes which had occurred in the site, since the pre-settlement days.

SOURCES

The sources include Registry Office documents, assessment rolls, maps and plans, photographs, by-laws, journals, interviews and field mapping.

REGISTRY OFFICE DOCUMENTS

All documents of transactions affecting land from the time of the Crown grants have been registered (almost without exception) under the Ontario Registry Office System¹ in the office of the district or county in which the land lies. If the boundaries of the district or county are changed² the documents are registered in the office of the new division. The documents are numbered consecutively in the order of registration and are listed in abstract form under this number in an Abstract Book. A separate page or pages is used for documents affecting each individual township lot. The first entry in most cases is the Crown grant³. Each

¹In some areas they are now using the land titles or Torrens system. Very few municipalities were under this system until 1960. It is not yet in effect in the Village of Waterdown although the change from the Registry Office system to the Land Titles System is now in preparation.

²In this case the "Home District" was registered in York. When this district was divided, East Flamboro became part of Wentworth County and the documents were transferred to the Hamilton office.

³Governor Simcoe - Public declaration of the terms of land granting in the Province of Upper Canada, February 7th, 1792 - stated among other things that within a Township (10 miles square along navigable waterways) the size of the farm lot was to be fixed at 200 acres and land so granted would be free of all expense except the fees payable to persons recording the grant. G.M. Craig, Upper Canada The Formative years, 1784 - 1841, p. 24.

entry is listed with the following details: the number of the document, type of document, name or names of the parties concerned, the date of execution and registration and a short description of the land affected. (A document is said to be executed "when it has been signed, sealed and delivered".) At first these documents were recopied into a copy book and filed in the Registry Office under their assigned numbers. In recent years they have been photostated or microfilmed and these true copies are filed under the assigned numbers. If a plan of subdivision is filed a new Abstract Book is opened with one page or pages for each lot on the plan and thereafter documents affecting land on that plan are recorded in the new book.

Many documents other than sale documents are handled under this system. Any documents which might affect the buying or selling of land must be registered in this office if the document is to be fully effective but there is no law which demands this action. The range of documents is great and includes deeds, memorials, wills, dower agreements, bars of dower, mortgages, liens, town plans, township plans, subdivision plans, surveys, powers of attorney, judgments in actions concerning land and easements. The appendix contains photostatic copies of some of the documents concerning land in the study area.

Each document was found to have some information which added to the picture of the settlement. While the amount of information might not be as great as that found in a page of assessment rolls, the names of the parties and the witnesses and the dates of execution and registration of these documents, are completely accurate. The description of the land is extremely detailed, being expressed in metes and bounds often using physical features as markers or containing particulars as to the ownership of the adjoining parcels.⁴ Easements on title (here often concerning water) give an indication of the use of the land and of those factors in the location which were deemed important enough to reserve.

OFFICIAL DOCUMENTS

The most useful documents studied were County Registry Books. In the Abstract Book are copied and numbered, in order of registration, all the land transactions for each lot in the

⁴One deed uses "the large oak tree" as a survey marker. Another describes certain lands as "commencing on the line between lots 5 and 6 in a line opposite the first row of apple trees on Lot 5.

County. From this abstract it is possible to obtain the document or a true copy in its entirety. In all cases there is set out the name of the purchaser and seller, the date of closing and registration (which is often not the same in the early documents which were sometimes not registered for over 20 years) the occupation of the two parties and often of the witnesses. The exact measurements and position of the parcel of land is given in each case. The Registry Office system records all transactions concerning land and not just sales; accordingly, wills⁵, dower agreements, liens, mortgages and judgments are also available, revealing the amount of money raised in a mortgage, the intricacies of division under wills and dower agreements and often the transfer of land within a family. Some of these documents are accompanied by surveys or registered plans of the parcel concerned.

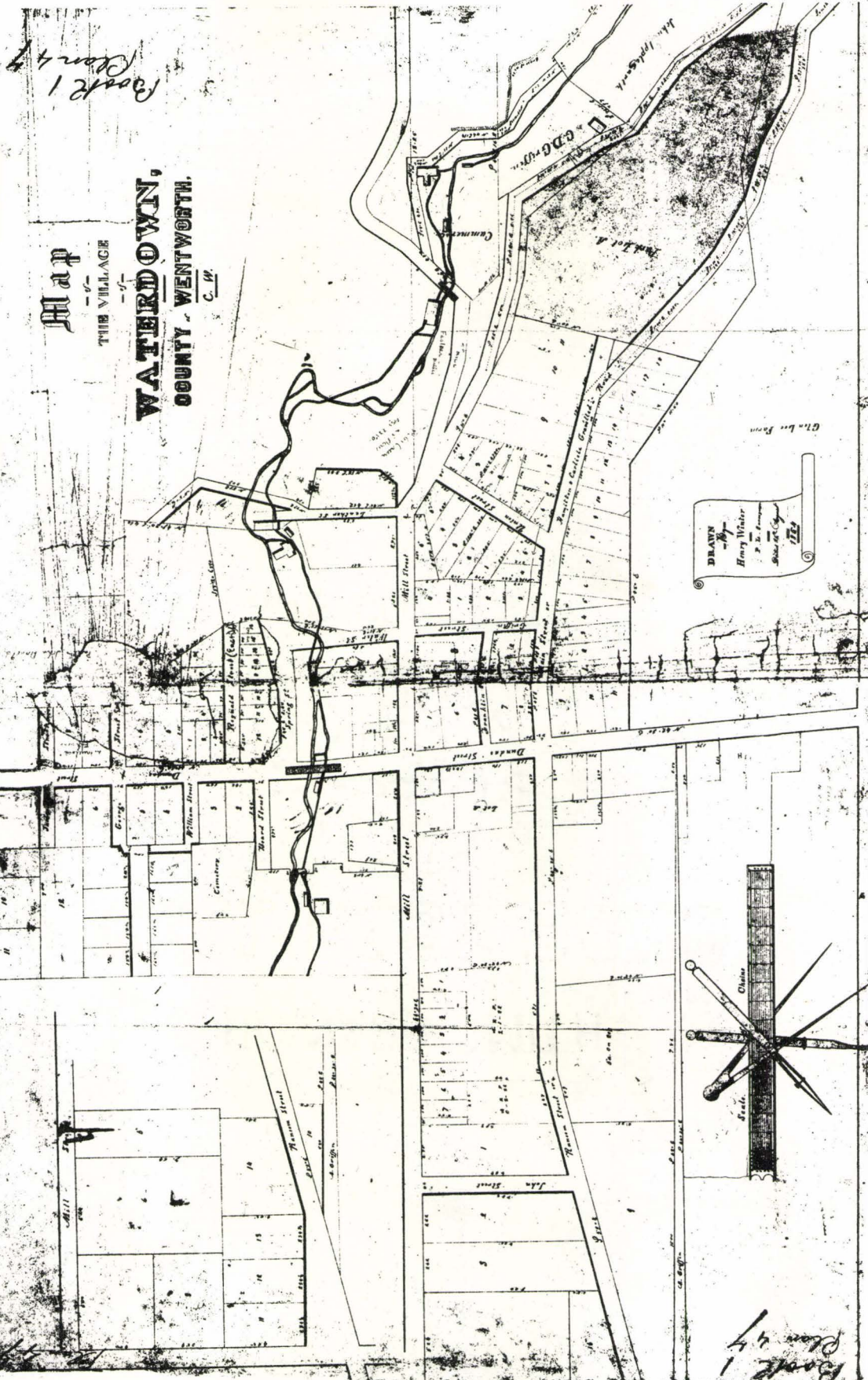
In the particular description of the parcel, mention is often made of roads as boundaries, making it possible to give time limits within which a road was built. This^{is} a great assistance in the reconstruction of past street patterns. Often restrictions (such as water rights, rights of way and restrictions

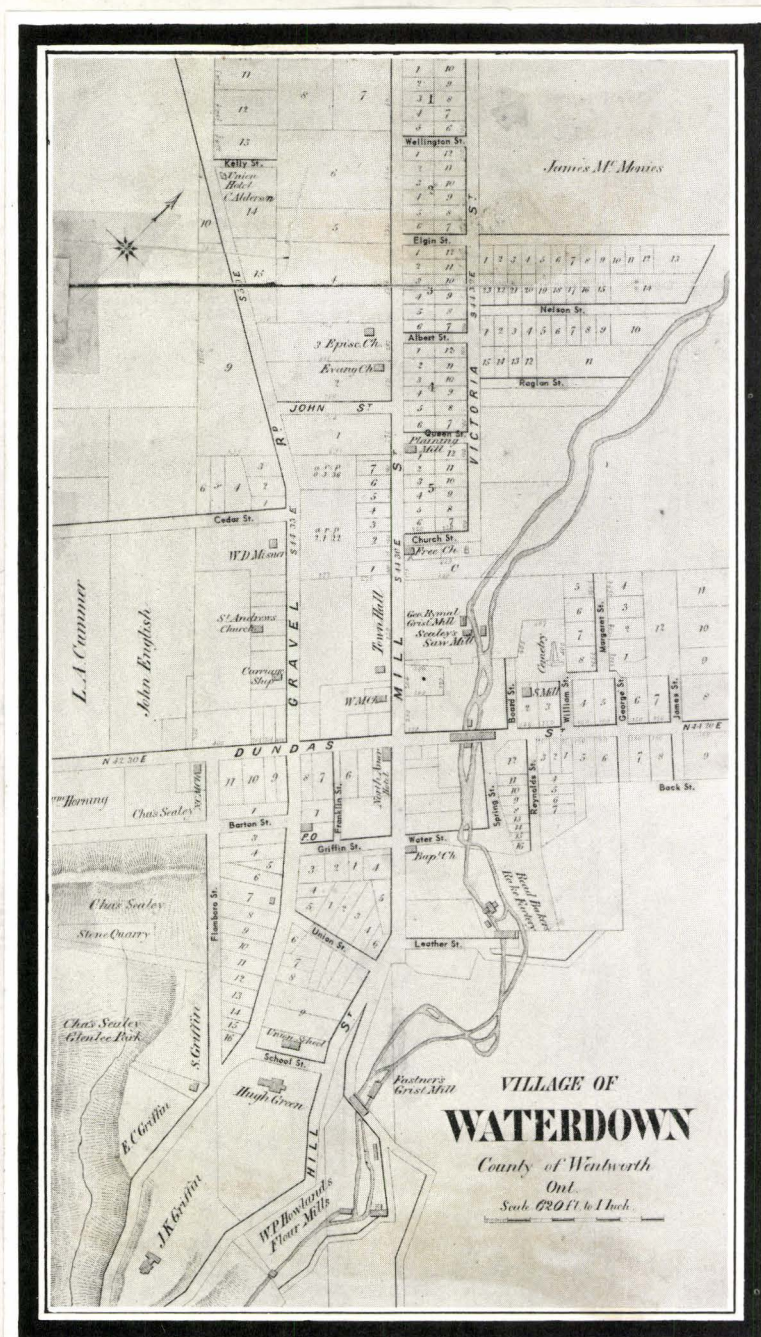
⁵In the case of the Will of E.C. Griffin and the Judgment given concerning the division of this land by Court order, the shape and position of parcels between Dundas and Union Streets were set out. This division remains unchanged in 1968.

Map

THE VILLAGE

WATERDOWN,
COUNTY WENTWORTH,
C. H.





on use) are imposed on the purchaser by the seller. An example of this is a deed to land on a creek which could not be used for any woollen business, a restriction placed on the land to protect the business interest of the seller who himself ran a woollen mill. Subtle information or suggestions which have not been noted particularly in this study have influenced the description of the period. The first deeds are signed by lawyers in Dundas; after 1841 a greater number are signed by Hamilton lawyers. This seems to indicate a change in importance of these settlements to Waterdown residents. Large mortgages placed on land give an indication of the value of a business, while foreclosures and liens may represent declining prosperity. The documents appear to have many untapped uses.

ASSESSMENT ROLLS

Assessment rolls are not found for Waterdown before 1841. Available for every time period thereafter, they are most valuable for statistical information about the settlement and its occupational makeup. Unfortunately the type of information collected by assessors is not the same for every year nor is it of equal quality. Particularly, these rolls do not identify the land

owned by the assessed until after 1920 although the area of the holding appears. From these rolls one does however find out the names and occupation of the tenants as well as the owners, information not available in any other document. Here also are given population figures, the number of households and by calculation the average size of a family. In 1841 and 1880 the number of animals kept was faithfully recorded. All this is valuable in a general description of the settlement at a particular date.

MAPS AND PLANS

Only one map of Waterdown from the Wentworth County Atlas of 1875 is available. Plans have been found of various sections of the Village and two of the complete area. The first and most useful is the plan drawn up, it is thought, in 1831 and registered in 1854 by E.C. Griffin. Two subdivision plans of the northeast quadrant, the McMonies and Stock plans, complete these documents until the registration of Plan 355 drawn for Registry Office purposes to combine existing separate plans of the whole village. This plan was registered in 1887 and corrected many errors in Griffin's original plan. It is correctly referred to as a "compiled plan" and was printed as a map of the Village in the

Wentworth Atlas of 1903. The essential difference between these plans and a map of the Village is that the plans show all the lot lines and directions used in registration, many of the owners, the number of the lots within the block and all planned streets, where the maps give much less detail about the lots but more locations of buildings and only those streets in use at the time.

PHOTOGRAPHS

Photographs have been the most reliable documents available for settlement reconstruction. Over 150 glass slides four by five inches which were taken between 1880 and 1920 were found in the attic of Miss Clara Reid of Waterdown. These had been taken by her brother William who found plenty of time while running a turning factory to take many photographs of the Village. These plates were with few exceptions in envelopes giving the year, month, day, hour and exposure of each plate and often naming the chief building shown in the picture. Many photographs were taken from the same position as previous exposures particularly if any change had occurred in the scene, and some pictures are taken in panoramic view. In 1960 only one mill building remained standing but the mills of 1880 are carefully recorded in these photographs

as well as new buildings, fires, reconstructions, railway building and streets from many different aspects. One photo, a tin-type of the rake factory (Picture No. 14) was given by Mr. Wm. Forstner the nephew of the owner of Forstners Mill.⁶ This is the earliest photograph available. Three stages of occupation of the site of the original mill of E.C. Griffin, called Smokey Hollow, are available in panoramic view.

FIELD NOTES AND MAPPING

The whole Village was mapped for 1960, locating each building existing at that time. At the same time all the existing houses were mapped according to the date of construction. It is extremely difficult to put a particular date on any house but it is possible to date it within broad limits. The question asked was, was this house built before 1841, between 1841 and 1880, between 1880 and 1920, between 1920 and 1960 or after 1960?[?] Obviously, many houses have been built, extended or revamped but

⁶Mr. Forstner, as a boy, helped to close the sluice when the head of water in the dam was exhausted and steam boilers took over powering the mills for the rest of the day. His father worked in the rake factory (and is in the picture) which was built around 1851 and which burned in 1885.

the original structure is usually visible. This map has not been included in this paper but has provided guide lines for village maps of each period. While mapping the locations in 1960 and dating the houses a thorough reconnaissance was made of the whole village, examining ruins, abandoned buildings and roads and sites where filling or cutting of the landscape has occurred including quarries, roads, dams and raceways still visible but not obvious.

INTERVIEWS

Interviews were carried out during the field work and construction of the maps. There are many families still living in the Village whose ancestors had taken up land before 1841. Two direct descendants of the Griffin family live and work in the Village and one was, before his retirement, carrying on the trade of a miller. Two men, both over ninety, had worked one in a water powered mill and one in a water powered furniture factory in the early 1890's following the trades of their fathers before them. Their tales of their working years and the information that they had received from their fathers added greatly to the information for the period from 1880 to 1920. Many people who had lived in the Village in the 1920's were available for interviews and were

extremely informative.⁷ The value of this type of information is much greater than one would expect. The possibility of error and speculation was largely eliminated by checking the information received from these people with Registry Office documents, assessment rolls and maps. Their recollection can therefore be regarded as more reliable than merely nostalgic memories.

JOURNALS

It is unfortunate that only two journals have been found, one written by Benjamin Shepherd who lived at Clappisons Corners and one by Mr. Gilmour who lived in Waterdown. Both of these men did business in the Village keeping track of payments in their journals. In addition, certain important occasions were noted such as births, marriages and special visitors. The value of these journals lies in the record of common every day transactions⁸

⁷ Particularly Francis Griffin who from 1917 delivered feed and supplies from the Griffin Mill to all the villagers who had animals. This made him perhaps much more aware of every house and business than someone with a more sedentary occupation.

⁸ Entries in the cash book of Benjamin Shepherd 1856-1904 (payments were often in goods) "for fixing William Misner's house \$6.50 and an iron of a cutter". In 1904 he "traded my watch for a

so seldom recorded in the sophisticated histories, diaries or reports⁹ of early settlers.

BY-LAWS

Little information has been obtained from the by-laws of the Township of East Flamboro and Waterdown. Primarily they are useful when dating the official opening or closing of a right of way within the lots but the by-laws are most often only a change in the official recording of the roads and seldom deal with actual changes in existing streets. The by-laws concerning building restrictions or zoning have not been rigidly adhered to

sewing machine and got \$2.00".

1857: Wages listed at .50¢ a day for a 10 hour day unskilled, and \$1.00 a day for a 10 hour day skilled labourer. Mr. Shepherd died April 23rd, 1924, at the age of 92 years.

1863:	1000 Board feet of lumber	\$ 3.00	
	300 Board feet of oak planks	3.75	
	Beef	.03	pound
	Flour 100 lbs.	2.50	
	Potatoes 1 bushel	.25	
	1 Suit (Mr. Graftons, Dundas)	4.50	

⁹These include Mrs. Sincoe's diary, Gourlays' Reports, a Pioneer Family by Griffin 1867 and Waterdown Board of Trade handbook 1949.

until recently and have had little to do with the mapped conditions except where restrictions in lot size for the accommodation of septic systems has prevented a rapid increase in density of buildings in certain areas.

METHODS OF MAPPING BUILDINGS AND ROADS IN THE LANDSCAPE USING PRIMARY SOURCES

The usefulness of particular primary sources in mapping is not the same for all mapped periods.

In 1841 the prime source was Registry Office documents which were checked with the assessment rolls for 1841.

The first entry in both lots 6 and 7 on the 3rd Concession are the original grants from the Crown. McDonnell received the first grant of 800 acres, apparently with the understanding that he would grant parts of this large holding to other incoming settlers. The second document listed is also a grant, to Alexander Brown in 1805. This included the land now contained in the Village of Waterdown. After 1805 the documents listed are for parts of lots and as they are often registered some years after execution they cannot be mapped in the order of their appear-

ance in the Abstract Book¹⁰.

These first grants and deeds were registered before the establishment of a Wentworth County Registry Office. Flamborough East lay in the Home District and all documents were registered at York (Toronto) and the copy books completed there. These books known in the Registry Office as the "Toronto Books" were transferred to the Hamilton office some time after 1841¹¹. However, many of the deeds which were actually executed before this date were not registered until the Hamilton office was established.

The documents up to 1841 are practically all memorials of bargain and sale¹². The document gives the name and occupation of the grantee and grantor and sometimes of the witnesses, describes the particular parcel by metes and bounds as well as

¹⁰The last entry in the Toronto Books is No. Q249 registered in 1841 between Samuel Kerr a tailor and Alexander Gordon, a shoemaker, affecting Village Lot 4, Block XVIII on the north side of Dundas Street being part of Lot 7, Concession 3.

¹¹See sources Chapter I.

¹²This is a document signed by the parties testifying that they have completed the sale. It is not the actual sale document exchanged between the parties but NOT registered.

by block and village lot number.

These lots were plotted in order of execution until 1841 and this resulted in a map which showed the boundaries and ownership of each separate parcel in 1841. Buildings were then located on the assumptions set out at the end of this chapter and the roads were plotted in order of their reservation as rights of way or in order of their appearance when named as boundaries in the documents.

A map was available for 1875¹³, which showed the street pattern, rivers, dams, raceways and mill ponds and the mills and public buildings as well as the lot divisions. The process as described for 1841 was continued until a document appeared in the Registry Office records which described the parcel of land in the same fashion as it appears in 1960. In all cases where assessment rolls were available from 1841 until 1880 a check was made to substantiate the data being mapped. These rolls were however of very little use in mapping the locations of buildings for 1841 and 1880.

The map for 1960 was constructed using field observation and registered plan 355 which showed the lot divisions. A check

¹³ See Sources, Map No. 2, Chapter I.

was made with the assessment rolls of that date which give all details including the size and structure of each building. Since similar detail was not available for 1841 and 1880 these details were not incorporated in the map.

The 1920 map was the last one constructed. In most particulars it is the same as the map of 1960 with all structures erected after 1920 eliminated and structures present in 1920, but destroyed or moved since that time, inserted. The information was practically all gained from photographs and interviews but again the assessment rolls were examined primarily as an assistance in conducting the interviews. The completed map was then verified by several people who had lived and worked in the Village at that time.

MAPPING RESTRICTIONS

From the sources already outlined it is possible to be quite certain of the limits of the parcels of land which were mapped. From field observation of the older buildings in the Village and from interviews with the oldest residents, it is possible to establish with a high degree of accuracy the location of the buildings as they were built on the large divisions of

land which characterize the early days of the Village. From observation it is possible to locate all the present buildings. It is noted that all the buildings in the Village, old or new, are built close to the street and the buildings in the older parts of the Village which have not been divided stand on lots that are fairly deep. Practically all existing older buildings are centered on the lots. It was therefore assumed that those buildings whose exact locations could not be certainly determined, also stood close to the street line and in the center of the lot.

The use of any parcel of land has been determined by the occupation of the resident owner or tenant, if it was at all reasonable to assume that the occupation could be carried on at that location. If two lots were owned by one person a distinction was made between his residence and his place of work.

METHODS OF CONSTRUCTION OF LAND USE MAPS

Land use maps were completed after all the data for the study had been gathered including the occupation of the owner or tenant in each parcel. Great changes have occurred in the last eighty years in registered occupations. In order to compare one map with another it was necessary to assign each occupation to

one of five broad divisions, namely, manufacturing, public and semi-public, commercial, residential, and agricultural. To prevent confusion several land use divisions which are commonly distinguished were grouped within these five divisions. Thus no distinctive group was given for services, professional, craft manufacturing, gardening and storage. Public and semi-public uses were grouped together. Rather difficult questions thus arose as to where to place buildings occupied by blacksmiths¹⁴, unmanned telephone exchanges, renovating companies, offices of doctors, dentists¹⁵ and accountants¹⁶. Each was placed in the category most suited to the major function of the building by a purely arbitrary decision.

¹⁴Blacksmiths were always in business until 1967. They provided services in mending, manufacturing plows, hinges and nails, etc. and in shoeing horses. It was finally decided to group them with service stations which grouping is as logical and arguable as any other.

¹⁵One room in an otherwise commercial block.

¹⁶Businesses with their major offices in Hamilton but with a village resident carrying on part of his business from his home.

MANUFACTURING INDUSTRIES

All premises and land adjoining where any material was worked up suitable for use and sold or bartered for retail or wholesale price including grist mills, saw mills, turning mills, grinding mills, washing mills, basket, barrel and head factories, sadlers, iron mongers, wagon makers, furniture factories or craft shops of any kind including body works, but excluding blacksmiths.¹⁷

COMMERCIAL

All premises and lands adjoining where goods or services

¹⁷ Many small manufacturers have at different times made and retailed their own products (as in the case of the weaver-tailors) and many have provided services as well as goods (as in the case of sadlers and blacksmiths). Arguments can legitimately be made for placing these borderline cases in either manufacturing or commercial divisions or for having a special category for crafts. A division was contemplated between manufacturers using water for the manufacturing process and those who did not. This was not done because industrial water can be used exclusively for power as in the case of grinding or for washing as in the case of hides, or for bending as in basket making, or for an expansion as in the manufacture of barrels which must be watertight. To draw this line of distinction would separate one time period from another not two coincident industries. Accordingly this distinction is not made in the maps but is referred to in the text.

were sold or bartered¹⁸ at retail prices including general merchants¹⁹, grocery stores, meat, hardware and drug stores, tailors, restaurants, confectioners, service stations, blacksmiths, hair-dressers, dressmakers, tinsmiths and buildings in which one of the above uses were carried on together with a pool hall or doctor or dentist's office.

PUBLIC AND SEMI-PUBLIC LAND

This includes land owned and operated by a public body or set aside for use by the public, by persons²⁰, or, corporate bodies

¹⁸In some cases of exchange of goods or services a system of barter and not cash sale was used. The second owner of the general merchants on the southeast corner of Mill and Dundas Streets received dairy products, mainly butter, in exchange for goods. His niece reports that he "used to take a sack of gold to Brown's Wharf to purchase goods for his store and at the same time export flour and butter by lake steamer". This is the report of Miss H. Eager in 1967. (Interview)

¹⁹It was not until 1880 that any division of the services of the general merchant, who sold everything from nails through food to patent medicines, appeared. By 1920 the divisions were very fine and by 1960 the general merchant seems to be reappearing in the guise of chain groceries and dry goods stores.

²⁰In this, I have included the public watering place set aside by E.C. Griffin, toll roads and undeveloped rights of way.

under certain restrictions including parks²¹, bowling greens, schools, churches, armories, wells, water towers, public health units, halls, municipal buildings, libraries, club houses and roads.

CHOICE OF FACTORS & METHODS OF ANALYSIS
COMMON TO ALL PERIODS MAPPED

The only factors which were common to and measureable in all time periods were physical features of the landscape including buildings and the socio-physical feature of land ownership and boundaries. Socio-physical features in general were considered too complex and numerous and too difficult to locate precisely at given times. The physical features could, however, be measured if certain assumptions were made. The first assumption was that the modifications of slope through filling or cutting were, at a contour interval of 10 feet sufficiently minor that the gradient could be considered constant for all times. The second assumption was that any parcel of land under separate

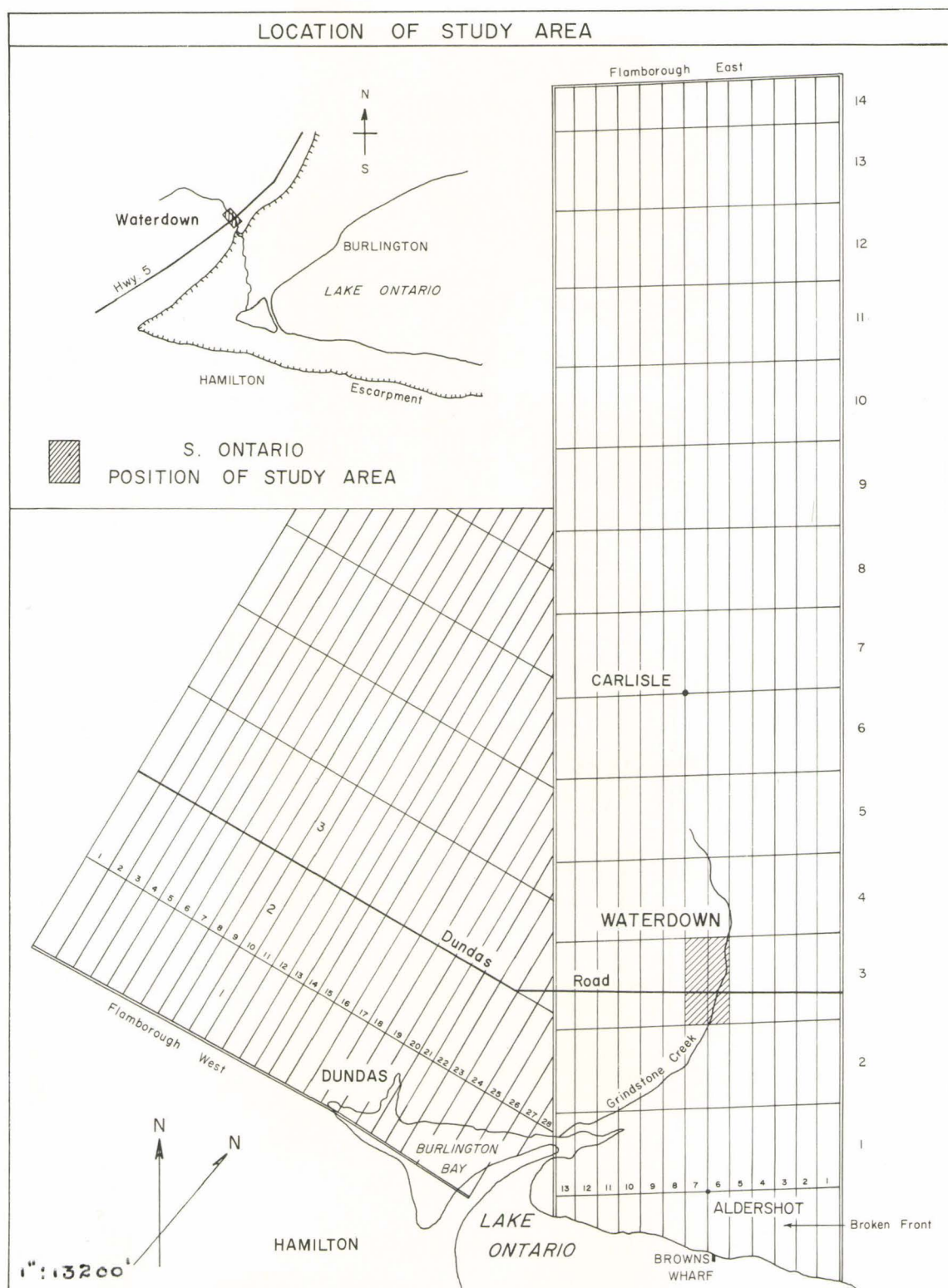
²¹At times farm field were used in certain periods as fair grounds or racetracks. If this was for a short period every year the land has been designated as agricultural.

ownership would have one building on it unless sure evidence was available that the parcel was empty or had more than one building. The third assumption was that the length of the rivers plus the raceways and the spillways were the same in 1841 and 1880 and without raceways and spillways the same in 1920 and 1960. With these limitations, five factors were chosen to be measured at each mapped time, namely,

1. Number of buildings
2. Number of contours
3. Length of water course
4. Length of road
5. Radial distance from the first crossroad junction.

Each of these were measured for each block of a grid of 264 parcels (approximately 1-2/3 acres) of land. It was further postulated that buildings were located in a particular position because, having weighed many factors, the owner decided on the most attractive location in his opinion for that building. Among the multitude of factors considered were the physical features of the site and its situation within the settlement. Therefore, attractiveness within the limits of these factors would be measured in terms of number of buildings. By the use of a multiple regression analysis it would be possible to calculate firstly, the percentage of association between the location of buildings and the four

factors; slope, roads, distance and rivers. Secondly, the value of each factor in comparison with the others; and thirdly, the predicted value of attractiveness (in terms of buildings) of each grid at each mapped period.



CHAPTER II

THE BEGINNINGS

The area to be discussed in this thesis is a block of 400 acres being lots 6 and 7 in the 3rd Concession of East Flamborough Township, Wentworth County, Ontario (Map No. 3). For convenience in discussion the North South line is considered to be parallel to the line between the lots.

LOCATION OF STUDY AREA

The study area is situated on the edge of the Niagara Escarpment where Grindstone Creek and its tributaries leave the top of the escarpment and flow towards Burlington Bay (Map No. 3). This escarpment which rises approximately 750 feet above the level of Lake Ontario consists of a massive limestone cap lying horizon-

tally over easily eroded shales. Here at Waterdown the escarpment face is practically concealed by a blanketing of glacial material covered with scrub vegetation. The cuesta face has been so cut back by a glacial stream²² flowing in a chute and by post glacial Grindstone Creek and its tributaries that the limestone cap is only visible where abrupt breaks in the streams reveal it. The major breaks occur (See Block Diagram A) (i) on Grindstone Creek where the cataract series composes the lip of the Great Falls (F1), (ii) on Spring Creek where the lip, 50 feet above the Great Falls, is Lockport series (F2) and (iii) on Grierson Creek (F3) where Lockport crinoidal limestone is exposed in a quarry near the stream's head waters. Several minor streams and a swampy area in the northwest sector complete the drainage pattern. The total fall of the main stream from where it enters to where it leaves the lot is just over 340 feet. The dolomite cap of the escarpment is covered with a layer of undifferentiated glacial material ranging in depth from 3 to 50 feet. The soils are primarily sandy loams with occasional layers of clay and gravel. The resulting landscape is one of gently rolling surface,

²²A glacial stream flowing parallel to the escarpment edge, here turned abruptly and flowed under the ice in a chute to the plain below cutting back the escarpment face and creating a valley later occupied by smaller post-glacial streams - Mannerfell, C.M.

cut abruptly by three streams draining the lot to the south.

