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A study of the parishes of Rhiw and Llanfaelrhys 1782-1947.

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M. J. Griffith

This study examines the impact of change in Rhiw and Llanfaelrhys between 1782 and 1947 with particular respect to settlement pattern and land utilisation. Anticipated characteristics from this part of highland rural Britain requiring confirmation included dispersed settlement, interdependent agrarian communities, pastoral farming with subsistent crop growing, poor overland communications and intermittent mineral extraction. Expectations included the slow diffusion of ideas with fewer, more gradual, less effective changes occurring later than in lowland Britain. Certain additional characteristics could be anticipated due to the Welsh context.

Considerable evidence of a varied nature, including previously unpublished material has been examined. The period studied has been subdivided into five phases of approximately thirty years duration. In each phase the themes of continuity and change are examined with particular reference to settlement, economic affairs and social issues.

The evidence indicates that the dispersed settlement pattern remained a constant feature. Throughout the study period agriculture formed the basis of the local economy. The stability given by the persistence in the siting of farmhouses, of land holdings and land ownership patterns and by the gradual acceptance of appropriate innovation underpinned other fluctuations in the economy. The Enclosure Acts heralded changes in the distribution of cottages and in the occupations and social status of their inhabitants.

The impact of manganese mining fluctuated. In boom periods the influx of Englishmen brought new influences and increased earnings eased the cottagers' poverty. Later tourism became a secondary source of income. Despite these external forces, the anticipated influence of religion, education, the Welsh language and culture combined to resist anglicisation.

Change occurred but was absorbed within the economic and cultural background. This study illustrates that the concept of continuity was within the parishes of Rhiw and Llanfaelrhys, more influential between 1782 and 1947 than that of change.

A STUDY OF THE PARISHES OF RHIW AND LLANFAELRHYS: 1782-1947.

MARGARET JANE GRIFFITH

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF PHILOSOPHY (M. PHIL.) AWARDED BY
THE COUNCIL FOR ACADEMIC AWARDS.

SHEFFIELD CITY POLYTECHNIC
DEPARTMENT OF RECREATIONAL
AND ENVIRONMENTAL STUDIES

MARCH 1985



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DECLARATION

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ABSTRACT.

This study examines the impact of change in Rhiw and Llanfaelrhys between 1782 and 1947 with particular respect to settlement pattern and land utilisation. Anticipated characteristics from this part of highland rural Britain requiring confirmation included dispersed settlement, interdependent agrarian communities, pastoral farming with subsistent crop growing, poor overland communications and intermittent mineral extraction. Expectations included the slow diffusion of ideas with fewer, more gradual, less effective changes occurring later than in lowland Britain. Certain additional characteristics could be anticipated due to the Welsh context.

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ACKNOWLEDGEMENTS.

I would like to take this opportunity to acknowledge the help which I have received from so many people whilst researching and writing this thesis. First I wish to thank my tutor, Dr. Ralph Hebden, Head of the Department of Recreational and Environmental Studies at Sheffield City Polytechnic for all the advice, guidance and support given over the past three years for, without that, there would have been no thesis. Secondly my thanks go to Mr. Bryn Parry, Gwynedd County Archivist, for his comments on the Welsh context of this research. Next I wish to record my thanks to the archivists and librarians of the Caernarvon and Dolgellau offices of the Gwynedd Archives Service, the Manuscript Department at the University College of North Wales, Bangor and at the National Library of Wales, Aberystwyth, together with the officers at St. Fagans Folk Museum and the National Museum of Wales, Cardiff for all their assistance over the years. I wish to thank my family for their encouragement and for the use of family papers. I also place on record my thanks to the many people living in, near or having connections with the study area for their help and interest as I have gathered information locally. Finally, I wish to express my thanks to my typist and cartographer for their patient work deciphering my script. Despite this support I acknowledge my responsibility for any errors.

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TABLE OF ABBREVIATIONS.

Ag. Hist. Rev.	Agricultural History Review
Arch. Camb.	Archaeologia Cambrensis
B.B.C.S.	Bulletin of the Board of Celtic Studies
G.A.S.	Gwynedd Archives Service
Geol. Jnl.	Geological Journal
H.M.S.O.	His/Her Majesty's Stationary Office
Jnl. Ag. Soc. U.C.W. Aber.	Journal of the Agricultural Society, University College of Wales, Aberystwyth
Jnl. Hist. Geog.	Journal of Historical Geography
Jnl. Mer. Hist & Rec. Soc.	Journal of the Merioneth Historical and Recording Society
J.R.A.S.E.	Journal of the Royal Agricultural Society of England
Local Hist.	The Local Historian
N.L.W.	National Library of Wales
Nat. Lib. Wales Jnl.	National Library of Wales Journal
O.S.	Ordnance Survey
Pers. Comm.	Personal Communication
P.P.	Parliamentary Papers
Prehist. Soc.	The Prehistoric Society
Private Poss.	Private Possession
P.R.O.	Public Records Office
Proc. Geol. Assoc.	Proceedings of the Geologists Association
Proc. Yorks. Geol. Soc.	Proceedings of the Yorkshire Geologists Society
Quart. Jnl. Geol. Soc.	Quarterly Journal of the Geological Society of London
R.C.A.M.	Royal Commission on Ancient and Historical Monuments

T.C.H.S.	Transactions of the Caernaryonshire Historical Society
Trans. Inst. Brit. Geog.	Institute of British Geographers Transactions
Trans. I.M.M.	Transactions of the Institute of Mining and Metallurgy
Trans. Roy. Hist. Soc.	Transactions of the Royal Historical Society
Trans. Roy. Soc. Edin.	Transactions of the Royal Society, Edinburgh
Welsh Hist. Rev.	Welsh History Review
Welsh Jnl. Ag.	Welsh Journal of Agriculture
U.C.N.W.	University College of North Wales, Bangor
Univ. Wales.	University of Wales
Unpubl.	Unpublished

INTRODUCTION

In this study of two rural parishes in the Llŷn peninsula of north west Wales, the emphasis is upon the impact of varying degrees of change in the settlement pattern and the land utilisation in relation to the local community (See Map 1.1.). The study area exhibits certain characteristics which need to be considered in the context of the wide range of both former and present-day patterns of rural settlement and land use found across Britain. Several zones have been identified by various authors, each being characterised by recognisable features such as the predominance of nucleated villages, hamlets or dispersed homesteads (1). The Llŷn peninsula was placed by Thorpe within the category which has a close to medium density of scattered homesteads with occasional villages and market towns (2). This is but one of a variety of models which have been suggested to categorise regional settlement contrasts within Britain. In the highland/lowland concept presented by Fox, the eastern edge of paleozoic outcrops formed the boundary between these two settlement zones (3). This concept is recognised now as being too simplistic and has been elaborated to take into account the interacting elements of those physical, economic and cultural factors which, operating over time, produce particular kinds of settlement patterns and land uses (4).

Regional patterns of land use are related to a range of physical factors. The combination of altitude, rainfall and the length of the growing season results in contrasting regional climatic conditions which correlate closely to contrasts between nucleated and dispersed settlement forms (5). The Llŷn peninsula is less harshly affected by these physical factors than most of

North Wales. (See Maps 1.5. I-VI). The variety of relief, rocks and soils together with the climatic differences resulting from altitude, exposure and location superimposes constraints on the character of Llŷn farming which in turn affects the settlement pattern (6).

The physical environment determined former economic patterns, many of which became integrated with the historic and cultural factors which then affect later development. These influences are shown in the farming regions which have been identified in England and Wales by Thirsk and Emery (7). The Llŷn peninsula is within the "mixed farming lowland" category. However the relatively high proportion of upland unenclosed at the end of the eighteenth century and the effect of overland isolation near the extremity of a mountain-locked peninsula are additional features of the physical and economic influences within the study area which might modify this categorisation.

In Wales, continuity of culture and language is said to be a basic and recurrent theme influencing the pattern of rural settlement (8). Four major cultural factors are recognised by Thomas as having contributed to the evolution of contemporary rural landscapes in Wales. These are the sub-divisions of pre-medieval tribal society, Anglo-Norman feudalism, the land enclosures of the eighteenth and early nineteenth century and the influences of the Industrial revolution (9). Within the study area these are closely interrelated as shown by the pre-medieval and monastic patterns of land division leading to opportunities for extensive upland enclosure which enabled the spread of squatter cottages and small-holdings whose viability was later assisted by work opportunities in the nearby mines. The Industrial revolution's influence through the

extraction, from these two rural parishes, of the vast majority of British Manganese ore, is however expected to be an influence for change rather than continuity.

Study of the interrelated effect of physical, economic and cultural factors over time highlights the problems within the concept of continuity and/or change (10). Continuity of territorial organisation and occupation, and the survival of population and language are probably more likely in districts such as the study area, and some evidence is presented to support this. Continuity of specific site occupation, of settlement pattern and land use is less likely when these aspects of a neighbourhood are continually modified to meet the changing social and economic factors such as population size and market forces. The combined effects of a growth in population, of squatter settlements, the opening of quarries or mines and the spreading influence of Methodism produced districts where apparently peripheral settlement areas and isolated chapels were part of a web of physical, economic and cultural factors which gave an underlying unity to the community not observable by focussing merely on the morphology of settlement, and which were also influences for change (11).

In this study aspects of the cultural influence of education and religion upon the rate of change and the development of the community are investigated as an important backcloth to the main themes of land use and settlement pattern. The potential to examine the effects of variations in farm size and tenure between a large compact estate-owned farm, a fragmented owner-occupied farm and a squatter smallholding exists but is not developed; rather the main themes of land use and settlement pattern are allowed to dominate. The investigation is not however kept too

narrow as the factors within the study area during the period 1782 to 1947 which are thought important to the processes maintaining continuity or assisting change could be very varied.

A wide range of evidence has therefore been studied and selection has taken place to illustrate the two main themes. This includes government-initiated surveys, reports and censuses, authoritative works on particular aspects or periods of time, estate papers and maps, and the recollections of many local people past and present. Previously unpublished material has been used, particularly concerning manganese mining and local social conditions, and considerable fieldwork has been undertaken. Appendix I contains a selection of photographic evidence and Appendix II enables identification of each site mentioned in the text.

The balance between the interacting components which constitute the situation in a given district changes over time as between varying degrees of innovation and stability. For this reason the period under review in this study is subdivided historically into phases of approximately thirty years and the salient variables are described and analysed phase by phase to demonstrate this varying relationship.

This study aims therefore to investigate in detail the impact of change in the settlement pattern and the land utilisation in relation to the local community in two Welsh rural parishes and, as such, may contribute to the continuing debate amongst historical geographers which focusses upon the balance between continuity and change in settlement patterns (12).

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- (2) Thorpe, H. (1964) op. cit. pp. 360-1.
- (3) cf. Fox, C. (1952) The Personality of
Britain.
- (4) Roberts, B.K. (1977) op. cit. p.17.
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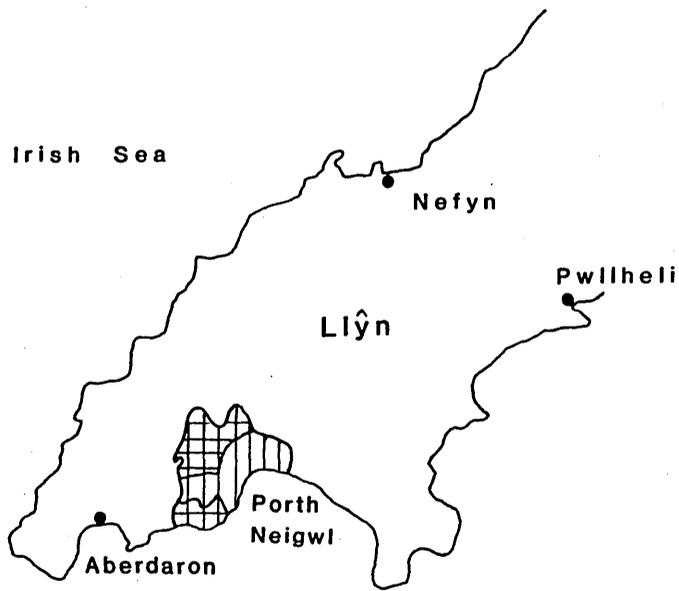
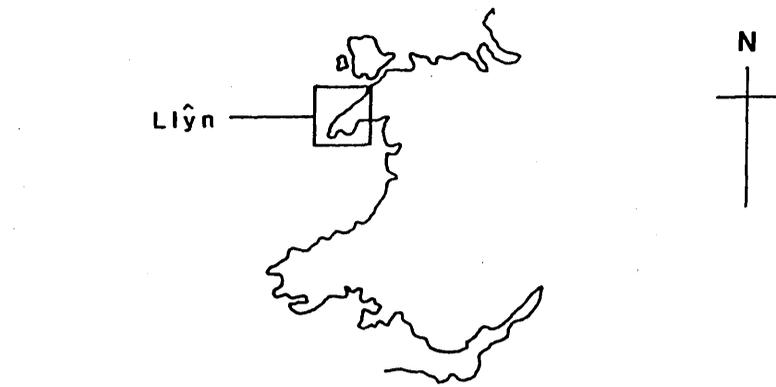
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MAP 1.1: LOCATION OF THE STUDY AREA

WALES




Bardsey
Island

Cardigan Bay

KEY



Parish of Rhiw



Parish of Llanfaelrhys



Centres of population

CHAPTER ONE

ENVIRONMENTAL BACKGROUND AND EARLY SETTLEMENT

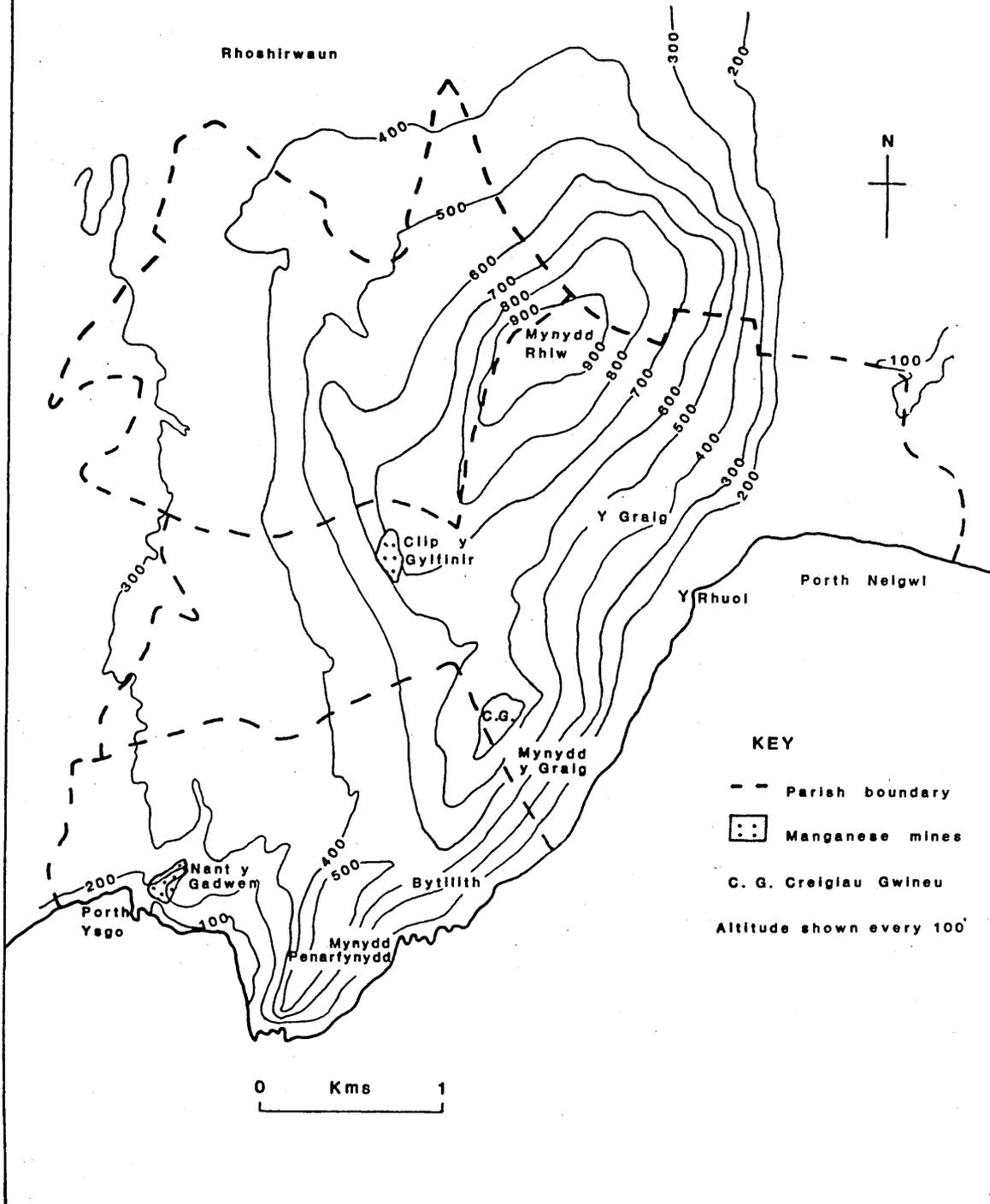
I. ENVIRONMENTAL BACKGROUND.

The natural environment of any district requires investigation and explanation if the effect of man upon it is to be analysed appropriately. The geological structures and the presence of glacial drift or other quaternary features greatly affect the relief, coastline, waterways and soil types within any area (1). The climatic factors of rainfall, wind, sunshine and temperature combine to determine optimum growth periods, vegetation cover, flora and fauna (2). Man, through observation, trial and error, and accumulated wisdom, has exploited certain features of the natural environment and has attempted to modify others in order to meet his basic needs and, if possible, provide a surplus for profit.

In this chapter the physical background of the area under review is studied in order to place the efforts of generations of men in their natural context.

The study area comprises the parishes of Rhiw and Llanfaelrhys which lie on the southern side of the remote Llyn peninsula of Gwynedd in North West Wales, about eight miles east of its tip. (See Map 1.1.). A major physical feature is a central ridge which runs North - South through the study area, culminating in the 975 foot high rugged outcrop of Mynydd Rhiw (See Map 1.2.). South of the main col in this central ridge the tor-like Creigiau Gwineu rises to 725 feet in the area of the rocky Mynydd Y Graig. Further to the south a smaller col at Bytilith separates Mynydd Y Graig from the flat topped 525 feet high headland

MAP 1.2: STUDY AREA: RELIEF AND MAJOR PHYSICAL FEATURES



of Mynydd Penarfynydd. To the east of the central ridge the land falls away steeply to a plain of glacial drift at around 150 feet above sea level, whereas to the west and north the transition to an undulating drift covered lowland lying at around 300 feet is less sudden (3) (See Map 1.2. and Appendix I. Nos. 1, 2 and 6.).