In 1790 the whole appears to have been covered by oak and pine plain with occurrences of swamp in low areas and great stands of pine on well drained ridges.²³

When the line for the Dundas Road was extended from Dundas to York in 1795²⁴ it was superimposed on the Township of Flamborough Survey of Lewis Grant (Map No. 3) completed in 1793²⁵. Instead of following a previously layed out concession line, the road ran at a slight angle half way between the third and fourth concession line (Map No. 3), back from the escarpment²⁶. The third

²³"Between Lots 7 and 12 the country an open white oak woods and pine plain from thence (3rd Concession) to the 5th Line, good land" Abraham Iredell, Surveyor. No date. Book 403 D.L.F. (about 1795)

Survey Book 403 D.L.F. here refers to the numbered survey books of the Ontario Department of Lands and Forests. This reference will hereafter be used Survey Book (number) D.F.L. (date).

²⁴Survey Book 173 D.L.F. 1795.

²⁵Survey Book 209 D.L.F. 1793.

²⁶"From Dundas the location of the road was inland to Waterdown and from there always well back of the Lakeshore into York" W.H. Breithaupt; Ontario Historical Society 1924.

concession line was never completed where drawn because it was surveyed across a break in the escarpment face. This line is described by Abraham Iredell, Surveyor, as

"The third concession on the mountain, on this line oak plains a creek and (sic) Break in the mountain impassable on the line, the mountain trends to the N.W. 22 chains"²⁷

The survey was finished in 1795 by John Stegman²⁸ and in the same year the first lots were granted by the Crown²⁹ to Alexander McDonnell, an officer in the North West Company.

Particular information concerning lots 6 and 7 is given by Lewis Grant³⁰ in 1794 while surveying the Flamboroughs

"Land in 6 stoney-woods pine and beach with fine soil, broken land in 7".

A more detailed description of Lot 7 was given by Abraham Iredell when he surveyed a particular block of 2400 acres

²⁷ Ibid. Survey Book 209 D.F.L. 1793.

²⁸ John Stegman; Survey Records; Ontario Department of Lands and Forest 1795. Large books with no number, Abraham Iredell, Surveyor, presented at Newark, August 7, 1795.

²⁹ Registry Abstract Book for Lot 6 and 7, 3rd Concession, East Flamborough, Wentworth County.

Registry Abstract of County Court offices list and number, land transactions, giving names of parties and date of registration. True copies are filed under this number.

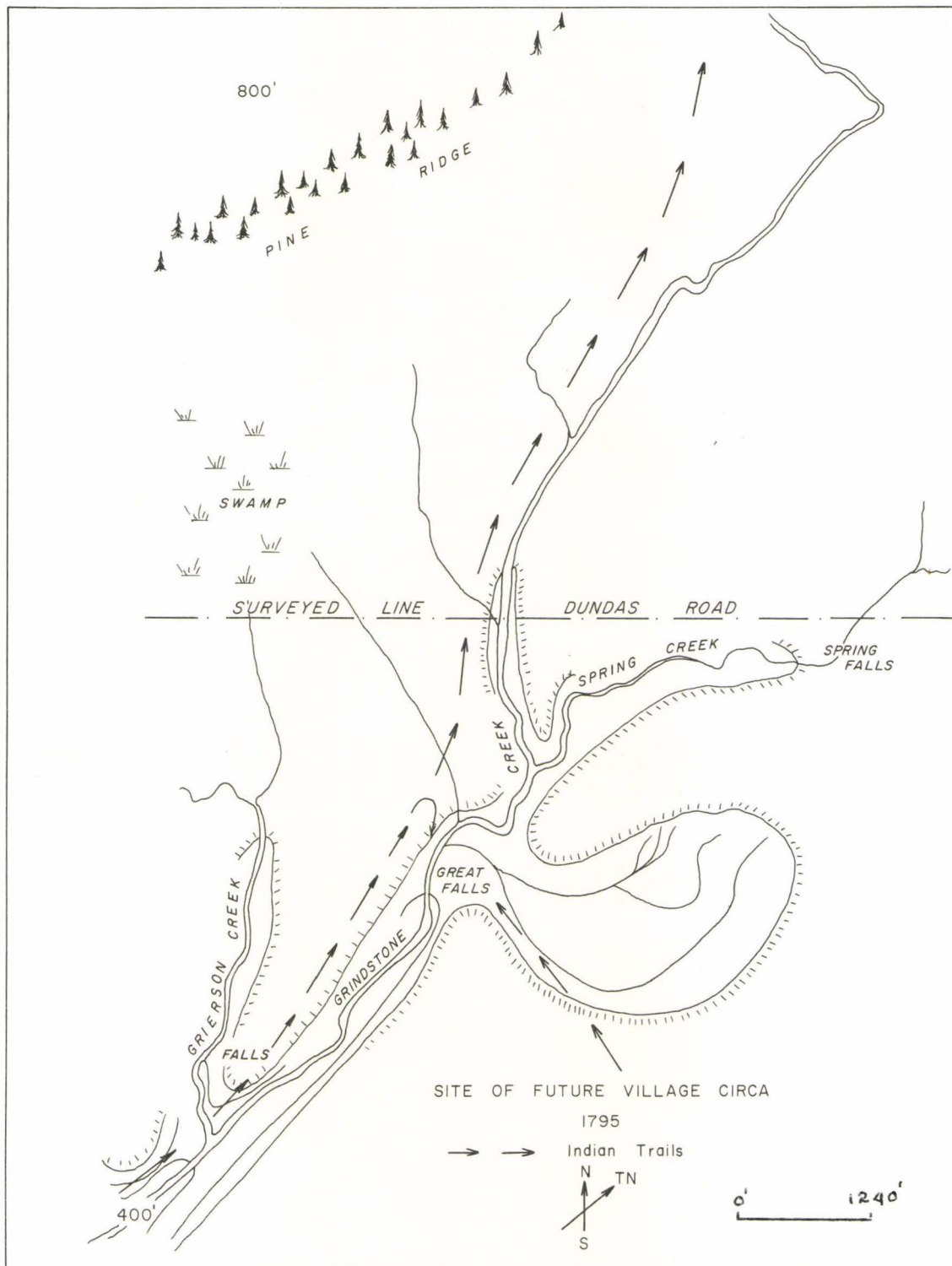
³⁰ Survey Book 404 D.L.F. 1794.

between the 3rd and 5th concessions from lots 7 to 12³¹. He wrote:

"The land on the indian land from the lake to the 3rd concession line is an open white oak plane to the mountain, the 3rd concession line has one chain on the mountain, on this line an oak and pine plane and the level country to the large creek on Lot No. 7 where the mountain breaks and trends to the west and interrupting the line again on Lot No. 2 between lots No. 7 and 12 the country an open white oak woods with deep hollows in the south line on boundary of the Township from the 3rd concession to the creek an open white oak and pine plain from thence to the 5th concession line. Good land. The 5th concession in general pine, strong land and heavy timber to Indian line on this line to the 3rd concession tolerably good land and pleasant country-".

Although broken land, the lots obviously were well endowed with fine trees for building and export. At the same time they were open enough that clearing and sowing crops was not the great task it could have been in dense forest. An additional feature of swift river and falls made the lots particularly desirable. Here close together could be found nearly all the necessities of the new settler - land to clear and plant, stone and wood to build a home, water for domestic use and a fall sufficient to provide the power needed to cut and grind the produce of the land.

³¹Survey Book 403. No date.



Before white settlement, the area was used by Indian hunters as an easy corridor through the escarpment to the interior where their hunting grounds and camps were situated. There is persistent mention by local amateur historians of a main trail leading from the mouth of Grindstone Creek up the left bank (Map No. 4). This was joined by a trail from the south,³² which crossed the river just above the Great Falls. Mention of this trail is made again where it passed through Bakersville just north of the 5th Concession³³ on the Centre Road, East Flamborough.

A special survey from the Broken Front (Map No. 3) to the 5th Concession of East Flamborough was done by Iredell;

"Field notes of Mr. Alexander McDonels (sic) land and the land belonging to the heirs of Captain Allan McDonel (sic) on the NW side of Burlington Bay Flamboro East"³⁴.

³²Charles R. McCullough, The Hamilton Centennial (1846-1946).

This trail is reported to start where LaSalle Park now stands. Traditionally LaSalle landed here and accompanied by indians started overland to the Grand River. It is possible that this route was through the escarpment at Waterdown.

³³Waterdown and East Flamboro 1867-1967, p. 45. The article was written from an interview with Miss M. Baker, a descendant of the founder of this community. This village disappeared shortly after 1905 when the last mill closed.

³⁴Survey Book 209 D.L.F. 1795.

McDonnell apparently took no action to improve these lots and they were sold³⁵ by McDonnell to George Brown³⁶ who then received the patent in 1805. Traditionally he is given credit for erecting the first mill above the Great Falls in the same year. On his property there was a stone quarry reported³⁷ to be operating by 1815. Brown himself reported on the quarrying situation in the Township to Gourlay³⁸ in 1817 as follows:

"Wellington Square³⁹
November 21st, 1817

There is no set price for limestone which is in great plenty as everyone gets what he likes by quarrying them.

Signed
George Brown".

³⁵TR 582 (1805)

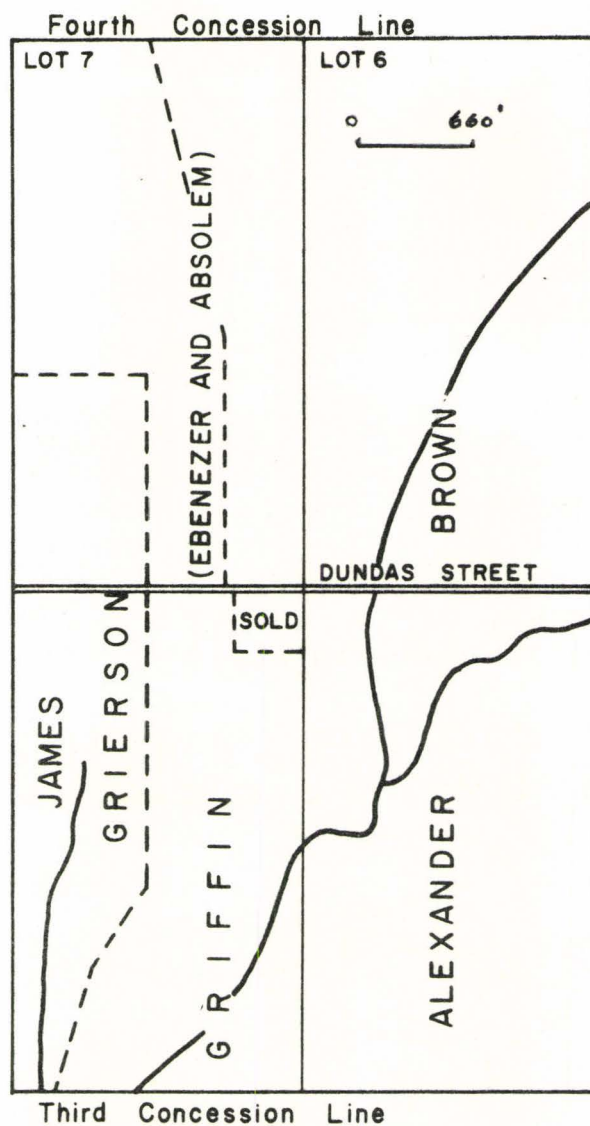
³⁵TR 582 refers to the location number of any document in the copy books or files of the Registry Office of Wentworth County filed in Abstract Books. Instrument number is in the order of registration.

³⁶George Brown - lived on the broken front where he and his son established Brown's Wharf. He had a mill on Grindstone Creek for a short period but became a merchant interested in exporting flour and timber, especially to the Maritime Provinces. He provided cordwood for the Richelieu Steamers on the Great Lakes.

³⁷Board of Trade pamphlet, Village of Waterdown 1949.

³⁸Statistical Account of Upper Canada 1817, R. Gourlay
p. 368

³⁹Now Burlington.



LAND OWNERSHIP 1835

LOT 7

It was not until 1820 that the first division⁴⁰ of Lot 7 took place. James Grierson⁴¹ purchased 42 acres including the Creek and stone quarry from George Brown (Map No. 5). One would expect that Mr. Grierson purchased this parcel as a source of water and building stone. The land was unsuitable for agriculture as it contained little more than steeply sloped banks of Grierson Creek and the quarry (F3 Diagram A).

In 1823 the remaining 158 acres of Lot 7 were sold by George Brown to Ebenezer Culver Griffin⁴² a miller from Smithville. This purchase included, the lower portion of Grindstone Creek, the Great Falls, and a one quarter mile stretch of River Valley, sufficiently flat and extensive to accommodate his two mills and their raceways (Map No. 5). Having established a saw and a grist mill on the river, Mr. Griffin started to clear and farm his land and to anticipate a settlement growing around his

⁴⁰TR E 207 Instrument 2, Lot 7, 3 Concession, E. Flamborough.

⁴¹James Grierson, brother in-law to George Brown, yeoman, assessed in 1841 for 2 oxen, 3 cows and 1 cattle. He is thought to have owned Lot 8 with no access to creek water. Assessment Rolls for E. Flamborough, Lot 7, Concession 3.

⁴²Instrument 3, Abstract for Lot 7, Concession 3, E. Flamborough.

power site. Some time in 1831 he drew up a plan⁴³ (Map No. 1) for the Village of Waterdown and sold the first⁴⁴ Village lot (Map No. 5) on the southwest corner of the road he had built⁴⁵ "to the mill yard". This was constructed on the west side of Grindstone Creek in Lot 7 (Lot 6 was still in the possession of George Brown). Mr. Griffin continued to sell small lots to the west along Dundas Street. He also sold half of his farm and his wollen mill⁴⁶ to his brother Absolom⁴⁷ (See Map No. 5).

⁴³Plan No. 47, registered in 1843. This plan appears as Map No. 1.

⁴⁴Village Lot - refers to smaller division of a concession lot.

⁴⁵Used in the description of the boundary of Lot Deed No. K95.

⁴⁶From Pathway to Skyway; a History of Burlington by B. Ford and C. Emery "one of the largest cloth and carpet mills in Canada West".

⁴⁷This land appears to have changed hands within the family, sometimes without registration (which was not compulsory at this time). E.C. Griffin sold his mill in 1830 to Absolom his brother (61 acres and wollen mill TR F227) and Absolom sold it back to Ebenezer in 1837, P 593; both these deeds were registered.

LOT 6

While the division of Lot 7 appears to be clearly laid out in the Registry Office documents, the divisions of Lot 6 are not. It is very difficult to be certain of the exact ownership for about five years prior to 1837. By the end of 1838 all the land in Lot 6 is accounted for in deeds from Culver Griffin.

In 1837 E.C. Griffin purchased Lot 6 (Map No. 5) from George Brown and received the Crown patent in the same year⁴⁸. This patent may have been intended to confirm Griffin's title. Immediately he extended his town plan to include Lot 6. The Village plan now covered 400 acres which included over a mile of Grindstone Creek. Negotiations were apparently under way even before 1837 to extend the milling complex. In 1836 Dayton Reeves deeded 75 acres to John Cummings in two parcels A and B⁴⁹. "A" was the land north of Dundas up to "the dam"⁵⁰. "B" was south of Dundas and was

⁴⁸Abstract Book, Lot 6, Concession 3, East Flamborough third entry.

⁴⁹K. 389.

⁵⁰This deed contains the first mention of Board Street.

"to secure all the waterfalls down to the still water of Henry Graham and Levi Hawkes dam erected for a turning shop and tanning purpose" (See Map No. 6).

This land must have been used for milling for some time for the agreement continued

"the water of the creek to continue same level or height as now established by dam erected years since⁵¹ and fully secure 8 foot fall of water at Dundas Street"

but it remained in Brown's hands, for the covenant actually governing the use of the waters was not completed until 1848 when E.C.

Griffin agreed to sell Parcel A and B to John Cummings, his heirs and assigns forever, providing that they⁵²

"shall not raise or erect or build any higher⁵³ than at present, a dam or mole now erected across Limestone Creek in Village Lot No. 1, originally built by Leander Hooper and now doth flow the water of said creek a short distance above Lot 1" (See Map No. 6).

It becomes clear that unregistered agreements had controlled the establishment of milling in Lot. 6. When Griffin received the

⁵¹The "years since" may be as little as 1 or 2 years.

⁵²L46 (1838) Griffin to Cumings, Yoeman.

⁵³Often Limestone Creek at this time. Now Grindstone Creek.

patent for the Lot he took over the agreements from Brown probably renegotiated them, selling under restrictive deeds. Levi Hawke agreed⁵⁴

"for taking out water and no more to drive and turn two lathes either for wood or iron except for three days, Monday, Wednesday and Friday when water is to be allowed to go thru the race-way to Lot 12 for tanning purposes".

While Graham the tanner agreed⁵⁵ that his

"water rights be limited to grinding of bark for tanning or other machinery to convert hides into leather".

Dayton Reeves who bought land near this dam also signed an agreement⁵⁶ with E.C. Griffin that Reeves would have

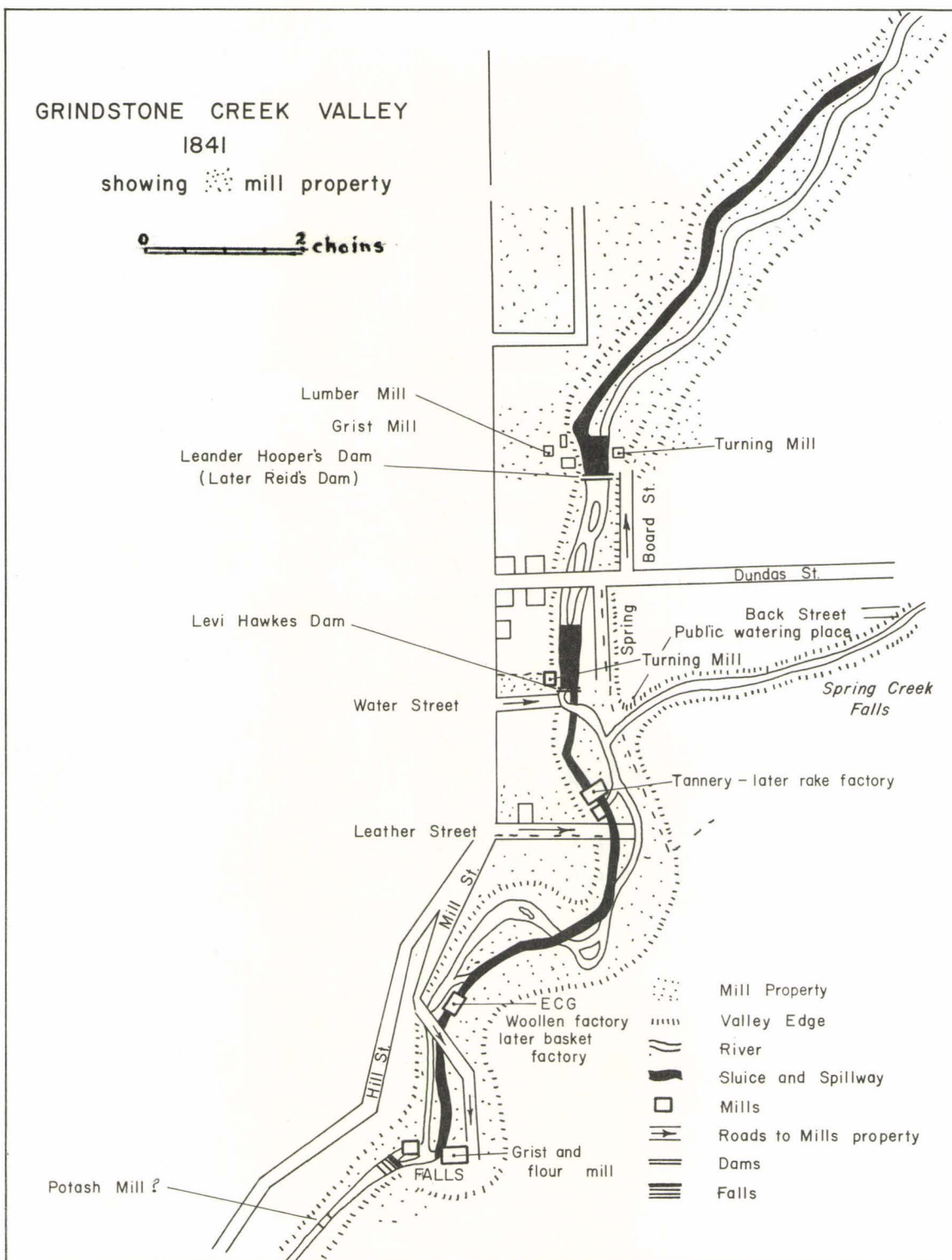
"all surplus water coming over the dam not needed by Levi Hawk or Graham and the use of the water in the Creek".

The restrictions imposed by E.C. Griffin not only concerned the use of water for milling. He placed reservations in deeds concern-

⁵⁴L129 (1837) Griffin to Hawk, millwright. Village Lot 11. Lot number here refers to Village lot.

⁵⁵L130, December, 1837 - Griffin to Graham, Tanner Lot 12, ibid 33.

⁵⁶L137, December, 1837 - Griffin to Dayton Reeves. Shoemaker.



ing roads⁵⁷

"reserving free use of a road two rods wide to descend the hill from the sideroad down to the creek in the most convenient place on the east side of the grist mill" (See Map No. 6)

"(Hill Street which is) to be reserved forever for travelling, passing and repassing and going upon, over and along said parcel of land as well with teams, oxen, horses, sleighs, carts and carriages as also on horseback and on foot"⁵⁸.

Three deeds⁵⁹ were given purporting to convey one lot on the river and confirmed by E.C. Griffin (the original deed was probably lost) who had arranged that all the deeds contained a prohibition forever of "any wollen manufacturing except with the permission of E.C. Griffin".

The influence of Mr. Griffin was enormous. His restrictions concerning roads, water rights and even public watering places⁶⁰

⁵⁷K95 - 1838 - Lot 4 Block XVIII 1838 (Mill Street)
ibid 33.

⁵⁸K778, Lot 7.

⁵⁹N355, 356, 357.

⁶⁰He established a public watering place on Spring Creek, See Map No. 3, N166, November, 1838.

remain in the deeds in some cases to this day. The scope of his activity as a miller and a farmer is indicated by his son. Writing in 1902 about the period of the MacKenzie Rebellion, Justin Griffin said

"the writer has no doubt that the property of the writer's father, his fair fields and woodlands, his flouring mill and woollen factory, saw mill and his barns and dwellings were counted to be confiscated"⁶¹.

The confiscation did not occur. Instead slowly but surely the settlement grew. The mills of Ebenezer Griffin attracted other trades and craftsmen. Together they established a centre for the supply of goods and services to the agricultural settlers who were rapidly clearing and farming the hinterland⁶². The foundations the original townsmen laid were to be part of the fabric of the community for years to come. The plans implemented by one man, Ebenezer Culver Griffin, far outweighed all others.⁶³ Future developers were to work within the framework of the land boundaries, street networks and established buildings and uses, laid down long before by this miller.

⁶¹Wentworth County Historical Society 1902.

⁶²In this case considered to be the area not more than one days walk behind the escarpment.

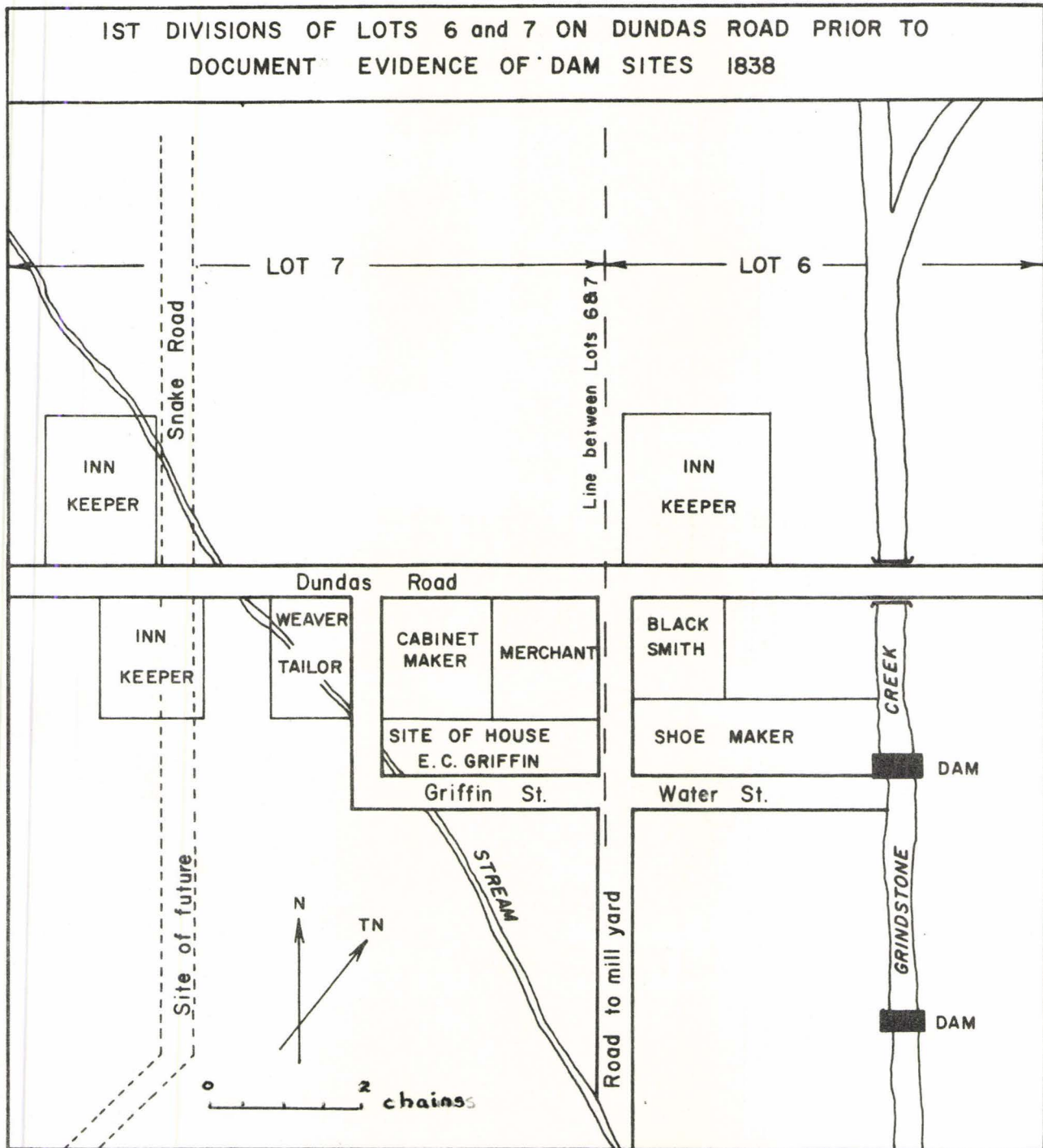
⁶³Between 1837 and 1840 there are 37 deeds on Lot 6. E.C. Griffin was a party to 29 of them.

CHAPTER III

1 8 4 1

The first evidence of the recognition of Waterdown as a separate community is found in the Assessment Rolls for the Township of East Flamborough for 1841. In these rolls there is a marginal note which precedes the entries for those living in lots 6 and 7 in the 3rd concession. The note reads "Village of Waterdown". As this was not yet an organized municipality, the exact location of each assessed person, within those lots is not given, but it is reported that there were 165 persons in the Village and 44 households in all.

In 1841 the settlement was very much in its formative years. Its inhabitants, although mostly tradesmen or artisans, were still highly dependent on the land. Forty-four families lived within the boundaries of the future municipality of Waterdown but thirty-two held less than one-half an acre of land



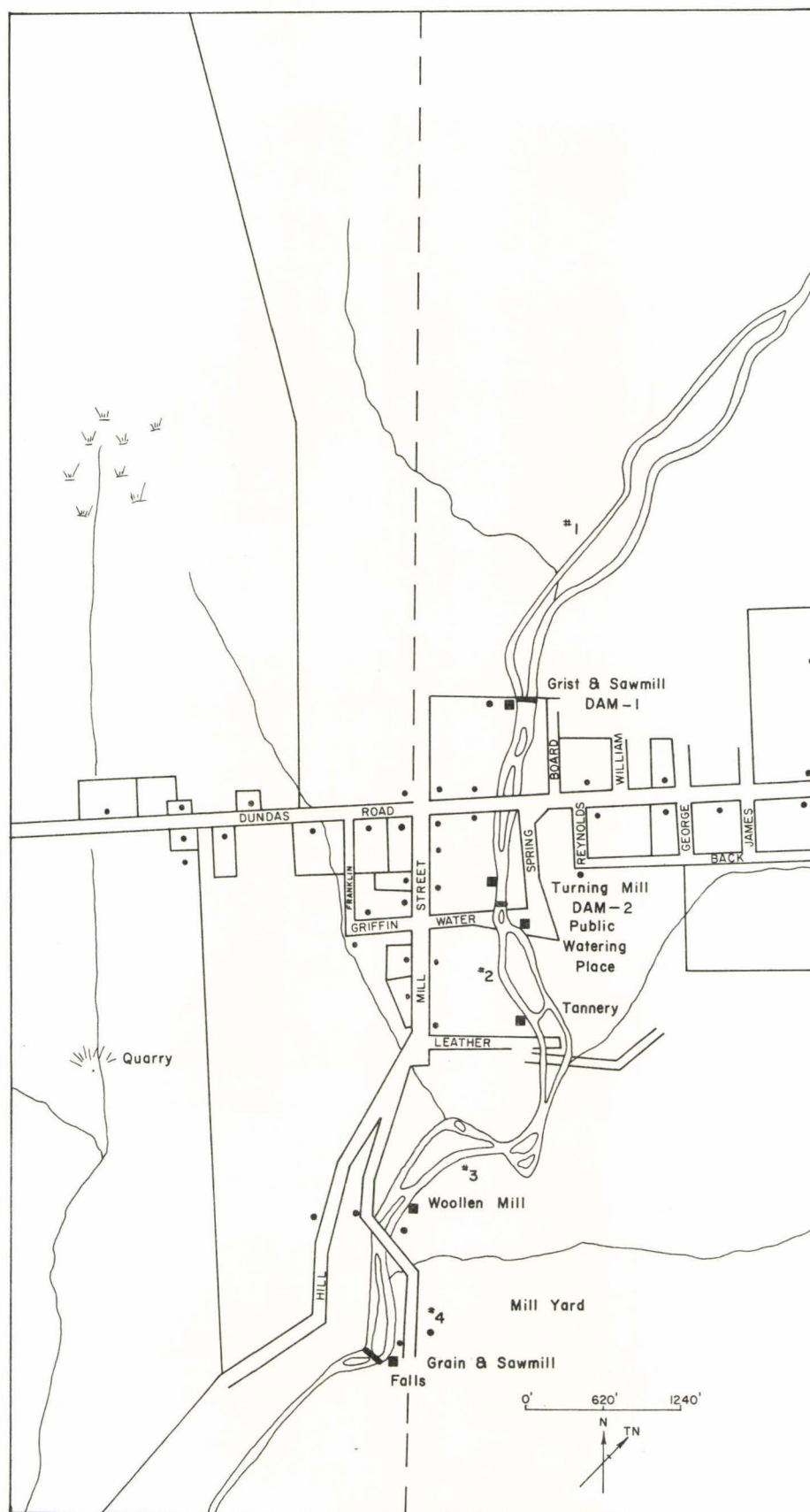
which constitutes only a small part of the total area of 400 acres. However, there were in the community thirty-three milch cows and eleven horses⁶⁴. Probably every household had its own vegetable garden. The food the inhabitants were unable to produce, was obtained by bartering their services to the farmers in the surrounding area. Few people were able to accumulate a surplus for sale outside the immediate area and those who could, were mostly millers who acquired cash by the sale outside of the community of flour, cordwood or woollen goods. These cash funds they could invest in luxury items for resale. Consequently, the general merchant class sprang up, increasing the dependence of the hinterland on the community. All the shops both mercantile and artisan grew up along Dundas Street (Map No. 7) the only road providing communications outside the community. As far as we can tell these shops were originally either log or board siding applied perpendicularly and were one storey high. Many had chimneys and foundations made with local stone. The tax rate indicates that a two-chimney structure was rare. All buildings faced the road and were close to the edge of the sixty-six foot road allowance protected only by a low stoop from the right

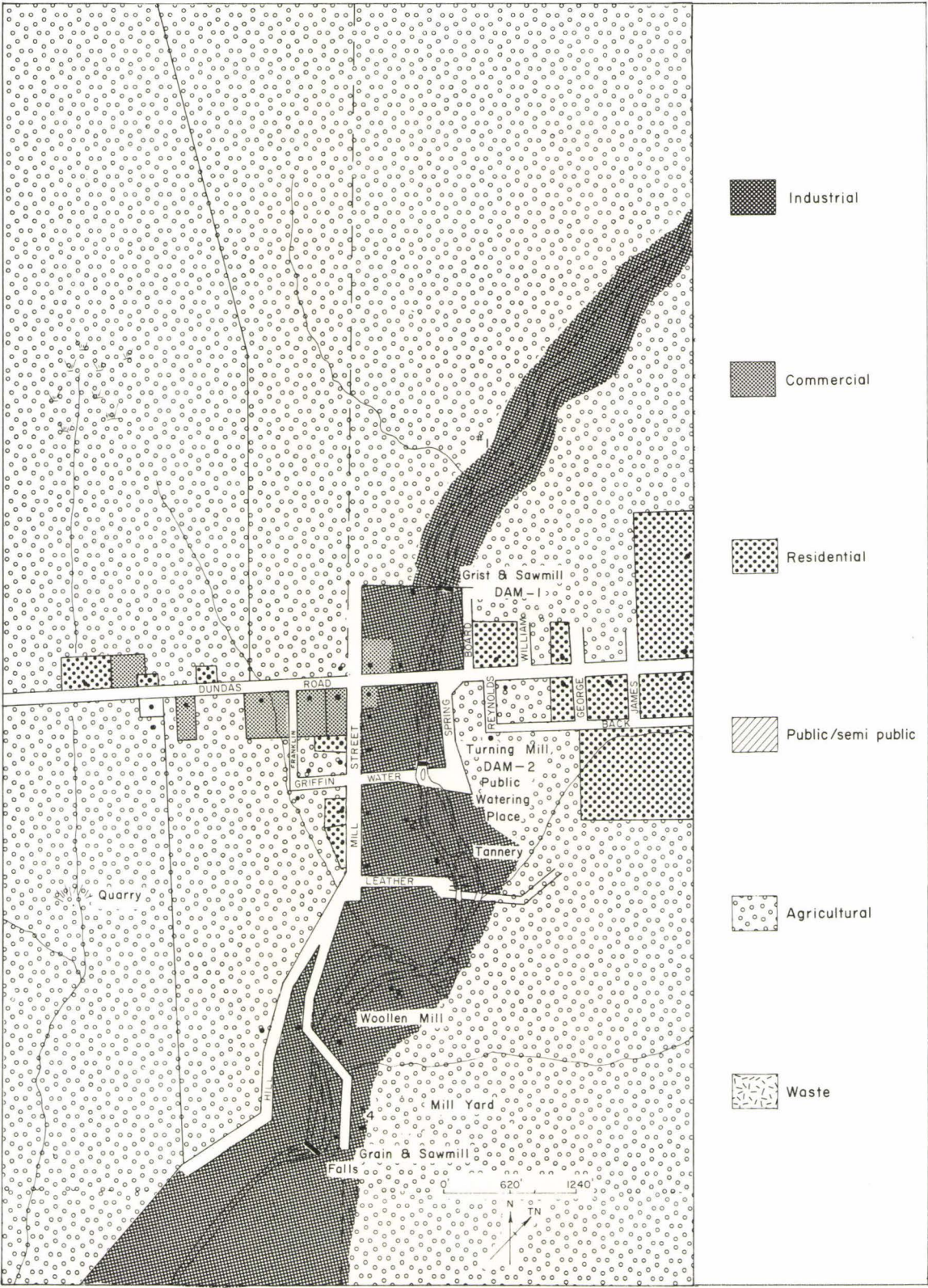
⁶⁴Assessment Rolls 1841 Waterdown (East Flamborough)

of way. The exception to this condition was an Inn and possibly the same store which still stands at the corner of Mill Street and Dundas Street. Both these structures are stone, (Picture No. 1) probably quarried on James Grierson's land. Many additions and renovations have been made but the two-storey structures were built sometime between 1840 and 1850. In a setting of one-storey plank structures these must have seemed grand indeed.