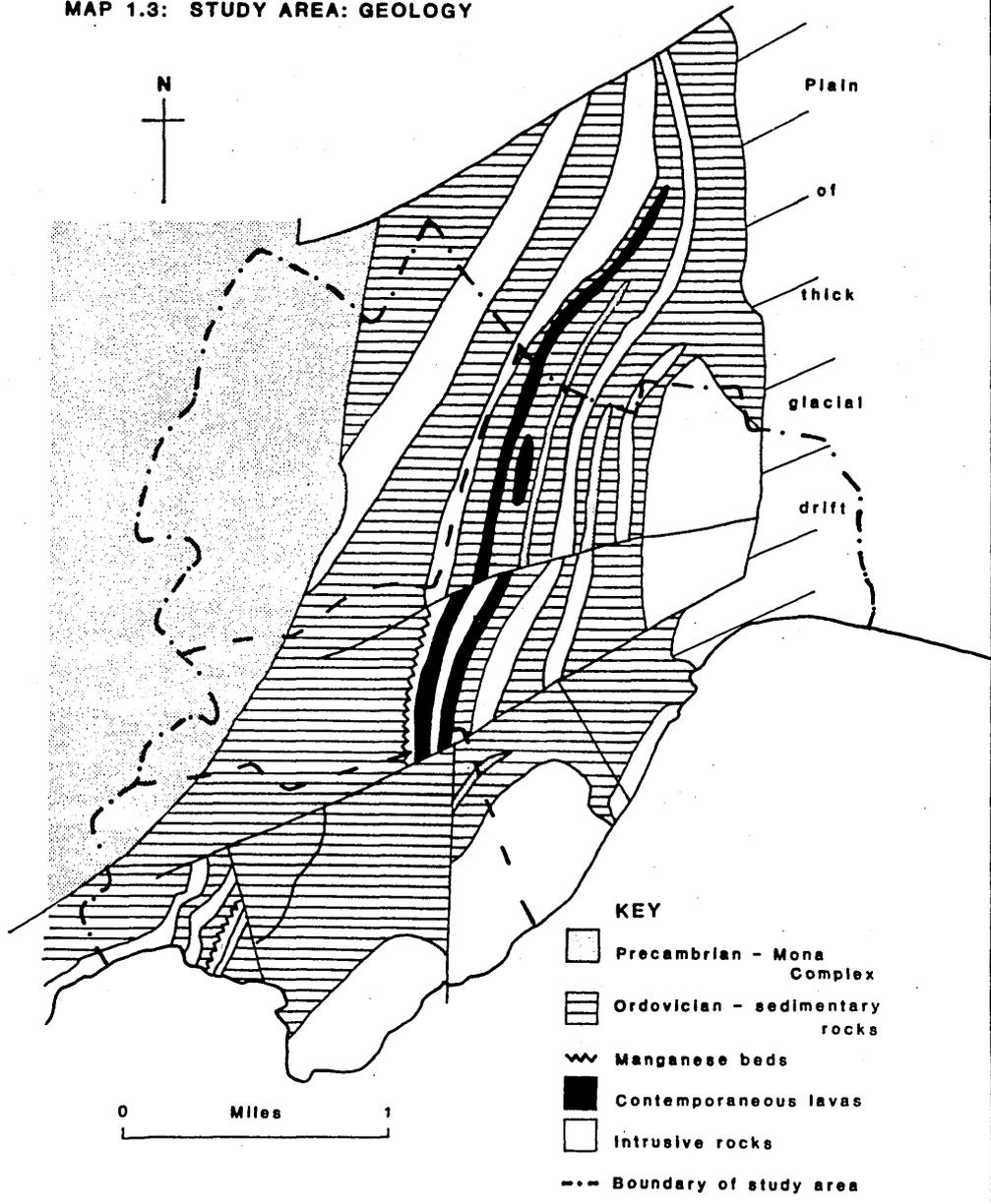
The sea marks the southern boundary of the study area. The coast line is varied with the westerly rocky cove of Porth Ysgo near the mouth of the gorge of Nant Y Gadwen, and the easterly manmade boulder cleared harbour of Y Rhuol and the treacherous sands and high clay cliffs of Porth Neigwl offering the only landing sites. Between these the rocky headlands form high rugged cliffs (4) (See Map 1.2. & Appendix I. Nos. 8 & 14).

This landscape is a product of the underlying geology, modified by the considerable cover of glacial material and combining with a variety in altitude, aspect, gradient of slope and soils to produce a highly varied terrain.

The geological structure of the Llyn peninsula is complex (5) (See Map 1.3.). In outline, the whole area coincides with a downfold of Ordovician rocks compressed between two upfolded belts of older Precambrian rocks in the north and west and Cambrian rocks in the south and east (6). These Ordovician rocks are in large part igneous in origin, relatively resistant to denudation and therefore form the highest ground (cf. Mynydd Rhiw.). A tract of Precambrian rock occurs in Llyn between Nefyn and Bardsey Island, and its eastern boundary lies partly within the study area (7) (See Map 1.3.).

The Ordovician exposures within Rhiw and Llanfaelrhys parishes are of the Arenig and Llanvirn Series and include sedimentary rocks and both extrusive and intrusive volcanic products (8). All three rock types have greatly affected developments in the study area. The sedimentary Hirundo zone of the Arenig Series contains manganese ore (9). These much disturbed beds outcrop in two localities, i.e. Nant Y Gadwen

MAP 1.3: STUDY AREA: GEOLOGY



and to the west of Clip Y Gylfinir (See Map 1.2.). The multiple effect of manganese mining upon the community is described in later chapters. Alternating with these less weather resistant deposits of shales, grits and mudstones is a variety of acid and basic extrusive igneous material part of which forms the large basic masses of Mynydd Penarfynydd, Creigiau Gwineu and Mynydd Y Graig (10).

The intrusive sills east and west of Porth Ysgo overlie sedimentary rocks and may have afforded the resistance required to allow the differential coastal erosion and thus the resultant cove with its later strategic importance (11). (See Appendix I. Nos. 13 & 14).

Differential aerial erosion shown by the north-east / south-west ridges of volcanic rock on Mynydd Rhiw provide a variety of shelter from the elements for animals grazing at this altitude (12).

The columnar jointing in much of this volcanic material was a boon to those involved in the building of houses and field walls especially in the early nineteenth century (13). The exposures below Creigiau Gwineu were also used as a quarry, and Y Graig was another source of building stone (14).

The geological features of the district were much faulted, possibly due to the proximity of the boundary with the Precambrian Monian rocks. The effects of these earth movements include the formation of the fault across the central ridge in the position of the main col, and the mineralisation and disturbed formations of the manganese beds (15).

In Llyn the dominant product of the long continued erosion of the Tertiary era was a series of gently undulating dissected plateaux transecting indifferently rocks of all ages, above which stood the Monadnock hills including Mynydd Rhiw (16).

Whittow, in his geomorphological study of Llyn, notes examples of these planations within the study area (17). Many of these shelves

provide ideal situations for house sites (18).

The quaternary succession in Llŷn was complex and the resultant covering of drift over much of the study area has been one of the chief determinants of soil type, drainage and minor aspects of local relief. These have greatly affected settlement and land utilisation patterns since prehistoric times (19).

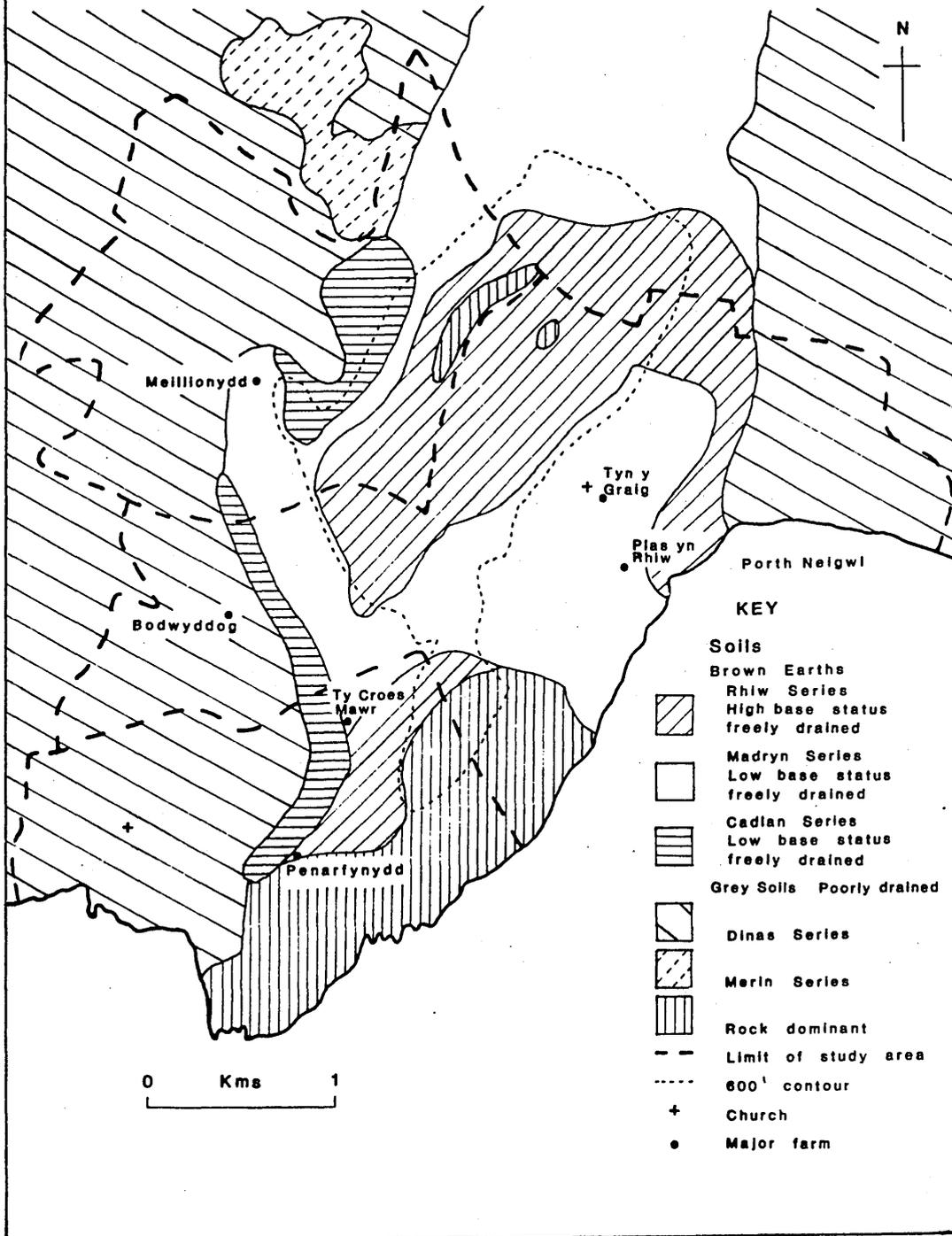
The main Irish Sea glaciation (Wolstonian) completely overran the Llŷn peninsula, deflecting the Welsh ice stream to the south (20). The whole of the study area would therefore have been engulfed by ice from the Irish Sea basin to the north, and this accounts for upland areas of drift and glacial striae (21).

During a later (Upper Devensian) Irish Sea glaciation it would appear that neither the Irish Sea nor the Welsh ice had the power to override areas of high land in south west Llŷn and the study area would therefore have been subjected to periglacial conditions (22). This may well account for the tor-like frost shattered scarp of Creigiau Gwineu and the scree slopes along parts of Mynydd Rhiw and Mynydd Y Graig (23). There is debate concerning the south western limits of the Devensian advance of the Irish Sea ice; it may have abutted against the western lower slopes of Mynydd Rhiw and have extended south to Porth Ysgo (24). The deep gorge of Nant Y Gadwen and some other local streams probably developed as glacial melt water channels, influencing later drainage patterns, and, in Nant Y Gadwen, exposing bedrock containing manganese ore (25).

Thus the whole study area had been covered at least once by glacial drift originating from the Irish Sea basin to the north. This northern ice had moved across the area from NNW to SSE depositing calcareous tills, sands, clays and gravels with many small erratics including flint (26).

This covering of glacial drift considerably modified both the relief

MAP 1.4: STUDY AREA: SOILS



and the soil types found within the study area. The formation of the soil of any area is dependent on the combination of the solid geology, superficial deposits and climatic conditions (27). Variations of soil type usually correlate closely with local agricultural practice in land utilisation and land management and thus indicate areas for potential development (28). Within the parishes of Rhiw and Llanfaelrhys the characteristics of the soils vary considerably (See Map 1.4.).

Either side of the central Mynydd Rhiw ridge the lowlands are covered by a deep mantle of glacial drift. This boulder clay contains material presumed to be of northern origin, including carboniferous chert, limestone and triassic minerals (29). These clays mainly comprise the soils of the Dinas series, a poorly drained non-calcareous gley, whilst there are some patches of the very poorly drained peaty gley of the Merin Series, in the north-west of the study area, bordering on the former wastes and frequently waterlogged commonland (30).

The characteristics of the soils of the upland ridge contrast strongly with those of the lowlands. The freely drained brown earths are known to frequently underlie areas of highest agricultural potential. In the study area these brown earths are represented along the upland ridge by the soils of the Rhiw, Madryn and Cadlan series (31). The parent material of the very fertile Rhiw series is the drift and basic igneous rock of much of the central upland ridge. It has been demonstrated that these doleritically derived soils carry twice as many sheep per acre than soils on Rhyolite under similar rainfall. Where it occurs with a deep profile, this is a most agriculturally attractive soil (32). However some parts of the Mynydd Rhiw ridge are rock dominant and no soil profile has been able to develop. (See Appendix I. Nos. 1 & 2).

The soil of much of the remainder of the central ridge is of the Madryn series, formed from the northern boulder clay drift with shales

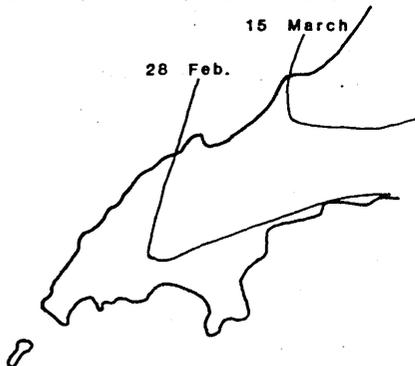
and igneous rocks from the underlying Ordovician rock. These form low base status, freely drained soils suitable for arable cultivation, as do the soils of the Cadlan Series which are formed from the Northern Boulder clay drift and which occur in ribbon-like stretches on the western flanks of Mynydd Rhiw just above the lowland with its gley soils (33). These lighter, better drained soils tend to warm up more quickly in spring and summer thus producing young grass earlier and, as freely drained loams, are usually suitable for cultivation. They are however liable to occasional seasonal drought (34).

The exposed western coastal situation of the study area results in the district benefitting from a relatively mild moist climate (35). (See Map 1.1). The prevailing westerly and south westerly winds are responsible for both the relatively mild winters and the average of 30 days a year with gales (36). Within the study area the proximity of the sea minimises the range of both diurnal and annual temperatures (37). The effect of altitude, aspect, the cooling effect of the wind on the exposed western slopes and the limited sunshine hours on the steep eastern slopes would cause marked but very local variations in duration and strength of sunshine and in temperature (38). The length of the frost free season also has a close correlation with altitude and affects the length of the growing season and thus agricultural activity (39). In Llyn the mildness beneficially affects plant growth in comparison with much of Wales (See Map 1.5.i,ii). The coasts of Caernarvonshire receive more sunshine and less cloud than the uplands (See Map 1.5.iii). The periods of low cloud over the upland of Mynydd Rhiw causes additional variations within the study area.

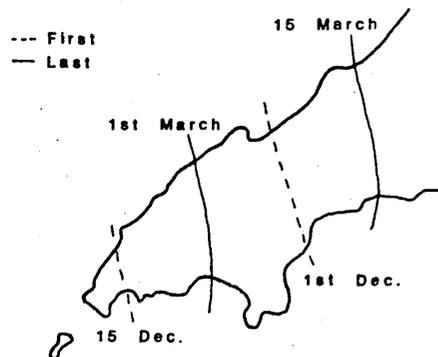
The passage of cyclonic storms and the moisture laden prevailing south westerlies drench the uplands of Snowdonia whereas the coastal lowlands of Llyn receive much lower rainfall totals (40). The upland

MAP 1.5: LLŶN: CLIMATIC CONDITIONS

(i) Mean dates for start of the growing season, 1911 - 1940

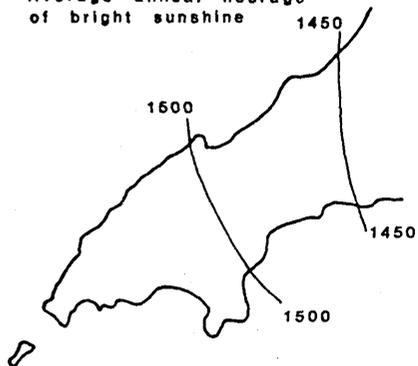


(ii) Mean dates for first and last air frosts, 1911 - 1940



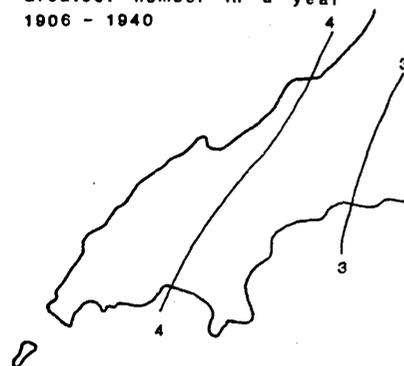
Source: W. Davies Wales in the Early Middle Ages

(iii) SUNSHINE
Average annual hourage of bright sunshine



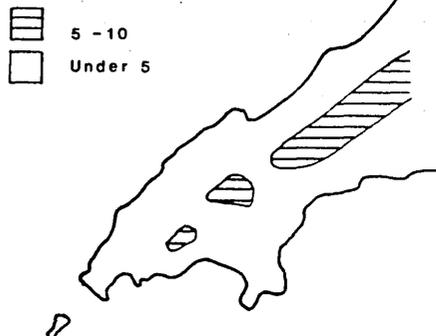
M.O. 572 1953 H.M.S.O.