The mills in the river valley are said to have been constructed of wood again often applied perpendicularly, and at least two storeys high to accommodate the bulky machinery driven by water power. The river had now been dammed in two places, (Map No. 6) one above and one below Dundas Street, and raceways and spillways had been constructed along the length of the Creek. Despite the fact that it was in this valley that money was made, all the mill houses but one were constructed of log. Far up the hill on the other side of the river were the cottages of those who worked in the mills, (Picture No. 2) all along Dundas Street to the line between Lots 5 and 6. Again built of wood most of these were one-storey frame structures and faced the Dundas Road.

All these shops and homes stood stark and bare beside the roads, the trees the enemy of the settler ruthlessly cleared





away, back to the farm wood lots.

ROADS

The only road which provided access to the lots from the surrounding country was Dundas Street. Built as a military road connecting Dundas and Toronto, its route did not conform to the concession lines of Flamborough but ran between the 3rd and 4th line swinging slightly north just east of the river crossing (Map No. 8). The stream itself did not alter the course of the road, which was built straight down the steep bank to a low bridge over the stream up the hill and straight out of the Village (Map No. 8). From Dundas Street two roads, Franklin and Mill had been built; the former probably originating as a lane leading to E. C. Griffin's house just south of the highway and the latter a road constructed slightly west of the line between lots 6 and 7 and leading "to the mill yard" of the grist and saw mill located just above "The Great Falls". In order to reach the mill yard it was necessary to cross the river. At this point Grindstone Creek swings close to the west bank of the valley leaving a flat area between the river and the east bank of the valley which is sufficiently large to hold mill buildings in a position directly

beside the lip of the falls where a mill with an undershot wheel⁶⁵ could profitably be located for a most efficient operation.

South of Dundas Street running east from Mill Street were two streets, Water Street and Leather Street (Map No. 8). Both led directly to the mill sites but as the level area used for the mills was west of the river, these roads were built only to the water's edge⁶⁶.

The only other street west of Grindstone Creek in 1841 was Hill Street (Map No. 8). Branching to the right where Mill Street descended the river bank, Hill Street ran along the edge of the spur of land between Grindstone Creek and Grierson's Creek. It was declared to be a right of way in an early deed "for passing, repassing and going upon and along the said parcel of land (before described) as well with teams, oxen, horses, sleighs, carts and carriages as also on horseback and on foot"⁶⁷

⁶⁵1841 Saw and grist mills were generally built over the water above the falls using an undershot wheel with paddles which turned against the current. These ground more slowly than the overshot wheels but were cheaper to construct because they did not need a dam. - Edwin Guillet, Early Life in Upper Canada.

⁶⁶Rights of way reserved but construction never extended over the river. See Plan Waterdown 1853 Map 1.

⁶⁷K778

It probably followed the same route as the main indian trail up the escarpment (Map No. 4).

Hill Street appears on later maps which indicate that at one time it led out of Lot 7 in the southwest corner.

East of the river many streets are shown running north and south from Dundas Street. However all the houses face Dundas Street and it is questionable if more than a right of way existed where most of the streets are named. There are two exceptions, namely Spring Street which ran south close to the east bank of the river to a public watering place on Grindstone Creek, (Map No. 6) and Board Street which ran north, also parallel to the river, leading to the level area on the east side of the river where a dam had been constructed.

The road pattern in 1841 was very simple and with the exception of Dundas Street and perhaps Hill Street leading out of the lots, the roads were all built primarily to reach the water's edge where domestic water or power could be acquired.

COMMERCIAL DISTRICT

The "Commercial District" was not clearly defined. As few settlers owned more than one parcel within the lot, residential, commercial and manufacturing activities were most often

carried on in one building. The center is defined here as the corner of Mill and Dundas Streets where the first general merchant's shop and the first inn were built. (Map No. 7) Additional premises of a commercial nature were opened on Dundas Street to the west of this corner, most of them on the south side of the road. Two innkeepers are listed and both were on the north side of Dundas Road. Map No. 9 shows the beginning of this development as it appeared. These innkeepers and the merchants, tailor, cabinet maker and blacksmith were able to provide all the basic needs of the community except shoes and milling services. No similar establishments were found east of Grindstone Creek.

INDUSTRIAL

Manufacturing sites were on Grindstone Creek and all were industries where water was a necessary commodity for the manufacturing process. Two dams had been constructed (Map No. 6) and a number of spillways⁶⁸ and raceways⁶⁹ extended from the edge of

⁶⁸Receives overflow of water.

⁶⁹Channel directing water to run a mill wheel.

Lot 7 to just below the Great Falls in Lot 6. In this area were located a grist mill, saw mill, flour mill, turning mill, tannery and a woollen factory, (Map No. 6). (The number of mills described in the Registry Office deeds is the same as the number of mills listed in the 1841 Assessment Rolls, but the "kind" of mills are not the same; the assessor listing one grist and four saw mills. The tannery was apparently abandoned in 1842 and a rake factory built in its place. The woollen mill survived until 1851 when it was burned out and rebuilt for other uses.) The only other industrial site was a quarry at the head of Grierson Creek, (Map No. 8) but there is no indication of who owned it or how the stone was brought out.

RESIDENTIAL

As previously stated, in most cases a man lived in the same building where he carried on his trade. The number of purely residential properties was therefore smaller than one might expect in a settlement of 44 households. Only one area stands out as distinctly residential (Map No. 9), the lots on Dundas Street east of Grindstone Creek. All but one of the owners of these lots had occupations not normally carried on in the home; millwrights,

carpenters (as opposed to cabinet makers) masons, and labourers.

A blacksmith owned the northeast corner lot on Dundas Street

where he may have carried on his trade but it seems more likely

that he worked with the blacksmith at Mill and Dundas Streets.

The other residential properties shown are individual units on

the borders of the commercial district, one on Dundas Street west

and one on Mills Street (Picture No. 3), a double stone cottage.

PUBLIC AND SEMI-PUBLIC USE

Very little land other than roads was reserved for public and semi-public uses. The public watering place was reserved at the end of Spring Street and all deeds on this land continued to reserve this use. It is often stated that the first school on the southwest corner of Mill and Dundas Streets was built in 1815. As the teacher was employed and the school built by Brown it is probable that it was in Lot 6, which Brown owned until 1837. A second school is mentioned by George Griffin, one of the sons of Ebenezer Culver Griffin, for he writes⁷⁰

⁷⁰ Notes set down by Mr. George Griffin and quoted in Waterdown Public School - A Historical Sketch, Ontario Department of Education.

"a new school was built if memory serves in 1827 on the corner of Mr. Grierson's farm. The writer was there at school the first day it was used. It was used for Church purposes by the Methodists on sabbath morning and by Presbyterians in the afternoon up to 1843 when their denomination built a church".

In 1841 no land was held by religious bodies although services were held at irregular intervals.

AGRICULTURAL

All the rest of both lots (Map No. 9) not divided into small parcels must be regarded as agricultural land. The owners of these lands were registered as yeoman or farmers and they owned the greatest number of cattle. James Grierson however was the only farmer reported to have a team of oxen. Reference is made by E. C. Griffin's son to his father's "fair fields, meadows and woodlot" and again in 1847 in his Will (see copy in Appendix I). Ebenezer Griffin left to his wife Eliza

"all that parcel or tract of land and premises lying on the northeast side of the Grindstone Creek which I own and use as a farm and timber lot".

This refers to the block of land east of Grindstone Creek and south of Spring Creek, excepting the mill property on Grindstone

Creek, (Map No. 9).

SUMMARY

Although the land use pattern of 1841 is not clearly defined, certain tendencies may be observed. A business section has grown up on Dundas Street, the first established road leading out of the lot, and has been extended west from the first established store and inn on the corner of Mill Street. Industries using water power have been established all along Grindstone Creek and roads have been built to the mill yards, crossing the river only where necessary to reach the mill property. Nearly all residential properties are on Dundas Street and east of Grindstone Creek.

All the remaining land is used for agricultural pursuits, crops, wood lots or pasture. This may be considered an integral part of the community, its owners being not only concerned with farming but also with milling and retail trading in the community. These men were also separating small parcels from their farm land each year to extend the built-up settlement.

CHAPTER IV

1 8 8 0

By 1880 Waterdown had been an incorporated municipality for four years⁷¹. All meetings of the elected council were held in the newly erected Bell House on Dundas Street (Picture No. 4), where the one prison cell and the fire bell were located. The large stone Township Hall erected in 1856 (Picture No. 5) was now used by the Flamborough Township Council. Waterdown was the "new village" where business activities and social amenities, not dreamed of in 1841, had become common place. The population now stood at 758 people. One hundred and twenty-nine people owned land within the village and were residents and forty-nine owned

⁷¹By-law No. 276, June 5th, 1875. "750 inhabitants ... more than half freeholders ... first election to be held in Bell House on Dundas Street.

land within the village but lived outside the limits. There were only thirty-one tenant families. 10.1% of the population had occupations listed on the Assessment Rolls, a slight drop from the 10.9% of 1840.

The village was still outstanding for its many mill buildings. The total area of mill properties on Grindstone Creek remained the same as in 1840. However, the percentage of the total population employed in milling industries had dropped from 6% in 1841 to 1.7% in 1880.

This does not indicate a decline in milling but is an indication of the many additional business activities now carried on in the Village. The number of owners of farm land of over 10 acres remains the same as in 1840 but by 1880 the size of the individual parcels was smaller. The number of village lots under one acre had risen from 21 in 1841 to 164 in 1880⁷². The large holdings were rapidly being broken up for residential land. Most people however still had vegetable gardens and fruit trees and kept some animals. Among the 160 families, 64 cows, 5 sheep, 78 hogs and 66 horses were kept within the village limits⁷³. To

⁷²Assessment Roll - Waterdown 1880.

⁷³Ibid.

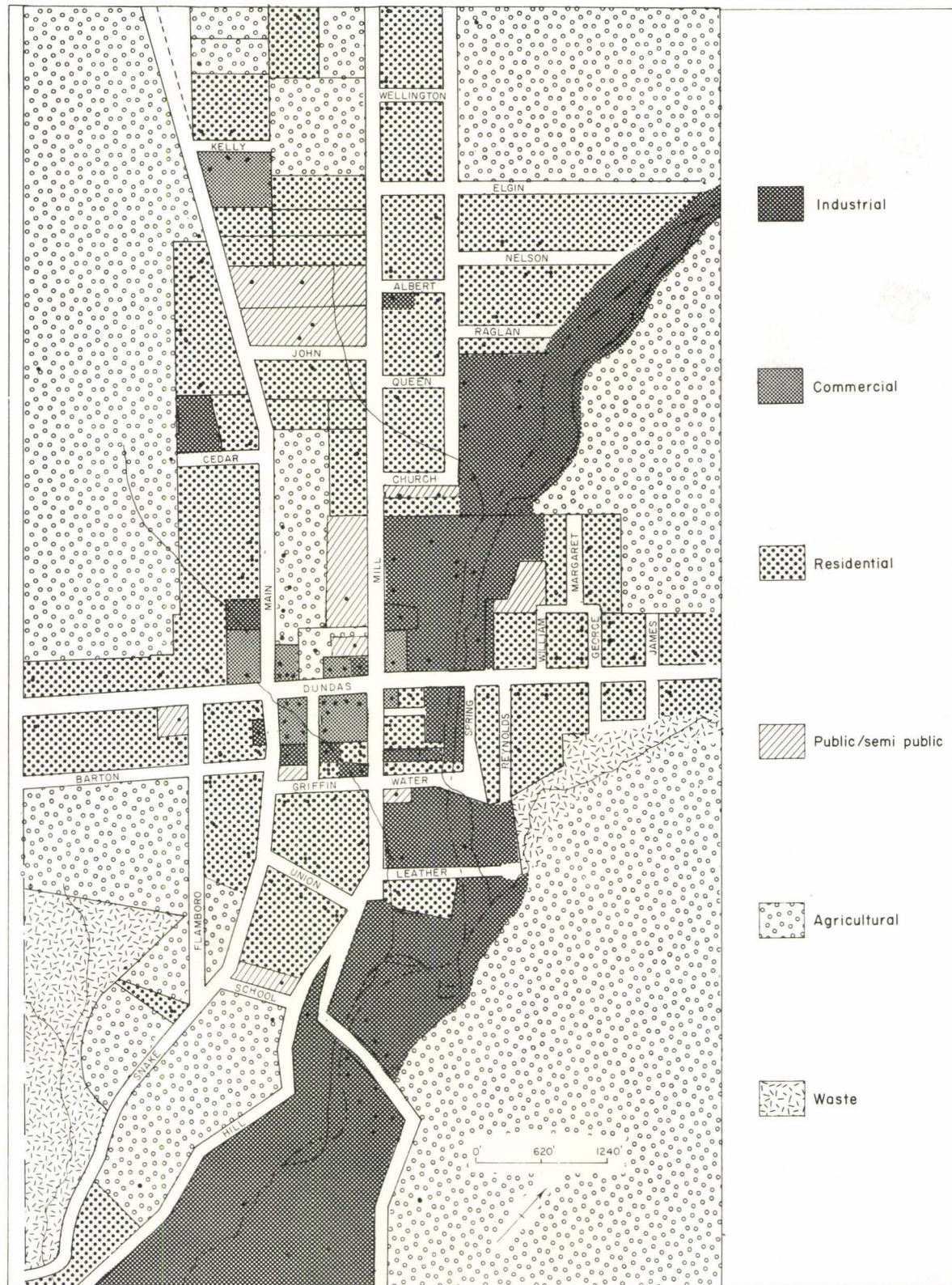
this can be added a great number of chickens, geese and ducks. These were the most common (and not taxable) animals kept, every family having some type of fowl, most often chickens, for their own use. In many ways the inhabitants of the village in 1880 were more self sufficient than the inhabitants of 1841 but the villager of 1880 had more sophisticated tastes and had the money and the means to indulge them. The business horizons of the village with several major exceptions still were less than a day's walk away and although now there were three roads leading out of the village⁷⁴ (Map No. 10) the greatest part of the business of the village was directed to providing services and goods for the villagers and for those farmers in the immediate hinterland. The range of occupations had increased markedly;

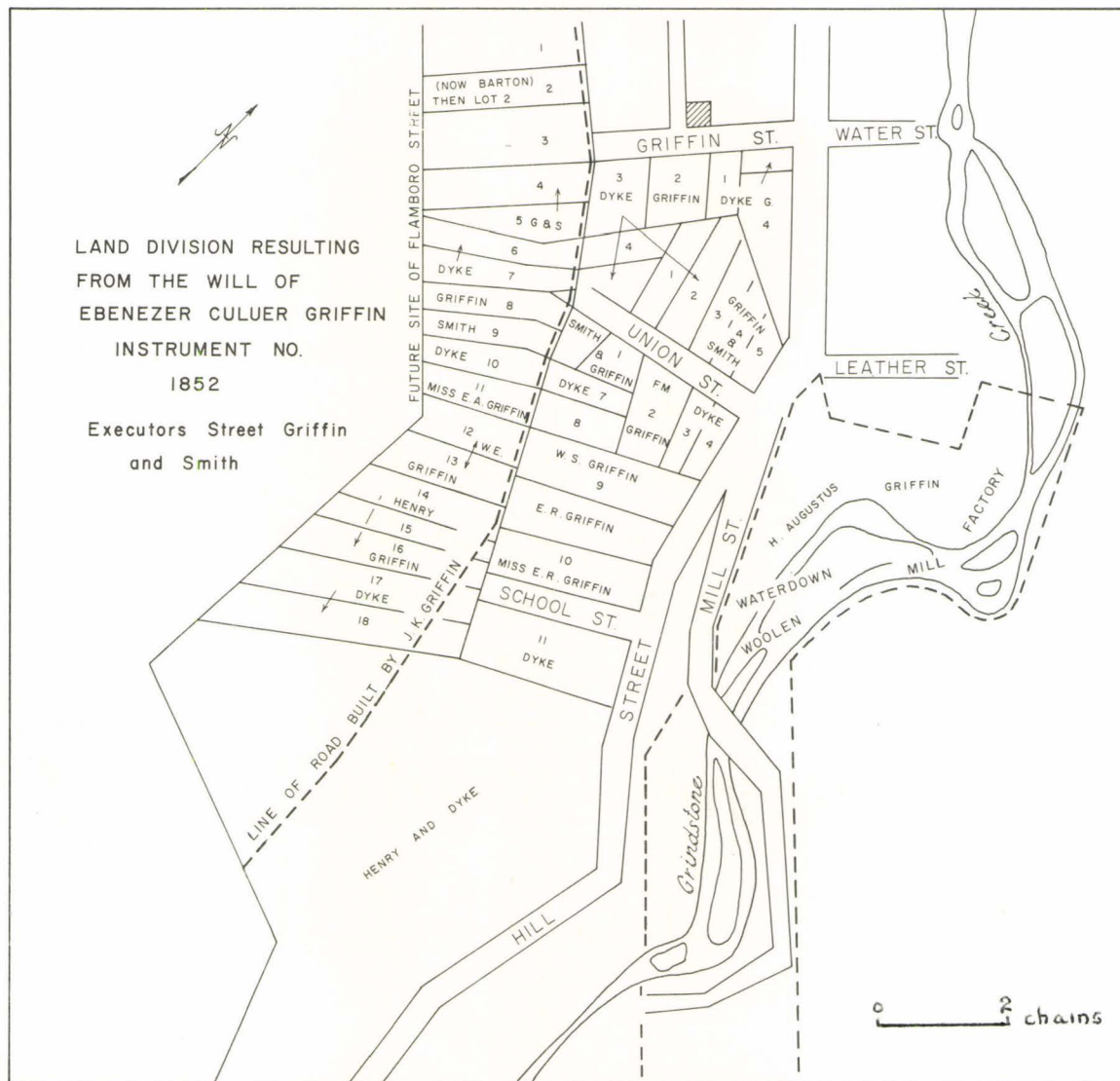
	<u>1841</u>	<u>1880</u>
Blacksmiths	2	9
Farmers	6	6
Gardener	0	1

⁷⁴The date of the extension of Mill Street is not known but it was probably early in the 1840's when Brown's Wharf (see Diagram) was built. In 1853 a toll road from Hamilton to Waterdown was constructed by James Kent Griffin and extended to Carlisle in 1854. The toll gate was at the Valley Inn and still stands (see Picture No. 6).

	<u>1841</u>	<u>1880</u>
Teamsters	0	2
Carriage or wagon makers	0	5
Saddlers	0	2
Machinists	0	3
Coopers	0	4
Rake makers	0	1
Cradle makers	0	1
Builders	0	1
Painters and plasterers	0	2
Masons	1	4
Carpenters	1	11
Tinsmiths	0	2
Merchants	7	4
Butchers	0	3
Bakers	0	1
Tailors	1	4
Weavers	1	2
Shoemakers	2	3

Few of the buildings remained in the same state as in 1841. There were still a great number of wooden structures in the business district (land use map No. 11) but they were now one and a half to two storeys high. In addition the hotel and





the store on the southwest and southeast corners of Mill and Dundas Streets had been greatly extended (Picture No. 1). A stone store now stood on the northwest corner⁷⁵ (Picture No. 17) and included rooms for the Mechanics' Institute Library. Two large brick buildings had been built on the northwest and northeast corners of Main and Dundas Streets (Picture No. 7); one being a stage hotel and the other a general merchant's shop. Behind these were a number of wooden stores and factories stretching north and south on Mill and Main Streets (Picture No. 8). This was the time when large mills such as Howland's Mill (Picture No. 9) public buildings and large homes were constructed in stone. The adventure into brick was just beginning and the new merchants were building their elegant homes of this material in prominent positions on Dundas Street (Picture No. 10).

The smaller homes remained either stone or wood but now the style was horizontal siding. The popular design was still the cottage but a number of two-storey Ontario Vernacular Classics⁷⁶

⁷⁵J.T. Stock - General Merchant. In 1881 the first telephone in the village was connected to this store on a loop line from the Toronto-Hamilton line. The telegraph station was put into this store in 1850. Messages were relayed to Aldershort station.

⁷⁶Ontario Vernacular Classic is a name applied by Marion McCrae and Anthony Adamson in "the Ancestral Roof", Domestic Architecture of Upper Canada for houses built in this style.

(Picture No. 11) were built at the same time. Trees and bushes were well established in the gardens and along the fences that now divided the lawn from mud road in front and a sense of permanence and prosperity pervaded the settlement.

ROADS

The road plan had been greatly extended since 1841. Three roads led outside the lot, namely Dundas Street as in 1841 and Mill Street and Main Street.

Mill Street, located on the line between Lots 6 and 7, was originally known as the Centre Road and it was intended that this road should be opened to the top of East Flamborough Township. This never occurred. By 1880 the road was opened to the fourth concession line but not beyond. The southern extension⁷⁷ provided a route to Brown's Wharf (Map No. 3) where produce was shipped, and to Aldershot Station (Map No. 3) which was the nearest railroad station⁷⁸ and telegraph centre. There is no information on who built this road or when it was built.

⁷⁷ All shipments of grain from Howlands Mill to Maritime Province used these docking facilities.

⁷⁸ Grand Trunk Railroad opened in 1853 at Aldershot.

Main Street (to use its present name) was constructed by James Kent Griffin between 1853 and 1854. The route appears to have been in use before this date but was impassable in wet seasons. The builder was given the right to erect a toll gate at the Valley Inn (Picture No. 6) and he improved the route to Waterdown, opening it in 1853 and extending the road to Carlisle (Map No. 3) in 1854. This route followed the property line between the Griffin and Grierson lands, through E. C. Griffin's land and north of Dundas between the land of Ebenezer Griffin and Absalom Griffin (Map No. 5). It was known at different times as Ransome Street, Hamilton Carlisle Gravel Road, Main Street and the Centre Road⁷⁹. The road provided the first direct connection to Hamilton and was used until after 1900 as a stage route⁸⁰ from Hamilton to Waterdown, Carlisle and Mountsberg. Three stage routes now passed through the village to Dundas, Hamilton, Aldershot, Carlisle, Milton and Toronto.

All the other roads (Map No. 10) provided only internal connections and all had been developed in residential areas. No

⁷⁹For convenience it will hereafter be referred to as Main Street, which is its present name.

⁸⁰"The Stage" was a term used even after 1930 although by then all routes were covered by automobiles.

further river crossings had been developed and no new road had been built leading to mill properties. Three large areas were without roads (Map No. 10); the northeast quadrant used as farm land which although fairly level was inclined to be swampy and stoney; the southeast quadrant separated from the rest of the lots by the valleys of Grindstone Creek and Spring Creek; and the Valley of Grierson Creek which was precipitous, damp and used only as a quarry site.

COMMERCIAL PROPERTIES

Again certain difficulties arise in dividing the retail businesses from the ones where a product was manufactured on the premises and sold at retail prices. By the divisions defined in Chapter 1, all the commercial properties remained on Dundas Street between Main Street and Mill Street and had doubled in number by the process of filling in vacant lots rather than by the extension of the district. Specialization in food products⁸¹ had appeared but general merchants were still very much in evidence. There were now two hotels and two stage houses in opera-

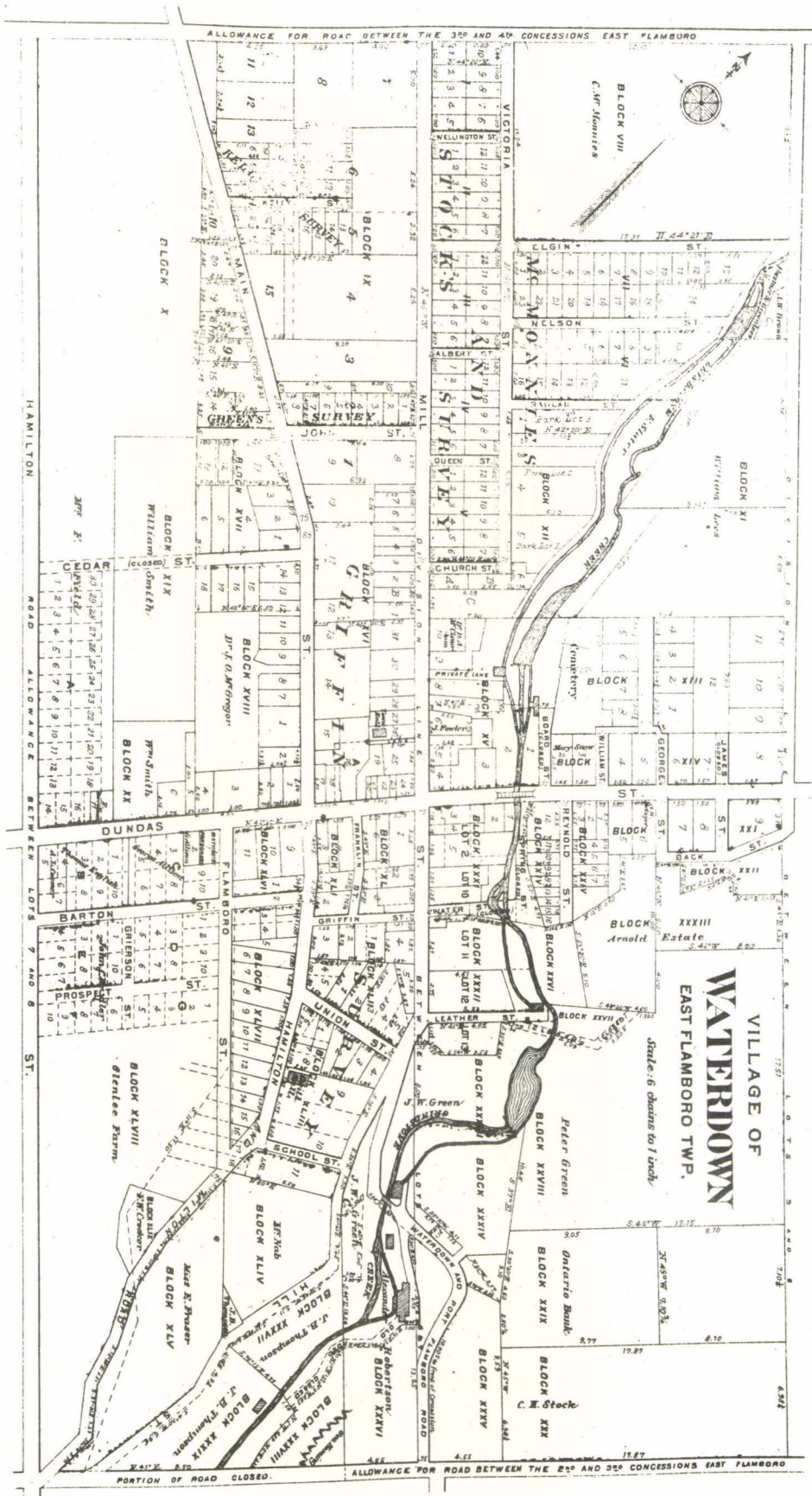
⁸¹ 1 baker, 1 butcher, Assessment roll 1880.

tion. (Map No. 2) The stage houses were on the two main corners formed by the roads running outside the settlement. The two hotels both comparatively small were practically opposite each other in the middle of the block. Although by law they provided lodging, by custom their bar was the main attraction. These two hotels, are now a store⁸² and a private house. No commercial establishments had appeared east of Grindstone Creek but two hotels were now in operation on Main Street North (Map No. 2) the only extension of this use, off Dundas Street.

INDUSTRIAL

Manufacturing industries were found north and south of Dundas Street between Mill and Main Streets, behind the commercial district and along Grindstone Creek. The power source in both cases was water. The one distinction was that only those industries demanding large quantities of water (largely for turning and grinding wheels) were found beside Grindstone Creek near one of the dams or the Great Falls. Those using little power, generally for short intervals or needing water for bending or cooling,

⁸²Known as the Boedacia House.



were on the small tributaries to Grindstone Creek which ran from the swamp in the west part of the village (Map No. 10). (A) shows the position of a cabinet maker's shop. The water rights in connection with this mill are still set out on the Deeds to the properties. At (B) was a basket factory. Here baskets were assembled and little cutting was required. It is thought to have had jig saws. On the right side of the road was a barrel factory (C) and across the road was the head factory. Both factories used water power but the major cutting was done in a mill on Grindstone Creek. Water from this Creek was also used by the blacksmith just north of the barrel factory. All the other industries not using water power, including saddlers, carriage makers, wagon makers, harness makers and machinists had shops and factories on either Mill or Main Streets both north and south of Dundas Street. Manufacturing concerns were found only on roads which led outside the settlement or on Grindstone Creek and there were none east of Grindstone Creek outside the river valley.

The milling property on Grindstone Creek occupied the same amount of land as it had in 1840; in effect the whole valley of Grindstone Creek. Between 1841 and 1880 one more dam came into use (Map No. 13) and the system of flumes and raceways was more complex and sophisticated. Originally earthen trenches formed

all the raceways but by 1880 raised wooden flumes and elaborate stone tunnels were in use to direct the water (Picture No.12).

Three mills stood on the high bank of the river and the wheelhouse which was their power centre stood at the top of the dam in a separate structure. These mills were not in the river valley but all their power facilities were. On the lower east bank beside the river stood a turning mill run from the same dam. The water ran in a raceway from the top of the dam into the mill and back into the river further down stream. At Dam No. 2 (Map No. 8) there were two mills, one above the dam where cradles⁸³ were manufactured and one below the dam which was a rake and snaith factory⁸⁴ (Picture No. 14) again operated by water running under the mill. Below this stood Dam No. 3. From it an elevated flume (Picture No. 13) constructed of wood, carried the water downstream thus increasing the fall without raising the dam level. The water from this flume was used to run the basket works which had replaced the old woollen mill which burned in 1850. Across

⁸³ Cradle. - an arrangement of light wooden pieces affixed to the blade and the handle of a scythe so constructed that grain cut by the blade falls onto the wooden pieces instead of falling loose on the ground.

⁸⁴ Snaith - a corruption of Snath - handles for scythe.

the road just above the Great Falls was a great four storey stone flour mill (Picture No. 13) (the property of W. P. Howland) and beside it another stone building where 150 barrels a day were produced to hold the milled flour. In 1880 it appears there were 14 buildings in this particular section or river valley alone. In Howland's Mill⁸⁵ the water was led into the mill above the falls and out a tunnel⁸⁶ below the falls in the deep valley wall 50 feet below.

All the industries were at least partly directed towards the production, refinement or transportation of agricultural products raised in the immediate hinterland. Except for the machinist and the millers of grist and flour, their product was largely constructed of wood which was still readily available but no longer cut in the immediate vicinity. Water power was used primarily but it appeared that steam supplemented water power. Unfortunately, no count of steam boilers is found until 1900 when five were reported to be in full time operation but Picture No. 13 shows chimneys of large proportion indicating the

⁸⁵Howland - Produced up to 45,000 lbs. of flour a day which was shipped from Brown's Wharf to the Maritime Provinces in 300 lb. barrels.

⁸⁶This tunnel is still visible just below the falls on the East bank.

use of steam much before 1900.

RESIDENTIAL

The residential districts were now well defined and greatly increased in size. Three major subdivision plans (Map No. 13) had now been registered (See Appendix Plan (1) Griffin (2) McMonies and Stock (3) McMonies and Stock).

The smallest in area but most densely populated section was below Dundas between Flamboro Street and Mill Street. This land had been left to the wife of E. C. Griffin in his will drawn up in 1848. When he died there was some disagreement over the division of his estate and it was necessary to obtain a judgement of equitable division. The award to settle the division was given in 1856 and the result is seen in Map No. 12. The land was divided into parcels by the Court and these parcels were distributed among his heirs in an equitable manner so that all would have a fair share. These lots retain their peculiar shape to this day. Most had houses on them. All lots were conveniently situated close to the mill site on Grindstone Creek and close to the business district on Dundas Street. This was not a registered subdivision plan but the boundaries then laid out largely

determined the position of Flamboro Street and Kent Griffins road which is now Main Street.

McMonies and Stock purchased in the early 1850's all the land north of Church Street and east of Mill Street in Lot 6. (See Map No. 13) This area was subdivided by these men and two plans were registered; one on August 28th and the other on August 29th, 1856. The land was divided into lots of equal size and streets were built to serve the lots. Although lots were put on the plan, only that area which was near Grindstone Creek and the mill site and was nearest to the Dundas Road was actually built up. From the occupations of the owners of these lots it appears that they were almost exclusively occupied by those working in the mills, who were not self-employed. Block No. V (See Map No. 13) was still timbered. A clearing in the northwest corner of this Block was the site of a factory run by the power from a small creek (Map No. 10). The few houses built on Mill Street north of Dundas were widely separated.

By this time the two blocks east and west of the commercial district on Dundas Street although not under plan of subdivision had been built up on both sides of the road. Here, particularly towards Hamilton were the truly large houses, the modern dwellings of the day, built of brick, of imposing dimen-

sion on large lots. They far outshone houses in any other residential area. It appears that although Main Street rivaled Dundas Street as a location for hotels and industrial establishments and even in traffic, (for now Hamilton was rivalling the magnetic quality of Dundas) Dundas Street was considered the elegant location, close to the shops but removed from the industrial establishments behind the commercial block.

PUBLIC SEMI-PUBLIC

By 1880 a great deal of land had been put to public or semi-public use (Map No. 11). The largest area was devoted to church properties including parsonages and rectories. This was the period when denominational divisions were at their peak with six protestant churches and one church of England within the village limits. (The Roman Catholic congregation had built their church just outside the village limits). With one exception they were all on streets leading out of the settlement. Only the Evangelical German Church on John Street broke this rule. Its history was short⁸⁷ and it served a small group of settlers. A village hall had not been built but the Bell House was used for

⁸⁷ Built 1870, Closed 1885. - Started by the Slater family - services were in German.

most municipal meetings. The township hall remained in use but served the area outside the village. There was a branch of the Mechanics' Institute Library on Mill Street. A large cemetery had been reserved on the northeast bank of Grindstone Creek which (although the land was purchased by a denominational board) was not part of a church property as was the Church of England's cemetery adjacent to the Church.

The school board, now a joint public or common school and the high school board held a large lot on School Street (Picture No. 15), where they had erected a two-storey stone building in 1870⁸⁸. At the time of construction its location was in the southern end of the most densely populated residential area of the village. Just north of this was the Drill Hall⁸⁹ property used in the training of the local militia and on occasion for concerts and meetings (Map No. 13). This was in many ways used as the modern "community centre" although it was the property of the Federal Government and was intended primarily for military use.

⁸⁸ Here the first entrance examinations in the Province of Ontario were held in 1873.

⁸⁹ Deed 233 between the Corporation of East Flamborough and the Queen.

AGRICULTURE

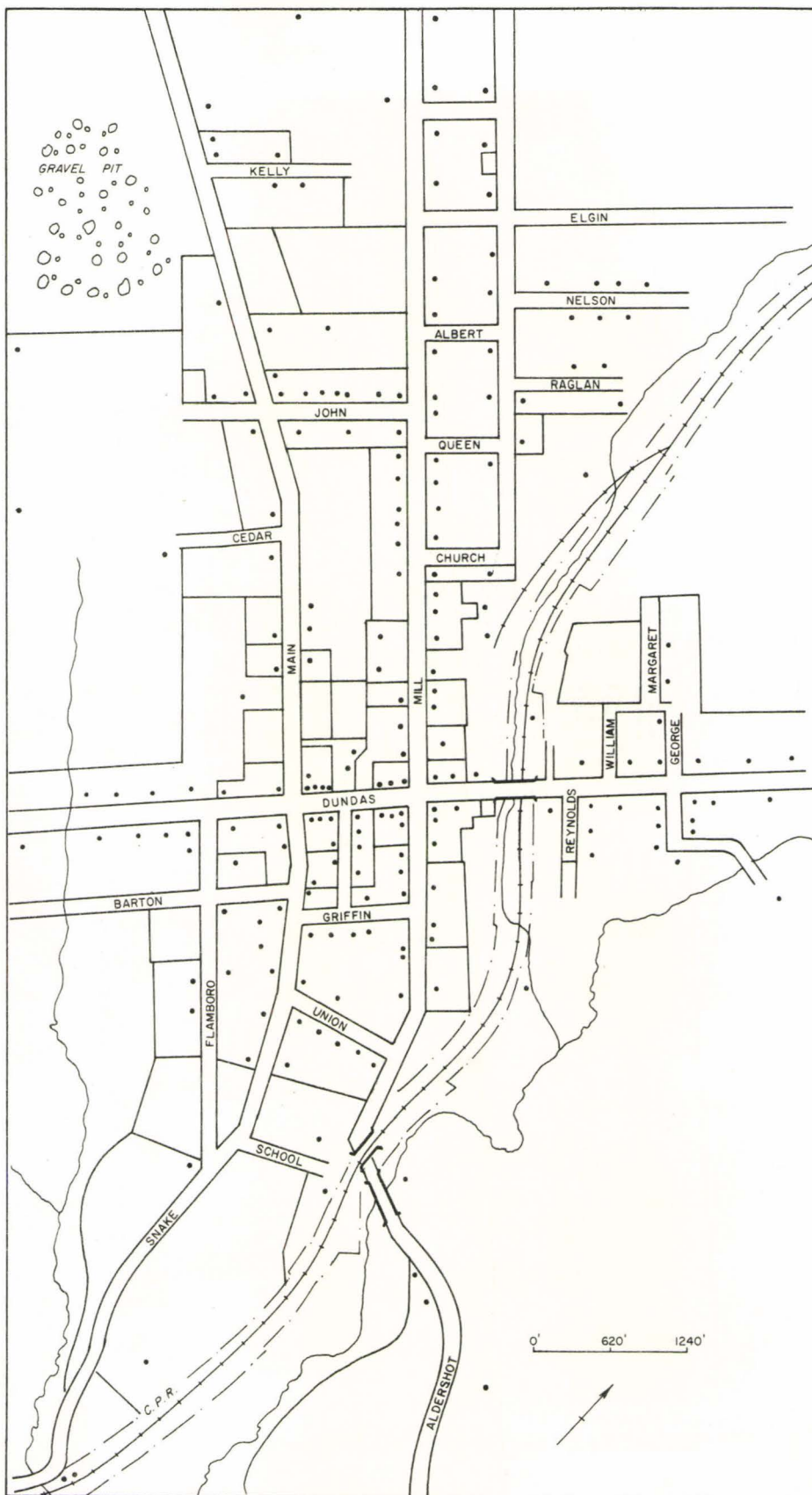
Again all the remaining land was held as agricultural land. All the wood lots had either disappeared or been reduced to a size where they were only useful for family firewood. The valley of Grindstone Creek was reserved in some places by agreement for watering and pasturing animals as was the valley of Grierson Creek, where it was passable. The quarry (Map No. 7) and the Gravel Pit seem to have been operated as side lines in an otherwise agricultural area and not as separate enterprises. For the first time a qualification of the term "farmer" had arisen. William Tees, a gardener, is registered as being the owner of 6-1/2 acres on "Side Street" (First Street) being Block 11 in Map No. 13. The tendency to get away from grain and into general farming was underway in Southern Ontario and specialization in horticulture was gaining impetus at the "Head of the Lakes". Agricultural land still encircled the village and occasionally still extended to the main thoroughfares (Map No. 11). Many small parcels were spotted through the residential districts which do not appear in Map No. 11 because it is difficult to distinguish between gardens grown for personal use and those raised for purposes of sale.

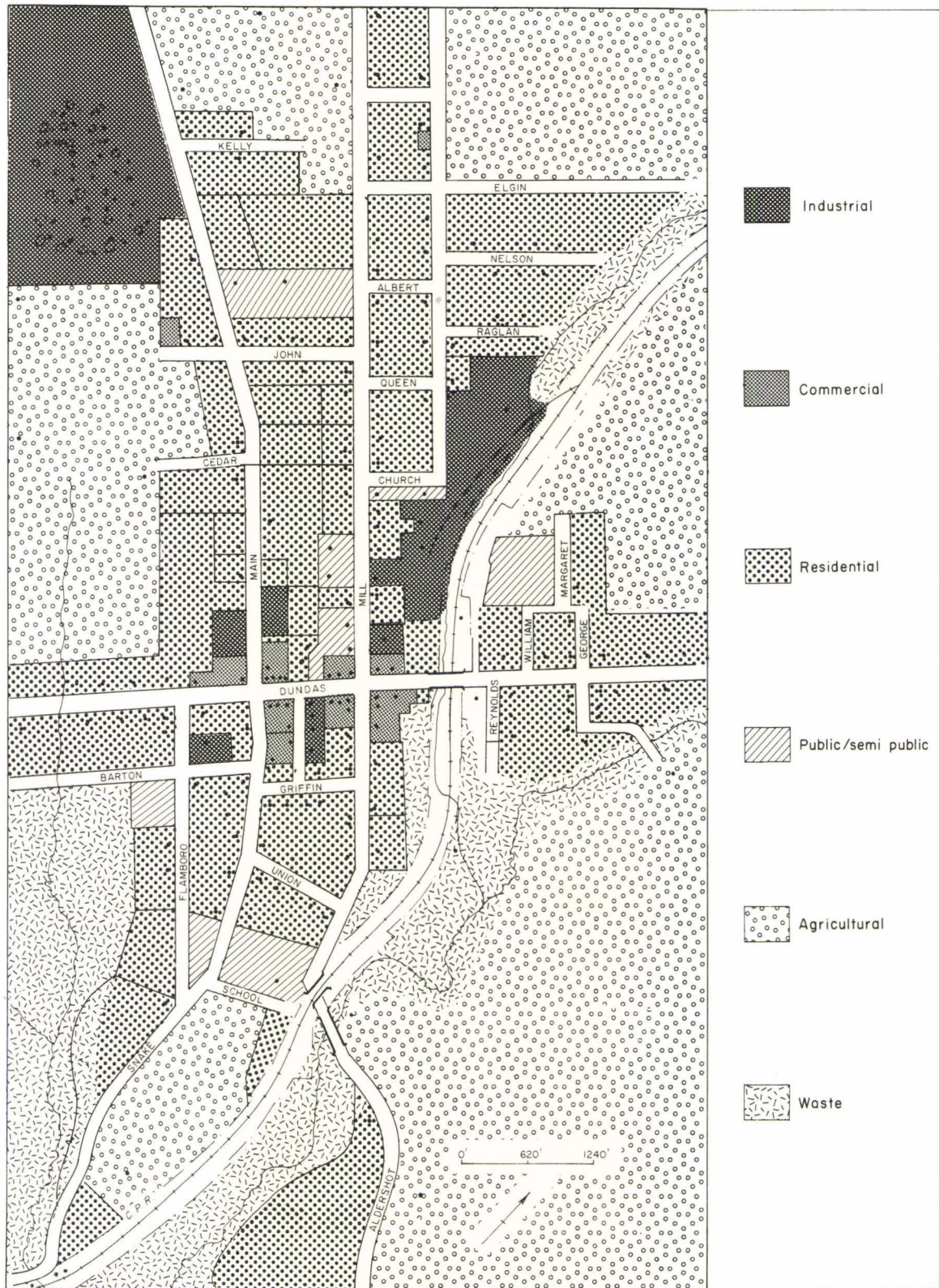
SUMMARY

The land use pattern of 1880 was more distinct than that of 1841. The commercial district had expanded very little in area but the number of businesses had increased. Industrial land had grown up north and south of the original commercial district on Main and Mill and had begun to flow over the west bank of Grindstone Creek onto the flat land above, reaching as far as Mill Street above Dundas. No industries had been established outside the valley floor east of Grindstone Creek. Residential land had persisted along Dundas Street but had shown little tendency to grow beyond the lots facing this main artery. No attempt had been made to cross Spring Creek to the south. In two areas the density had increased. These areas were the Griffin land between Flamborough and Mill Streets south of Dundas, and the lower section of McMonies and Stock survey between Elgin Street and Raglan Street (Map Number -10). Most of the small cottages occupied by labourers were built in these two areas. Two minor extensions on John Street and Kelly Street had been built up but accounted for only about seven houses. Public and semi-public land was scattered throughout the built-up area and was largely of a religious nature. The least developed

street was the last one built, Main Street north of Dundas. Although open in 1854, most of the land along Main Street north was agricultural with only the farm residences facing the street (Map Number - 11). Over half the total area of the 400 acres was used for agricultural purposes. The southeast corner of the lot east of Grindstone Creek remained unchanged in its use from 1841. No further attempts had been made to extend roads across the river or to extend the commercial district past the two main corners of Mill and Main Streets at Dundas.

It is clear that most of the buildings are located on the first established road; all other buildings except farm houses are found beside the river and on streets built to the mill yard. The business district is on land with little slope; the residential properties on land with moderate slope and only the mills are on or near land of extreme slope. Only mill buildings and farm residences are far from the centre of the settlement.





CHAPTER V

1 9 2 0

Shortly after 1880 the population of Waterdown began to decline until by 1900 there were only 600 inhabitants. This level of population persisted until after the First World War when a slight increase began to take place so that by 1920 the population was 758, just above the figure for 1880.

In fabric the village had changed very little except in the valley of Grindstone Creek where the busy mills of the 1880's were gone. In their place was a single track rail line⁹⁰ built in the only place where a gentle grade could be obtained over the escarpment (Map No. 14). The rest of the village had an aura of permanence, weathered buildings, established gardens, with none of the scars of progress. No new construction was being done at all.

⁹⁰The single trackway was completed in 1913.

The roads remained unpaved and some were being closed. There were no public water systems⁹¹. The only real additions which might indicate a healthy economic climate were the hydro⁹² and rail services, but they had had no apparent effect on business activities.

This lack of vitality was reflected in the Assessment Rolls of 1920. There were now 7.8% of the total population with listed occupations compared to 10% in 1880. Many of the craftsmen were over 60 and no young people were learning the trades. The number of assessed spinsters, widows and housewives was nearly twice the figure of 1880 although there were only 31 more households⁹³. Additional occupations had appeared; namely railway men, hydro workers, telephone operators, printer⁹⁴, undertaker⁹⁵

⁹¹Artesian wells were opened in 1926.

⁹²The hydro lines were strung on the railroad right of way in 1920.

⁹³4.2 persons per family dwelling.

⁹⁴First newspaper, The Waterdown Review, 1918. Editor, George Brown.

⁹⁵1890. The business was started by A. Slater who built coffins and carried on business in connection with Vance's Tin-smithing Shop. First motorized hearse came into use in 1911.

postal worker, two bankers⁹⁶ and two dentists. All these new occupations reflected new techniques and specialization rather than any growth in demand in an expanding settlement. Only one occupational group had increased markedly. Where there was one gardener in 1880 now 12 were listed; all but one owned land and of these, 7 owned over 1 acre of land. No one was listed as a miller⁹⁷ although one mill was in operation.

ROADS

The road plan had not been extended at all in the 40 years between 1880 and 1920. Certain roads, primarily those leading to water were not in use but only Leather Street had been officially closed in 1920. Map No. 14 shows that Leather, Water and Back Streets were now unused. Spring and Hill Streets had been destroyed by railway construction in 1912. The need

⁹⁶The first bank was opened on the northwest corner of Mill and Dundas Streets - G.T. Stocks' Store, January 2nd, 1906. It was operated by the Traders Bank and became the Royal Bank in 1912.

⁹⁷A nephew of E.C. Griffin. His son Francis ran the mill until 1963 when it was bought by Job's Mill of Burlington and it was finally closed and converted into a store and apartment in 1967.

for these streets had disappeared with the mills that they served. Only Board Street remained as a right of way onto railway property in the valley. It led to the station (Map Number -14) but was marked "closed" as it was not a public thoroughfare. No residential streets had been constructed and no additional river crossings had appeared.

COMMERCIAL

Commercial properties remained in the same location as in 1880, between Mill and Main Streets. The area they occupied had not increased but the variety of services had increased.

A hardware store, two drug stores, a candy shop, a dress-maker, a bank and several pool halls had opened and many shops had "Halls" on the second floor which were used for meetings and social events. There were now only two hotels. The stage houses of the early period had survived but all the small hotels were closed. Fire had razed a number of stores (Picture No. 16) on the north side of Dundas Street to the west, and these had been rebuilt with considerable constraint, smaller and less ornate than the buildings which they replaced. The wooden buildings⁹⁸ (Picture

⁹⁸These burned in 1923 at the same time as the north side of Dundas was burned.

No. 17) with porches over the wooden sidewalk stood directly on the unpaved Dundas Road. Although hitching posts were still common, a number of automobiles were appearing and telephone and hydro poles⁹⁹ now lined the north side of Dundas Street.

INDUSTRIAL

The industrial sites in the village had decreased markedly. Although most of the land in the Grindstone Creek valley was still under the same ownership, no mill of any kind was in operation. It might appear that the construction of the railway had ruined the valley for milling. Actually natural forces, fire, flood and drought had done the job some time before the construction of the railroad in 1912. By 1900 all the mills in operation had to rely on steam boilers to supplement the dwindling water supply. Most of the mills manufactured some kind of wood products and a constant supply of fuel was available to stoke the boilers. Methods of production and the produce itself were becoming obso-

⁹⁹Formerly the lines had come from the south up Mill Street from Aldershot. A new line had now been put in from Dundas. The telephone was no longer on a loop line.

lete and if fire struck, rebuilding was not economically feasible. When, in the spring of 1900, flood water finally took out the dam below Dundas Street¹⁰⁰ it was never rebuilt. Fire destroyed all the Howland Mills¹⁰¹ in Smokey Hollow and the basket works. By 1912 Slaters Mills had turned to steam and only Reid's Turning Mill (Picture No. 18) stood in the way of the construction of the rail line. One large house facing Board Street was turned into a railroad station; the back was taken off Reid's Mill and the railway was constructed. With the mills went all the raceways, dams and spillways. The river was rerouted where necessary. Spring Street was destroyed and an overhead bridge (Picture No. 19) was built by the railway on Leather Street leading to where the old tannery once stood over 80 years before. This bridge was only a symbol of the past importance of river valley land, a futile attempt to hold onto land which had once been the most productive land in the village. The railway line was too late to bring with it industry of any kind. One spur line ran to Slater's Mill above the valley. For a while some passenger traffic and some freight was carried to the Waterdown Station, but on the whole the village

¹⁰⁰Chapter II - Levi Hawkes' dam.

¹⁰¹By this time known as Robertson's Mill.

turned its back on the valley and forgot it.

The industrial locations on the high land beside the river¹⁰² and that behind the commercial district had managed to survive in part. These were all industries which provided articles and services still required by their farming clientele. Containers for fruits and vegetables were still manufactured on Franklin Street¹⁰³ and on Main Street North¹⁰⁴. A sadler continued in business on Main Street South and a wagon maker on Mill Street North. Two blacksmiths maintained the forges for the manufacturing and repairs of farm equipment and for shoeing horses which were still used for farm work and to a great extent for transportation. Neither of these businesses took much interest in auto repair¹⁰⁵. A mill had been built in 1900 on Main Street North by a Mr. Griffin and by 1920 was operated by hydro power.

¹⁰²E.G. Slater's Mill - now the jam factory (See Picture 20, a and b).

¹⁰³Two factories, a barrel works and a head works. In 1920 the stream was still open and water from the stream was used in an attempt to extinguish a fire started here by a steam boiler.

¹⁰⁴Basket factory (See Picture No. 20, a, and b).

¹⁰⁵Mr. G. Potts operated a blacksmith forge until 1967 and did for a time have a Stutz Bearcat agency but he sold it to a Mr. Alton who eventually opened a garage.

Between Mill Street and the river valley was a feed store (later Nicholson & Settler's Jam Factory); Slater's Lumber Mill, formerly Forstner's Mill was in the same location as the mill of 1840. No longer was it run by water power. A new steam boiler had been installed after 1912 (Picture No. 21). Immediately north was a large storage shed owned by Wentworth Apple Orchards where apples were sorted and stored in barrels. This property and Slater's Mill were served by the railway spur on the main line of Grindstone Creek.

RESIDENTIAL

The residential areas of the village had changed very little in the last 40 years. Primarily the increase was seen in the form of rather large Victorian brick houses built on three streets between 1890 and 1910. Three huge homes had been built on Dundas Street, two on the top of the rise just east of the west limit of the village and one in the middle of the business district on the south edge of the farm lot which ran north to John Street. The others were built on Mill Street and Main Street between Dundas Street and John Street. All were on main county roads in a position to be seen with ease by those entering

or leaving the village. Little construction of small family dwellings occurred.

PUBLIC AND SEMI-PUBLIC

Public and semi-public land remained fairly static. Land had been bought for a Memorial Hall on the north side of Dundas Street between Main and Mill but construction was not completed until 1923. In 1914, a new Roman Catholic Church was erected on the southwest corner of Barton and Flamboro Streets.

AGRICULTURAL

The farm land again remained about the same size. Nearly all of it was in the form of market gardens. Only the two large plots (Map No. 15) were used for general farming and were part of larger holdings which included land outside the village. The northwest quadrant behind Main Street was still used as a market garden. The swampy nature of this land was found very suitable, when drained, for vegetables. The drainage water was pumped out into a tank and was used for watering in dry periods.

SUMMARY

Land use forms of the 1920 had, with one exception, changed very little from the 1880's. The exception was in the river valley where the mills of 1841 and 1880, which had been the life blood and dominating feature in the landscape, were gone. Only foundation ruins and a few small out-buildings remained in the valley, mute testimony of a nearly forgotten, once thriving milling complex. Only a rail line crawled up the valley through the village beside a new insignificant stream. Many of the industrial buildings behind the business district were gone or sadly in need of repair. The residential land was creeping in to fill the gaps and to line Dundas, Main and Mill Streets with brick homes. Otherwise little change had taken place. The commercial and residential areas were financially depressed but no smaller in number or area. Farm land had changed in kind but not in extent.

CHAPTER VI

1 9 6 0

The years from 1920 to 1940 found little change in the settlement. Gradually the old industries which had survived the change in economy and technique, closed down. The population remained about the same in number and generally in occupational character. There were still 12 gardeners, 2 coopers, a blacksmith and a harness maker. This quiet village atmosphere was to change drastically in the next 20 years. The Second World War was followed by a rapid growth in village population. From 867 persons in 1940, it rose to 1794 persons in 1960. This influx completely changed the character of the settlement. Only a jam factory, saw mill, feed mill and a blacksmith were left as industrial relics of the past. Fewer people worked in the village than there had been in 1920 but there were 280 more households. Obviously, the working force was largely occupied outside the

settlement and only the basic services of food, drugs and public utilities were provided for the inhabitants by the much reduced (870) village working force.

The fabric of the business district had been drastically changed by the rebuilding of much of the area after the great fire of 1923 which destroyed the buildings on both sides of Dundas Street from Main to Franklin. The residential properties on Dundas Street remained much the same, only a few brick houses having been built here in the 1920's and 1930's. In other residential sections however, and in much of the garden land of the 1920's the change was outstanding. Well over 200 homes had been constructed, fragmenting the spacious lots of earlier days and completely covering farm and garden plots with new subdivisions. The mill village of the 1800's had become a residential satellite to the large industrial and urban communities of Lake Ontario.

ROADS

By 1960 the road pattern had expanded into the northeast quadrant cutting up agricultural land and providing communications for new residential development. A new cross street had been put in to cut the long block from Dundas to John Street between Main

and Mill Streets, again to facilitate the construction of residences. Both Flamboro and Barton Streets had been extended. Flamboro joined now with Main Street in the south and Barton joined Hamilton Street. First Street now ran nearly to the river in the north and Hamilton Street ran from Barton Street north to the fourth concession (Map No. 16). However, neither of these ran the full length of the lots. Both were stopped by river valleys. No real attempt had been made to extend Cedar and John Streets as far as Hamilton Street, but the open portions were paved as were all the other village streets. However the new extensions had been constructed without curbs or sidewalks. The county roads and the village streets of the 1920' had been provided with cement walks for some years. The hill on Mill Street south of Smokey Hollow had lost its wooden walkway (Picture No. 22), the whole right of way was now used as a paved road. No additional bridges had been constructed to connect the land east of the creek to the rest of the village. Even the Leather Street bridge (Picture No. 20) (which never did lead to anything) had been removed.

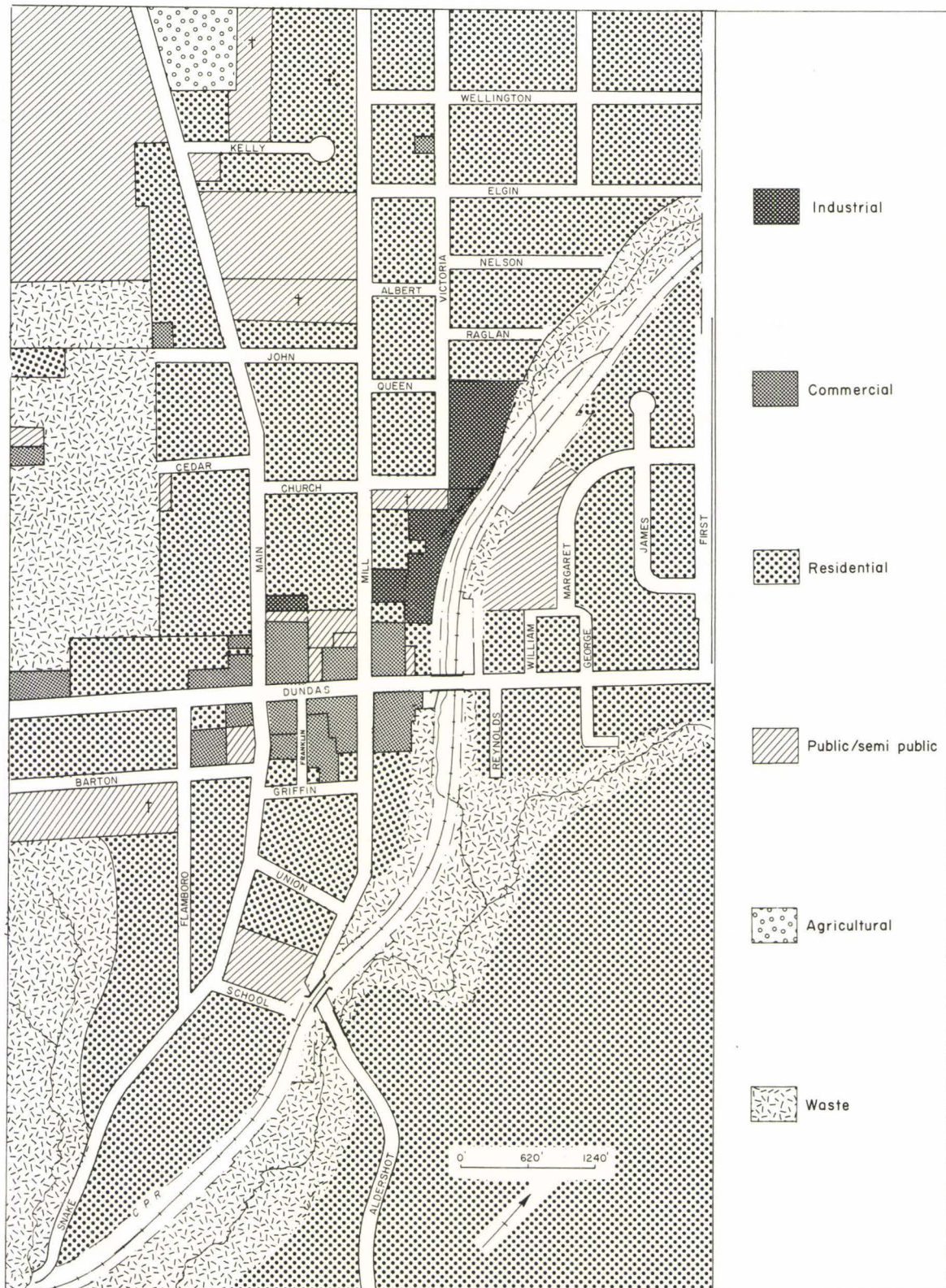
COMMERCIAL

The business district still remained between Main and Mill on Dundas Street. The fire of 1923 had burned out a roller rink and four stores on the south side which was now replaced by a large service station. On the north side all the buildings so destroyed had been replaced with much smaller shops. The variety of services was strictly curtailed. The main businesses were one large hardware and dry goods store¹⁰⁶, two drug stores, two groceries (one barely operating) two restaurants, a cleaner and six hairdressing establishments; the latter being located around the edges of the core area. Various other stores, a TV repair, bakeries, etc. opened and closed as the businesses failed.