(iv) ABSOLUTE DROUGHTS
Greatest number in a year 1906 - 1940



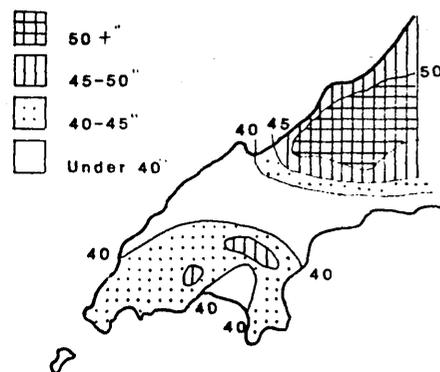
Source: E.G. Bowen Wales

(v) SNOW LYING
Annual average of mornings with snow lying, 1912 - 1938



Source: E.G. Bowen Wales

(vi) RAINFALL
Annual average rainfall in inches

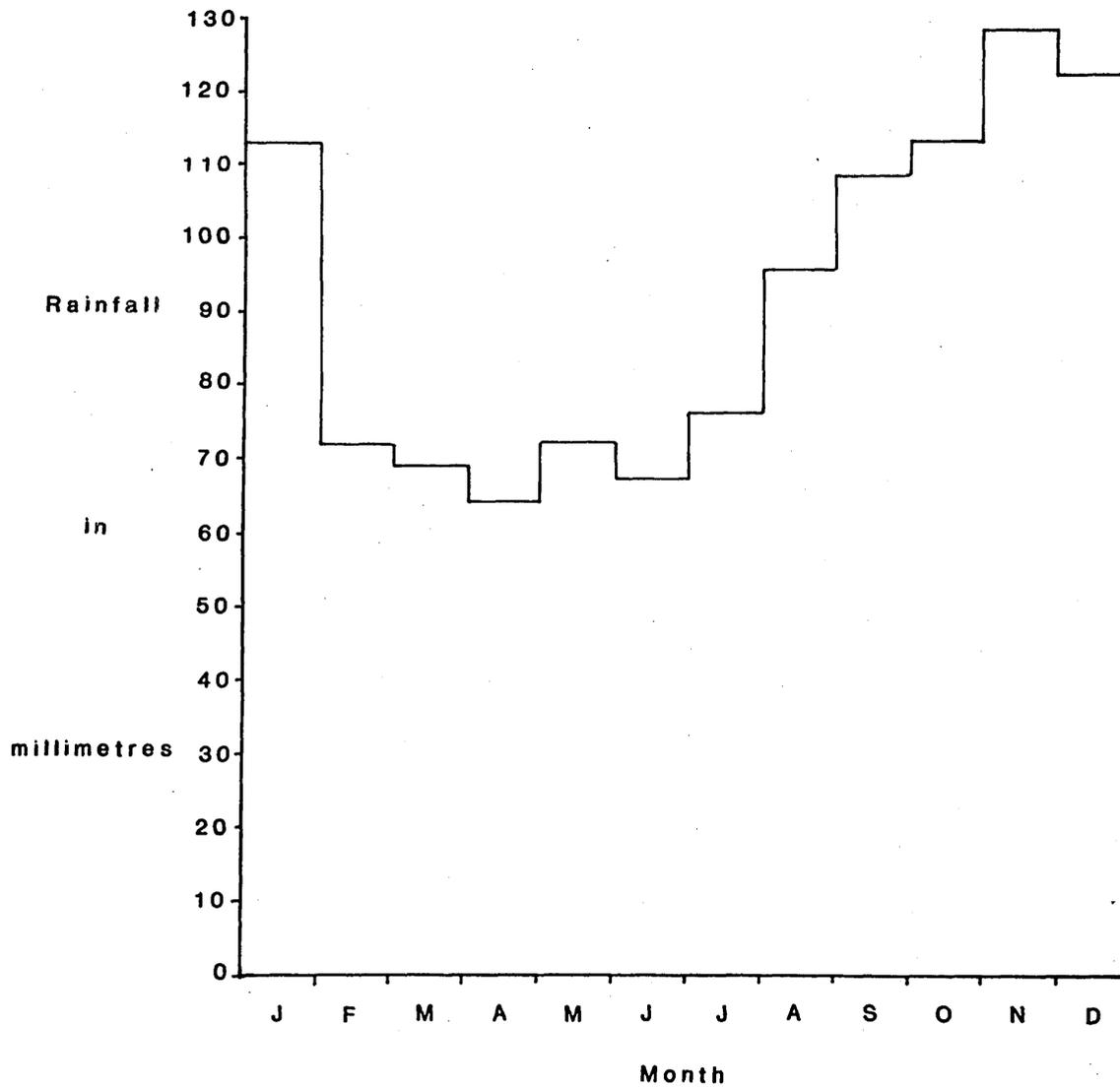


Source: E.G. Bowen Wales

FIGURE 1.1: AVERAGE MONTHLY RAINFALL, 1941 - 1970

AT BOTWNNOG

[2 miles N.E. of study area]



Altitude: 112' O.D.

AVERAGE ANNUAL RAINFALL: 1,099mms

Source: Wales Water Authority Gwynedd Division

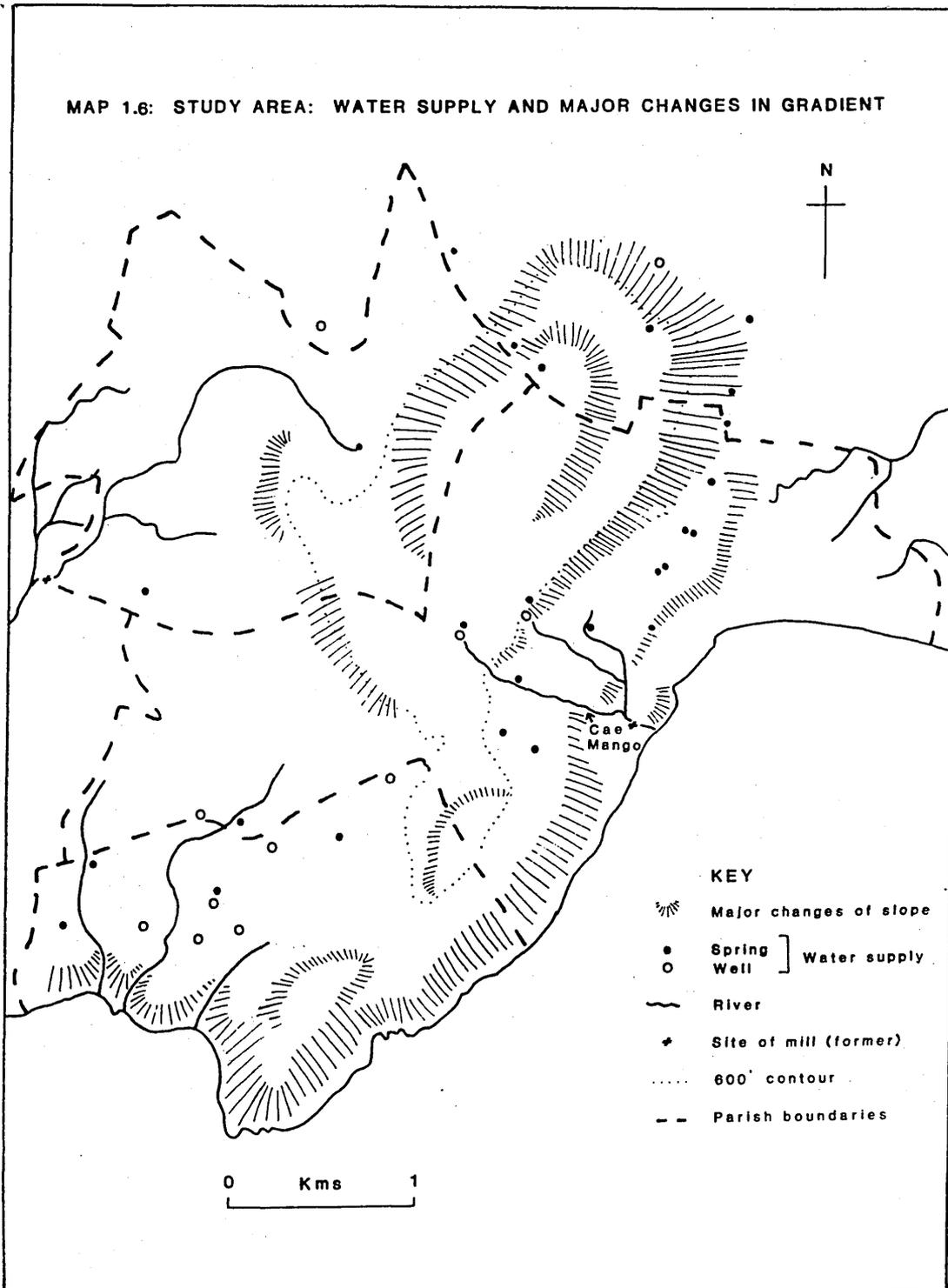
ridge of Mynydd Rhiw receives an annual average of 100 - 110 cms., whilst the lowlands to the lee of the ridge enjoys a lower annual average total of under 100 cms. (See Map 1.5.VI).

The seasonal distribution of rainfall is typical of western Europe with October, November and December being the wettest months and May, June and July usually being the driest months, although March and April have low rainfall in western Llyn. (41) (See Figure 1.1.). This seasonal variation is associated with the hay harvest of June and July and the corn harvests of late August and early September. The annual average number of raindays is 175 - 200 (42).

The ridge of Mynydd Rhiw is subject to frequent periods of low cloud, causing reduced sunshine and reduced evaporation. Snow cover is rare (See Map 1.5.V). Over a 35 year period, absolute drought was recorded in Llyn on average once every four years with the maximum of four droughts within any one year (43). (See Map 1.5.IV).

The distance from an adequate water supply is a crucial factor in determining both settlement sites and land utilisation in any district. When considering the water supply, the district under review can be divided into two areas. Firstly, the central upland ridge which includes the head waters of only one stream, and where the water supply was obtained from natural springs and two main wells. (See Map 1.6.). In 1947, at the end of the period under review, this area was still without a supply of piped mains water, and all water was still obtained from the wells and various springs. This had complications for land use in that during the periods of drought cattle had to be moved nearer adequate supplies of water, and also for the manganese operations in that the ore was washed in a field still known as 'Cae Mango' (Manganese field) where a stream crossed the road on the way from the mines to the small harbour (See Map 1.6.).

MAP 1.6: STUDY AREA: WATER SUPPLY AND MAJOR CHANGES IN GRADIENT



Secondly, the lower land to the east and west of the central ridge, which was drained by several small streams and was also supplied by wells dug at most of the old farms. Some of these streams were tributaries of the Afon Daron and flowed away to the west; some joined the Afon Soch, flowing to the east (44). Three short streams flowed south through rejuvenated overdeepened glacial meltwater channels, tumbling over cliffs to reach the sea (45).

There was sufficient headwater on two streams to enable corn mills to operate, one having existed at least since the fourteenth century (46). None of the streams were of use as sources of fish, nor in assisting with transport in any way. Much of the lowland was dissected by numerous ditches in an attempt to drain the heavy gley soils. These areas were often suitable for summer cattle grazing and as hay meadows.

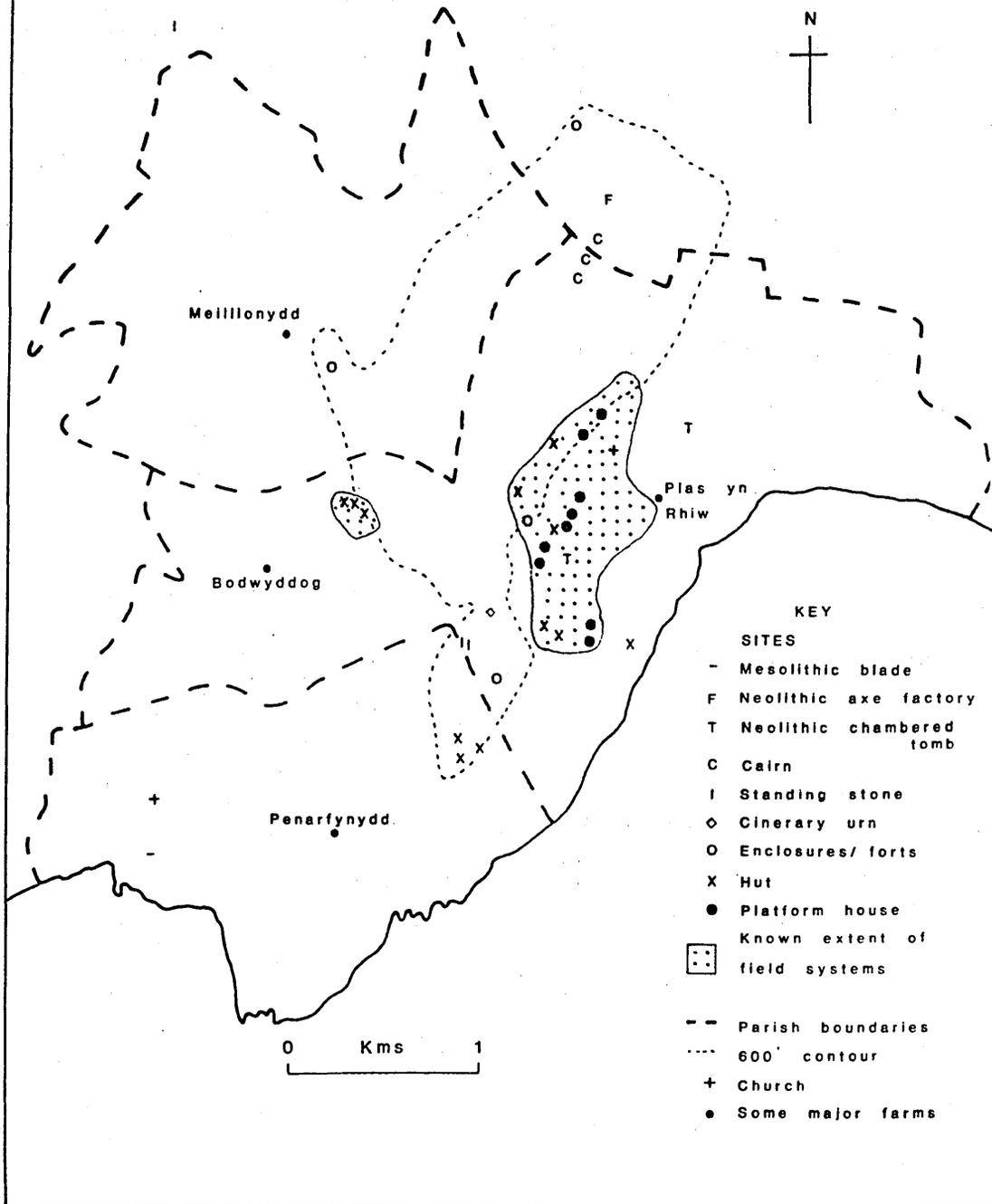
To the south, the sea was a source of food, fish being used to augment the diet. It was also an important means of transport and travel. The coves of Porth Ysgo and Y Rhuol were relatively sheltered from the prevailing winds and were of much value to the local community.

II. EARLY SETTLEMENT.

It was probably a direct result of this prominent coastal position, with easy access from the sea, that the study area was first inhabited, most likely by groups of people wandering through and then settling in the region in pre-historic times.

Wherever man settles he modifies the natural environment in his desire to better meet his basic needs for shelter, water and food. Religious and cultural, ritual and territorial rights are frequently expressed in ways which further modify his habitat. The evidence of the effect of early man upon the natural environment within the study

MAP 1.7: STUDY AREA: PREHISTORIC AND MEDIAEVAL SITES



area takes several forms and indicates his presence periodically, if not continuously, from Mesolithic times onwards (47). (See Map 1.7.).

It seems probable that in prehistoric times travel was easier by sea than across forested, rocky or marshy land, and that the Irish Sea, with its surrounding coastal fringe formed a cultural entity (48). This focus would have given the promontory of Llŷn more significance than it appears to have when viewed from the later cultural epicentre of S.E. England. The treacherous sea passage around the western extremity of Llŷn may sometimes have been avoided by the traversing of the neck of the peninsula. The height of several of the Llŷn hills would have enabled travellers to take bearings on landfalls in Ireland and S. Wales. Thus, over the millennia many groups may well have visited the study area.

A retouched flint blade, possibly Mesolithic was found in Nant Y Gadwen, a sheltered stream valley within quarter of a mile of a sandy cove: an appropriate location for people from a hunting - fishing economy (49). An established local society is suggested by the existence of the Neolithic Megalithic Chambered tombs of Tan Y Muriau and Bronheulog (50). The circular nature of Rhiw churchyard may indicate the site of an additional monument. The Mynydd Rhiw Neolithic stone axe factory is on the border of the study area, and roughed-out and polished axes from this site have been found both locally and at a considerable distance, probably indicating industry, trade and travel (51).

Bronze Age cairns occur on Mynydd Rhiw and two standing stones remain near Capel Tan Y Foel (52). A Cinerary urn with a bronze awl and pommel was uncovered near the col in the Mynydd Rhiw - Mynydd Y Graig ridge (53). Together these again indicate an organised society with communal activities (54).

Several enclosures, possibly Iron Age defensive structures, are

found ringing the central Mynydd Rhiw - Creigiau Gwineu ridge (55). Areas of cultivation and a variety of hut types occur either side of this ridge; in particular the eastern side shows signs of extensive field systems resulting from prolonged early cultivation on prime agricultural land within the study area (56). Archaeologists now consider that in some such areas cultivation may have begun in Neolithic times (57).

The earliest surviving documentary reference to Llyn is in Ptolemy's Geography where Llyn is named as the Ganganorum Promontorium, the promontory of the Gangani, who were one of the tribes of Iron Age Ireland (58). In origin the name Llyn is related to that of the Irish province of Leinster, again stressing links with Ireland (59). The use of Ogam in the Llystyn Gwyn Inscribed Christian Stone of the fifth - sixth centuries A.D. testifies to the persistence of Irish influence in North West Wales (60). Closer to the study area the fifth - sixth century A.D. inscriptions on the two memorial stones from Capel Anelog near Aberdaron indicate the presence of an ecclesiastical community, possibly the nucleus of the later 'clas' at Aberdaron (61). These probably represent the early establishment of Celtic Christianity in the district in the form of a religious community at Aberdaron (62). In spite of later medieval rededications by adherents of the Roman Catholic Church, the percentage of Celtic dedications in Llyn churches is very high, reaching 77% (63). This re-emphasises the central location of Llyn at a time of sea travel by Celtic saints around the Irish Sea basin, and also their preference for island sites as places of retreat (64). Bardsey was an important religious community and later a place of pilgrimage (65). The Celtic settlement was replaced later by an Augustinian Order and the thirteenth century documents indicate that the considerable extent of land owned by the Abbey on the mainland

included part of the study area (66).