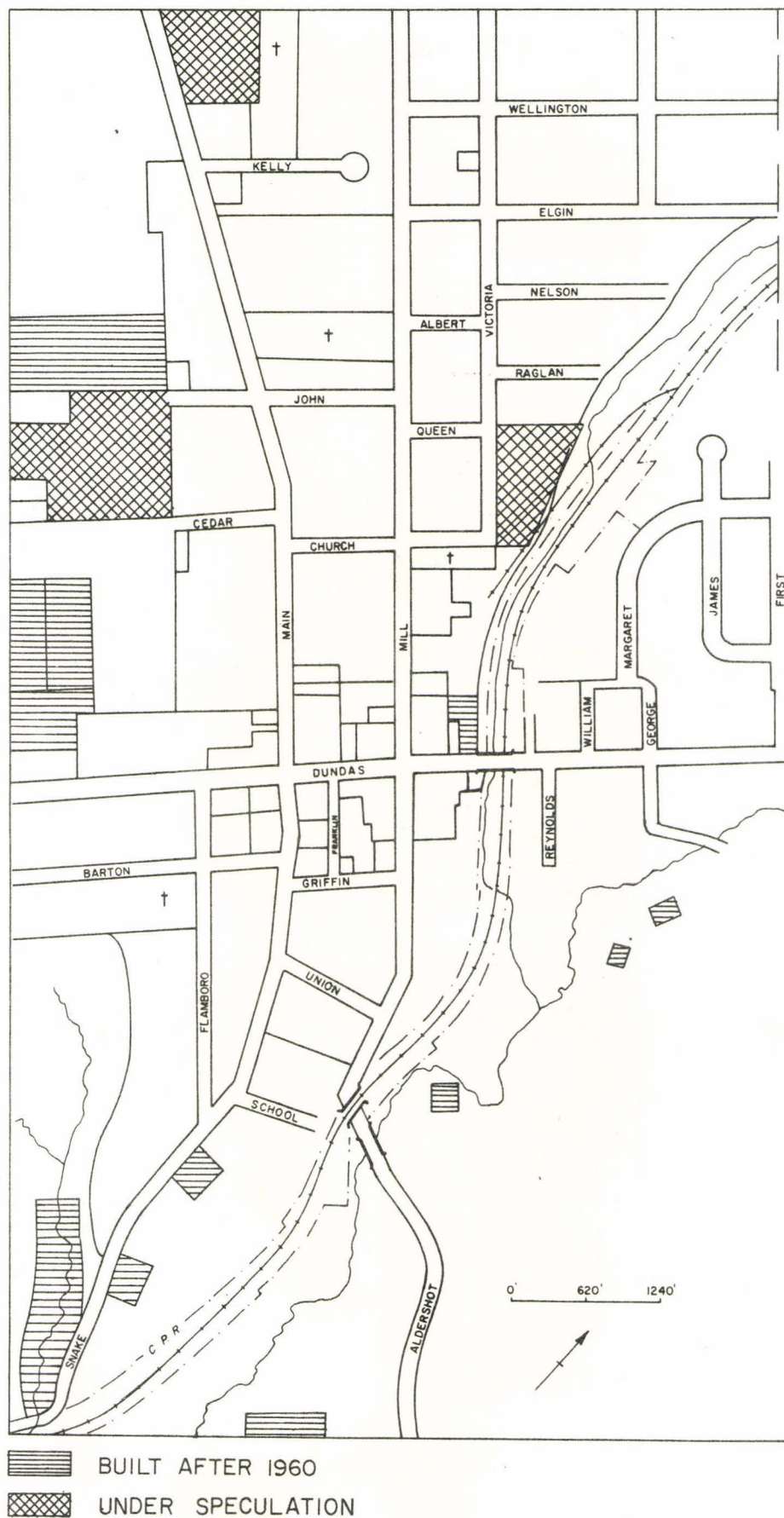
The area covered by these commercial establishments was slightly smaller than it had been in 1920, the individual premises had decreased both in number and in kind.

¹⁰⁶Weeks' Hardware. Third owner of the store on the corner of Mill and Dundas. This remained a general store selling goods of every description including food until the 1940's.





NEW BUILT UP AREAS 1968



INDUSTRIAL

Industrial properties which once had filled the land behind the commercial district were now gone. Only the Jam Factory and the Lumber Mill remained in their former positions and continued to operate successfully, depending largely on truck transport, ignoring the railway siding which reached them from the valley. The Wentworth Apple Orchard property was abandoned. One small business survived, which was a furniture factory on Franklin Street near the site of the old barrel works. On Mill Street north, the Gilmour Wagon Works had been replaced by an unmanned telephone exchange and behind it a supplier's yard and sheds¹⁰⁷.

RESIDENTIAL

The residential pattern had changed more than any other in the village in this period. A by-law was now in force which determined the minimum size of lots to accommodate a septic tank system, since there were still no public sewer lines and many

¹⁰⁷Industrial Renovations Limited.

houses were being built under the provisions of the National Housing Act. Consequently the lot size was not as small as that often seen in large centres. New lots were carved out of large old lots resulting in a great mixture of old and new homes as the density increased. Two large subdivisions (Map No. 17) were built in a very short time. Victoria Street subdivision was built on what had been, until the 1940's, a small farm. The houses were largely the split level post-war variety of the 1950's. The other subdivisions was Margaret Gardens built on a piece of property east of the Creek (Map No. 15 and 16) which had been used since before 1900 as a market garden.

Very little change had taken place in the residential area lying south of Dundas Street. The spurs of land over-looking the escarpment were showing signs of being broken up into smaller plots. The houses located here were generally larger and more pretentious than those in the subdivisions to the northeast¹⁰⁸. Small houses had, however, been erected on the west side of Main Street on small plots with limited view beside Grierson Creek. The built-up area on Flamboro Street was beginning to stretch south. The large block in the southeast corner of the village

¹⁰⁸ Margaret Gardens.

had now become an estate and was still the largest block of land in one parcel. The main house on this parcel had been enlarged and one new one was built on the Third Concession Road. A privately owned bridge had been built from George Street (Back Street) across Spring Creek and one house on the block of land south of Spring Creek had access to Dundas Street.

PUBLIC AND SEMI-PUBLIC LANDS

The public and semi-public land acquired since 1920 was required to service a greater residential population. A public water system was in use by 1926 and a number of small pump houses for artesian wells were scattered through the village. In that year a large block of farm land between Mill and Main, north of John Street, was purchased and in 1924 a large public school was constructed on this land. It was not until about 1940 that a gravel pit in the northwest quadrant was purchased for a public park. The fire hall and municipal buildings were now housed in the same building at Main and Barton Streets.

The only large parcel added as semi-public land was a new United Church on the Fourth Concession cut out of former farm land which had belonged to a member of the Griffin family. This

large church was near the first large new subdivision in the settlement.

AGRICULTURAL LAND

Most of the land which had been agricultural ^{was} became subdivided, turned into estate land or abandoned. One small parcel, a depression on the southeast corner of Main Street and the Fourth Concession (Map No. 17) still remained a working garden where most of the growing was done under glass. The northwest quadrant was abandoned from just behind the Dundas Street lots to the "pine ridge"¹⁰⁹ which was still discernible after 150 years of settlement. North of this ridge a park had been built in the hollow made by gravel digging operations. The valleys of Grindstone and Grierson Creeks, used from time to time for pasture and watering cattle, now lay unused. All the other large areas of 1920 (Map No. 15) were now the sites of subdivisions or residential estates.

¹⁰⁹Map page Chapter II.

SUMMARY

The major development and change in use in the period from 1920 to 1960 was clearly of a residential nature and it had taken place on land well removed from the main communicating roads and away from the earliest established road network and the business district. The new houses were occupied by families whose breadwinners worked outside of the village and these families apparently also shopped outside the village. Consequently, the retail outlets decreased in number rather than increasing and practically all manufacturing disappeared. The major additions other than housing were in the form of public and semi-public land used largely by the growing population for recreational and social functions and situated north of Dundas Street where the population density had increased most rapidly. Although this growth was largely after 1945 this area appears to have been regarded as the growth area because the school property had been bought when little growth was actually taking place¹¹⁰. At the time of this purchase land was available south of Dundas Street

¹¹⁰The high school and public school were in the same building until 1924. In 1927 a High School was built outside the village limits.;

which could have been used for a school. The separate school did in fact purchase lands south of Dundas Street, behind the Roman Catholic Church¹¹¹ and opened for teaching in 1951.

¹¹¹This church was built in 1914 and replaced an earlier structure which was located outside the limits of the village.

CHAPTER VII

ANALYSIS

SUMMARY OBSERVATIONS OF LAND USE PATTERNS

The land use maps of the four periods 1841, 1880, 1920 and 1960 of the Village of Waterdown show that physical features of the site have always appeared to play a part in the location of land uses and the buildings associated with them. The patterns resulting from the areal disposition of uses show clearly that particular identifiable areas have been more or less attractive to particular uses than others.

The river valleys, at all periods mapped, stand out in several ways. At all periods of time the valley floors have been avoided by all roads except the two earliest ones, Mill and Dundas. The occasional street which was extended to the water's edge was not continued across the stream, and all were closed to

public traffic as soon as the mill properties were abandoned.

The valley of Grindstone Creek has always been the easterly boundary of the commercial district on Dundas Street. All expansion of this district has been to the west and, in the most prosperous period of 1880, slightly north and south on Mill and Main Streets.

The industrial area was largely contained in Grindstone Creek Valley. When expansion had taken place in this occupation in 1880, the new industrial locations were on the west bank, and largely along the tributary streams of this main river, although steam power was in use.

The creek valley never contained more than four residential buildings at any time. Residences were consistently constructed on the high land. They were at first physically close to the village centre on the west bank of the river or on Dundas Street. When, after 1940, great residential expansion took place, land west of the river was developed first, and then the land conveniently located behind Dundas Street in the north-east. Even with the increasing pressure for space within the village for residential locations in the 1950's, the south-east corner of the village, cut off from the commercial centre by the steep valleys of Grindstone and Spring Creeks, contained only three

houses.

With the exception of a large public graveyard, and at one time (1840) a public watering place, all public and semi-public uses have been located on the west side of the village away from Grindstone Creek, on the edge of the commercial district or within the residential fringe.

Agricultural land seemed to be least affected by river courses. Although there are no indications of crops being grown in the valleys, at most periods rights of way to the water's edge for the watering of cattle were retained. Until after 1920 this use encompassed all the areas where there were no buildings, except the valley floor.

Because of the difficulty of measuring land area precisely, and because of the shifting boundaries of land ownership, it has been necessary to consider buildings, which are measurable at all times, as representative of the land use locations. A building must be regarded as a physical manifestation of a decision to locate a particular use within the site. (The valley mill industries and the agricultural areas require few buildings per unit area, and therefore the correlation between buildings and land use may not be as great for these uses.)

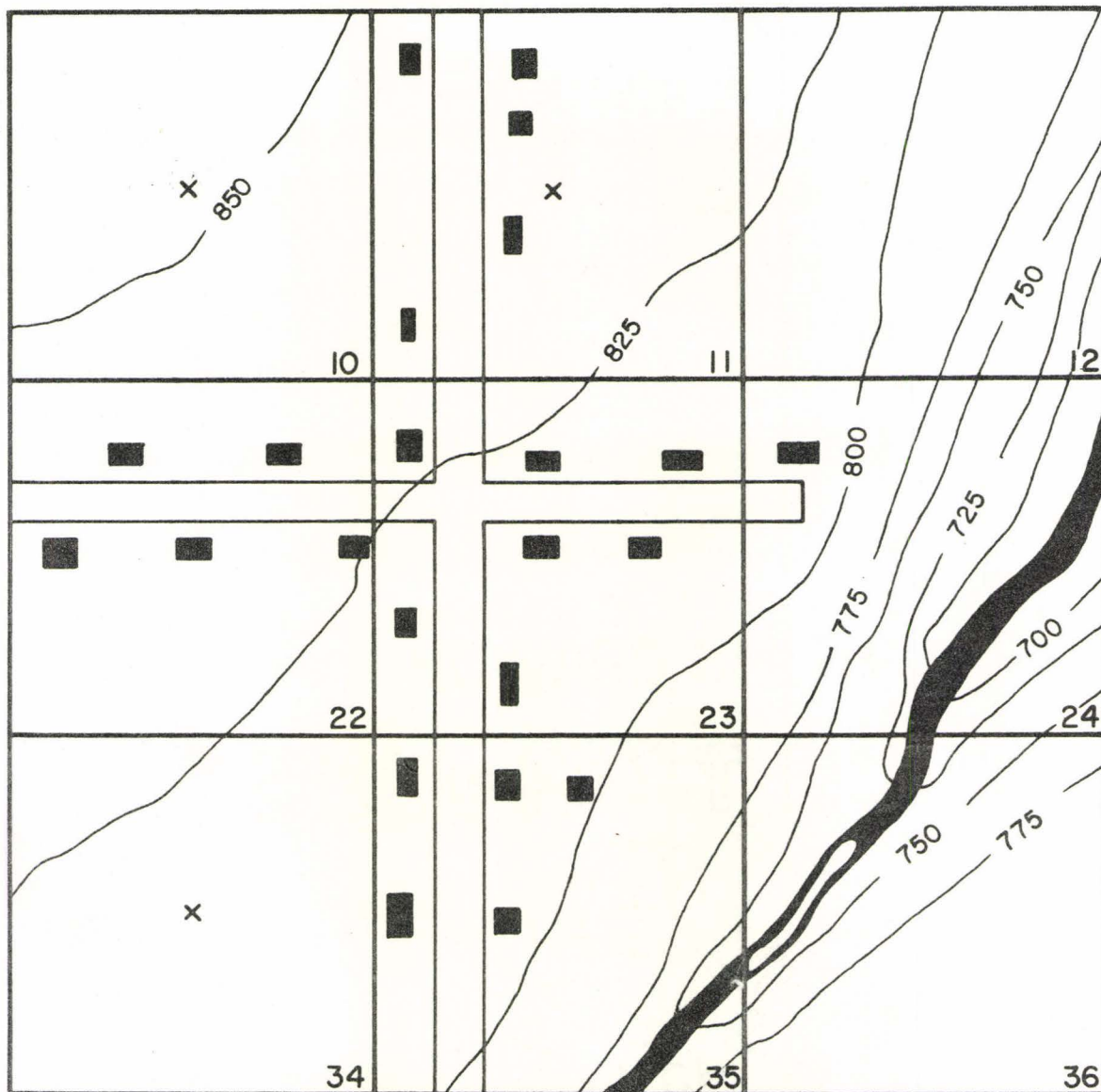
At any period of time, a settlement may be considered as

the sum of all the decisions to locate within a defined area. Each decision is the product of an infinite number of considerations, ranging from the more obvious ones of land price and availability to less obvious considerations of inheritance or sentiment. Some want a fine view; some desire proximity to other similar uses, family or friends. It seems that often apparently trivial considerations may have tipped the scale. It is impossible either to perceive or to measure all relevant considerations in a decision to locate.

It is, however, possible to isolate four factors, measurable at all time periods, which appear to have affected decisions to locate buildings; namely, slope, river course, roads, and distance from the centre of the settlement. The first two, slope and river, may be regarded as constant natural physical features of the site. Roads and distance from the centre may be said to be cumulative physical facts, the products of previous decisions. Nevertheless, with respect to any particular decision to locate, they are features of the site, and are therefore treated as factors in that they affect any subsequent decision.

The role played by these four factors of space and terrain in the decisions to locate buildings can be determined by a statistical analysis. This analysis measures the degree of associa-

Examples of measurements taken for each of the 264
Grid squares for each mapped date.



	Block 10	Block 11	Block 24
No. of Buildings	0	5	1
Units of Road	0	16	2
Units of River	0	0	6
Units of Slope	1	1	8
Units from Centre	169	167	152

Note: Units from Centre are measured from the centre
of the block to the intersection of Mill and Dundas
Streets.

tion between each factor and the location of buildings. Linear regression and correlation have been used to reveal the strength of relationship and the place of each factor in decision making. By using the information thus obtained, it is then possible to make a prediction, within the limits of the analysis, of the number of buildings which could be expected to be erected in a defined area at any period of time. By comparing these predictions with the actual number of buildings which were erected, it is possible to further evaluate these factors as considerations in decisions to locate.

METHOD OF HANDLING THE DATA

To compile the data used for this analysis, a grid of 264 squares was superimposed on a location map of each period showing contours (Diag. B). The number of buildings, unit lengths of river and road, distance from the first corner of division, and the number of contours were counted in each grid square. The number of buildings was considered the dependent variables and the four physical factors, the independent variables. These values were measured for each square for each time period, mapped and the analyses were made.

For purposes of the analysis, a normal distribution of data was assumed¹¹². This permits testing whether the relationship between the factors is linear or chance. The table which has been used¹¹³ gives a figure of r equals .1205 for 95 percent, and r equals .1569 for 99 percent levels of confidence.

This determines the level above which the simple correlation coefficient can be considered to be significant. Below this level a random correlation is highly probable.

Where n represents the number of readings, x the independent variables, y the dependent variable,

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{n(\sum x^2) - (\sum x)^2} \sqrt{n(\sum y^2) - (\sum y)^2}}$$

This coefficient gives the strength of the linear relationship between two variables. This is the simple correlation coefficient. The percentage of the variation of the dependent variable accounted for by the regression equation is equal to the square of r ; i.e.

$$\% \text{ variation explained} = r^2.$$

¹¹²For further discussion on assumptions for the simple stochastic model (giving relationships) see Introduction to Statistical Data Processing. Sterling, T.D., Pollack, S.V., Prentice-Hall, 1968.

¹¹³Tables for Statisticians - by H. Arkin & R.R. Colten, p. 155, Table 22.

The predicted number of buildings is obtained from the formula

$$y = a_0 + a_1 x_1 + a_2 x_2 + a_3 x_3 + a_4 x_4 .$$

The residual value is obtained by subtracting y from the actual occurrences.

Table I gives for each mapped period the simple correlation coefficient for all uses (A) and for residential uses (B).

(See Page 98)

PERCENTAGE OF VARIATION

The percentage of variation accounted for by the analysis ranged from 40 percent in 1880 to 52 percent in 1960. In 1840 and in 1960, 49 and 52 percent of all building locations can be explained by the four analysed factors. These figures are for all building locations. The percentage of variation accounted for when these factors and residential buildings were analysed, was much lower, ranging from 19 percent in 1880 to 40 percent in 1960.

TABLE I

(A) FOR ALL USES

Variables	Simple Correlation Coefficient		Percentage Of Variation Accounted For
1841 Roads	.6817		
Distance	-.3865		
Slope	-.0244	N.S.	49 percent
Rivers	.1281	N.S.	
1880 Roads	.5621		
Distance	-.4316		
Slope	-.1629		40 percent
Rivers	-.0184	N.S.	
1920 Roads	.5587		
Distance	-.4803		
Slope	-.2361		46 percent
Rivers	-.1089	N.S.	
1960 Roads	.6878		
Distance	-.2212		
Slope	-.3781		52 percent
Rivers	-.1937		

(B) FOR RESIDENTIAL USES

Variables	Simple Correlation Coefficient		Percentage Of Variation Accounted For
1841 Roads	.4175		
Distance	-.2261		
Slope	-.1736		30 percent
Rivers	-.0851	N.S.	
1880 Roads	.5287		
Distance	-.2206		
Slope	-.0737	N.S.	19 percent
Rivers	-.0372	N.S.	
1920 Roads	.4903		
Distance	-.2789		
Slope	-.2298		28 percent
Rivers	-.1445	N.S.	
1960 Roads	.6162		
Distance	-.0791	N.S.	
Slope	-.3138		40 percent
Rivers	-.2101		

SUMMARY

EXAMINATION OF SIMPLE CORRELATIONS FOR ALL PERIODS

ROADS

The most obvious result obtained in the analysis is that for all periods the presence of roads is more highly correlated to the presence of buildings than any other independent variable and that the correlation shows little fluctuation, ranging from .5587 in 1920 to .6878 in 1960. The presence of roads must therefore be regarded as the prime factor of the four analysed, and one which was always considered favorably when reaching a decision to locate a building. This remains true for residential buildings, except that the correlation rises from .4175 in 1840 to .6162 in 1960.

DISTANCE

As the distance from the centre increases, it stands in opposition to a decision to locate. This is true for all periods. The simple correlation coefficient increases, however, from $-.3865$

in 1840 to $-.4803$ in 1920. Distance does not retain its position as roads do. In 1840, 1880 and 1920 it is of the second order but by 1960 it has dropped to third position, to $-.2212$. With respect to residential buildings this factor follows the same order of significance as it does for all buildings for 1841, 1880 and 1920. However, by 1960 it has fallen to the fourth order and indeed the simple correlation coefficient is so low as to be insignificant in the location of residences. This does not apply to all buildings.

RIVERS

The length of the river courses per grid square is a positive factor in 1841, being third in order of importance, at $.1281$, which is significant at 95%. In 1880 and 1920 there is no significant correlation between rivers and buildings. By 1960 rivers stand fourth in order of significance at $-.1937$. They now have a negative correlation.

Considering residential buildings however, the length of the river has no apparent correlation in the occurrence of buildings in 1840 and 1880. By 1920 this factor was fourth in order, at $-.1445$, significant at 95%, and by 1960 it had risen to third, at $-.2101$,

significant at 99%.

SLOPE

In 1841 the number of degrees of slope was of no apparent significance. Its correlation is of the third order in 1880, at $-.1629$, and in 1920 at $-.2361$, but by 1960 it had risen to $-.3781$ and may be considered as more prohibitive to location than either distance from the centre or length of river.

For residential buildings its relationship is practically the same as for all buildings, although it has in 1880 a very low correlation, $.0737$ and can be considered not significant.

ANALYSIS OF FACTORS

ROADS

It has been stated that roads, viewed at any period of time, are recognized as arising out of previous decisions. Once they are built, they are physical factors of the site which will influence subsequent decisions.

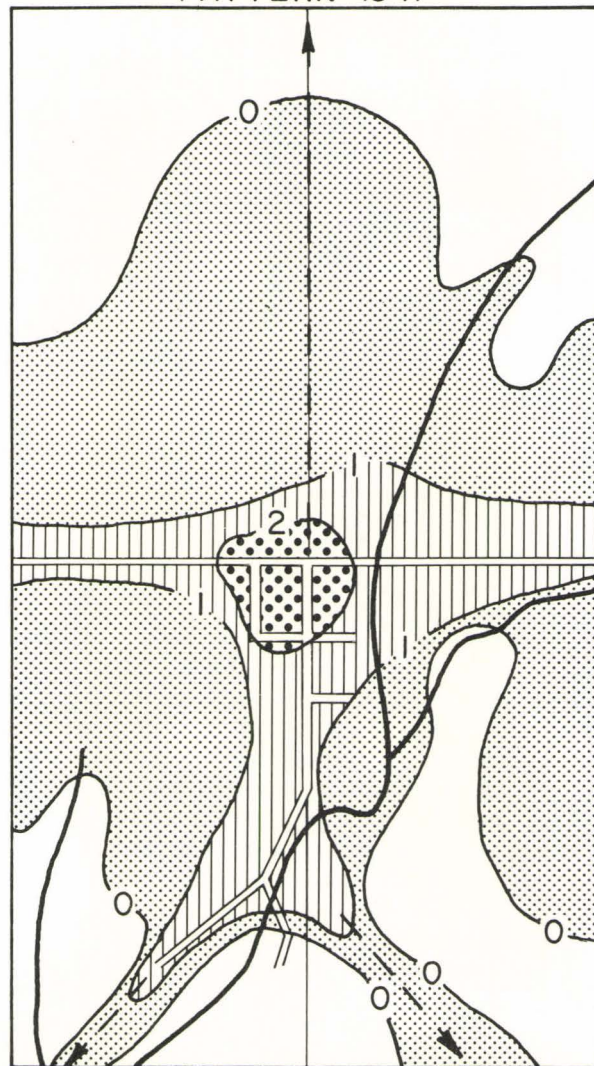
Dundas Street was a dominant physical factor of these lots

when the first known permanent settler arrived. His decision to locate a mill was determined by the position of the Great Falls on Grindstone Creek, which was also a dominant physical factor of the lots. His decision to locate his road to the Mill Yard was, however, ruled by the position of the falls and the Dundas Road and the need to join one to the other. If the Dundas Road had been built in a different position, say at the Third Concession, his mill road would also have been built in a completely different position.

By 1841, the first period mapped, the settlement land use patterns were the sum of all the decisions made since the first settler arrived on the lots. All decisions made thereafter would be made with reference to the existing features, whether natural or man-made.

The analysis states that roads will be the prime factor of location. The road pattern existing in 1841 was very simple. It consisted of two major roads; Dundas Street cutting the lots from east to west and crossing Grindstone Creek, and Mill Street which led directly from Dundas Street and crossed the Creek just above the Great Falls and which led to a mill yard. All the other five streets led to either of these two main streets. When this road pattern is superimposed on a map showing isolines joining

PREDICTED VALUES SUPERIMPOSED ON ROAD
PATTERN 1841



--> MOST LIKELY FUTURE ROUTES



OVER 2



1-2

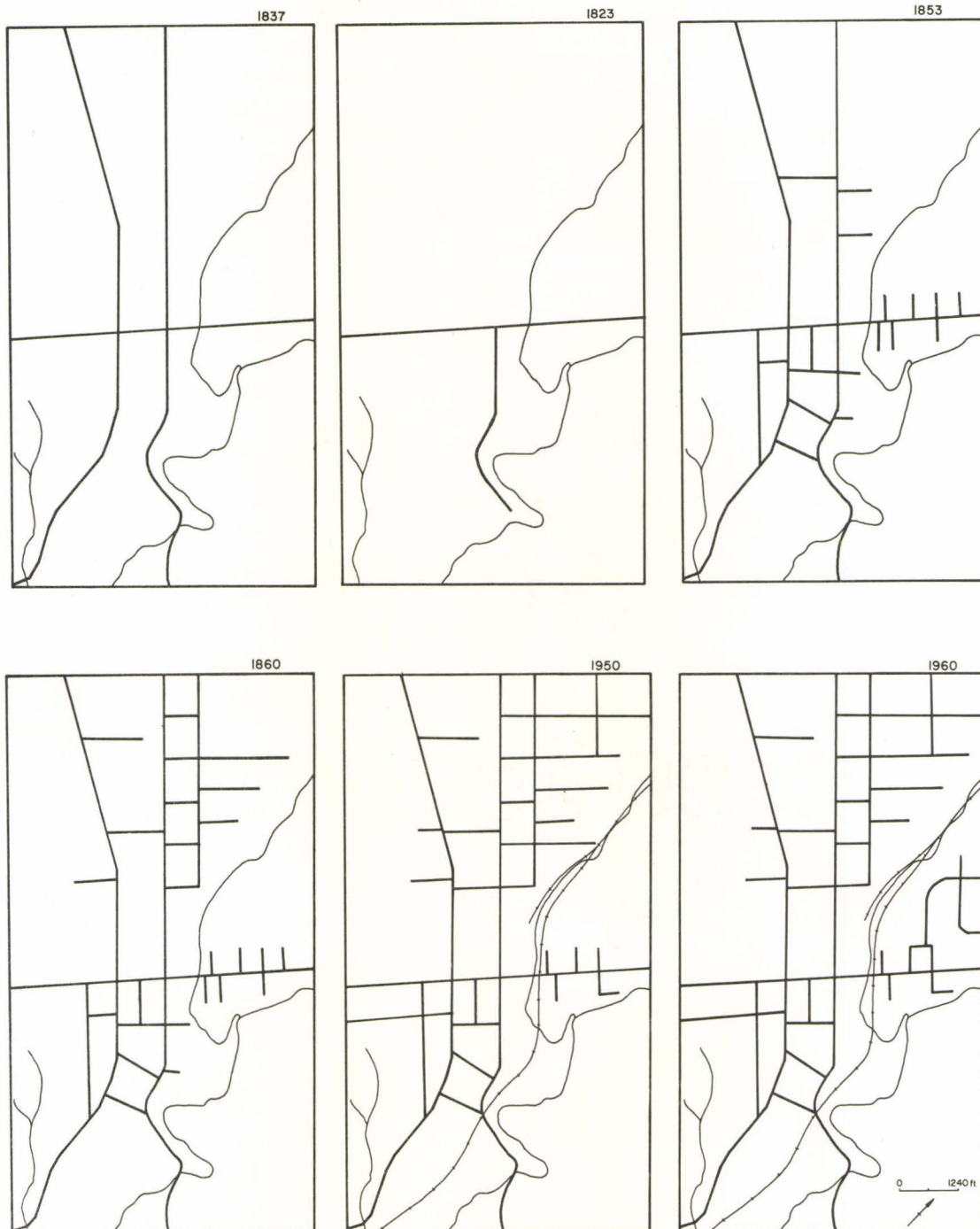


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DEVELOPMENT OF ROAD PATTERN



points of equal value in terms of predicted numbers of locations per grid square, it is clear that the highest values are in the immediate vicinity of this existing road pattern. Where the two roads have crossed Grindstone Creek, the predicted value is uninterrupted. The highest predicted values are found where the greatest road length exists, at the intersection of Dundas and Mill Street, and projecting very slightly to the west (Diagram No. C)

The area where the next highest predicted values are found lies around the existing roads. This area extends north of Dundas Street in a fairly even band half way to the Fourth Concession, covering an area of uniformly level ground, dipping only slightly around the river valley to the east and the swamp to the west. South of Dundas Street, the area of predicted value (1) is sharply cut by areas of (0), the lowest predicted value, which are coincidental with that part of the river system where the slope is great and where there are no river crossings by additional roads. In addition, a large trough of (0) value cuts off the large area of (1) value in the southeast. It can be observed on map D that as the road pattern developed it consistently avoided these river valley areas and as one would expect, buildings were never erected in the river valley in any great number except where the road crossings were found. Until 1880, roads did breach the river

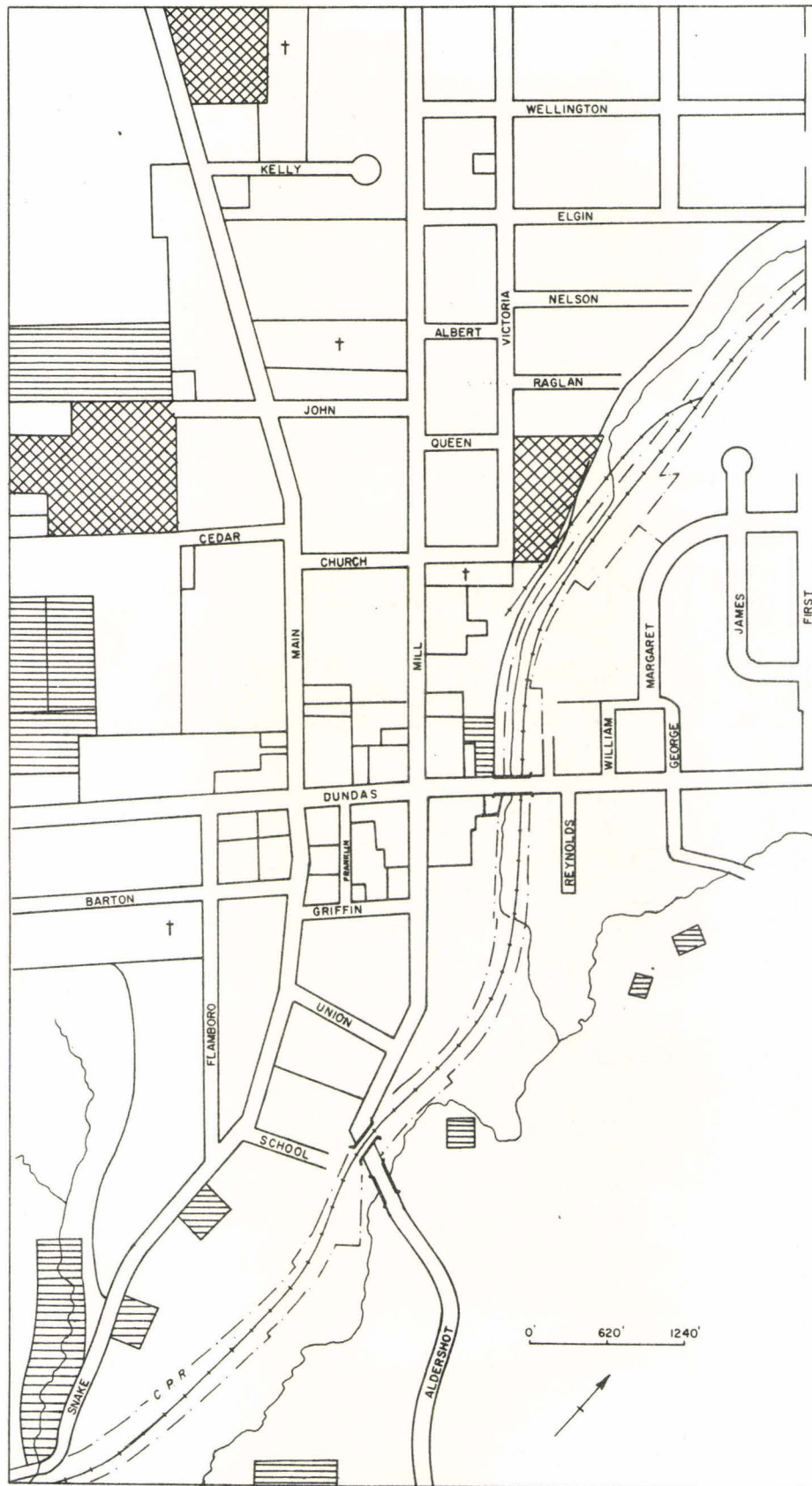
bank to connect mill properties to the main arteries of Mill and Dundas Streets. These roads were unused once the mills were shut down. Eventually both the roads and the mill buildings disappeared. The location of roads as a dependent variable has not been analysed. From examination, it appears that the location of the roads would be strongly affected by slope and river course, but the effect of these factors would only obtain within the valley itself and the area immediately around it. Once the settlement extends beyond this immediate area, the roads appear to be governed by the need to connect any given block of land to Dundas Street. Their location is on occasion dictated by property boundaries, being built to provide connections of a parcel under one ownership to Dundas Street. Immediately the roads appeared, they were the dominant physical factors in subsequent decisions to locate buildings. If, for some reason not analysed, roads were not constructed into an area, that area unserved, or cut off from the existing road network remained undeveloped (e.g. the southeast corner).



DISTANCE

The first consideration of distance within the lots was made when E.C. Griffin built his first mill. At that time the

consideration was of the distance between the mill and the most convenient point of connection to the already established Dundas Street. By the time we see the sum of the subsequent decisions in the map of 1841, the intersection of Mill and Dundas Streets, where there was a general merchant's store and a hotel, was not only the physical centre of the settlement, but was also the point of reference when one was considering the distance from a possible location to the centre of the village. There is no doubt whatever that this remained the physical centre for this 400 acre village, but the analysis suggests that after 1920 this was not the point of reference when making the decision to locate a residential building. This reflects a change in the identity of the settlement. In 1841, distance had the second highest correlation of all factors, being $-.3865$ for all uses and $-.2602$ for residential buildings. The values remain fairly stable through 1880 and 1920, during periods when the prime methods of movement and transport were by foot or by horse-drawn vehicle. Suddenly, in the 1960 analysis, a change appeared. For all uses, the value was $-.2212$, in third position after roads and slope; but for residential uses the change was dramatic. From second position in 1920, correlation between distance and residential buildings in 1960 had a value below 95% significance. By this time, the post-war boom in resi-

NEW BUILT UP AREAS 1968



-  BUILT AFTER 1960
-  UNDER SPECULATION

dential construction was being felt in the village, and except for the northeast and southwest corners (Map No. 17) most available lots were now built up. Over 85% of all homes in the village were now owner-occupied, and the residential population had more than doubled; but they worked and did their business outside the village (See Period 1960). It must be remembered that when the building boom began, the land close to the village centre was scarce but by no means impossible to find, so that this low value of the distance factor cannot be accounted for purely on the basis of there being no available lots near the centre. By 1968 building lots were still available in visually attractive sites much nearer to the centre than the growing subdivisions (for example, the southeast corner - See Map 15, Location of Buildings in 1960).

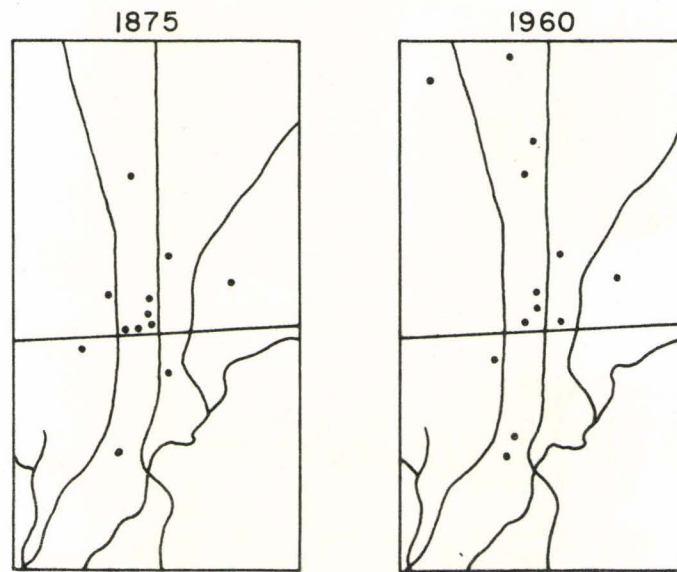
While residential uses were now apparently unaffected by being far from the centre of the village, the analysis of all uses indicates a negative correlation of $-.2212$ for distance, which is a higher correlation than that of the length of the rivers. Although not separately analysed, the commercial locations remained in the core area in 1960. However, by 1968 (See Map No. 18) commercial development was going on the northwest on Hamilton Street. This could be an indication of a growing lack of concern for centrality, another indication of a change in the real central position of the

larger urban area of Hamilton (a subject which is beyond the scope of this analysis).

RIVERS

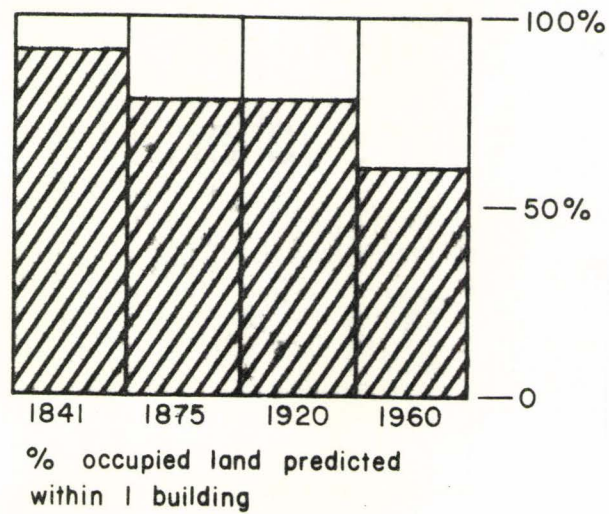
From the observation of maps at all periods, it appears that rivers blocked the extension of all roads except Mill Street, Dundas Street and Main Street. Certainly there were few buildings in the river valleys except mills and homes at the river crossings. But many houses were built close to the river bank over-looking the valleys. The function of rivers has a significance only in 1841 and 1960. In 1841 the correlation is low, being .1281, but it is a positive value, and a consideration in favour of location. This undoubtedly was the result of the mill sites in the river valleys. In 1880 and 1920 the length of the river shows little correlation with location. By 1960, however, the river length (which had dropped considerably as spill-ways disappeared and as tributaries dried up or were led into drains) had a significant correlation of $-.1937$ for all uses. What may be more important is that the correlation is now negative and is a consideration against location. In the case of residential uses the correlation is even higher, being $-.2101$, which leads to the postulation that

DIAGRAM E



Location of Public and Semi Public Buildings
and Land

DIAGRAM F



the function of rivers in the location of buildings had changed from attractive to unattractive in the life of the settlement and were, by 1960, more unattractive for residences than for any other use.

Although an analysis was not carried out for lands used for public and semi-public purposes, Diagram E shows clearly that with one exception all these uses were in the area bounded by Grierson Creek and the swamp in the west, and by Grindstone Creek in the east. Only the public graveyard existed in limbo on the east bank of Grindstone Creek.

At no time in the history of the village have commercial uses ever extended past the corner of Mill and Dundas Streets to the east. No analysis of this use was done due to insufficient data, but the persistence of the core area in expanding in any direction except east is obvious. Whether it was the river itself which created the barrier, or whether the slope was considered too difficult a place to stop while entering a store, no one can say. No one ever tested the feasibility of shops east of Grindstone Creek.

From 1841 on, only residences lined Dundas Street from the west bank up the hill to the village limits. It could be argued that an established use precluded a change of use. However,

when circumstances dictated, commercial uses displaced residential uses particularly on Dundas Street west. This process of changing use is particularly evident in 1968 in the slowly expanding business district, but still there is no sign of commercial expansion to or over Grindstone Creek.

SLOPE

In 1841 the coefficient of slope for all uses and for residential uses had a very low value, but by 1880 its order in the hierarchy was third (after roads and distance). The correlation coefficient was $-.1629$ for all uses and $-.2298$ for residential properties. The greater negative relationship for residential properties can probably be accounted for by the few mill buildings which lie within the grids where the slope is extreme. Residences, although not far from the valley, were set back far enough to avoid any extreme slope. In 1920 the coefficient is lower again, but by 1960 the coefficient for slope is second only to roads. By then all the mills were gone, including remnant outbuildings; the valleys were empty except for two old houses and the railway line. The valley had been forgotten to such an extent that there were many people interviewed who had never been into Grindstone Creek

Valley, and who did not know that Grierson Creek and Spring Creek even existed. In 1960 the swamp area in the northwest was apparently as unattractive as the steep valleys. In 1841, 1880 and 1920 this area had no buildings but was valuable market gardening land. By 1960 it had been abandoned as agricultural land and lay unused. Building in this area was now feasible (despite the fact that in many places bedrock was found three feet below the surface) but other land was still available where technical problems of construction were not so great. However, by 1968, with land becoming scarce within the village limits, construction had started on high density housing near the "Pine Ridge" (See Map No. 4, Chapter III), and a large shopping plaza was operating, only part of which had an excavated basement.

EXAMINATION OF RESIDUALS

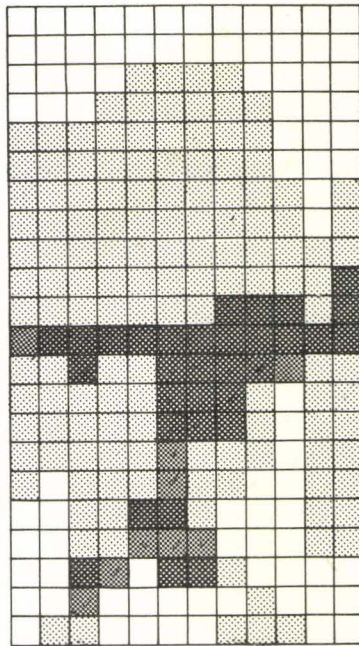
The predicted number of buildings for each grid square at each time period is obtained by the formula

$$y = a_0 + a_1 x_1 + a_2 x_2 \dots$$

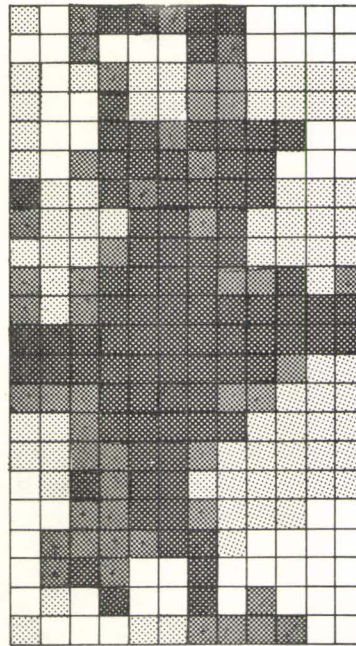
Y represents the number of buildings which would be expected to appear in each grid square if no other factors were considera-

Residual Values Unoccupied Areas

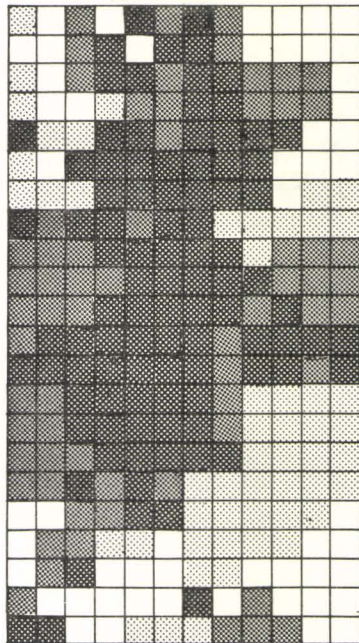
1841



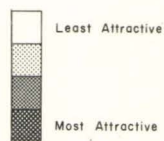
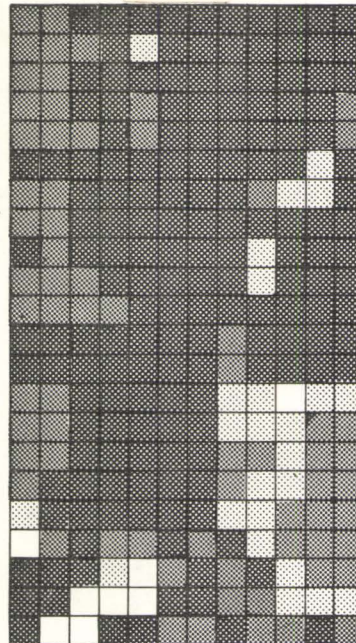
1880



1920



1960



tions in the decision to locate. The analysis shows that locations of buildings can be predicted 50% of the time. If it is assumed that a lot's "attractiveness" to location depends on the number of buildings which can be expected upon it, then those lots which have the lowest value will be the least attractive, and those with the highest value will be the most attractive.

If the actual number of locations is subtracted from the predicted number of locations, the residual value is obtained. Therefore, in any grid square which is unoccupied at any time period, the predicted and residual value is the same. From the residual values, it is possible to predict which grid squares will be first occupied when expansion takes place (those of the highest value) and to reveal in the error of the prediction the presence of unanalysed factors which have caused a marked error in prediction.

PREDICTIONS OF FUTURE LOCATIONS IN UNOCCUPIED AREAS

Land not occupied in any mapped period is assumed to be less attractive than that occupied. Diagram H - Residuals in Unoccupied Lands - shows the occupied area as black. The degree of attractiveness of unoccupied lands is represented by the tone

values from grey to white, the grey the most attractive and the white the least attractive. All the white areas have a minus predicted value.

In Diagram G, 1841, it has been observed that the most attractive unoccupied land extends in a broad band north of Dundas Street. This band is followed by a band of least attractive land, which projects south into the most attractive land. This occurs in the west where there is a large swamp, and in the east on the course of Grindstone Creek. This diagram predicts that the expansion to the north of Dundas Street will extend furthest the north between these two areas; one of no slope and consequently swamp, and one of extreme slope of the river valley.

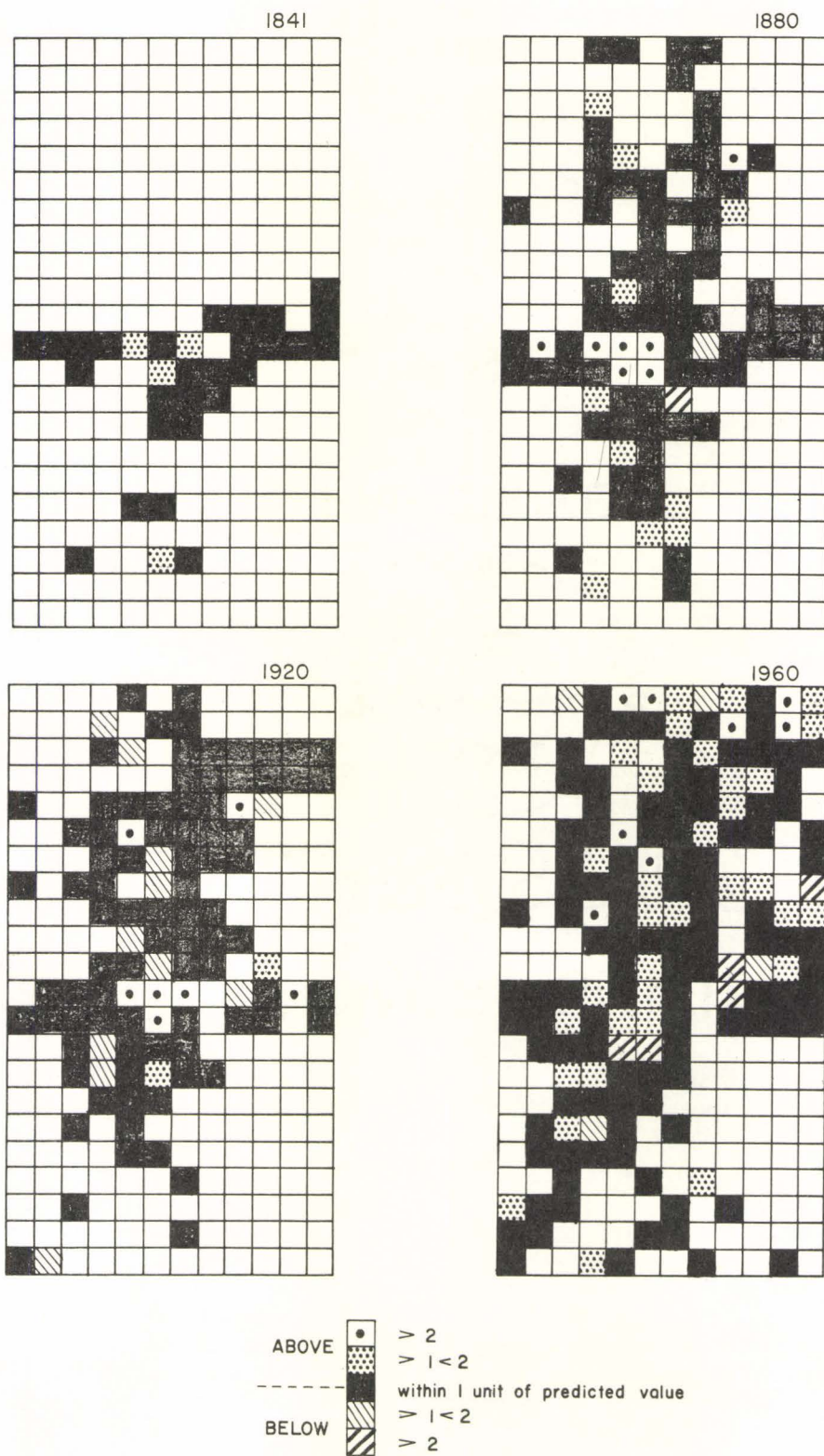
Disruptions in the pattern of most attractive lands to the south of Dundas Street are again in the areas of extreme slope, the valleys of Grindstone Creek and its tributaries.

Examination of the maps of 1880 and 1920 show that as growth did occur, these intrusions of least attractive land are still quite discernible, and the road system and consequently the building locations constantly avoided these areas of low location value. Until 1920, the land farthest from Dundas Street was of lower value than that close to Dundas Street, but by 1960 the distance from Dundas Street was no longer a significant considera-

tion in location decisions. Nearly all the land which had a minus value in 1920 (except land on the river valley, swamp, or on steep slopes) was either occupied by buildings or devoted to public uses, including parks (northwest corner). The only major exception was the land in the southeast corner which was completely isolated from the rest of the lots by river valley (lands of low location value), an indication that the future development of a parcel of land depends to some extent on the land adjacent to it.





The predictions of each period have not been fully realised by the next period, although the trends have always been for extension along the main arteries and away from the river valleys. The time periods were chosen for the availability of maps and information and because they were equally spaced and representative of four stages of development. The analysis shows the expansion was not uniform year by year, but rather was characterised by surge and stagnation. This is particularly obvious when observing the predicted values of 1880. It is seen that these were not fulfilled in the next forty years and were exceeded by 1960, while the predictions of 1841 are more than realised in the period between 1841 and 1880. The predictions obtained in this analysis are certainly indicative of the location of future developments, but not of the time necessary to fulfill the predictions.

Residual Values in Occupied Areas



RESIDUAL VALUES IN OCCUPIED AREAS - ERROR OF PREDICTION

Diagram G shows that in over half the occupied grid squares the actual number of buildings was within 1 of the predicted number of locations. This range accounts for 90% of the errors of prediction for all occupied areas in 1841, but for only 65% in 1960. This is an indication that the analysed factors, when taken together, were less influential in the decision to locate as time passed.

In Diagram 9 (Residual Values in Occupied Areas) all grid squares which are white are unoccupied at the period mapped. Where the number of actual locations is within 1 of the number of predicted locations, for any grid square, it is shown as black. In all grid squares marked , the number of actual locations exceeds the predicted number by more than 1 and not over 2; in all grid squares marked , the number of actual locations exceeds the predicted number by more than two. In all grid squares marked , the expected number exceeds the actual number of more than 1 but less than 2; in those marked , the expected number exceeds the actual number by 2 or more.

The grid squares with high positive residual values are found in 1841, 1880 and 1920 primarily at 12 to 13 -d,e,f, that

is, bordering Dundas Street between Main and Mill. This has at all times been the central business district.

The residual ranged from 3 to 7 over the predicted values. This points clearly to the fact that, in that area which was always the commercial district, some other factors were overriding positive considerations when making decisions to locate commercial uses. Two of the more likely considerations would appear to be the need to locate commercial uses in close proximity to similar uses and the need to locate commercial uses on the most travelled main street which provided communication to outside points. The combination of these two needs appears to promote increased density rather than expansion of the commercial district, particularly when one possible area of expansion is rendered impracticable by a major physical barrier, the river valley. The diagrams at these first three dates show the settlement at periods when "identity of place" was, among other things, identity with the self-sufficient centre of the village itself and its hinterland. By 1960, this identity had been superseded by identity with a larger centre outside the village itself. In this period the residual values in this area have dropped to two more than predicted. In this residential period, the actual number of buildings in the commercial district had not decreased, except by destruction by fire, but the

number of co-existent uses in each building had diminished.

In 1960, high positive residual values of more than two were in the residential area, and most of them were north of Dundas Street. This was the area of recent residential development, where land subdivision was not so complicated by the need to conform with existing older houses on large lots and high density developments were possible.

It is suggested that high residual values occurring predominantly in one land use area, indicate that the unpredicted growth is in response to a particular need. Thus, in the earlier periods, the commercial district expanded to serve the commercial needs of the agricultural hinterland; and in the latest period the residential area expanded to serve the residential needs of the industrial centre outside the village.

Residual values where the actual locations are less than predicted do not appear in 1841. In 1880 there are only two such grid squares, both on apparently attractive lots near existing roads. Perhaps the proximity to the river was a dissuading factor. Whatever the reason, one became vacant by 1920 and remains so to the present time. The other contained a mill and a road leading to the mill. The presence of this road gave the square a high predicted value which was not realised. When the mill closed, the

road closed, and the predicted value dropped to within 1 of the actual number of locations.

There are a great number of grid squares in 1920 where the predicted number exceeds the actual number by more than 1, but less than 2. Nine were on public or semi-public land. The remaining three were on agricultural land.

In 1960, all the grids in which the predicted number exceeds the actual were public or semi-public except three. One was part of a large residential lot. The remaining two, (14-e & f) were residential lots directly south of and facing the back of commercial premises fronting on Dundas Street.

In all periods, areas where actual locations fell short of the predictions were usually areas of public, semi-public and agricultural use. The predictions made in the analysis have been predictions of buildings, assuming that buildings reflect land use. However, public and semi-public uses do not produce as many buildings, as other uses and often produce large areas without any buildings. It is this characteristic which renders prediction of the number of locations in terms of buildings impossible in these areas.

CHAPTER VIII

CONCLUSIONS

The identity of Waterdown as a self-sufficient settlement is an image which, although real at one time, exists now primarily in the minds of those whose family names are recorded in the earliest documents concerning the site. This image of identity has been adopted by those who moved to the village just prior to the Second World War and by recent arrivals who wish to identify with a place small enough for their perception. For many others, the village appears to have little or no real identity except as a name conveniently identifying the location of their house which is "just outside of Hamilton".

The real identity of Waterdown is revealed, at least in part, by its land use patterns and its landscape. These exist at any moment in the lifetime of the settlement, and have been described and examined in this thesis at four periods. These

patterns of land use and landscape have changed from one period to another. Nevertheless, through these changes, the physical features of the site, both natural and man-made, have appeared to influence the patterns of land use in a particular way.

A land-use pattern results from an accumulation of locations of similar function in an identifiable matrix which can be given areal definition. Every location within each land use pattern is the result of the decision of a person or public body to establish a building or use in a particular place. These decisions to locate are made only after a great number of considerations have been weighed. It is impossible to identify and evaluate all the considerations which have influenced any decision to locate. However, it is possible to isolate and evaluate certain considerations which might be expected to influence many decisions, and to determine whether their influence has changed through time.

Land use maps of the village of Waterdown have been constructed from original documents and records for four periods, 1841, 1880, 1920 and 1960. Four factors which appeared to play a role in the development of land use patterns have been mapped for each period for each parcel of land of a defined size and position. These factors have been correlated with the total number of building locations and with the number of residential locations within

each parcel of land. This has been done by using a regression analysis which has provided a value for each parcel of land in terms of the predicted number of locations for all buildings and for residential buildings, as if the decision to locate a building was ruled entirely by the consideration of these four factors.

An examination of the value for each parcel of land, assigned under these conditions, suggests that particular parcels of land were, after due consideration, regarded as more attractive than other parcels.

The regression analysis also provided weighted values for each factor in relation to all others at each period for all uses and for residential uses, which showed that their position and value in the process of decision-making was not constant through time or for all uses.

The analysis has shown that predictions based on the four factors taken together account for between 40% and 52% of all building locations which occur, and for between 20% and 40% of residential building locations.

The factors which have been analysed as considerations in any decision to locate have been divided into two groups; accumulated physical factors, of the unit length of roads, and the radial

distance of any parcel from the centre of the village, and natural physical factors inherent to the site, of unit slope of land and unit river length for all parcels of land.

Roads are regarded as visible cumulative decisions. Once constructed, they become physical factors of the site, to be considered in any subsequent decision to locate a building. Roads are usually built on the most convenient level ground, but can be built without undue regard to apparent physical obstacles if the need for road connections is great enough. In Waterdown they have shown a tendency to remain on the level ridges and to avoid the steep slopes and river crossings. Two roads were, however, extended down the river bank and across the rivercourse before 1841. After this time no additional river crossings were constructed, but a number of roads were built to mill sites at the river edge. When the mill sites were no longer in use the roads were closed. In this way roads differ from physical facts, such as steep slope and rivercourses, inherent in the site, which do not disappear when their usefulness is gone. Roads, once constructed, are the most stable factor considered in the analysis. The correlation between roads and buildings was high at all times and roads were the prime factor analysed. Where roads were constructed, buildings were located, but where they were not con-

structed (for some unanalysed reason), the land remained without buildings.

The land use patterns, however, emphasize that the analysis would be more meaningful if roads had been placed in two categories, those with external connections and those with internal connections. All commercial uses except one, and all public and semi-public uses in which the public participated (not including wells) were located on roads with external connections. Residential uses appear to have a more flexible relationship, and are found on both external and internal connections.

Where roads cross rivers, many buildings have been located at some times. Commercial uses, however, have never been extended even to the water's edge on the Dundas Road. Always commercial expansion has occurred to the west away from the river. In spite of the high correlation of roads and buildings, it appears that some unanalysed factor has held commercial buildings away from areas of steep slope and river valley.

Distance becomes a factor only when there are two or more points of reference. The analysis has assumed that consideration of distance has always been from any given point to the corner of Mill and Dundas Streets, where the first commercial development occurred. It is clear from the analysis that this distance

has not had the same weight or position in relation to the other considerations at all times or for all uses. It is clear that in the first three periods this distance was, for all uses, second only to roads in importance and that the attractiveness of land for location decreased as the distance ^{from centre} increased. By 1960, however, this was no longer true for all uses; the correlation had dropped and distance stood in third place in the hierarchy of considerations. For residential uses, the correlation was no longer significant. It is not suggested that distance was no longer of any importance in decisions to locate a residence, but that one of the points of reference was no longer the corner of Mill and Dundas Streets. When a residential location decision was made in Waterdown at any time, the distance considered was undoubtedly the distance from the residential location to the area of employment and commerce. By 1960, the area of employment and commerce was outside the village. Therefore, distance from Dundas and Mill Streets became unimportant.

The analysis of the physical factors, river and slope, inherent in the site has shown that these factors tend to change in value and position in the hierarchy of decision-making.

Rivers in the first period, 1841, have a positive correlation with buildings of all uses (95%). At this time, a large

proportion of the buildings in the settlement were mills or mill outbuildings. Since the mills were water powered, they were of necessity located in the river valley. The location of the mills in turn dictated the location of the roads in 1841. For these reasons, rivers had a positive relationship with buildings. In 1880 it was still mandatory to locate mill buildings near a power site. However, mills accounted for a small proportion of the total number of buildings in the village, and the relationship became negative and not significant. By 1920, there was a very small increase in the total number of buildings in the village, but there were no mills and therefore there were so few buildings near the rivers that the correlation was again negative and not significant.

Rivers have always had a negative relationship to residential buildings. There have never been many residences in the river valleys. In the early periods, when there were few residences anywhere, the correlation is insignificant, but as the number of residences rapidly increased to 1960, the contrast between the density on the valleys and on the level ground became more obvious and the correlation therefore became significant.

In Waterdown, extreme slope is always associated with rivers, and like rivers, there is an insignificant negative corre-

lation with buildings until the village becomes densely settled. But by 1960, residential uses had become dominant in the settlement, and therefore slope had the highest negative significance of all factors.

Slope has an effect not only on its own area, but may also constitute a barrier. If an attractive area is located from the centre of the settlement by extreme slope, it will not develop as quickly as an equally attractive area which is not so isolated.

The discrepancies between predicted locations and actual locations of buildings found in this analysis of four particular physical factors have revealed that there are many unanalysed factors affecting decisions to locate. These discrepancies can be related to the land use patterns. In the periods 1841, 1880 and 1920, high positive residuals are found in the commercial and industrial districts. In these districts were many craftsmen who provided goods and services used not only in the settlement itself, but also in the surrounding farms. At this time more buildings were constructed in this area than predicted because some powerful considerations beyond those analysed apparently increased the need for such locations. In 1960, these high residual values are found in the fast-growing residential areas of the "dormitory village" of this period. A consideration of all these positive discrepan-

cies suggests that the land use areas in which they occur reflect the identity of the village at each time period and disclose the presence of powerful unanalysed considerations.

High negative residuals have occurred largely in milling, semi-public, public and agricultural areas. In these areas, a unit building is not representative of a land use. These uses are, in fact, characterized by the scarcity or complete lack of buildings. Therefore, the high negative residuals represent not that the actual land use is less intensive than predicted, but rather that the relationship of buildings and land use is not appropriate in these areas.

In the history of this settlement the natural physical site and the previous cumulative decisions of the inhabitants manifested in its landscape are, at any time, considerations in reaching a decision to locate. By the isolation of certain factors, it has been possible to measure their role in location and to predict, within certain limits, their influence on future locations. Apparent discrepancies in the prediction of locations have revealed the presence of unanalysed factors, which have over-ruled the analysed factors, in certain land-use areas at certain times. It is suggested that these areas, where predictions are greatly in error, are found in land-use divisions which most truly reflect

the "identity of place" in the minds of the inhabitants as they met the challenge of their time and adjusted to the cumulative decisions of the past. These decisions have created an identifiable settlement not entirely ruled by, but influenced by, the physical site which has imposed limitations on the inhabitants and their aspirations through its history.