Following the English Conquest of Wales by 1284, the medieval bond townships and areas of common became Crown land (67). Thus within the area under review the poor agricultural land of the marshy inland waste of Rhoshirwaun and the rocky upland ridge of Mynydd Rhiw and Mynydd Y Graig became Crown commons. The bond township of Penarfynydd, which contained rich agricultural land, also became Crown property and was later leased to favoured subjects (68). Differential development was therefore already occurring upon the variety of soils and terrain within the study area.

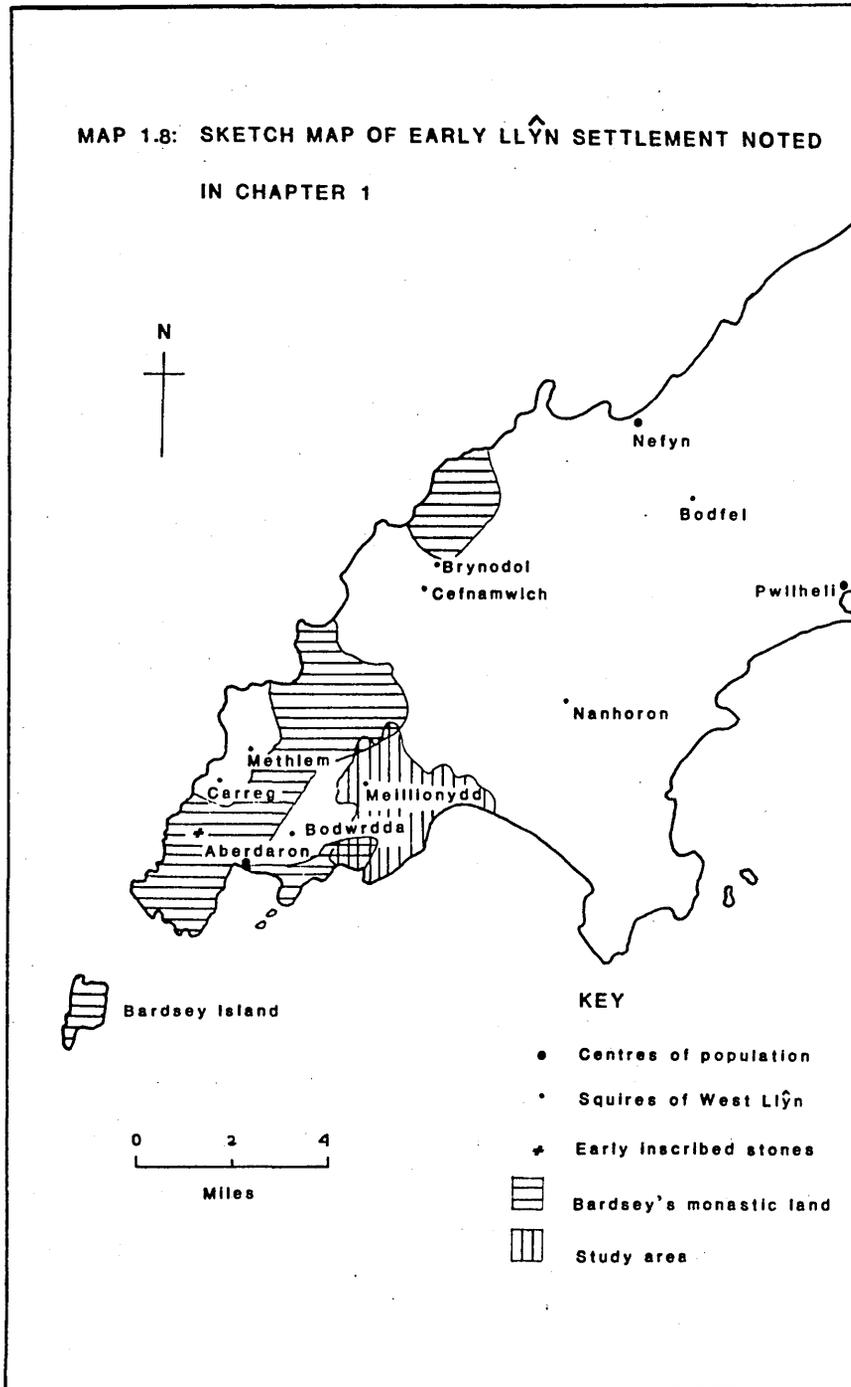
The Extent of Caernarynshire describes the nature of the townships, their inhabitants and certain local duties and taxes (69). It indicates early settlement sites within the study area.

The development of several of these into the substantial farms in the period under review is noted in Chapter Two.

Within the former free townships in the study area sites of several platform houses and their associated field systems overlie some of the earlier cultivation tracts already described (70). It is thought that the platform house sites may indicate those early medieval homesteads which were not sufficiently successful to remain in use and be modified by following generations. They mainly occur in land which later formed part of the Plas Yn Rhiw estate and their fossilised state may indicate an early change in land management within that estate.

The church lands of the Monastery of Bardsey became Crown property after the Dissolution of the Monasteries in 1536. Much of this land was acquired gradually by the local squirarchy including the Llyn families of Bodwrdda, Carreg, Bodfel and those families at Meillionydd, Methlan Nanhoron, Cefn Amwlch and Brynodol (71). (See Map 1.8.). Within the area under review these former church lands comprised much of the more

MAP 1.8: SKETCH MAP OF EARLY LLŶN SETTLEMENT NOTED
IN CHAPTER 1



productive undulating lower land to the west of Mynydd Rhiw ridge.

The pattern of widely dispersed settlement was therefore already apparent in the sixteenth and seventeenth centuries. It resulted from the development of the Crown-owned bond land, the gwelyau of the free townships and the consolidation of the former monastic hamlets and produced a pattern of widely scattered homesteads across all but the Crown commons.

Thus since Mesolithic times, man has selected those aspects of the natural environment within the study area which he has perceived as best meeting his needs. The patterns of later use have been superimposed upon the signs of earlier settlement and land use, so that incomplete evidence remains where the earlier work was too substantial to remove, or when it occurred in areas not requiring modification to meet later needs. Some monuments became incorporated into later features and a few have been discovered as chance finds.

When the size of the population grew or the climatic conditions improved, settlement became more dense and cultivation extended into higher altitudes. Periods of centralized management, by Abbot, Prince, King or later landlord would also have modified both settlement and land use, as would the results of wars, famine and disease. The period selected for study is thus clearly rooted in a matrix of geological, climatic and historical conditions from which all further developments occur.

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CONDITIONS IN 1782: SETTING THE SCENE.

The date of 1782 has been selected as an appropriate starting point in this study for three reasons. First, this date was a turning point in the economic development of Caernarvonshire (1). In 1781 Richard Pennant had secured control over the undivided Penrhyn inheritance, making it amongst the largest estates in the county. He was then able to provide the leadership required to commence improvements in Caernarvonshire's stagnant industries, agriculture and communications system (2).

Secondly, 1782 is the earliest date for which records concerning all farm holdings within the parishes of Rhiw and Llanfaelrhys may collectively be studied. These records exist in the form of the Land Tax Assessment Lists and contain information on each holding giving its name, owner, occupier and the assessments made from 1782 until 1819 (3). By studying these documents alongside estate surveys, rentals and valuations dated 1774-1790, it is possible to comment upon the division of land ownership, the relative value of holdings and the settlement patterns of that period (4).

Thirdly, it has proved possible to obtain information from a wide variety of sources in order to form an impression of the social conditions of the time. These include aspects of welfare and charity, law and order, and religious and educational developments (5). It is therefore possible to use this information as a base from which aspects of both continuity and change over the following 160 years can be studied in the parishes of Rhiw and Llanfaelrhys.

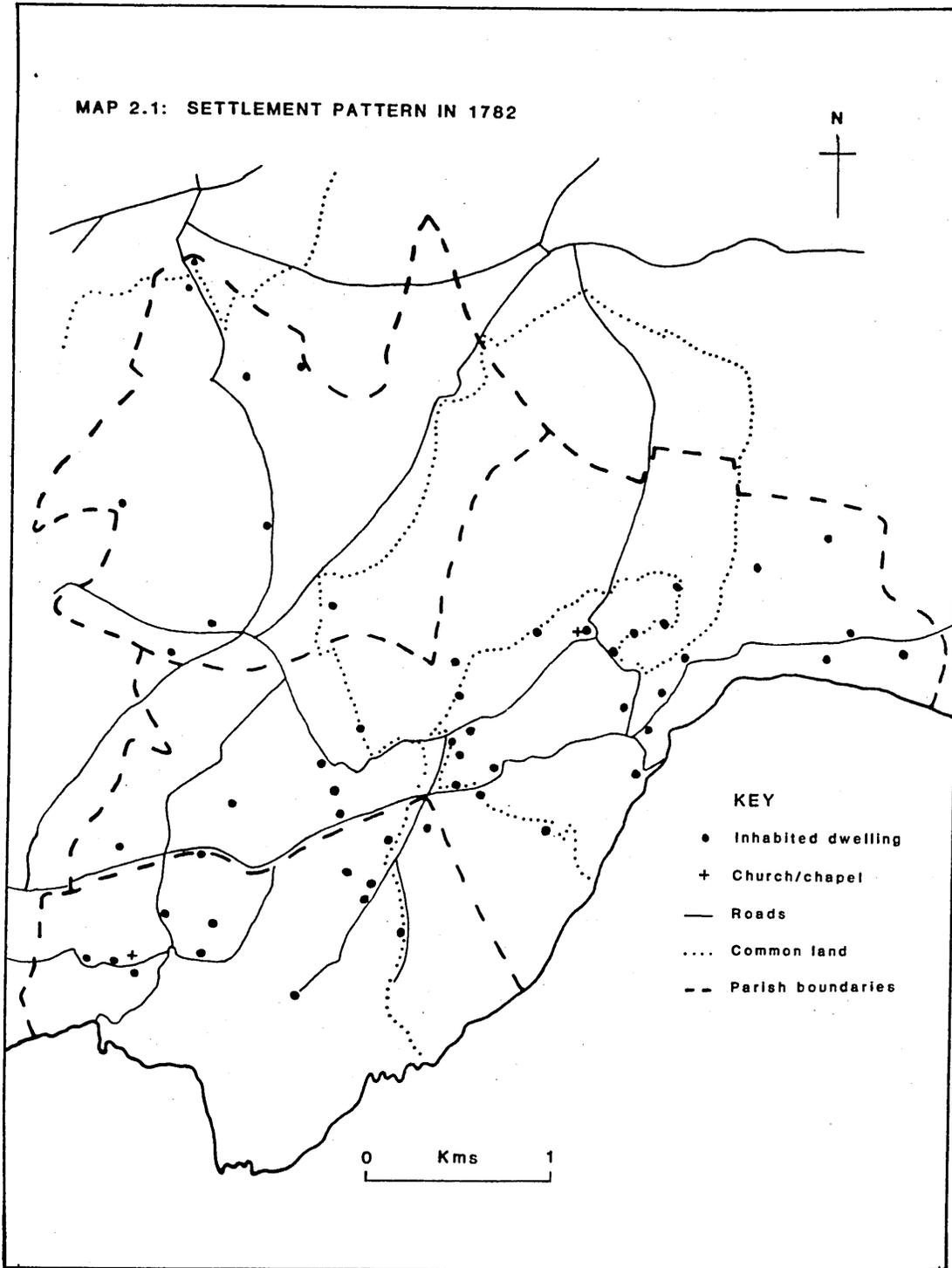
I. SETTLEMENT AND LANDOWNERSHIP.

It is possible to plot the settlement pattern in a stable farming district such as the area under review, by using later maps of the whole area such as the 1816 survey for the First Edition Ordnance Survey Map and the 1842/44 Tithe Commutation Maps together with fragmented estate surveys (6). In this way the site of each tenement named in the 1782 Land Tax Assessment Lists can be established. There may have been other tenements in existence which were not noted for assessment or redemption. However, the close correlation between listed tenements and details in extant pre-1790 estate documents suggest that there were few, if any, such additional settlements (7).

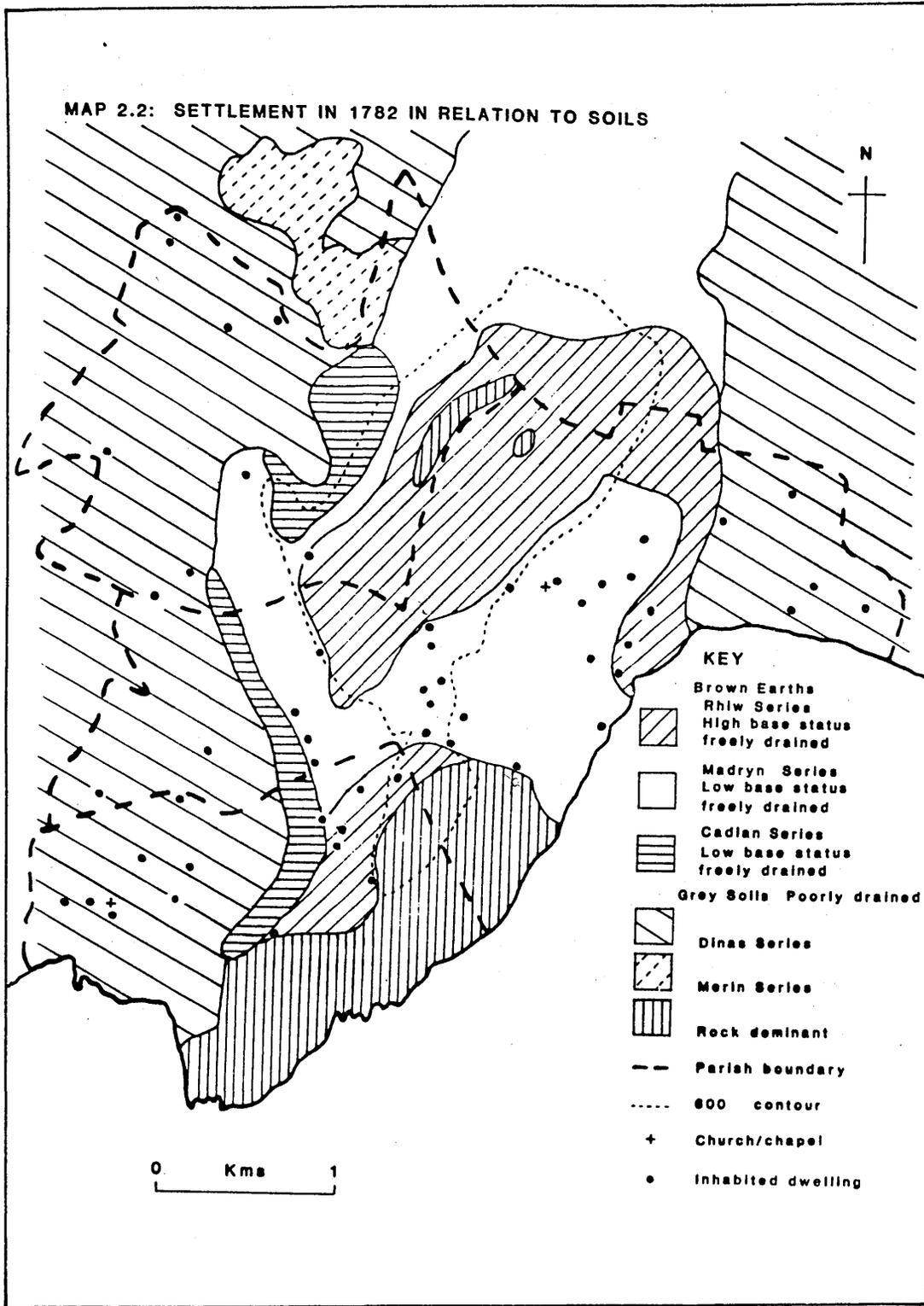
Map 2.I. indicates the distribution of settlements in 1782, together with the two areas of Crown common as identified in 1802 and 1811 and the roads as surveyed in 1816 (8). It is unlikely that these features were considerably modified between 1782 and 1816 and they are therefore used in the following comments upon the 1782 settlement pattern. Map 2.I. shows a widely dispersed pattern of settlement similar to that in many parts of culturally and economically remote areas designated as "Highland Britain" at this time. There were no concentrations around any focal point, although the pattern does indicate links with aspects of the topography, communications network and historical background of the district.

The boundaries of the common land form a clear demarcation line for both settlement and land utilisation. Only four of the fifty-three settlements were encroachments within the Crown commons and three of these were in the upland common. The effect of altitude is indicated in Table 2.1. and Map 2.3., emphasising the problems associated with exposure at high altitudes and of poor drainage at low altitudes.