APPENDIX

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	Document
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Confirmation of Title	356
Limiting Uses	357
Retaining Public Watering Place	N166
Marriage Settlement	L1467
Typical Purchase on Dundas Street 1841 - Last Deed in Toronto Books	Q249
Memorial of Will of E. C. Griffin	1848

LIST OF PICTURES

PICTURE

1. Corner of Mill Street and Dundas. Site of first land divisions
2. Board and Batton Cottage Dundas St. East of Grindstone Creek before 1841
3. Stone Rowhouse Mill South circa 1841
4. Bell House Dundas Street
5. Flamborough Township Hall
6. Valley Inn south end of Kent Griffin's Road (Main St.)
7. Stock's Store and Reid's Harness Shop N.W. corner of Mill Street
8. Post Office and Harness Shop Main St. South
9. A & B - Howland's Mill in Smokey Hollow and Howland's Mill before and after fire
10. Brick House on Dundas St. late 1800's
11. The Ontario Classic Venacular
12. Smokey Hollow turn of the century
13. Smokey Hollow before 1880
14. Baker's Rake Factory circa 1884
15. A & B - Waterdown Common School (High school and Public) and Remnant now Scout Hall
16. A & B - Fire in central business district
17. A & B - Dundas St. in early 1900's and Dundas St. in 1967

PICTURE

18. Reid's Dam
19. In background) Bridge to Leather Street
20. A & B - Nicholson and Stetlers Jam Factory and Dean's Basket Factory
21. New boiler being installed at Lumber Mill
22. Wooden sidewalk south of Smokey Hollow on the Alder-shot Road



THE GREAT FALLS GRINDSTONE CREEK

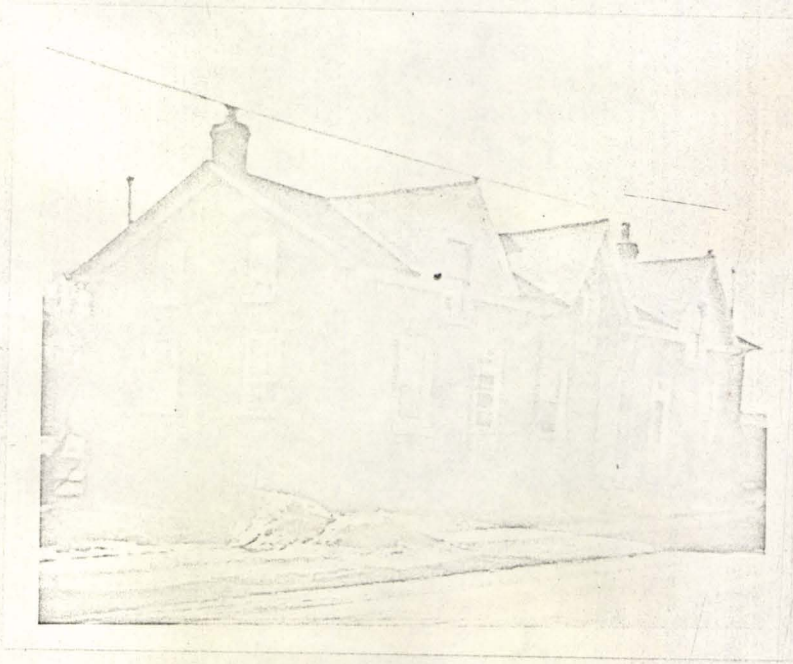


WEEKS' STORE in 1904. Note American Hotel veranda on the right and the gas lantern
Courtesy Sam Pasquier

Picture 1



Picture 2



Picture 3



Courtesy W. Drummond

THE BELL HOUSE on Dundas Street was built before 1878, torn down about 1920.

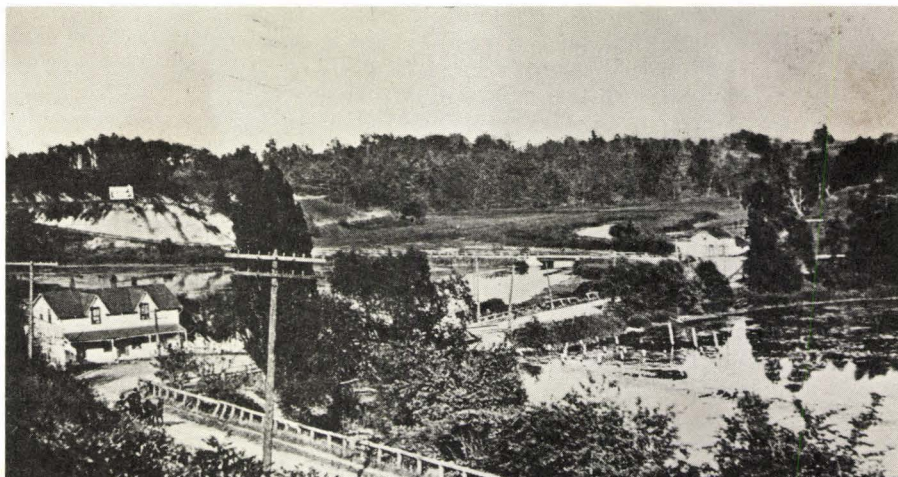
Picture 4



Courtesy J. Peter Vance

TOWNSHIP HALL built in 1857. It once had a small portico on the front.

Picture 5



Courtesy Elvin Moon

VALLEY INN (*left*) not there today, as it looked when Snake Road was one of main routes between Hamilton and East Flamborough. Building on right is thought to have been the toll house and is still standing.

Picture 6



Picture 7

Courtesy W. Reid Collection

REID'S HARNESS SHOP in 1900 on the northwest corner of Mill and Dundas Streets, once J. T. Stock's store.



Courtesy J. Peter Vance

OLD POST OFFICE building at 31 Main Street South. Veranda has since been removed. This building has housed a variety of businesses.



Courtesy W. Reid Collection

ROBERTSON'S FLOUR MILL in Smokey Hollow before it burned. Built by Howland at a cost of \$13,000.

Picture 9a



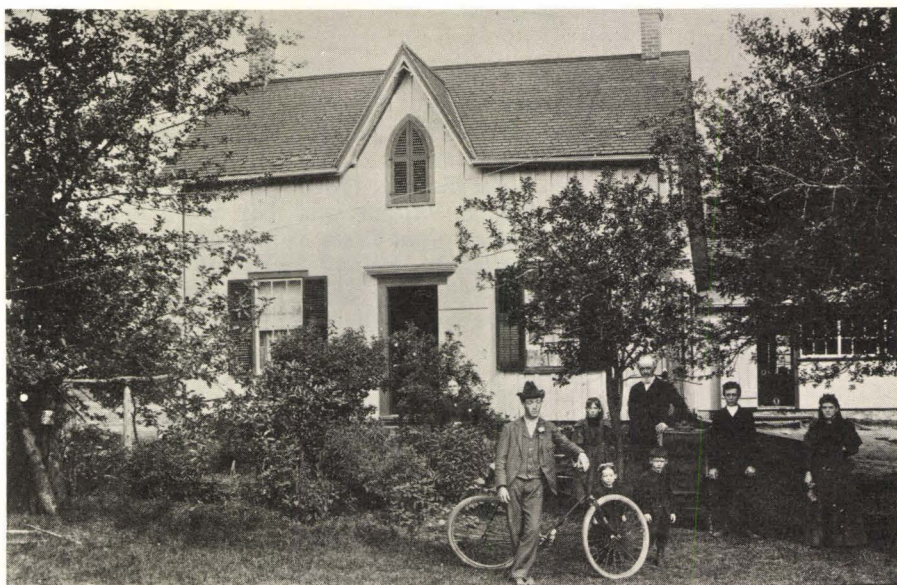
Courtesy W. Reid Collection

ROBERTSON'S FLOUR MILL the morning after it burned. It was in winter; note the cutter.

Picture 9b



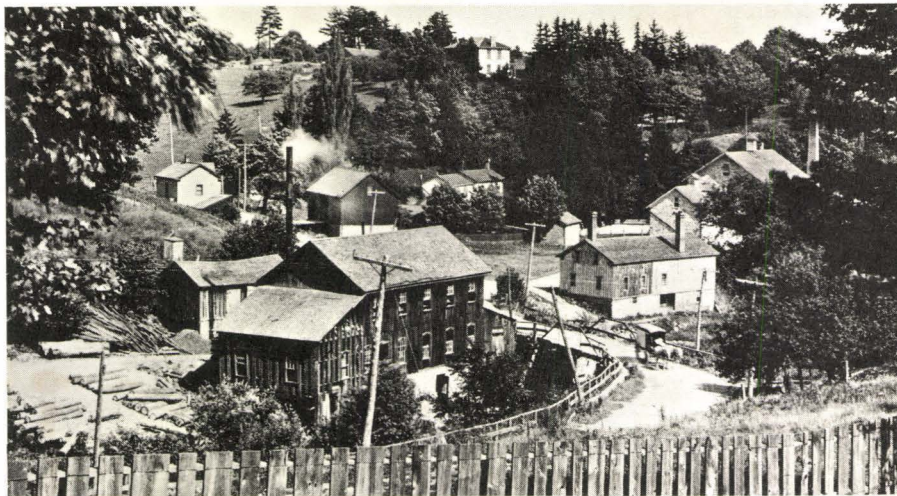
Picture 10



Picture 11

Courtesy of Asahel Bates

BATES FARM house in 1896. Small boy at front wheel is present farm owner Asahel Bates.



Courtesy W. Reid Collection

SMOKEY HOLLOW about 1905. Note flume is gone. Stone mill right centre with cupola was Howland's (later Robertson's) flour mill.

Picture 12



Courtesy W. Reid Collection

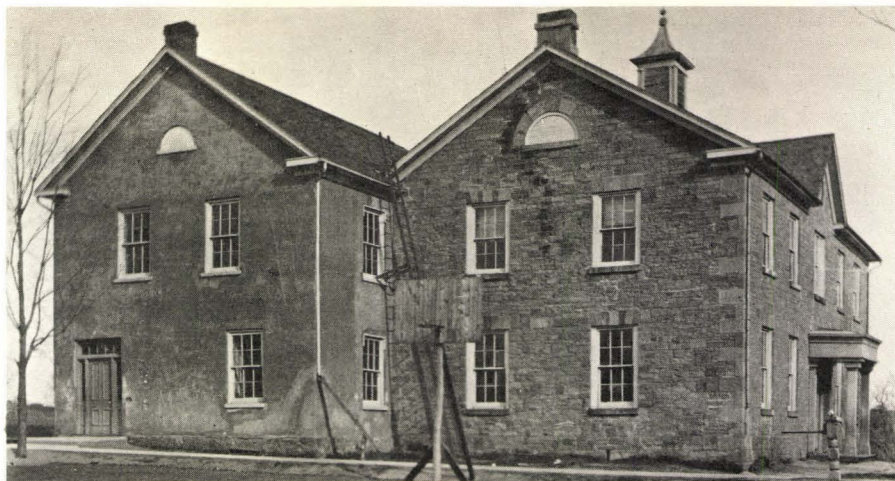
SMOKEY HOLLOW about 1870. Note flume on left leading to the mill situated on site of Griffin's woollen mill.

Picture 13



BAKER'S RAKE FACTORY reached from Leather Street

Courtesy G. Forstner
Burned in 1885.



Courtesy W. Reid Collection

WATERDOWN PUBLIC and High School was one of the first Common and High Schools in Gore District. Present Scout Hall is downstairs portion at right foreground of picture.

Picture 15a



Courtesy J. Peter Vance

SCOUT HALL in Sealey Park as it looks today.

Picture 15b



1922 FIRE scene after the major fire was put out — about 3 p.m.
Taken from the Kirk House roof.

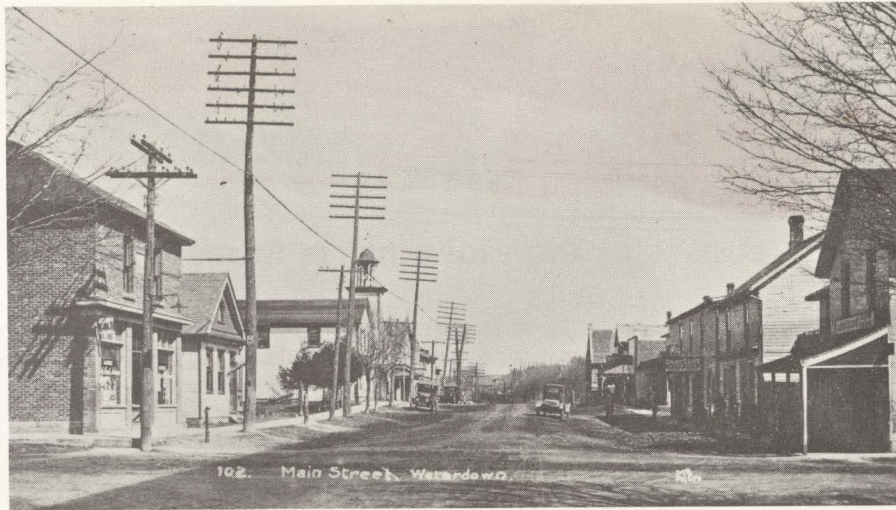
Picture 16a



Courtesy W. Reid Collection

1906 FIRE on Dundas Street burned a tailor shop and a barber shop near the corner of Main and Dundas Streets, north side. Note the barber pole.

Picture 16b



Courtesy Miss Mayme Baker

DUNDAS STREET about 1920 looking east from Main Street intersection. Note Bell House and Tower in left background.

Picture 17a



Courtesy J. Peter Vance

DUNDAS STREET in 1967 looking east.

Picture 17b



Courtesy W. Reid Collection

REID'S DAM as seen from the north looking toward Highway No. 5 about 1905.

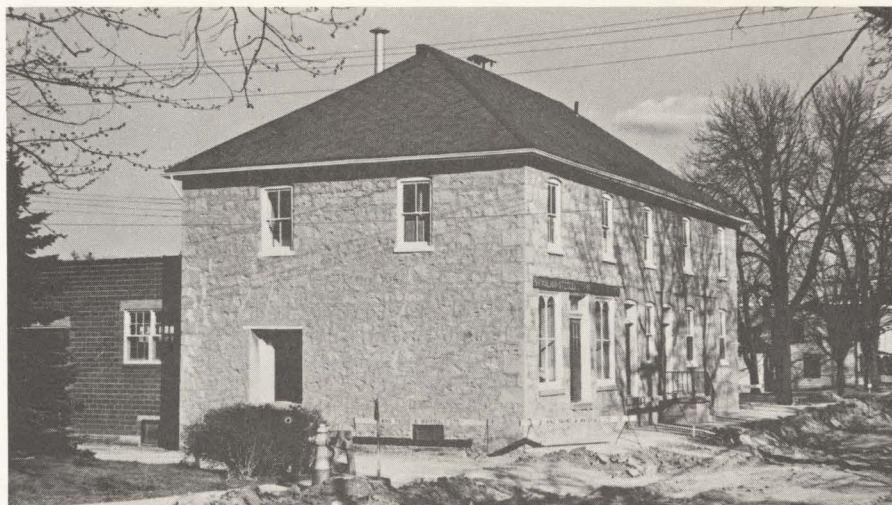
Picture 18



Courtesy W. Reid Collection

RAILWAY CONSTRUCTION in 1911. Note the Leather Street Bridge which crosses the railway in the background.

Picture 19



Courtesy J. Peter Vance

JAM FACTORY of Nicholson and Stetler on Mill Street. This building has housed many businesses; it is one of the many fine stone buildings in the area.

Picture 20a



Courtesy W. Reid Collection

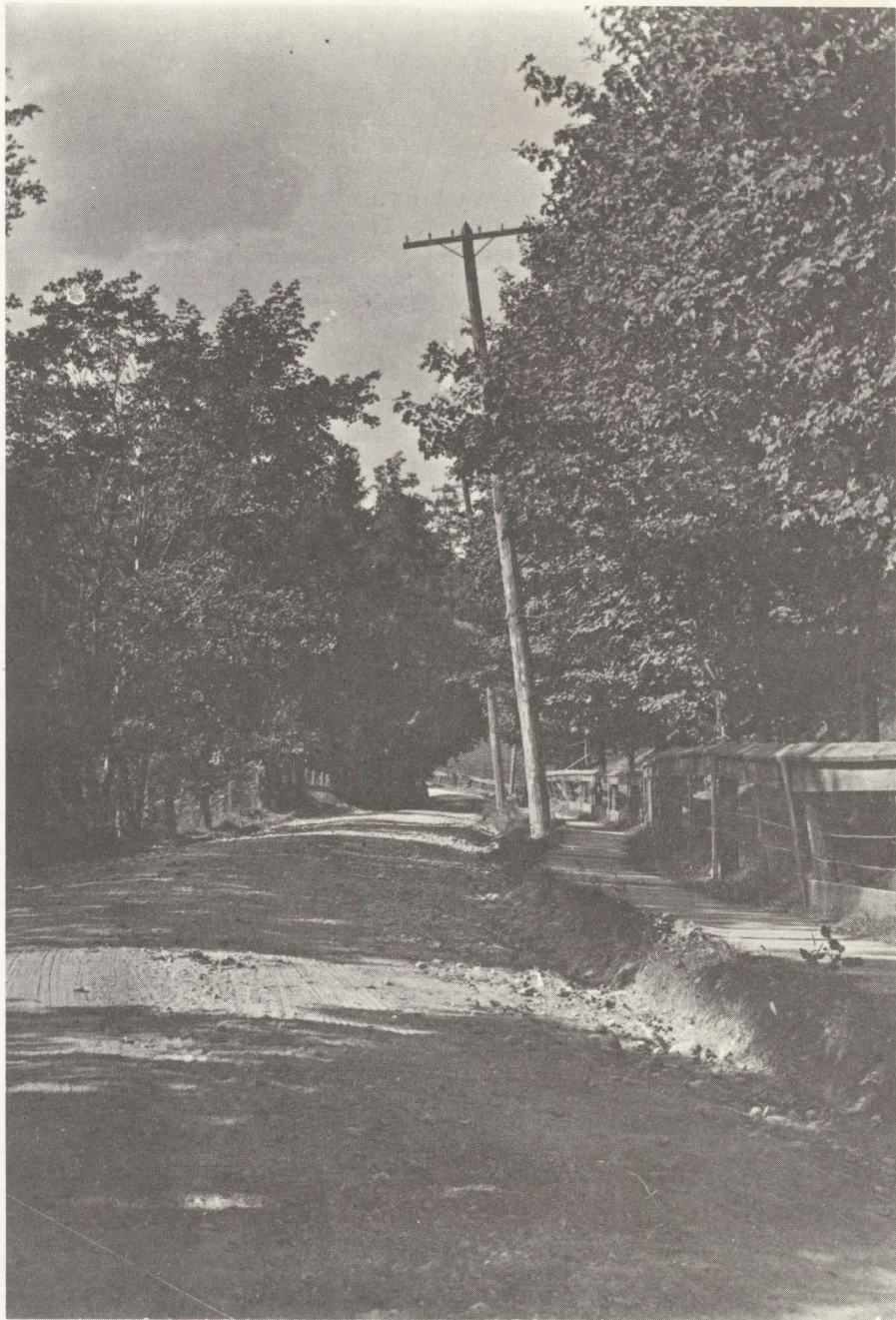
DEAN'S BASKET FACTORY in Smokey Hollow about 1900.

Picture 20b



Courtesy W. Reid Collection

FORSTNER'S GRIST MILL (later Slater's Saw Mill) putting in steam power. Left to right: Wilbert Nicholson, Joe Chubb, J. Klodt, Fred Carson, Joe Carson, Jack Slater.
Upper rear: William Edge.



Pictu

ALDERSHOT ROAD, NORTHBOUND INTO SMOKEY HOLLOW.

1 A Memorial to be Registered pursuant to the Statute in such case made and provided, of an Indenture of Bargain and Sale made the twenty second day of December in the year of Our Lord one thousand eight hundred and thirty seven by and between Ebenezer Collier Griffin of the Township of Glanborough East, in the County of Halton, in the District of Gore, and in the Province of Upper Canada, (person) of the first part; and Levi Hawk, of the Township, District and Province aforesaid, (Northwicks) of the second part; whereby the said Ebenezer Collier Griffin for and in consideration of the Sum of Forty pounds of Lawful Money of the Province of Upper Canada, to him in hand paid by the said Levi Hawk, the receipt whereof is acknowledged, did give, grant, bargain, sell, alien, assign, transfer, release, enfeoff, convey, and confirm unto the said Levi Hawk, his Heirs and Assigns, all that certain Parcel or Tract of Land situate lying and being in the Township of Glanborough East, in the County of Halton, in the District of Gore, and in the Province of Upper Canada being composed of a Part of Lot number six, in the third Concession of the Township of East Glanborough aforesaid, being Village lot Number Eleven, on the South side of Dundas street in the village of Watford containing by admeasurement Two acres be the same more or less and is situate and bounded or may be otherwise known as follows; that is to say: COMMENCING where a Post has been planted on the Easterly side of Mill street (about five links North East from the limit between Concession lots number six and seven) and Ten Chains and three and a half links South East from the South side of Dundas street being the limit between village lots number eleven and twelve; Thence North forty five Degrees East six chains and forty links more or less, To the southern limit of the usual course of the Grindstone Creek; Thence upward the several courses and windings of the said creek, three chains and thirty links more or less to the Easterly side of Water lane (which street is seventy links wide at its junction with Mill street); Thence South fifty one Degrees and fifty five minutes West along said street three chains to a Post; Thence South forty five Degrees West along said Street or Lane two chains and fifty links to Mill street aforesaid, and to within seventy five links of the limit between Concession lots number six and seven aforesaid; Thence South forty five Degrees East three chains and twenty one links (which is the width of the front of said Village lot) to the place of Beginning. Also the right and privilege Forever of repairing, keeping in order or reconstructing (if necessary) with earth from the North side of said Grindstone Creek (from a reservation for that purpose made of one perch wide on the North side of said ~~Dundas~~ ^{Creek}) a certain Dam and Race way, situate a few perches above and beyond the precinct or limit of the said Village lot (which dam is near to be raised above its present height or level) and which said Dam or Mole was originally constructed by the said Levi Hawk and one Henry Ferguson Graham (tanner) jointly - and also of taking out of said Dam through said Race a sufficient quantity of water, and no more than sufficient to drive or propel Two turning lathes for turning all sorts of turning either wood or iron, ^{with the necessary appendages thereto} and the like; for and during the space

space of three days in each and every week, namely on Mondays, Wednesdays, and Fridays, and for that purpose above on the above mentioned days - and on Tuesdays, Thursdays, and Saturdays the said Waters to be allowed without any obstruction or subversion, whatever, to flow and pass down the said Race now constructed through the Village lot above described to and into Village lot number twelve for the use of the said Henry Ferguson Graham his heirs and assigns FOREVER, to be used for Tanning purposes and no other on the latter mentioned days.

And which said Indenture is given upon the EXPRESS Condition that the said Levi Hawk his heirs and assigns shall not at any time or times hereafter, erect or build, or cause or suffer or permit to be erected or built, on any part of the said premises hereby conveyed or mentioned or intended so to be, any Machinery of any name or nature whatsoever to be driven or propelled by the water herein before granted and conveyed or intended so to be, other than that already granted and permitted - namely - Two turning Lathes for turning all sorts of turning - either wood or iron and the like - and also in like manner shall not take or make use of any more water than may be necessary from time to time for that purpose - and also shall not use the said water on any other days of the week other than Mondays, Wednesdays and Fridays; And also shall not erect or cause to be erected or raised, the said Dam any higher than it is now raised or erected. And also, shall on Tuesdays, Thursdays and Saturdays, suffer and permit without any obstruction or subversion, such quantity of water as may be necessary to drive or propel the Bark Mill or other machinery erected or to be erected for the purpose of converting Hides into leather, of or belonging to the said Henry Ferguson Graham his heirs or assigns: and shall also suffer and permit the said Henry Ferguson Graham his heirs and assigns to enter into and upon the said premises on the site of the said Race constructed or to be constructed, across the premises herein conveyed or intended so to be for the purpose of clearing out or repairing or reconstructing the said Race if necessary. - And it is further further declared that in the event of all or any of the above conditions, restrictions and reservations not being adhered to or complied with, on the part of the said Levi Hawk his heirs or assigns, and thereby affect the true intent and meaning of the said Indenture, then the said Indenture and every thing therein contained, and all the interest, title, and estate thereby created or conveyed or intended so to be from Haverhill to cease, determine, and become absolutely void. SO HAVE and SO HOLD the said above granted Premises, subject to the conditions aforesaid, with all the privileges and appurtenances thereof to the said Levi Hawk his heirs and assigns, to his or their own use FOREVER. Upon which Indenture is endorsed a Certificate of William B. Parker and Elijah Seavey - Esquires - Two of His Majesty's Justices of the Peace in and for the aforesaid District of Essex - declaring that Eliza Griffin, Wife of the said Ebenezer Colburn Griffin, personally appeared before them, and being duly examined by them touching her consent to be Barred of Tower of and in the lands therein described, she gave her consent thereto, and that it did appear to them that such consent was free and voluntary, and not the effect of coercion or the fear of coercion, on the part of her husband or any other person. - Which said Indenture is Witnessed by David Parsons Carpenter and Jeremiah Smith Carpenter both of the Township of East Plainborough in the County aforesaid and Province aforesaid

And this Honorable survey, is hereby required to be Registered by him the said
 Greater therein named.

Witness our Hand and Seal the twenty second day of December in the year
 of our Lord, one thousand eight hundred and thirty seven

Signed and Sealed in the Presence of

George C. Griffin

Levi Hawk

The subscription herein contained and affixed to this form by the said David
 and George C. Griffin, signed by the said David and George C. Griffin, and the said George C. Griffin,
 is admitted to be the true and correct copy of the original and true copy of the said
 the words "and also shall never take or make use of any more" shall be
 may be required for the printing purposes of the said George C. Griffin and
 subject: & also relation to the first and second lines from bottom on first page
 the words "with the company of the said George C. Griffin" - - - - -

David Carson

Barnes Hunt

129
 129
 129
 129
 129

George C. Griffin
 Levi Hawk

Registered the
 25th March 1837
 from support the
 of David
 Carson in Books
 L. Folio 108
 Memorial 129
 Certificates

Vol. Racy
 P. 10

The original of the
 of the said David Carson
 the same date was given
 to the same date and
 the Memorial is dated
 the 25th March 1837
 the Memorial of the said
 the 25th March 1837
 the 25th March 1837

George C. Griffin
 David Carson
 Barnes Hunt

130-130 Heltzle

No. 130 -

309. 310. 311. 3.

Memorial

E. C. Griffin -

H. S. Graham

Registered the 2

March 1855. of Room 14
the north of David Paine
Book L. folio 171
Memorial No. 130 -

Certified by

Thos Racey
Supt.

An original Duplicate of the said Indenture
bearing the same date was executed at the
same time, and this Memorial is
declared by the parties thereto to be the
Memorial of both Indentures - The
Duplicate to be held by the Gronston
therein named

Witness
Daniel Carson
Jeremiah Shute

Shenandoe Griffin
Henry P. Graham

As Memorial to be Registered pursuant to the Statute in such case made and provided, of
Indentures of Bargain and Sale, the Twenty-second day of December in the year of our
one thousand eight hundred and ^{seventy} seven by and between Henry Fergusson Graham of the Town
Hamborough East in the County of ^{Halton} in the District of Gore and in the Province of Upper
Canada of the first part; and Henry Fergusson Graham of the Township of ^{Gore} and Province aforesaid
of the second part; whereof the said Henry Fergusson Graham for and in consideration of the
sum of Forty pounds of Lawful Money of the Province of Upper Canada, to him in hand paid by
said Henry Fergusson Graham, the receipt whereof is acknowledged, did give grant bargain
alien assign transfer release, enfeoff, convey and confirm unto the said Henry Fergusson
Graham, his heirs and assigns, all that certain Parcel or Tract of Land, sit-
lying and being in the Township of Hamborough East in the County of Halton in the Dis-
trict of Gore and in the Province of Upper Canada, being composed of a Part of Lot number Six
the third Concession of the Township of East Hamborough aforesaid, being Village lot number Twelve
South side of Dundas street in the Village of Waterbury, containing by admeasurement Three Acres
the same more or less, and is Batted and Bounded, or may be otherwise known as follows that is
Commencing where a Post has been planted on the Easterly side of Mill street seventy-five links
East from the limit between Concession lots number six and seven and Four chains and three and
four links South East from the south side of Dundas street being the limit between Village lots number
eleven and twelve; Thence South forty-five Degrees East along Mill street two chains and some
five links to Leather street; Thence North forty-five Degrees East along the said Leather
street six chains and fifty links to a Post; Thence North forty-five Degrees West fif-
teen links to a Post; Thence North forty-five Degrees East one chain more or less to the south
limit of the usual course of the Grindstone Creek; Thence upward the several courses
windings of the said Creek three chains more or less to the limit between Village lots number
and twelve; Thence South forty-five Degrees West six chains and forty links more or less to the
of Beginning, Also the right and privilege forever of Respaving, keeping in order or
constructing (if wanted) with earth from the North side of said Grindstone Creek (from a
excavation for that purpose made of one perch wide on the North side of said Creek)
certain Dams and Race way now erected constructed and made across said Creek situated
few perches above and beyond the precincts or limits of Village lot number eleven (which
Dam is never to be raised above its present height or level) - and also of taking out
said Dams through said Race a sufficient quantity of Water and no more than sufficient
to drive or propel a certain Water Mill now erected or to be erected and also any
Machinery necessary for the purpose of converting Hydes into Leather, said Water to
used for the above purpose, and no other on Wednesdays, Thursdays, and Saturdays, and also
privilege of entering in and upon Village lot number eleven on the site of the Race a
mentioned for the purpose of cleaning out repairing or reconstructing said Race as may
necessary from time to time hereafter.

And which said Indenture is given upon the Express Condition that
the said Henry Fergusson Graham his heirs and assigns, shall not at any time or

hereafter erect or build, or cause or suffer or permit to be erected or built on any part of the said Premises hereby conveyed or mentioned or intended so to be any Machinery of any name or nature whatsoever to be driven or propelled by the water hereinbefore granted and conveyed or intended so to be other than that already granted and permitted to namely "any machinery now erected or to be erected for the purpose of Grinding Bark for Tanning purposes or any other Machinery necessary for the purpose of converting Hides into Leather." And also and in like manner shall not take or make use of any more Water than may be necessary from time to time for that purpose; and also shall not use the said Water on any other days of the week other than Tuesdays Thursdays and Saturdays, ^{with a minute of five} and also shall not erect or cause to be erected or erected the said Dam any higher than it is now raised or ere to. — And it is therein further declared that in the event of all or any of the above Conditions, restrictions and reservations not being adhered to or complied with on the part of the said Henry Ferguson Graham his heirs or assigns, and thereby affect the true intent and meaning of the said Indenture, then the said Indenture, and every thing therein contained, and all the interest, title, and estate thereby created or conveyed or intended so to be, from thenceforth, to cease, determine, and become absolutely void. To Have and To Hold the said above granted Premises, subject to the conditions hereinafter with all the privilege and opportunity, attached to the said Henry Ferguson Graham his heirs and assigns, to his or their own use forever. Upon which Indenture, is endorsed a Certificate of William B. Proctor and Esq. Clerk of the County of Essex. — One of the Magistrates of the County of Essex, for the presence of the said Henry Ferguson Graham, personally appeared before them, and being duly examined by them, touching her consent to be Barred of Her Dower of and in the lands therein described, she gave her consent thereto, and that it did appear to them that such consent was free and voluntary, and not the effect of coercion, or the fear of coercion, on the part of her husband or any other person: — Which said Indenture is Witnessed by David Parsons, Esq. Justice of the Peace, and James Smith, Esq. Justice of the Peace, both of the Township of East Ham Borough, County of Essex, and sworn officers of the Law. And this Memorandum thereof is hereby required to be Registered by him the said grantor therein named.

Witness our hands and Seals this twenty second day of December in the year of our Lord, one thousand eight hundred and thirty seven —

Signed and sealed in the presence of

Henry F. Graham

Henry F. Graham

and before signing, between or amongst and to the lines from the page above, and in the presence of the said Henry F. Graham, and James Smith, Esq. Justice of the Peace, both of the Township of East Ham Borough, County of Essex, and sworn officers of the Law, and that it did appear to them that such consent was free and voluntary, and not the effect of coercion, or the fear of coercion, on the part of her husband or any other person: — Which said Indenture is Witnessed by David Parsons, Esq. Justice of the Peace, and James Smith, Esq. Justice of the Peace, both of the Township of East Ham Borough, County of Essex, and sworn officers of the Law. And this Memorandum thereof is hereby required to be Registered by him the said grantor therein named.

James Smith

#131 Holton "L"

D. Reeves Hallon

Memorial

312. 313. 314.

Benjamin Colver Griffin

to

Dayton Reeves.

Registered the
26th March 1838 as No.
upon the oath of David
Parson in Book L. folio
174. Number of Memorial

131-

Certified by

Thos. Pacey.

Regtr.