MAP 2.1: SETTLEMENT PATTERN IN 1782



MAP 2.2: SETTLEMENT IN 1782 IN RELATION TO SOILS



MAP 2.3: SETTLEMENT IN 1782 IN RELATION TO ALTITUDE

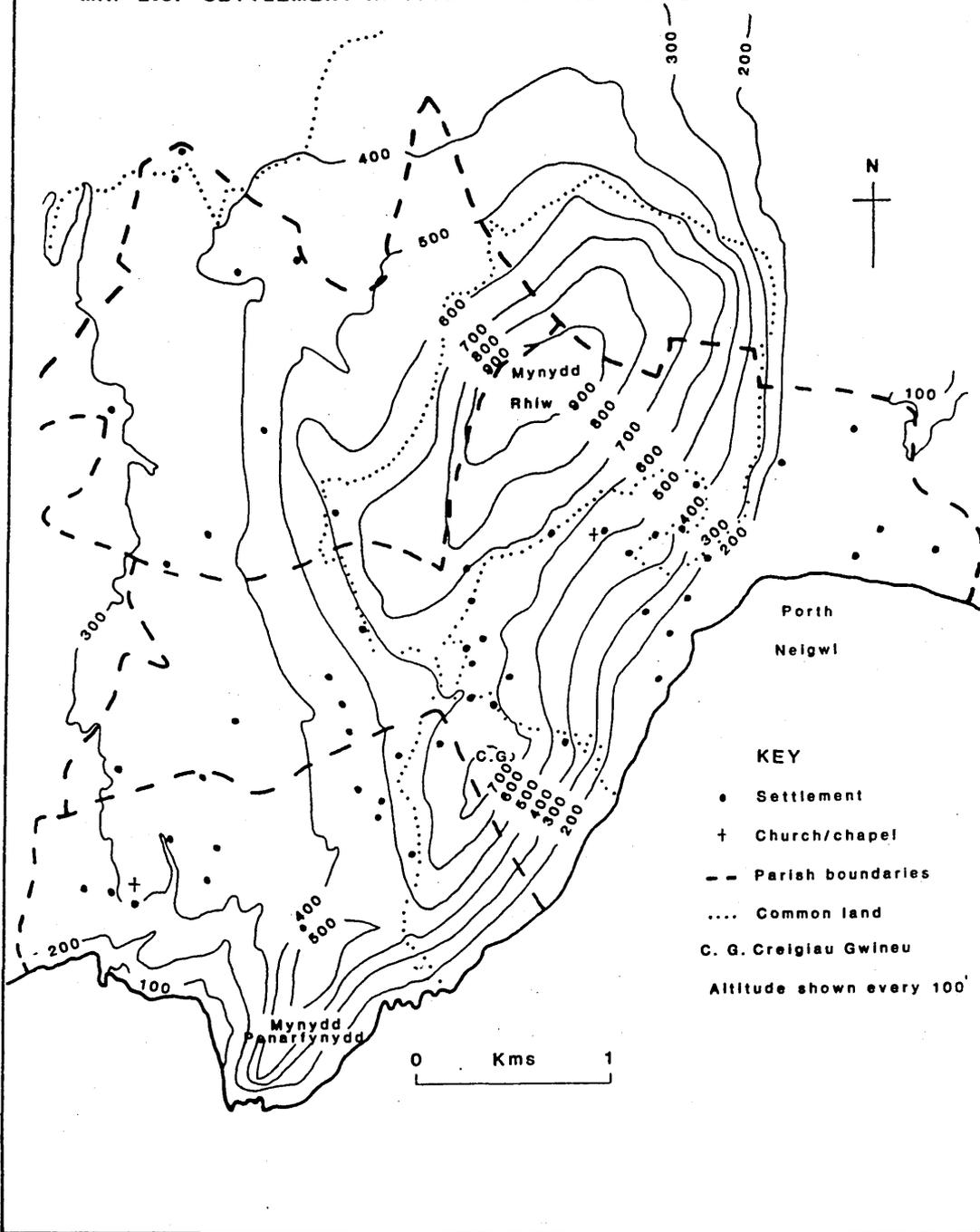


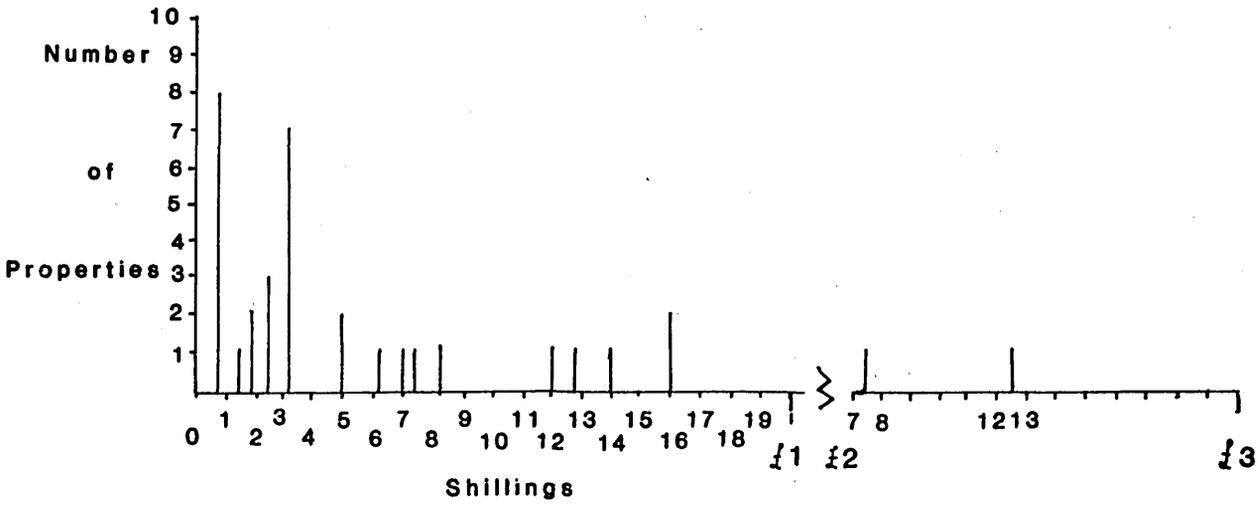
Table 2.1. Settlement and Altitude in 1782.

Dwellings over 600'	10
Dwellings between 350' - 600'	25
Dwellings below 350'	18
Total number of dwellings	53

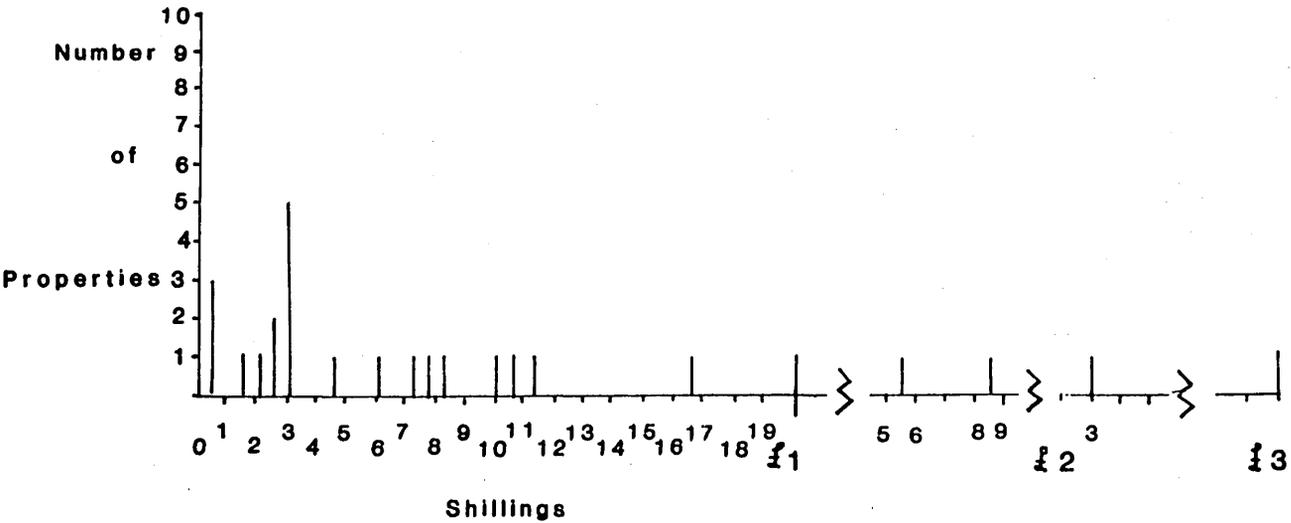
The benefits gained by the twenty-eight dwellings on the sunnier western slopes were almost equalled by those received by the twenty-five dwellings on the more sheltered eastern slopes (9). There were no dwellings along the col or the ridge. The underlying soil was clearly an important consideration with thirty-four dwellings being on fertile, free draining brown earths as compared with nineteen on wet gley soils (10). (See Map 2.2. Ch.1. p.14). Dwellings tended to be built on level sites or, if necessary, endways - on, tucked into the hillside to avoid surface water (11). They were within reasonable distance from tracks and roads and there was a slight concentration near each of the two coves used for coastal shipping.

Figure 2.1. shows an analysis of the distribution of the rates in the 1782 Land Tax Assessments and reflects the distribution in value of the holdings. This would vary according to a combination of factors including acreage, type and condition of land, aspect, slope, land use and, indirectly, land ownership. It must be accepted that the Land Tax Assessment Lists may not be complete or accurate. Nevertheless comparisons can usefully be made using the distribution of Assessment Values in each parish (12).

FIGURE 2.1: ANALYSIS OF DISTRIBUTION OF LAND TAX ASSESSMENT IN 1782



RHIW LAND TAX ASSESSMENTS IN 1782



LLANFAELRHYS LAND TAX ASSESSMENTS IN 1782

Table 2.2. Assessment Rates in 1782.

	Rhiw		Llanfaelrhys	
Number of holdings assessed	34	100%	26	100%
Assessment of 5/- and under	23	67%	13	50%
5/1d - 10/-	4	12%	5	19%
10/1d - £1	5	15%	4	15%
£1:1:0d - £2	0	0%	2	8%
£2:1:0d - £3	2	6%	2	8%

Table 2.3. Land Ownership in 1782.

Total Assessment of land belonging to the estate of:	Rhiw	Llanfaelrhys	Total
	£ s.d.	£ s.d.	£ s.d.
Meillionydd	1.10.2	7.15.0.	9. 5.2.
Nanhoron	4.14.9½	1.15.4½	6.10.2.
Glynllifon	-----	2. 8.6.	2. 8.6.
Plas Yn Rhiw	3. 1.6.	-----	3. 1.6.
Brynodol	2. 4.9.	-----	2. 4.9.
Others	(10) 1.19.2½	(9) 2. 6.3½	(19)4. 5.6.

The pattern of distribution in Figure 2.1. and Table 2.2. clearly indicates a concentration of very low assessments in both parishes, but especially in Rhiw. There is also a more marked gap in values in Rhiw with only two tenements being assessed at over sixteen shillings, compared with six in Llanfaelrhys despite its smaller total of tenements.

This probably reflects the higher number of large and medium sized farms within Llanfaelrhys, for which there are historical and topographical reasons.

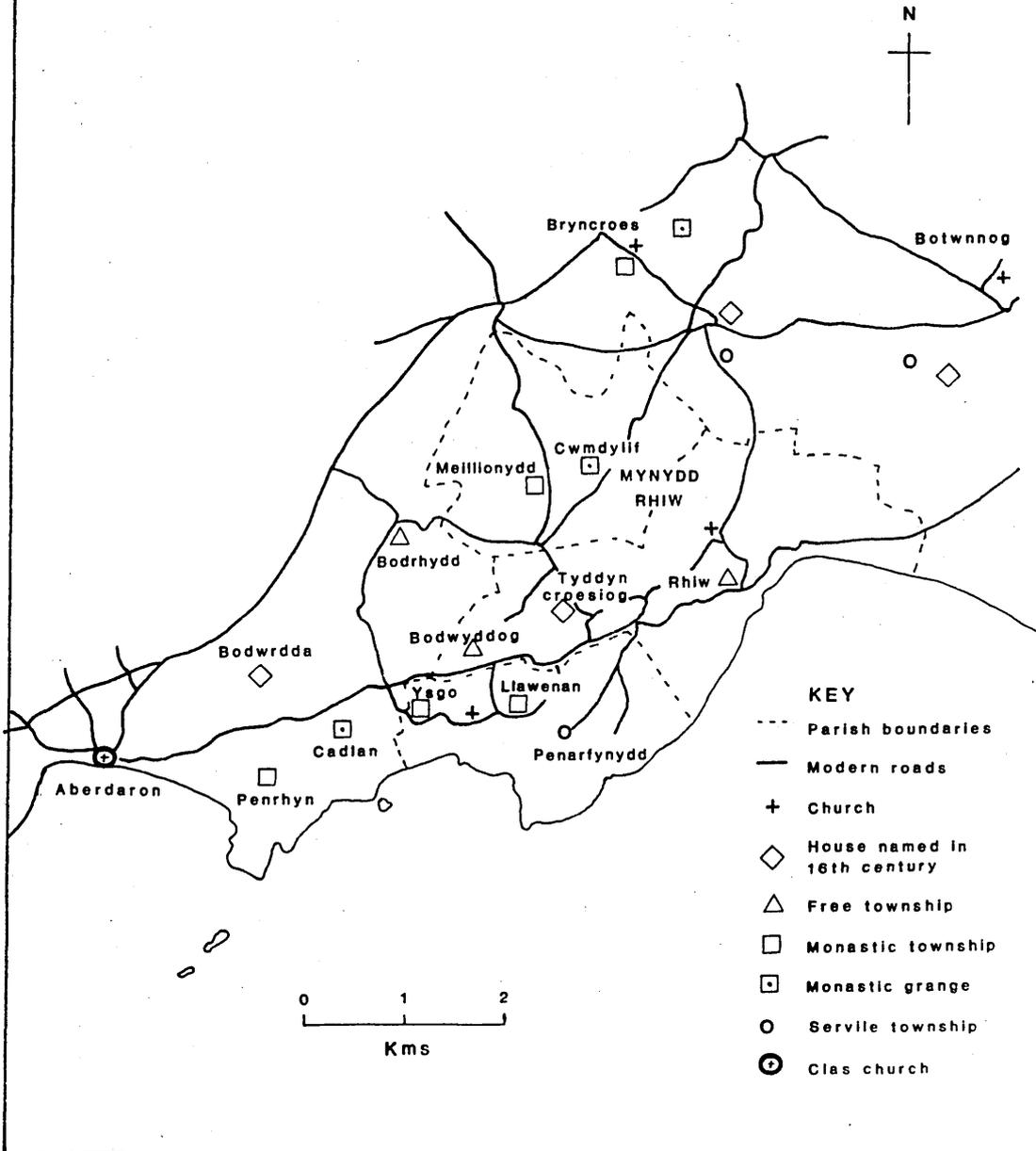
The control exercised by the five main land owners can be seen in Table 2.3. where the value of their lands can be compared with that of the nineteen other land owners.

A number of the farms named in 1782 were on the sites of much earlier settlements. This factor combined with the implications of land ownership for future development, can usefully be clarified by a brief examination of the history of settlement in the district.

Prior to the English conquest of Wales by 1284 this district was part of the commote of Cymyd Maen and contained distinct areas under either ecclesiastical or secular lordship (13). (See Map. 2.4.). The monastery on the island of Bardsey, some six miles to the west, enjoyed extensive properties and privileges on the mainland within the study area west and north of Mynydd Rhiw. Amongst these was the coastal township of Ultradaron which included the hamlets of Ysgo and Llawenan. These were probably grain producing areas, and a grange was recorded at the neighbouring hamlet of Cadlan. Further inland was another grange, Cwmdylif, now in the lands of Meillionydd farm (14).

The secular lordship was under the control of Llewelyn and contained both the free communities in the townships of Rhiw and Bodrhydd, and also the servile bond hamlet of Penarfynydd. In 1352 this hamlet was still required to render dues and a certain measure of corn to the Lord's manor at Neigwl, approximately one mile east of the study area (15).

MAP 2.4: SOME PRE 1782 SETTLEMENTS



In 1284 Edward I succeeded by "right of conquest" to the territories of Llewelyn and the areas of common, manors and bond townships became Crown Land (16). This greatly influenced the pattern of later land ownership. When purchase of these lands became possible in Elizabethan times, the consolidated bond townships were usually purchased as a unit, and they have tended to remain as distinct units up to the present day. Penarfynydd is an example of this (17). Both rocky upland and marshy lowland commons remained Crown land until the Enclosure Movement in the early nineteenth century, although encroachments have no doubt been made over the centuries (18).

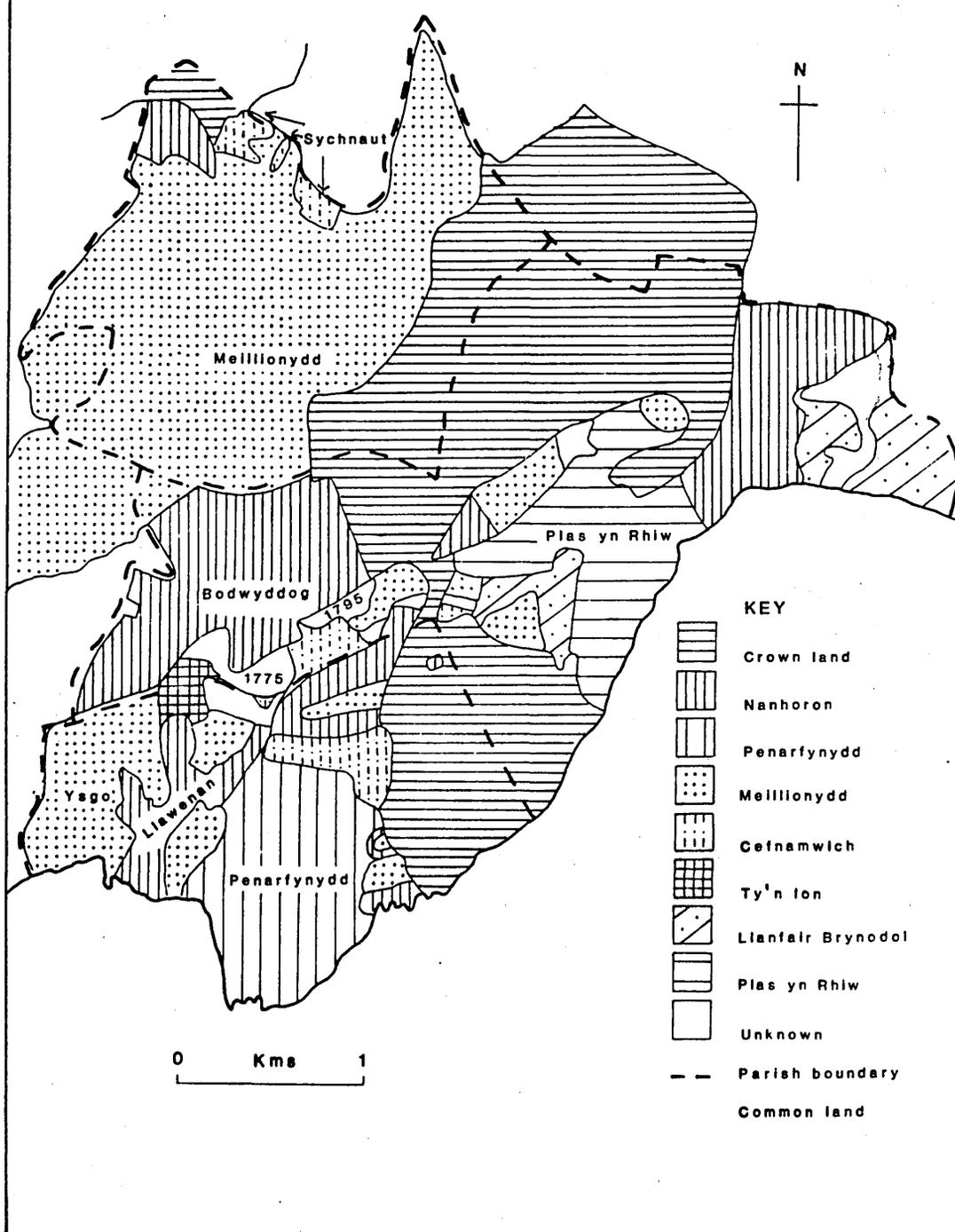
After the dissolution of the monastery of Bardsey in 1536 the development of local estates such as Bodwrdda and later Meillionydd occurred. Tudor surveys indicate the early development of monastic hamlets such as Ysgo and Llawenan into the consolidated farms now on these sites (19). Much of the free township of Bodrhydd was contained in the later ecclesiastical parish of Llanfaelrhys although a small farm of that name survives just beyond the parish boundary (20). In the free townships the policy of partible inheritance led to the ownership of small scattered parcels of land by the descendants of a common ancestor (21). This uneconomic structure was maintained by strong community relationships in the communal working of the land as well as through family ties (22).

By the eighteenth century the failure to produce male heirs and a series of early deaths resulted in several local family estates being absorbed, by marriage, into larger more distant estates, with some of the implications of absentee land lords.

Bodwrdda estate was absorbed by Coytmor and later sold to Richard Edwards of Nanhoron (23). His family had previously gained Bodwyddog through marriage, thus enlarging an estate of growing

MAP 2.5: LAND OWNERSHIP CIRCA 1782

Compiled from various Estate Surveys 1776 - 94



importance in the area (24). The former holdings of the Cefn Amwlch estate within the study area appear to have been sold to a variety of small holders around 1774 at a time when the family may have been in financial difficulty (25). The Brynodol estate, formerly a cadet branch of Cefn Amwlch, which owned three holdings in Rhiw, remained stable during this period. The Meillionydd estate passed, on the marriage of the heiress, to the Vaughan family of Nannau and Hengwrt (26). The smaller compact estate of Plas Yn Rhiw passed, with the marriage of that heiress, to William Williams but this family continued to live in Rhiw (27).

The important developments in land ownership can be seen in Map 2.5. The large compact farms frequently indicate those former monastic and servile hamlets, whilst the irregular shape of dispersed plots indicate some of the small holdings acquired later by those purchasing land to consolidate their estates.

By 1782 the lands of the two locally based estates, Plas Yn Rhiw and Bodwyddog, appear to have developed contrasting settlement patterns. The Plas Yn Rhiw estate contained nine farms in addition to the manor house, with these forming a "girdle settlement" around the circumference of the estate which, for the greater part, bordered on upland common land (28). Bodwyddog (See Map 2.5.), however, remained as a single farming unit. This may have been due to its position at a lower altitude on less steep but also less fertile slopes, or to the fact that it had become part of the extensive Nanhoron estate.

Differences highlighted by the settlement pattern, size and location of holdings, and land ownership greatly affected later economic development.

II. ECONOMIC AFFAIRS.

In the 1780s Caernarvonshire showed little vigour in economic affairs, with the limited exception of slate quarrying (29). In the Llŷn peninsula, as in other remote areas in the so designated "Highland Zone" of Britain, the general population dwelt in dispersed mainly self-contained, almost self-supporting communities, farming small holdings rented from frequently distant landed gentry (30).

The evidence for the economic conditions in specific localities is to be found from two main sources. Firstly, an overall picture may be given by the passing visitor who, unaware of local conditions, customs and probably language, may only comment on the unusual, or on that in which he is particularly interested. Secondly, detailed but fragmented information can be obtained from a variety of surveys and rentals of different dates from some of the estates, from Probate Inventories and wills and from government and ecclesiastical documents. By collating various references to the district, it is possible to gain some impression of the economic circumstances prevailing around 1780.

In this remote district of North West Wales a virtually medieval farming economy continued undisturbed until the later part of the eighteenth century (31). The small tenant farmer and freeholder of necessity practised mixed farming in order to supply the majority of his basic requirements in food and clothing. The sale of store cattle was the chief method of obtaining the rent money. There were marked topographical and soil variations even within each district, and these affected the pattern of land utilisation locally.

With very few exceptions the land of Llŷn at this time remained unimproved and almost entirely treeless (32). There were some areas

of good grazing suitable for both cattle and sheep (33). The chief produce of Llyn[^] was the small sturdy black cattle of which over 3,000 were sold annually (34). The cattle drovers followed the drove routes from the cattle fairs and markets at Sarn and Pwllheli (35). They travelled across country to England often taking the store cattle to the Midlands and East of England for fattening prior to their sale at Barnet Fair and Smithfield market in London (36). These drovers had an important place in the economy, converting produce into usable wealth. They made a great contribution to the social life of the countryside, bringing back news of events in London and in Parliament and introducing fashions and ideas from England to these remote districts (37). Drovers were used as agents, carriers and bankers, and in the ordering, transporting and payment of goods available only from the towns and cities of England. They are thought to have brought into the region examples of new seeds, fruits and vegetables which they had seen on their travels (38). One local drover William Lewis of Bodwrdda, which is still a cattle-rearing farm, was buried at Llanfaelrhys church on his death in 1758 and there may have been other drovers from the study area (39).

Writing in 1782 Marshall reported that every province of the Principality seemed to produce a separate type of cattle. Mouse coloured cattle were found in the Llyn[^] peninsula (40). However, later Welsh cattle were usually black, small in stature and became known as "runts" i.e. store cattle. It was usual for the best cattle to be sold, as these were the mainstay of the economy, obtaining the highest prices. Therefore the remaining bulls did little to improve the quality of the herd (41).

Secondary products such as butter and cheese were exported probably to the growing industrial towns of England (42). However it is likely

that these were luxury products rather than surplus to local requirements. Leather and horn would have been other by-products essential in the semi subsistence nature of the rural economy.

Following the passing of an Act 1811 to enclose commons and waste lands in Rhiw, Llanfaelrhys, Bryncroes and other parishes in Llyn, there was a dispute concerning the rights of tenants who grazed sheep upon the commons of Rhiw and Llanfaelrhys (43). In 1812 local tenants of the two major landowners gave evidence listing some twenty five Aberdaron parishioners grazing sheep on these commons (44). These would have been in addition to the grazing rights of the parishioners of Rhiw and Llanfaelrhys. The evidence given frequently stresses rights of customary use and refers to practices occurring over the previous twenty - thirty years. These emphasize the annual turning of sheep onto the common for grazing and confirm the importance of the gate across the trackway at the boundary of the upland common.

The district was known for the small hardy Rhiw breed of sheep which only became extinct in the 1950s (45). These sheep were said by the owners of the last flock to have been kept in the locality by that one family since monastic times (46). They were said to be able to survive the bleak local conditions (47). This tanfaced breed was lighter in frame and in wool than even the unimproved modern Welsh mountain sheep, and the lambs did not fatten until the second year (48). In the eighteenth century local wool provided the raw materials for homespun clothing and knitted wear, with little surplus for sale (49).

In common with much of North Wales, agricultural practice was said to be a century behind that of South East England (50). However one suspects that few practices successful on arable land there could be usefully followed in the study area due partly to topographical and climatic differences. A dismal description of the state of

agriculture in the neighbouring district of Eifionydd around 1760 was later recollected as follows:

"No ground was then fallowed, no pease, grass, turnips or potatoes raised, no cattle fattened and little grain sold. Oats and barley were alternately sown, and during seven months of the year the best soil was ravaged by flocks of sheep, a certain number of which were annually sold and carried off to be fed in richer pastures When seedtime was finished, the ploughs and harrow were laid aside till autumn, and the sole employment of the farmer consisted in weeding his corn field and digging and conveying home peat, turf and heath for winter fuel. The produces of a farm was barely sufficient to pay the trifling rent and the servant's wages and to procure his family a scanty subsistence " (51). Much of Llyn would have been in a similar condition although Pennant was able to comment that the chief produce included oats and barley even though the land was in an unimproved state (52). This would have been normally for household consumption. Earlier in the eighteenth century occasional cargoes of grain were sent to English cities, farmers being tempted by the good prices obtainable there (53). However, Llyn and Eifionydd remained normally dependent on corn imports in the mid eighteenth century, and in 1751 hungry mobs stormed the port at Pwllheli in an attempt to prevent vessels sailing with provisions so much needed at home (54).

There was as yet little use of potatoes, but there was some expansion in linen manufacture, the flax being grown locally and dressed by domestic labour at Pwllheli (55).

Along the north coast at Llyn herring were caught "in vast abundance" in 1771 and the annual value was estimated at £4,000 (56). Pennant however commented unfavourably upon the combination of fishing

and farming which was common in the coastal district of Llŷn (57). In contrast Davies thought the dual economy was necessary in order to sustain a family (58). The involvement of local farmers through the buying of shares in boats noted in inventories from other parts of Llŷn is likely although not proven in the study area.

Afforestation was neglected and in Llŷn trees are only mentioned "around the houses of the gentry" (59)

By 1780 most of the land below the upland common in the study area was probably already enclosed (60). The exchange of isolated quilllets of land, relics of the former openfield and partible inheritance systems, was taking place to enable landowners to consolidate their individual farms and build substantial fences around each field (61).

In 1778 the large Vaynol estate, which owned extensive lands in Llŷn, introduced new tenures of twenty one years (62). Such leaseholds were uncommon at the time in Caernarvonshire where the almost unlimited tenancies at will, whose effect on the quality of farming is debatable, were general (63). The Vaynol leases included clauses optimistically designed to ensure the maintenance of the tenements in good repair (64). There appears in an analysis of a later valuation to have been a close correlation between the quality of the farming and the state of the fences - a term which includes stone walls (65). No mention is made in the valuation of demand for produce outside the farm (66). Enterprise was said to be inhibited by several influences. Firstly the ancient practice of intermixture of fields tended to result in neglect. Secondly, the following of another occupation such as quarrying or fishing resulted in less attention being given to the farm. Finally, there was a lack of incentive as tenants knew that improvements might be followed by rent

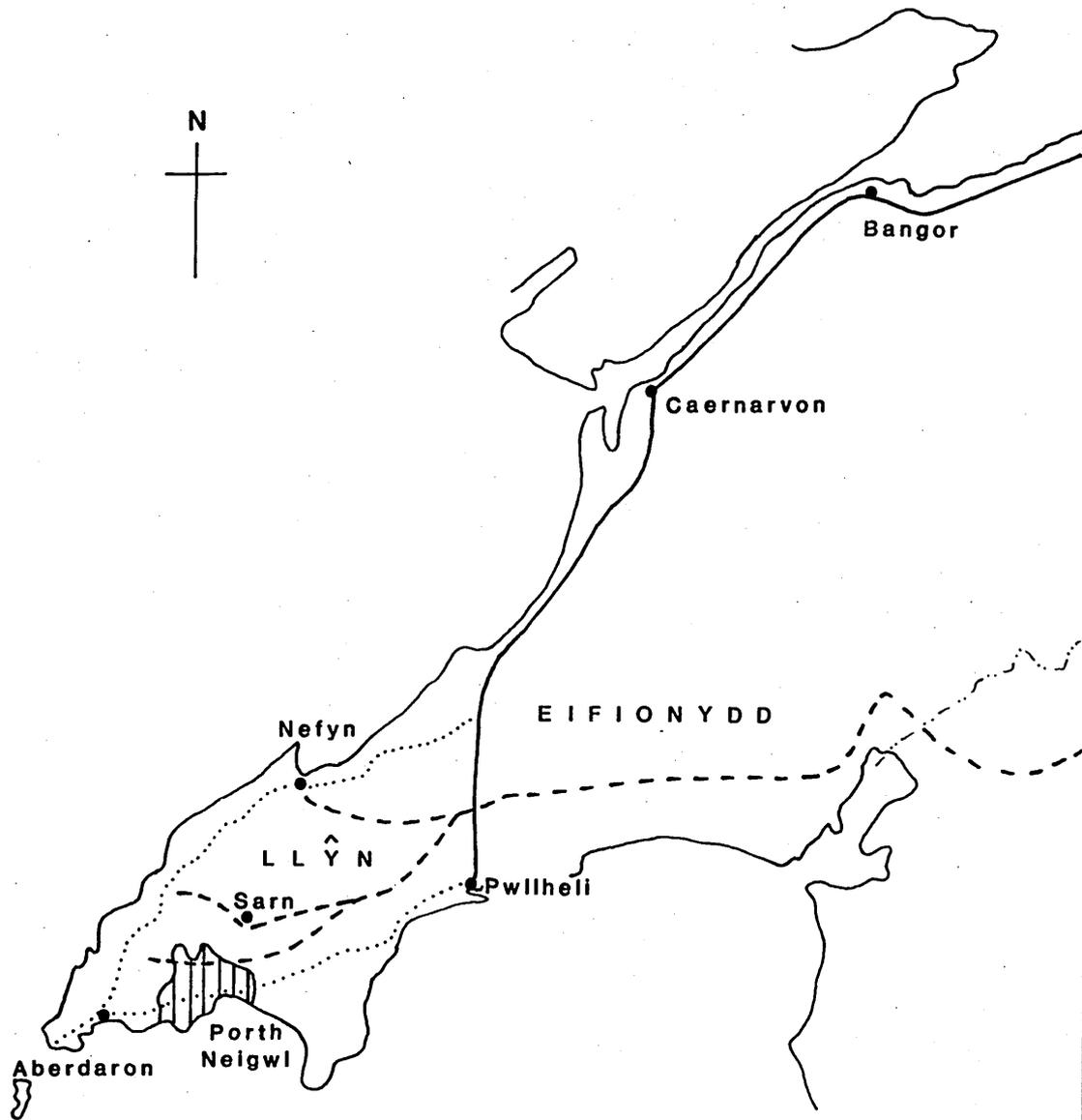
increase (67). Hyde Hall strongly criticized this approach stating that landlords ought instead to compensate tenants for extensive improvements (68).

It would seem from the 1774 deed of lease for Blawty, a farm bordering on the study area, in which provision is made regarding tillage, planting young trees, harrowing and so on, that at this period the Griffith family, Cefn Amwlch and the Assheton-Smith family, Vaynol were amongst the few gentry said by Pennant to be setting a laudable example (69).

In Caernarvonshire as a whole there was no apparent interest in copying the practical and fruitful experiment and ideas of Henry Rowland in Anglesey, later published as "Idea Agriculturae" (70), nor on following the advanced but rather costly methods of potato, clover and turnip cultivation with accompanying benefits for feeding cattle, as practised in the 1730s by Edward Wynne of Boderwryd, Anglesey (71). None of the early innovators described by Emery come from Caernarvonshire (72). As far as agricultural development were concerned, Caernarvonshire lagged behind even the remainder of North Wales (73). It was a mainly pastoral area, with conservative attitudes.

Dodd suggests that the main reason for the backwardness found throughout Caernarvonshire was the lack of leadership rather than the lack of capital (74). Both were relevant factors and are closely linked with the fact that many of the great estates to which local gentry, freeholders and tenant farmers had been accustomed to look for leadership, had passed to non-resident owners. Even though resident, Wynns, of Glynllifon with their vast estate, still "found politics more paying than turnips and as yet contributed little to the agricultural advance beyond the introduction of some superior

MAP 2.6: WESTERN CAERNARVONSHIRE: LATE 18th CENTURY COMMUNICATIONS



KEY

- County boundary
- Turnpike
- Ancient trackway
- - Drovers road
- Town/village
- ▨ Study area

0 10
Kms

strain of cattle from England" (75).

Improvements in tillage, crop rotation and in the variety and quality of crops produced required complex interrelated planning. Techniques in draining, manuring, stock control and breeding had first to be acquired. The position of the land agent was therefore of utmost importance in giving guidance and encouragement (76). However, many agents were quite unlearned in agricultural developments, being, for example, clergy or retired military men (77).

Other inhibitory factors included the often unfavourable environmental conditions and the conservatism and hereditary prejudices of even the opinion leaders amongst the tenantry (78). The language difficulties between agent and tenant, or those encountered by a Welsh farmer travelling in England, together with the lack of publications in Welsh on agriculture were additional problems (79). Inadequate capital resources were yet another factor inhibiting development and necessitating the use of antiquated albeit practical equipment (80). Virtually all the landed estates in North Wales were heavily mortgaged during the late eighteenth century (81). The majority were mortgaged in order to cancel out debts or to finance legacies, not for the sake of investment in schemes of agricultural improvement (82). The absence of security and tenants' rights inhibited innovation as did the ties of kinship and religion amongst adopters of the new methods (83).

The lack of a road network was a major factor in the economic backwardness of the region (See Map 2.6.). Prior to the formation of the Turnpike Trusts travel was of necessity on foot or horseback along trackways, with wheelless sledges being used to carry peat, minerals or slate (84). The London to Dublin route through Holyhead was, apart from the remote drove routes, the main link with England and was used by those gentry travelling for political or social reasons. The

formation in 1769 of the old Caernarvonshire Turnpike Trust resulted in the maintenance of a road from beyond Conwy through Bangor and Caernarvon, to Pwllheli. It was of great significance in the development of Caernarvonshire. Later this event was looked back upon as having "first opened up the remoter region of Llŷn to itinerant trade and so roused the long dormant spirit of local amelioration" (85). The stimulus of outsiders bringing their goods and capital together with their knowledge of and experience in more advanced agricultural industrial and social developments elsewhere, was now within a dozen miles of the study area. It is not known whether the increased potential of the market at Pwllheli and beyond was quickly appreciated, although it still remained customary for goods to be transported by sea from local coves to Pwllheli harbour rather than overland along the drove routes and ancient pilgrim tracks which traverse Llŷn (86).

Pennant referred to the dangerous bay of Porth Neigwl as being "dreaded by mariners" (87), but it is known that boats were built at Rhiw and Aberdaron and that coastal shipping was of much importance (88). Pwllheli was at this period the chief ship-building port of Caernarvonshire, and together with Nefyn, was a point of departure for merchandise going to Liverpool and further afield (89). Along with the drovers, sailors formed a mobile section of the community, bringing back news and ideas, but lacking in the political, social or financial power to fully develop any innovations.

The communications network was improving and there was better access to and from distant markets. However, opportunities for comfortable travel or travel for educational, social, cultural or political purposes were still very limited.

There was no evidence at this time of any local mining or quarrying within the area under review, nor of any woollen industry which

might have benefitted from improving transport facilities.

Thus, for a variety of reasons the rate of diffusion of information concerning innovatory practice which might bring economic development was still extremely slow and by 1782 developments were minimal.