A Memorial, to be Registered pursuant to the Statute in such Case made and provided of an Indenture of Bargain and Sale made the Twenty first day of December in the year of Our said one thousand eight hundred and Thirty Seven by and between Ebenezer Collier Griffin of the Township of East Falmborough in the County of Hallow in the District of Gore and in the Province of Upper Canada Respondent of the first part, and Eliza Griffin of the same place wife of the said Party of the first part, of the second part, and Dayton Reeves of the Township of County District and Province aforesaid Respondent of the third part. — Whereby the said Ebenezer Collier Griffin of the first part for and in consideration of the sum of fifty pounds of lawful money of the Province of Upper Canada to him in hand paid by the said Dayton Reeves, the Receipt Whereof is acknowledged, did give, grant, bargain, sell, alien, assign, transfer, release, confirm, convey, and confirm unto the said Dayton Reeves his heirs and assigns all and singular the certain parcel or tract of Land and premises, situate, lying and being in the Township of East Falmborough in the County of Hallow, in the District of Gore and Province of Upper Canada, containing by Admeasurement two and a fourth acres in the same more or less, being comprised of a part of lot number six in the Third concession of the Township of East Falmborough aforesaid, being Village lot number Ten on the South side of Dundas Street in the Village of Watdown, and part of Village lot number one on the South side of Dundas Street, as also certain water privilege annexed to Village lot number ten aforesaid. — All of which is more particularly known and described as follows (that is to say) Firstly, Village lot number Ten aforesaid, commencing where a post has been planted on the North side of Mill Street and three chains and sixty two and a half links South East from the South side of Dundas Street Thence North forty two degrees and twenty minutes East one chain and two links Thence South forty five degrees West thirty seven and a half links, Thence North forty two degrees and twenty minutes East three chains more or less to the Southern limit of the waters of the Falmouth Creek. Thence down the several courses and windings of the Southern boundary of said Creek till it intersects the dam erected across said Creek, by one Levi Hawk and Henry Ferguson Graham, Thence down the South side of the water Course or Race way coming out of said dam till it intersects the North side of Water Lane, Thence South forty five degrees West along said Lane or Street four chains fifty links more or less to Mill Street, Thence North forty five degrees West two chains and fifty links to the place of Beginning, being one acre and a half in the same more or less. — Also, all the surplus water passing over said dam and not required to propel the Turning Lathes (erected or to be erected) of the said Levi Hawk his heirs and assigns forever, on three days of each week — namely, on Monday's Wednesday's and Friday's — And the Back Mill of the said Henry Ferguson Graham his heirs and assigns, or other Machinery (erected or to be erected) for converting hyds, into better said Machinery to be used on Tuesday's, Thursday's and Saturday's forenoon. — As also all the full, power, or advantages of said surplus water from said dam to the South East side of Water Lane aforesaid for any purpose, whatever. Secondly, part of Village lot one on the North side of Dundas Street, commencing on the North side of Mill Street, and four chains and fifty four links South West from the North side of Dundas Street, Thence South forty five degrees East two chains and four links to within two chains and fifty links of Dundas Street, Thence North forty one degrees East two chains and fifty eight links, Thence North forty five degrees West one chain and seventy three links, Thence in a South westerly direction two chains and fifty nine links more or less to the place of Beginning containing Ninety perches be the same more or less. (said Levi Hawk in his deed is restricted from using any more water for his Lathes than is found for H. Graham's Sawery)

have and to hold the said above granted Premises with all
privileges and appurtenances thereof to the said day then Receives
his heirs and assigns to his and their own use forever Al. p. m. Which
indenture is enclosed a Certificate of William B. Proctor and
Cyril Scott Esquires two of Her Majesty's Justices of the Peace in
and for the said District -

7 that Eliza Griffin wife of the said Ebenezer Griffin personally
appeared before them and being duly examined by them touching her
he learned of her power of and in the lands therein described, she
consent thereto and that it did appear to them that such consent
was voluntarily and not the effect of coercion or the fear of coercion
of her husband or any other person - Which said Indenture
was by David Parsons Carpenter and Levi Hawk Millwright
Living of East Falmouth in the County of Hallow District
and Province aforesaid

Memorial thereof is hereby required to be Registered by them
the said Justices herein named

Witness my hand and Seal the Twenty second day of December
on Ford one thousand eight hundred and thirty seven

David Parsons

Levi Hawk
W. P. Taylor
Signed and sealed

Ebenezer Griffin -

Dayton News

355 Hallen
No 355

Memorial -
to the
Ebenzer L. Griffin
to
Henry W. Graham
and
William Stark

⑦

Registered the 3rd March
1842. at New York
upon the oath of Levi
Hank - a Book of John
453. No. of Memorial 355

Relieved by

The Praying

Right S.

Memorial to be Registered pursuant to the Statute, of an Indenture of Bargain and Sale made the twelfth day of September in the year of our Lord one thousand eight hundred and thirty seven Between Ebenezer W. Hunt Gaffer of the Township of Plumborough East in the District of York and Province of Upper Canada Deputee of the Township and Henry Ferguson Jachum of the Township District and Province of Lower Canada and William Stock of the Township District and Province of Lower Canada of the other part as Tenants in Common and not as Joint Tenants — Whereas the said Ebenezer W. Hunt Gaffer for and in consideration of the sum of five pounds lawful money of the Province of Upper Canada, did first claim and assign unto them the said Henry Ferguson Jachum and William Stock as Tenants in Common and not as Joint Tenants the heirs and assigns All my Right and Title (Except as is therein Excepted and Reserved, and is herein copied thereunto) that certain parcel or tract of land and premises situate lying and being in the Township of Plumborough East in the County of Halton in the District of York and in the Province of Upper Canada, being composed of a part of Lot Number seven in the third concession of the Township of Plumborough East aforesaid containing by Admeasurement five Acres in the same more or less which certain parcel or tract of land and premises is bounded and bounded as may be otherwise known as follows — That is to say — Commencing in front of said Concession Ten Chains and fifty Links from the South East Angle of said lot — Thence North eight Degrees West two Chains and thirty three Links to a post; Thence North one Degree West two Chains thirty nine Links, Thence North seventy seven Degrees and thirty Minutes West one Chain and fifty Links to the Creek Thence North seventy six Degrees and fifteen Minutes West four Chains and thirty seven Links to a post Thence South Ten Degrees East four Chains and thirty three Links to a post; Thence South twelve Degrees West two Chains and twenty one Links to a post; Then to the front of said Concession three Chains from the South West Angle of said lot; Thence North forty five Degrees East nine Chains and fifty Links more or less to the place of Beginning — All which said Claim is made under the Conditions and Exceptions — as as follows — That is to say — It is covenanted, warranted and it is fully understood by the parties to these presents that this said Claim Indenture is not intended nor shall it be construed or be taken to Release to Whomsoever, a destroying, or an altering in the least possible degree any Conditions, Restrictions, privileges or Reservations whatever contained in a certain former Indenture bearing date the twelfth day of March in the year of our Lord one thousand eight hundred and thirty seven whereby the above named premises were conveyed by the above named Ebenezer W. Hunt Gaffer to our Father James W. Hunt and Joseph W. Hunt Deputee of the Township and Henry Ferguson Jachum and William Stock as Tenants in Common under certain Conditions and Limitations above referred to, one of which was that they the said Father James W. Hunt and Joseph W. Hunt Deputee of the Township and Henry Ferguson Jachum and William Stock should never build, construct, erect or cause to be built constructed or erected on the premises aforesaid any Woolen Factory, fulling Mill Carding Machine or any contrivance or machinery for the Manufacturing of Woolen Stuffs or for Carding Wool for fulling Cloth on pain of forfeiting the said Indenture and every part thereof in full Commission under the hand and seal of the said Ebenezer W. Hunt Gaffer his heirs and assigns shall for that purpose be first read and obtained — And that these premises are given to the said Henry Ferguson Jachum and William Stock by the Request of the before mentioned Father James W. Hunt Deputee of the Township and William Stock of and in the premises hereby first claimed and intended as to be, and not for the purpose of releasing or weakening the Conditions, Exceptions, Privileges or Reservations above referred to

Which Indenture is Witnessed by our Father James W. Hunt and Joseph W. Hunt Deputee of the Township District and Province of Lower Canada and this Memorial thereof is hereby required to be Registered by the said Grantor herein named

I Shere my hand and seal the Second day of October — in the year of our Lord one thousand eight hundred and forty two

Signed and Sealed in presence of

Per Hunt

Henry Ferguson

It be enovied to be Registered pursuant to the Statute in that case made and provided of an Indenture of Bargain and Sale by way of Joint Claim in the words and form following - that is to say - "Know all men by these presents that whereas in and by a certain Indenture of Bargain and Sale bearing date the Tenth day of March in the year of our Lord one thousand eight hundred and thirty seven between Charles Collier Giffin of the Township of East Flom borough in the District of Gore and Province of Upper Canada as one of the first part and Luther Drumbull Junior of the same place as second and Joseph Barton Tracy of the same place as tenants in common (and not as joint tenants), did Recieve of and from the said party of the first part as Tenants in Common as of record certain lands and tenements situate in the Township of East Flom borough aforesaid in the District and Province aforesaid being composed of a part of the southerly part of Lot Number Seven in the third Concession of the Township of East Flom borough aforesaid containing by actual measurement about five acres less the same more or less and to which said lands and premises are more particularly set forth and described in the said Indenture

Now these presents doth Witness that I the said Joseph Barton Tracy aforesaid as grantor in said Indenture for and in consideration of the sum of Two hundred pounds of good and lawful money of the Province aforesaid to me in hand paid by the said Luther Drumbull the other joint grantor mentioned in said Indenture at or before the executing and delivery of these presents the receipt whereof is hereby granted and confessed, Have remised Released surrendered, assigned, transferred Quitclaimed and forever Relinquished and by these presents do for ever my Executors and administrators freely and absolutely Remise Release Surrender Quitclaim assign Transfer and Confirm unto the said Luther Drumbull his heirs Executors administrators and assigns all the Estate Right Title interest benefit trust claim and demand whatsoever which I the said Joseph Barton Tracy my heirs Executors and administrators, now shall or may have or claim of in or to the said premises or of or in any sum or sums of money or other matter or thing whatsoever in the said Indenture of Bargain and Sale contained mentioned and expressed; so that neither I the said Joseph Barton Tracy my Executors or administrators at any time hereafter shall or will claim Challenge or demand any interest property benefit or other than in any manner whatsoever by Reason or means of the said Indenture or any covenant therein contained; but thereof and therefrom and of and from all actions suits and demands which I my Executors or administrators may have concerning the same shall be forever barred by these presents - In Witness whereof

the parties to these presents have herewith set their hand and seals the fourth day
of January in the year of our Lord one thousand eight hundred and thirty six

Which said Indenture as to the Execution thereof by the said Joseph Barton Tracy
and the said Luther Lumbell the parties in said Indenture is Witnessed by Ebenezer
Colburn Griffin of the Township District and Province aforesaid Esq. and Levi Hawk
of the same place Millwright (Levi Hawk's name is the first subscriber) and the
memorial thereof is hereby required to be Registered by the said Joseph Barton Tracy the
Grantor therein named

In witness whereof I have herewith set my hand and seal
the eighth day of May in the year of our Lord one thousand eight hundred
and thirty

Signed Sealed and Executed
in presence of —
Levi Hawk
Ebenezer & Griffin

Joseph B. Tracy

356
Hallowell
Me. 356

356
Joseph B. Tracy

Luther Lumbell

Registered the

22d March 1842. at 9

which you return the

ack. of Levi Hawk.

in Book No. 4th. 455.

No. of acknowledgment 356.

certified by

The Recorder
Rye

1. A Memorial to be Registered pursuant to the Statute in such case made and provided of an Indenture of Mortgage and Sale made the twelfth day of September in the year of our Lord one thousand eight hundred and thirty nine made between Luther Turnbull junior of the Township of Shelburne East in the District of Gore and Province of Upper Canada yeoman of the one part and Henry Ferguson Graham of the Township, District and Province aforesaid Yeoman, and William Stock of the Township District and Province aforesaid yeoman of the other part as Tenants in Common and not as Joint Tenants - Whereby the said Luther Turnbull junior for and in consideration of the sum of One hundred and fifty pounds lawful money of the Province of Upper Canada in hand paid by the said Henry Ferguson Graham and William Stock the Receipt whereof is acknowledged, did give, grant, bargain, sell, assign, release, transfer convey and confirm unto the said Henry Ferguson Graham and William Stock as Tenants in Common and not as Joint Tenants their heirs and assigns, Forever, All and singular that certain parcel or tract of land and premises situate lying and being in the Township of Shelburne East in the County of Halton in the District of Gore and in the Province of Upper Canada - Being composed of a part of lot number seven in the lot or concession of the Township of Shelburne East of four acres containing by Admeasurement five acres be the same more or less - Which certain parcel or tract of land and premises is bounded and bounded or may be otherwise described and known as follows - that is to say - Commencing in front of said concession Ten Chains and fifty links from the South East Angle of said lot - Thence South eight Degrees West two Chains and thirty three links to a post - Thence South one Degree West two Chains thirty nine links - Thence North seventy seven Degrees and thirty minutes West one Chain and fifty links to the creek - Thence North seventy six Degrees and fifteen minutes West four Chains and ninety seven links to a post - Thence South ten Degrees East four Chains and thirty three links to a post - Thence South twelve Degrees West two Chains and seventy one links to a post - Thence to the front of said concession Three Chains from the South West angle of said lot - Thence South forty five Degrees East Nine Chains and fifty links more or less to the place of Beginning - To Have and To Hold with the privilege and appurtenances thereof, freed and discharged from all incumbrances whatsoever save and except the reservation and conditions expressed in the original Grant thereof from the Crown and the further Conditions and provisions in the said Indenture written; which are fully as follows - that is to say Upon Condition never that they the said Henry Ferguson Graham and William Stock their and each of their heirs and assigns forever shall duly observe, all the Conditions and Reservations contained in the said Indenture bearing date the twelfth day of March in the year of our Lord one thousand eight hundred and thirty seven in which said Indenture the lands and premises hereinbefore described were conveyed by Ebenezer Colburn Griffin Esq. of the Township District and Province aforesaid to the said Luther Turnbull junior and one Joseph Barton Tracy of the same place Millwright as Tenants in Common and which said Indenture was therein declared to be null and void and forever to cease and be of no effect if the said Luther Turnbull junior and Joseph Barton Tracy or their or any of their heirs or assigns should at any time thereafter forever "build construct, or erect or cause or suffer or

a permit to be built constructed or erected on the said premises or any part thereof any Woolen Factory
or Mill Carding Machine nor any contrivance or Machinery for the Carding of wool plying, making, or
manufacturing of cloth or Woollen Stuffs without the Consent of the said Ebenezer Collier Griffin his heirs and
assigns in writing for that purpose under his or their hands and seals first had and obtained"
In which Indenture is a further Grant from the said Luther Lumbell Junior to the said Henry Ferguson
Cahoon and William Stock their heirs and assigns as aforesaid of all his right Title and privileges of and
concerning Certain Roads and Ways for the benefit and convenience of the premises therein conveyed - all
which are fully described in the said Indenture from the said Ebenezer Collier Griffin to the said Luther
Lumbell Junior and Joseph Benton Tracy.

And which said Indenture is witnessed by Levi Hawks and Thimmarick Benton
both of the Township District and Province aforesaid Millwrights and the Memorial
thereof is hereby required to be Registered by them the said Grantors therein named
Witness our hands and seals this Second day of March in
the year of our Lords one thousand eight hundred and forty Four

Signed and Sealed in Presence of

Per Hawk

Per Tracy

Henry F. Graham

William Stock

155
Holliston

475. 476. 477.
George C. Griffin & wife
(6) to

Alfred Brown - Edw

A. B. (6)

Registered the 11th day
of August 1811 at 9 o'clock
Ym upon the oath of Alfr.
and Brown Junior. in
book No. Folio 204. 205 and
and 206. - No. of Men. and
106. Antiquated by

Thos Percy
Register

(6)

County of Kenton, Ind.

I, Henry Henderson Justice of the City of Hamilton, do hereby certify that the

- 1st. That I have personally examined and seen the within Books and duplicates, thereof duly signed, sealed and certified by Alexander Brown, John L. Brown, Doctor John C. Brown and also by the undersigned with the parties thereto.
- 2nd. That said Books and duplicates were presented at the City of Hamilton.
- 3rd. That I know the said parties.
- 4th. That I am an authorized instrument to said Books and duplicates thereof.

Witness my hand at Hamilton in the County of Kenton this nineteenth day of October in the year of our Lord 1871

Henry H. Henderson.

Gen. Ryman
this 10 day of April.
A.D. 1873 at 11:45 AM.
East Hamber
\$70.75.
I certify that the within Instrument was duly entered and recorded in the City Office in the County of Kenton in the State of the Township of East Hamber at eleven o'clock seven minutes of the twenty sixth day of April A.D. 1873.
John H. Spencer.

Wm. H. East Hamber.
Don.
Wm. H. East Hamber.
George Ryman.
Registration.

\$2.00 paid Geo. Ryman

This Indenture made in plain and the
fourteenth day of October in the year of our Lord one thousand
eight hundred and six. at the presence of the ad-
verses part for me of the same place. Robert
de lauder Dean of the Township of West Ham
Houlbeck and one John Brown of the same place. Seamen
merchant. Of the first part: and George Reynal of the
same place. Houlbeck and. Of the second part: and
Isaacman A. Brown of the same place, and Phoebe
Ann Brown his wife. Cometh Phoebe
Brown of the third part.

Whereas under and by virtue of an Indenture by
way of Marriage Settlement dated the twenty eighth
day of November one thousand eight hundred and six
for and made between Isaacman A. Brown
of the village of Watford, of the first part: the said Phoebe
Ann Brown. of the second part: and the said
parties hereto of the first part: of the third part: the
lands and premises therein after mentioned were
conveyed to the said parties hereto of the first part -
their heirs and assigns upon the several Trusts and
for the several uses therein contained.

And whereas among the Trusts in said
Settlement contained was one to the effect following.
That it should and might be lawful to and for the
parties hereto of the first and second parts by any writing
or writings attested by one or more credible witnesses
to direct the said parties hereto of the third part to sell
and dispose of the lands and premises therein
described and that it should and might be lawful
for the said parties hereto of the third part their heirs
and assigns and they were authorized to make
such absolute sale or sales of the said lands and
premises as the said parties hereto of the first
and second parts should in writing attested as
aforesaid direct and appoint.

And whereas the said parties of the first part by
and with the direction request and appointment
of the said parties of the third part signified by their
executing these presents. have agreed to sell by
way of exchange to the said party of the second part -
their heirs and assigns the lands and premises
therein after described and to receive in full thereof
by such like direction, and in exchange thereof, the
lands and premises mentioned in a certain

This Indenture made in plain words the
fourteenth day of October in the year 1701. I send one thousand
eight hundred and 200. to one in presence of the ad-
joining sheet for me of Banbury and; Robert
Alexander Brown of the Township of East Hamphors
Houlbeaud, and John Brown of the same place. Seamen
merchant, of the first part; and George Reynal of the
same place, Houlbeaud, of the second part; and
Socomen A. Brown, of the same place, and Flora
Ann Brown, his wife, formerly Flora Anne
Brown of the third part.

Whereas under and by virtue of an Indenture, by
way of marriage settlement dated the twenty eighth
day of November one thousand eight hundred and
four and made between Socomen A. Brown
of the village of Watford, of the first part; the said Flora
Ann Brown, of the second part; and the said
parties hereto of the first part; of the third part; the
lands and premises hereinafter mentioned were
conveyed to the said parties hereto of the first part -
their heirs and assigns upon the several Trusts and
for the several uses therein contained.

And whereas among the Trusts in said
settlement contained was one to the effect following.
That it should and might be lawful to and for the
parties hereto of the first and second parts by any writing
or writings attested by one or more credible witnesses,
to direct the said parties hereto of the third part to sell
and dispose of the lands and premises therein
described and that it should and might be lawful
for the said parties hereto of the third part their heirs
and assigns and they were authorized to make
such absolute sale or sales of the said lands and
premises as the said parties hereto of the first
and second parts should in writing attested as
before said direct and appoint.

And whereas the said parties of the first part by
and with the direction request and appointment
of the said parties of the third part signified by their
executing these presents, have agreed to sell by
way of exchange to the said party of the second part -
his heirs and assigns the lands and premises
hereinafter described and to receive in lieu thereof
by such like direction, and in exchange therefor, the
lands and premises mentioned in a certain

Indenture of Bargain and Sale from the said party
of the second part and his wife to the said parties
of the first part.

And whereas a realisation of the respective
properties has been duly made and the value of the
property proposed to be given in exchange by the
said party of the second part has been found to be
in excess of the value of the lands hereafter mentioned
so that it is desirable for the interests of the said
parties of the third part that said exchange should
be made.

Now this Indenture ^{with witness} that the said parties of the
first part in consideration of the premises and
in furtherance of the powers vested in them and
at the request and by the direction of the said parties
of the third part signified by them executing these
premises presents and of the sum of five shillings
to each of them in hand well and truly paid at and
before the sealing and delivery hereof the receipt
whereof is hereby acknowledged Have granted
bargained and sold and by these presents do
grant bargain and sell unto the said party of
the second part his heirs and assigns for ever
all and singular as those certain parcels or tracts
of land and premises situate in the village of
Wheatstone in the Township of East Chatham and
more particularly described as being part of Park
lot number fourteen and as commencing at a post
placed at the distance of two chains and thirty one
links and on a course North forty four degrees twenty
one minutes East from a post on the East line of Mill Street
and being at the North West angle of lands owned
by one Philp and ten chains and thirty five links from
the intersection of the North side of Grand Street with
the East side of Mill Street, Thence North forty four
degrees twenty one minutes East four chains and
seventy five links to a post set on the East side of the creek
at high water mark, Thence parallel to Mill Street
on a course South forty five degrees East one chain
eighty four links more or less to a post: Thence South
forty four degrees twenty one minutes West four
chains seventy five links more or less to a post
set at the South East angle of land owned by said Philp
Thence North forty five degrees West and parallel
to Mill Street one chain eighty four links to the post

of beginning. Commencing by a measurement three
rods and then to the same more or
less. Revening mill race and water, w.a., leading
to the mill corner by the said 15 rods to the
said stone house. also

Part of lot number one. being in the third concessions
of the Township of East-Blondino of records and
known and described as the greater of all used
fronting on Mill Street in the said village of Waterdown
the greatest to Hannah Ringer by the late John
Lamont deceased, registered in the Magistrate's
Surrogate Court of the County of Middlesex on the ninth
day of October. one thousand eight hundred and
eighty one. also all and singular what certain parcel
or tract of lands situate in the said village of
Waterdown and described as follows. that is to
say. Commencing at a post-planted on the easterly
margin of Mill Street in said village and at the distance
of seven chains sixty eight links north west from the
north side of Dundas Street, being the corner of the
private road leading to the first mill. Thence
following the center of the private road aforesaid
on a course north fifty four degrees thirty minutes last-
seven chains fifty links more or less to the pole rock
the westerly corner of the cemetery. Thence
following the westerly limits of the cemetery north
westerly two chains ten links more or less to the west
angle of the cemetery. Thence north forty four degrees
twenty minutes last two chains eighty seven links
more or less to the north angle of the cemetery. Thence
north forty five degrees west one chain sixteen links
to which one chain eighty four links of the land
formerly belonging to one Henry D. Brachman. Thence
south forty four degrees thirty minutes west parallel
with said land ten chains fifty links more or less
to the intersection of the westerly limits of Mill Street
Thence south forty five degrees last one chain
thirty three links to the place of beginning together
with the use of the mill race leading to the mill
on said described land for the use of said mill.

Receiving therefrom and thereunto the following
described portion of said premises decreed by the
court of Chancery to belong to one Richard A. C. C.
that is to say. being part of said lot number one, fronting
in the survey of A. H. C. and according to the

plan made by Henry Houlbush, P. & S. and being part
 of a number of said third conveyances of said
 Township, commencing at a point placed at high
 water mark on the East side of a creek at the distance
 of four chains fifty eight links and on a course North
 forty four degrees twenty minutes East from a post
 on the East side of Mill Shoals being at the South
 West angle of land owned by one Phelps and
 17 right chains and fifty one links from the intersection of the
 North side of Mandat Street with the East side of
 Mill Street, Thence North forty four degrees twenty
 minutes East three chains ninety two links more to
 a post: Thence South forty five degrees East
 one chain sixteen links to a post: Thence South forty five
 degrees twenty minutes West two chains eighty seven
 links to a post: Thence South forty five degrees East
 two chains ten links to a post - all on the West side
 of the cemetery. Thence South fifty four degrees thirty
 111 minutes West one chain fifty links to a post: at high
 water mark on the East side of said creek. Thence on
 a North West by course along said high water mark
 on the East side of said creek two chains sixty four
 links to the place of beginning containing two
 rods twenty eight and one half perches more or less
 To Have and To Hold the same and every
 part thereof unto and to the use of the said party of
 the Second part his heirs and assigns for ever.
 And the said parties of the first part covenant
 with the said party of the Second part that they
 have done no act to encroach on said land
 and that they will execute such further assurances
 of the same as may be required.
 And the said parties of the third part hereby do
 authorize and require the said parties of the first
 part to execute these presents for the purposes aforesaid.
 In witness whereof the parties hereto have
 hereunto set their hands and seals the day and
 year first above said

Signed Sealed and Delivered
 in presence of
 Henry R. Badger.

attest Henry

John Green

Almon

John Green

Handwritten:
Holland
707. 708.
Holland
Holland

Thos & Lucy
Payton.

The British V. L. John Gurney
 having challenged to write with that name
 to wit. I signed and did see the document
 signed of Dargens and Sale
 before to in the document mentioned date
 signed and dated by the Mission named
 Samuel Hove, and also that above the document
 Alexander Garden.
 Document duly signed and dated by the
 Mission named Alexander Garden.
 for the printing thereof. And that I have been
 subscribing thereto to the said Dargens
 and Sale and also to the Mission mentioned
 above before the then
 Clerk, George Campbell
 in the year 1846.
 The Secretary
 of the Mission.

A Memorial,

to be Registered pursuant to the Statute in such case made and provided, of an

Indenture of Bargain and Sale, made the eighteenth day of September in the year of our Lord one thousand eight hundred and forty one

BETWEEN Samuel Hand late of the Village of Watudown in the District of Gore
and Provier of Canada Tailor of the first part and Alexander Gordon of the
Village District and Provier of the second part - - -

Whereby the said party of the First part, for and in consideration of the sum of Twenty pounds
Lawful money of the Province of Canada, to him in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, has given, granted, bargained,
sold, aliened, assigned, released, enfeoffed, conveyed, and confirmed, unto the said party of the second part, his heirs and assigns, Forever, All and Singular, that
certain parcel or tract of Land and premises, situate, lying and being in the

certain parcel of lands and premises situate lying and being in the Towns hip of Tilambro,
in the County of Shelton in the District and Province aforesaid - being composed of a part
to number Seven in the third Concession of said Towns hip containing by Admeasurement
about of an acre and is Bounded and bounded as may be otherwise known as
follows - that is to say - Commencing where a post has been planted on the North
side of Dundas Street and Nine chains and fifty links from the Western limits or line
of said Lot (which post forms the North East angle of Puttick's Glenmoyne Village
) thence along Dundas Street North forty one Degrees East four perches - thence
thirty five Degrees West ten perches - thence South forty one Degrees West four perches
to intersect Glenmoyne's Lot aforesaid - thence South forty five Degrees East ten
or more or less to the place of Beginning -

Together with all and singular, the houses, out houses, buildings, woods, ways, waters, water courses, easements, privileges, profits, hereditaments, and appurtenances whatsoever,
or the said parcel or tract of Land, tenements, hereditaments and premises, belonging or in any wise appertaining, or therewith used and enjoyed, or known or taken as a part or
a part thereof, or as belonging thereto, to any part thereof, and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof, and also all the estate, right,
title, interest, trust, claim, property, and demand, both at law and equity, of him the said party of the first part, of, in, to, or out of the said lands, tenements, hereditaments, and
reversion, and every part thereof - **To Have and to Hold** the same land, tenements and hereditaments, and all and singular, other, the premises thereby conveyed, or men-
tioned, or intended so to be, with their and every of their appurtenances unto the said party of the second part, his heirs and assigns, to the sole and only use of the said party
the second part, his heirs and assigns, Forever, subject nevertheless, to the reservations, limitations, and conditions, expressed in the original grant from the Crown, and
which said Indenture is Witnessed by John Graham of said Village Carpenter and John Gordon
of said Village Shoemaker

and this Memorial thereof is hereby required to be Registered by me, the said party of the second part therein named.

Witness my Hand and Seal this eighteenth day of September in the year of our Lord one thousand eight hundred and forty one
Signed and Sealed in presence of

John Graham
John Gordon

Alexander Gordon

1
A Memorial to be registered pursuant to the Statute in such case, made and provided of the probate of the last Will and Testament of Ebenezer Cullen Griffin late of the Township of East-
Sunderborough in the Gore District Esquire deceased,
Written in words following. In the name of God
Amey J. Ebenezer Cullen Griffin of the Village of
Waterdown District of Gore Province of Canada,
Esquire, Considering the uncertainty of this life,
and being of sound and perfect mind and Me-
mory, blessed be Almighty God for the same, do
make and publish, this my last Will and Testa-

ment in manner and form following that is
to say, after the payment of all my legal debts,
I give and bequeath, to my two Eldest sons
James Kent Griffin and George Douglas Griffin
the sum of five pounds Lawful Currency of the
Province of ~~Massachusetts~~ each. To my beloved Wife,
Eliza Griffin all that parcel, or tract of land, and
premises lying on the north east side of the
Grind Stone Creek, which I own and use as a
farm and timber plot. Excepting and reserv-
ing that part now used and occupied for the
purposes of my Woollen Factory and any portion
needed for the purposes of a race way for the
said factory, and also Excepting and reserving
a small House and Blacksmith Shop thereon.
Erected as long as she remains my lawful widow.
I also give and bequeath, to my beloved Wife
my Dwelling House and furniture with the
lot surveyed with it in my last survey of Village
lots, to be hers and assigns and her heirs
for ever. I give and bequeath also to my re-
maining Children William Smith Griffin
Egerton Ryerson Griffin, Eleanor Rebecca Griffin

Franklin Metcalf Griffin, Mutton Ebenezer Griffin,
Eliza Augusta Griffin, and Henry Augustus Griffin,
all my personal and real Estate, as soon as they sever-
ally come to the age of Twenty one years, I also give
and bequeathe to my children last named, ^{my} Farm
and Timber Plot, first bequeathed to my beloved
Wife, to be sold and equally divided among them
after the demise of my beloved wife, I also give
and bequeathe to my Executors hereinafter men-
tioned all my Estate lying on the Grand River,
near Brantford. In case of the death of any one
of my above named Children before they arrive
at the age of twenty one years, and have no heirs,
I give and bequeathe their equal share of my
said personal and real Estate to be equally
divided among the whole of my remaining Chil-
dren or their respective heirs. I do likewise
Empower and authorize my Executors herein-
after mentioned to sell, convey, and deed any
of my lands for the settlement of my business
and the fulfilling of this my last Will and
Testament, and lastly, I do hereby appoint
James Kent Griffin my Eldest son of the Village
District and Province aforesaid Yeoman,
Eliza Griffin my beloved Wife and Russel Smith
of the District of Brock, and Province afore-
said to be my sole Executors of this my last Will
and Testament in witness whereof I hereunto set
my hand and seal the fourteenth day of October
in the Year of our Lord one thousand Eight hun-
dred and forty seven, signed sealed published
and delivered by the above named Ebenezer
Culver Griffin to be his last Will and Testa-
ment in the presence of us who have here-
unto subscribed our names as Witnesses,

in the presence of the Testator,
Witness

(Signed)

William I. A. Case

Absalom Griffin

Benjamin Reynolds

Witnesses,

(Signed)

Cheney Culver Griffin (I.S.)

And lastly I authorize the immediate settlement of all notes and accounts due, and to be applied to the liquidation of my legal debts, whereas my son James Kent Griffin and Thomas Syke jointly have obtained an interest in my factory, to the amount they have already paid or is to pay, immediately to the amount of one equitable sixth of my Factory, which Factory was valued before the new Machinery was put in at one thousand pounds, Curr. In consideration whereof I give and bequeath the one sixth of said Factory to Thomas Syke and James Kent Griffin my son of Village District and Province aforesaid in freehold, Witness (Signed)

William I. A. Case

Absalom Griffin

Benjamin Reynolds

(Signed)

Cheney Culver Griffin (I.S.)

Which said Will and Testament is Witnessed by William I. A. Case, Physician, of the City of Hamilton District of Gore and Province of Canada, Absalom Griffin of the Village of Waindown District and Province aforesaid, Miller and Benjamin Reynolds, of the same place, Merchant.

and this Memorial thereof is hereby required to be registered by me one of the Deputies mentioned in the said Will and Testament.

Witness my hand and seal the Twenty first day of September in the year of our Lord one thousand Eight hundred and forty eight.

Witnesses

{ Absalom Griffin

{ R. N. Hopkins

{ W. S. Griffin