III. SOCIAL ISSUES.

The dispersed settlement pattern and lack of agricultural improvements in the study area correlate with the poverty of the majority of the population in Llyn (90). Their houses were said to be "very mean, made with clay, thatched and destitute of chimney" in contrast to those of the gentry (91). However some repairs within the study area were being made by landlords (92). Payment of rent in kind is illustrated in Rhiw in the 1770s where allowances included hens, butter, a bullock, a cow or calf, work on stone walls, looking after sheep and foddering calves (93). However many were in debt (94). The commons were used as a source of fuel and building material and as watering places (95). Dress and diet consisted of what could be obtained locally (96). Epidemics swept through Llyn in the 1770s and around 1782 (97).

The Elizabethan Poor Law Act was not adopted in Caernarvonshire until the 1770s (98). By 1776 poor rates were being levied, raising £1:18s.0d and £2:12s.0d in Rhiw and Llanfaelrhys respectively (99). By 1785 these had altered to £3:17s.0d and £ 2:11s.0d respectively (100). In 1786 other funds to support the poor in Llanfaelrhys yielded only ten shillings (101). Even with the small population, family charity and the bounty of the gentry could no longer provide sufficient relief and the Poor rates increased (102). The economic poverty was mirrored

in social conditions for the vast majority.

During this period remarkable religious changes were occurring. Following the visits of Howel Harris to Caernarvonshire from 1741 onwards, Methodism took root in Llyn (103). Morgan Griffith, Bwlch Y Rhiw started preaching around 1744. The first recorded Methodist sermon within the study area was given at Plas Newydd farm around 1772 (104). Chapels had then been built in two neighbouring parishes (105). In 1776 it was recorded in Rhiw that "great many follow them, but none that preaches" (106). The fabric of Rhiw church in 1776 was poor, the deterioration being hastened by the general stagnation in church life combined with the increased involvement with the vigorous style in Methodism (107). Methodism was linked with a demand for education and an active press (108). Since 1618 Botwnnog Grammar School had provided elementary education for a few boys locally (109). From 1741 however, the well organised circulating schools of Griffith Jones spread throughout Wales (110). Teachers stayed three months in a parish, teaching children by day and adults in the evenings, in order that they might read the Bible in Welsh (111). Table 2.4. indicates likely pupil contact and thus educational opportunity within the study area in spite of the problematic figures (112).

Table 2.4. The Schools of Griffith Jones. 1741 - 1777.

	Rhiw	Llanfaelrhys
Population in 1749	150	135
Greatest number of pupils in 1 year	56	50
Number of school sessions	9	7
Total of pupils	393	274

The local Welsh presses became active from 1776 and the readiness with which weavers and smallholders became teachers and preachers suggests a growing reading public (113). The influences of Methodism and education combined to produce men accustomed to local leadership (114). It is unlikely that more than a few of the inhabitants of Rhiw and Llanfaelrhys would have had the need or opportunity to speak, read or write in English. They could not therefore take advantage of any exchange of ideas through that medium.

The early 1780s can be said to have been the start of a new phase in the development of the district. Enlightened leadership by some politically and socially influential gentry was heralding developments in communications and in agrarian and industrial practice. The spread of non conformist religious beliefs together with opportunities for basic education in Welsh laid the foundations of new community structures and for the formation of moral and social codes of behaviour (115). These were able to offer support to the majority of the population in their poverty and enable them to face the local developments that changes in national and international affairs were about to initiate.

- (1) Dodd, A.H., (1968) A History of Caernarvonshire p.232
- (2) Idem. p.232
- (3) GAS. CRO. Land Tax Assessments. Rhiw 8/10; Llanfaelrhys 8/6
- (4) N.L.W. Nanhoron Ms; N.L.W. Llanfair and Brynodol Ms; U.C.N.W. Nannau Ms;
U.C.N.W. Cefn Amwlch Ms; U.C.N.W. Penrhyn Ms; Glynllifon Estate Office papers;
Private possession Tynlon Ms.
- (5) See this chapter, footnotes 90-115.
- (6) British Library, Map Library O.S.D. 300. S.E.R. 260;
N.L.W. Maps and Prints Dept., Tithe Maps. Rhiw, Llanfaelrhys;
U.C.N.W. Bangor Ms. 2636
- (7) cf. U.C.N.W. Bangor: Ms. 2636. Maps of holdings in Rhiw and Llanfaelrhys
- (8) GAS CRO. X/EA 1802 Rhoshirwaun Inclosure Act. 42 Geo. III c 30;
GAS CRO.X/EA 1811. Aberdaron etc. Inclosure Act. 51 Geo III c 49;
British Library, Map Library O.S.D. 300 S.E.R. 260
- (9) See Chapter 1. p. 15
- (10) Ordnance Survey. Soil Survey of England and Wales: Pwllheli.
- (11) See Estate maps. cf. U.C.N.W. Bangor Ms. 2636. Personal field work cf. Carreglefain, Ty Croes bach, Conion uchaf.
- (12) The subdivision of the British pound (£) was changed in 1971 from shillings and pence to a decimal system in which 100 pence (p) = 1 pound (£). In the former system 12 pence (d) = 1 shilling (s); 20 shillings (s) = 1 pound (£). 1 shilling

- was the equivalent of 5 pence (p) in the decimal system
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- (14) PRO. S.C. 6. Henry VIII, 4969: PRO, Rentals & Surveys.
Port. 17, nos. 84, 85
- (15) Ellis, H. (1838) Record of Caernarvon B.B.C.S. pp. 36-38
- (16) Jones Pierce, T. (1941). op.cit. p.13
- (17) N.L.W. Glynllifon Ms. 1575; Ms. 76; Ms. 105; Ms. 97; Ms. 157
Ms. 347; Now at G.A.S.
- (18) G.A.S. CRD. X/EA. 1802. Rhoshirwaun Inclosure Act. 42
Geo. III c 30;
G.A.S. CRD. X/EA. 1811. Aberdaron etc. Inclosure Act, 51
Geo. III c 49
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pp. 1-2 ;
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- (31) Dodd, A.H. (1971) *op.cit.* pp. 1-8
- (32) Pennant, T. (1810) *Tours in Wales.* p.386
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12 Oct.

- (46) Idem. + pers. comm.
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- (55) Idem. p.198, p.200
- (56) Pennant, T. (1810) op.cit. p.386
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- (92) N.L.W. Llanfair & Brynodol Ms 43. U.C.N.W. Bangor Ms. 3130
- (93) N.L.W. Llanfair & Brynodol Ms 43
- (94) G.A.S. XM/269/2
- (95) G.A.S. Cefn Amwlch XD/32; U.C.N.W. Nannau Ms; G.A.S. Glynllifon Ms; G.A.S. CRO X/EA 1811. Aberdaron etc. Inclosure Act. 51 Geo III c.49
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CHAPTER THREE

THE STUDY AREA BETWEEN 1782 AND 1816.

1816 has been selected as an appropriate date for the end of the first phase in this review as it highlights three interrelated occurrences significant to the study of the parishes of Rhiw and Llanfaelrhys. Firstly, one effect of the Napoleonic wars was the hastening of agricultural development in general, and, in particular, the enclosure of common land. The Rhoshirwaun Enclosure Act of 1802 included a small part of the study area (1). The Enclosure Act of 1811 involving Rhiw, Llanfaelrhys and several other parishes had a much greater local significance for settlement pattern, land ownership and land utilisation (2). By 1816 these Acts were being implemented within the study area.

Secondly, the first edition of the Ordnance Survey Maps of the district were surveyed in 1816 at a scale of 2" to 1 mile (3). These gave, for the first time, an accurate and comprehensive survey of the siting of buildings and roads throughout the area under review, thus clearly indicating the settlement pattern at that date.

Thirdly, the end of the Napoleonic wars in 1815 brought about a series of changes with great economic and social consequences for the following decade. 1816 is therefore a convenient and suitable time at which to re-appraise changes within the study area since 1782.

I. SETTLEMENT.

This was a period of much development concerning both settlement and land ownership. So far as can be ascertained from estate documents and plans and Land Tax Assessment returns, there were fifty-three houses within the study area in 1782 (4). Their dispersed pattern of distribution has been commented upon in the previous chapter. By 1816, fifty-four additional houses had been built, whilst none of the former houses had become uninhabited. (See Map 3.1. and Table 3.1.).

The position of these buildings can be ascertained by using a variety of cartographic material. Detailed but fragmentary estate plans survive for some parts of the study area, and these clearly identify certain buildings by name. Houses within those parts of the study area included in either the 1802 or 1811 Enclosure Acts are also clearly marked on the surveys and schedules associated with these Acts, and thus many of the newer settlements can be positively identified.

The 1816 surveyors' drawings which preceded the first edition Ordnance Survey Maps are the first reliable survey of the whole area, and both confirm and complete the fragmentary estate and enclosure maps. The Ordnance Survey Map identifies but does not name every building. However, because of the tradition of stability in the majority of house names, it is possible to identify by name each house standing in 1816.

One particular value of the Ordnance Survey Map is that it indicates the stage of development reached in 1816 by the network of local roads and tracks. Field boundaries, however, are not reliable and it is not clear whether 'rough pasture' signifies unenclosed grazing land, whilst rough pasture within the bounds of farms remains unshaded (5).

MAP 3.1: SETTLEMENT PATTERN 1782 - 1816

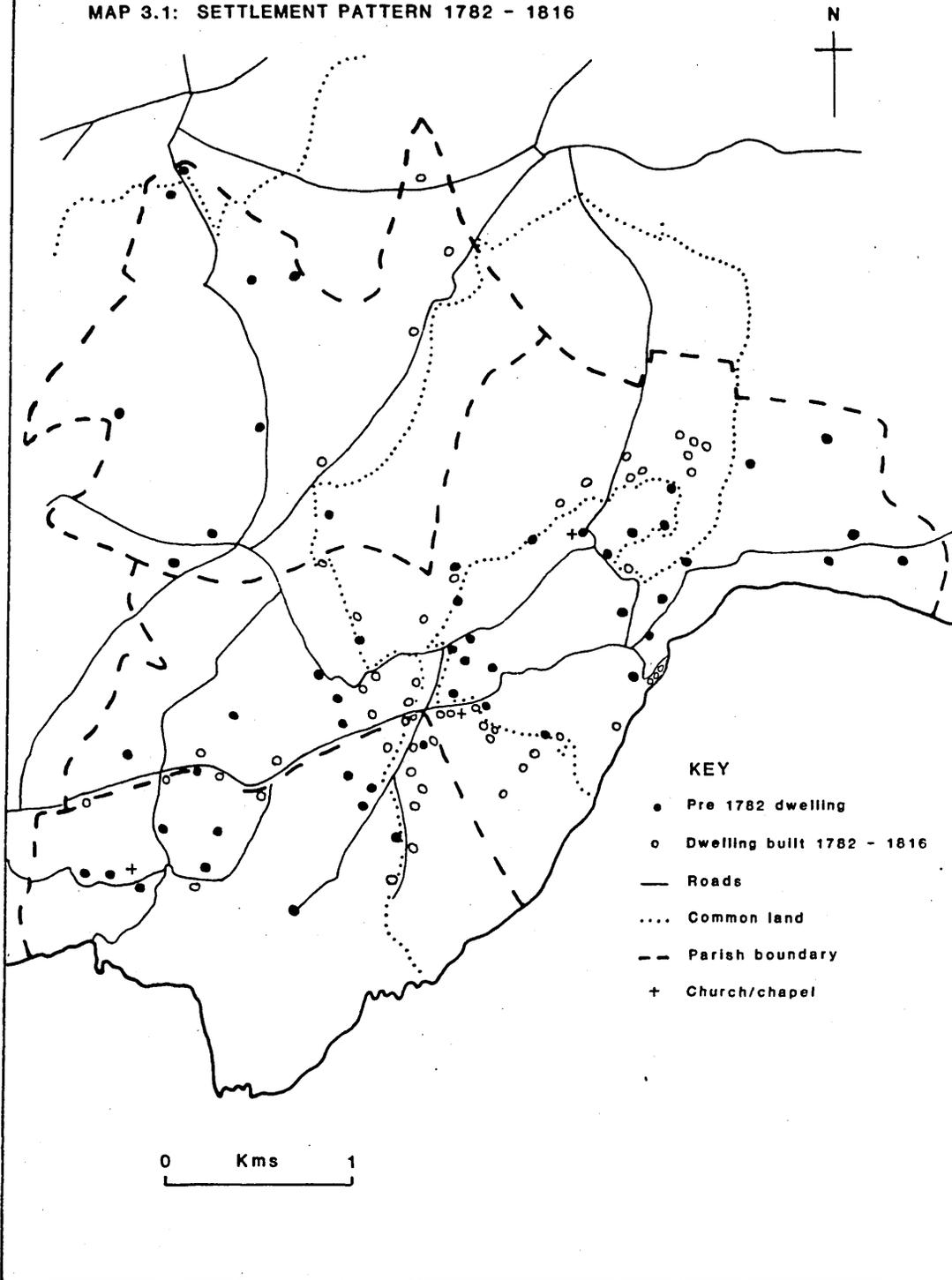


Table 3.1. Settlement Developments 1782 - 1816.

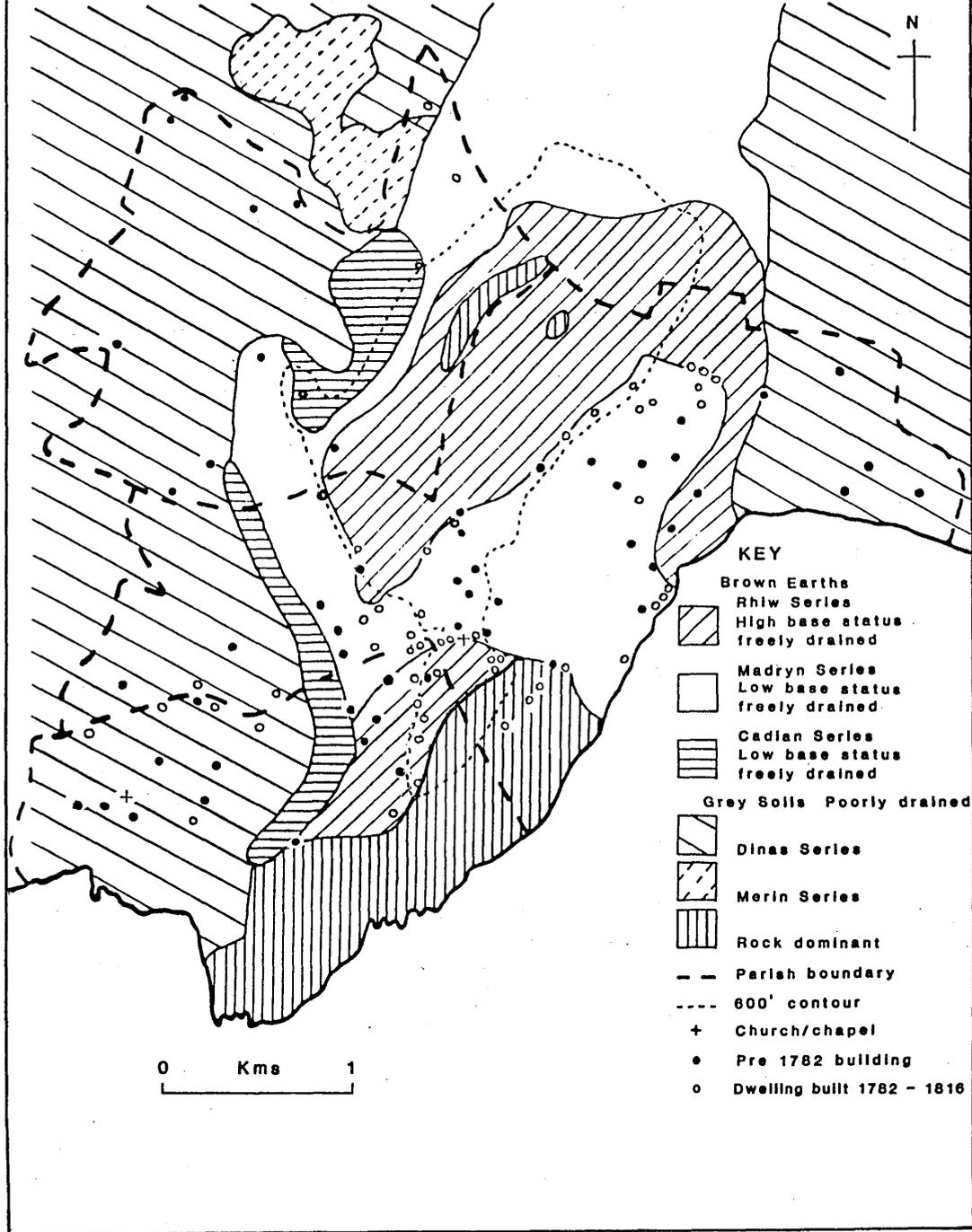
Total dwellings in 1782	53
Total dwellings in 1816	107
Dwellings uninhabited between 1782 - 1816	0
New dwellings between 1782 - 1816	54

Table 3.2. New Settlement Pattern 1782 - 1816.

Total of new dwellings	54
New dwellings within former upland common	31
New dwellings below common to the west	18
New dwellings below common to the west and on roadside	16
New dwellings below common to the east	5
New dwellings below common, to the east, and on coast	4
New dwellings near roadside	22

Table 3.2. indicates the pattern of the new settlements. The most noticeable factor is the emphasis on the use of the upland common for the siting of new settlements. (See Map.3.1.). Unauthorised squatting and encroachment had probably been occurring for a long time. Four houses within the commons had already been recorded amongst those paying Land Tax in 1782. According to the 1811 Rhiw and Llanfaelrhys Enclosure Award, squatters settlements of over twenty years standing were to be allowed to remain. The Survey for that Award clearly indicates the sites of all encroachments and it would seem that none were pulled down, as occurred elsewhere. Encroachments upon the commons probably seemed the best solution to housing problems as the local

MAP 3.2: SETTLEMENT PATTERN 1782 - 1816 IN RELATION TO SOIL

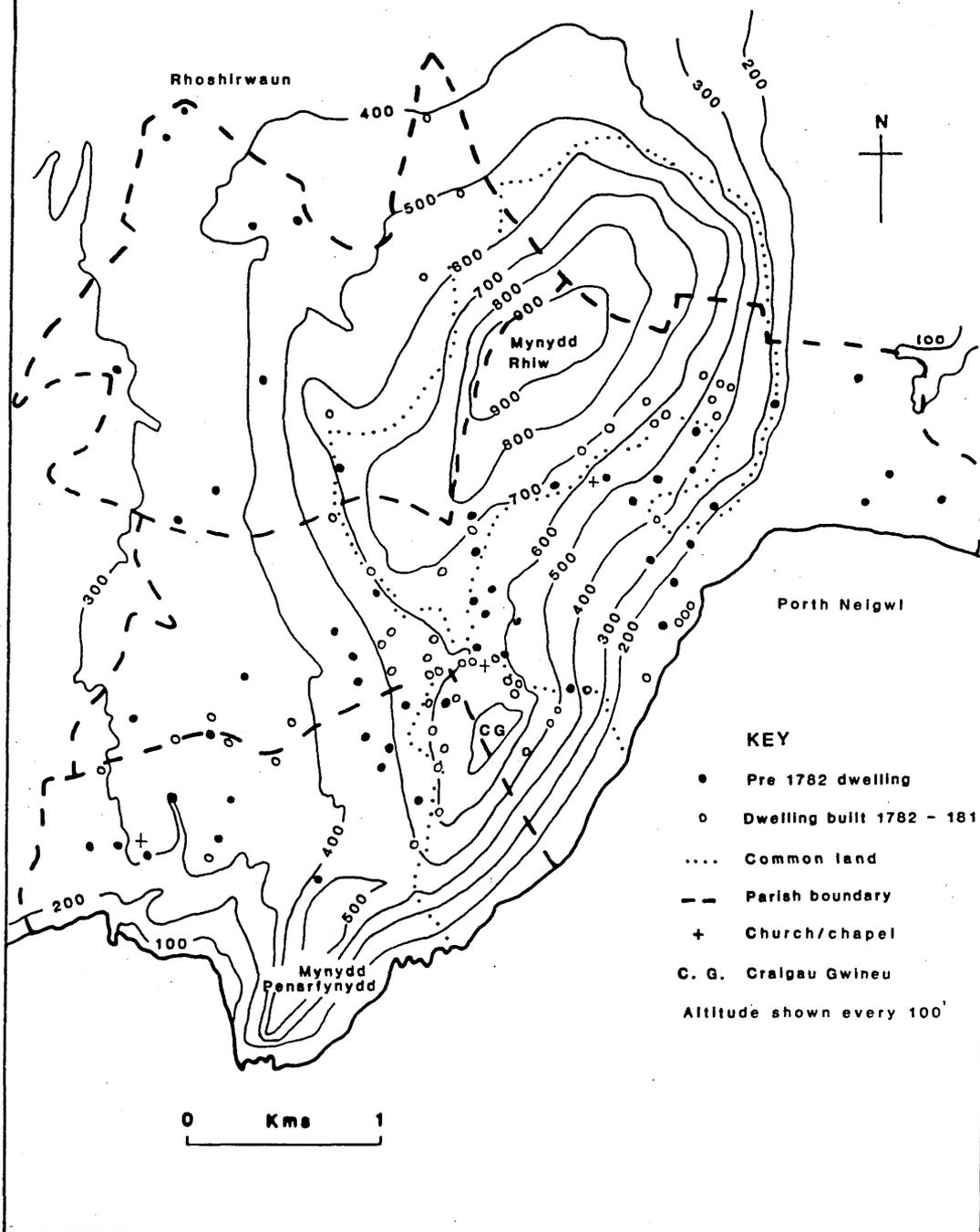


KEY

- Brown Earths
- Rhiw Series
- High base status freely drained
- Madryn Series Low base status freely drained
- Cadian Series Low base status freely drained
- Grey Soils Poorly drained
- Dinas Series
- Merin Series
- Rock dominant
- - Parish boundary
- ... 600' contour
- + Church/chapel
- Pre 1782 building
- o Dwelling built 1782 - 1816

0 Kms 1

MAP 3.3: SETTLEMENT PATTERN 1782 - 1816 IN RELATION TO ALTITUDE



KEY

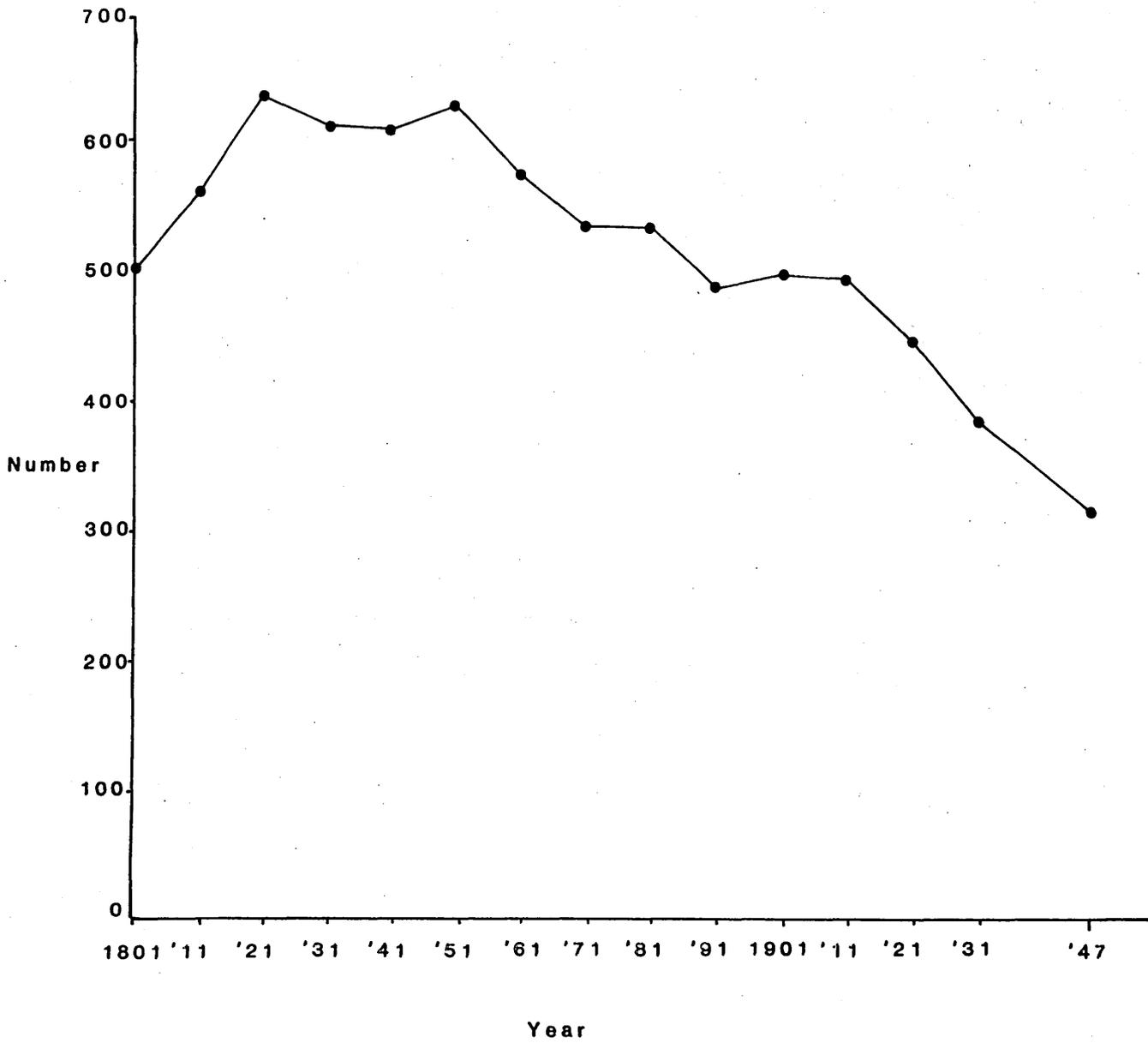
- Pre 1782 dwelling
- Dwelling built 1782 - 1816
- Common land
- - - Parish boundary
- + Church/chapel
- C. G. Craigau Gwineu
- Altitude shown every 100'

population increased and the remainder of the land was mainly owned by distant landlords. Encroachments usually included a garden of under an acre inclosed by a stone wall to separate it from the open common. Twenty-eight of the thirty-one encroachments upon the upland common were built upon the soil of the fertile Madryn or Rhiw series of free draining brown earths, whilst only three were upon a rock dominant soil. (See Map 3.2.). None were built above 700 feet above sea level and none were built around the more rocky northern or western flanks of Mynydd Rhiw (See Map.3.3.).

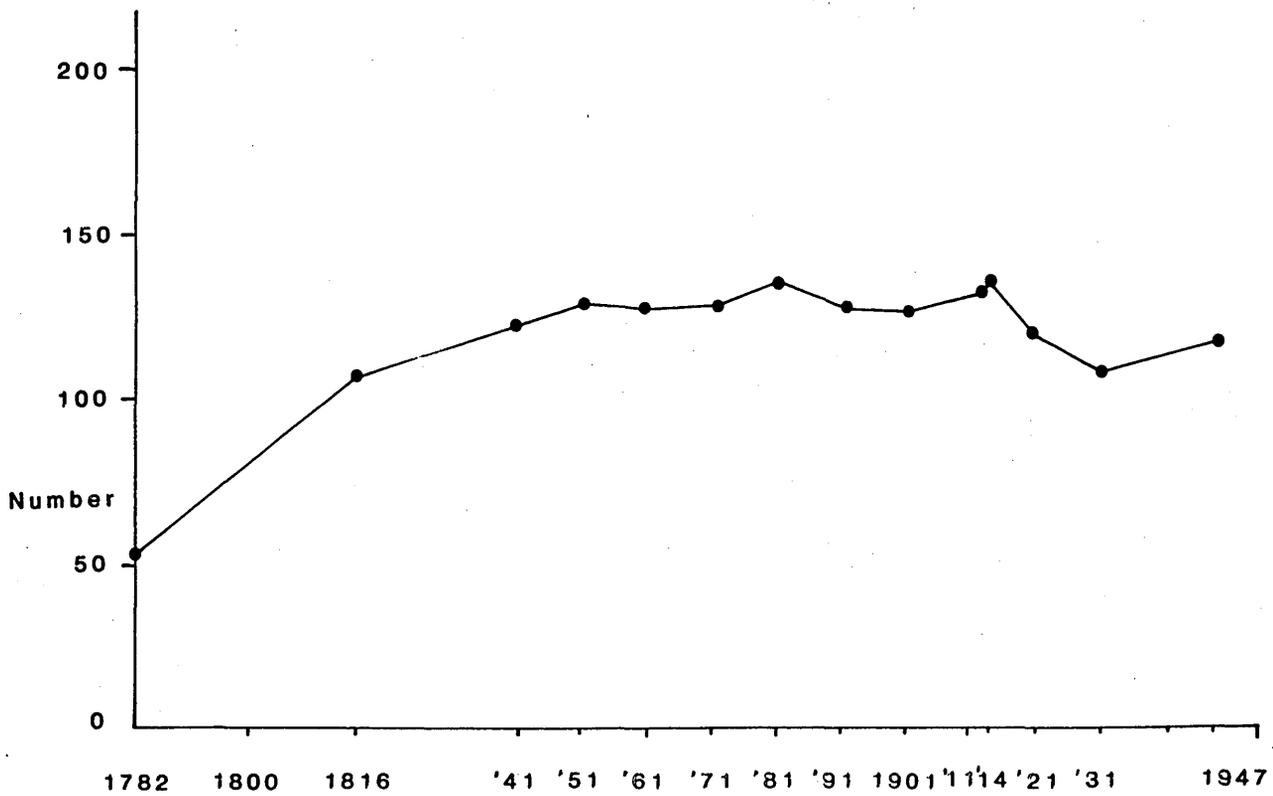
Close proximity to tracks and roads and to the coast is a second significant feature in the distribution of the new settlements during this period. Twenty-two of the fifty-four new settlements were alongside or close to tracks and roads. Amongst these were sixteen of the eighteen new settlements below the commons to the west of the central ridge. All but three of the twenty-three houses built below the former commons were close to a road, or the coast, emphasising the increasing importance placed upon the more convenient movement of people, animals and goods in and out of the district.

It is probable that the increase in housing was the result of an increase in population and the lack of sufficient tenancies for local people. The common North Wales practice of the relatives, friends and neighbours assisting in the building of a house on the commons between dusk and dawn (*tyunnos*) for a newly married couple was thought of as being reasonable and fair by most except for the landed gentry (6). With the increased birth rate following the establishment of so many new homes, and in spite of the high infant mortality rate, the population did continue to increase. The population and the number of inhabited dwellings in the study area at this time are indicated in Figures 3.1. and 3.2. respectively.

**FIGURE 3.1: TOTAL POPULATION OF RHIW AND LLANFAELRHYS:
1801 - 1947**



**FIGURE 3.2: TOTAL NUMBERS OF INHABITED DWELLINGS IN
RHIW AND LLANFAELRHYS: 1782 - 1947**

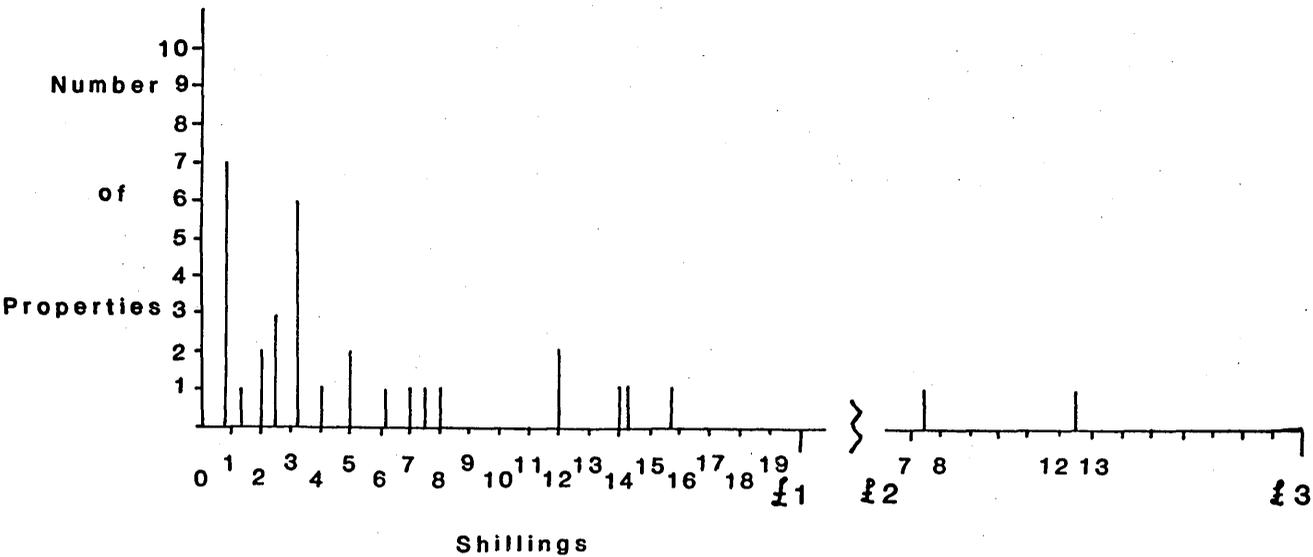


The vast majority of the new houses had very small or no gardens, were probably the homes of farm labourers and fishermen and were situated on former commons or close to roadways. The few exceptions were those estates where the land has been subdivided and separate farm houses built within the new holdings. For example, Tyn Rhedyn formerly part of Llawenan farm, and Tyddyn, Clwyd and Cae Newydd formerly part of Meillionydd farm.

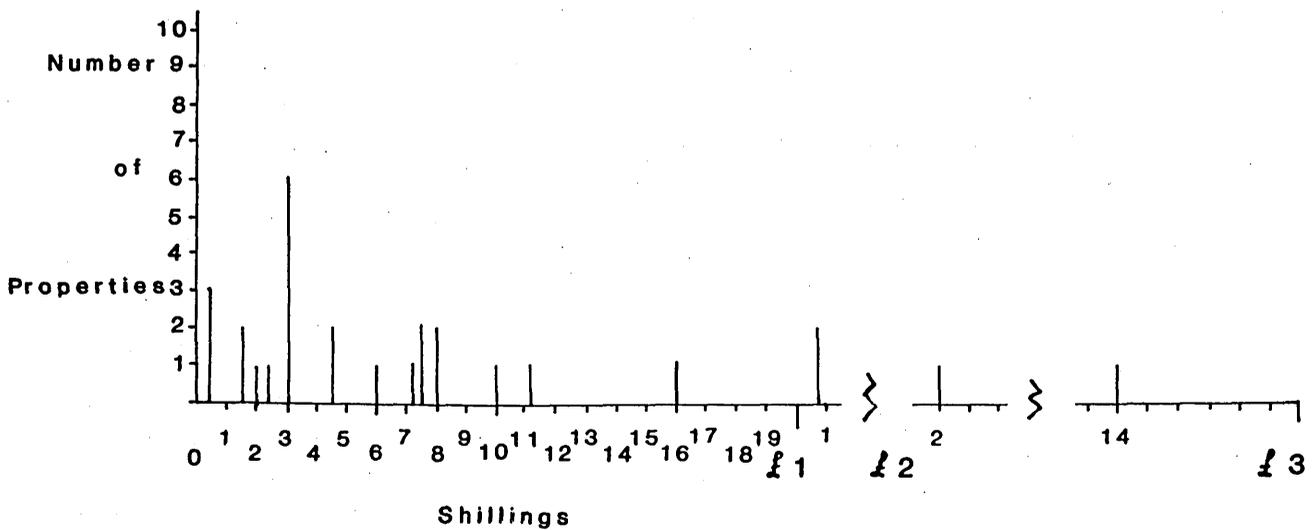
The doubling of the number of dwellings altered the character of the settlement pattern and the distribution in the size of land holdings within the study area. The former pattern was of widely dispersed homesteads each within its own farmland, albeit varying greatly in acreage, with communal use of the open upland common. By 1816 one third of all settlements were on the former commons and a half of all settlements stood in under one acre of land. Two economic systems were now placed alongside each other; the family farm and the cottage of the virtually landless labourer and fisherman.

The increase in the number of dwellings is not represented in the Land Tax Assessment returns between 1782 and 1818 where an increase of only 4 properties is noted. This may be due to inaccurate returns or to the small area of land associated with most properties. Figure 3.3. shows an analysis of the distribution in the rates in the 1818 Land Tax Assessments and reflects the distribution in value of the holdings assessed in the parishes of Rhiw and Llanfaelrhys. This would vary according to a combination of factors including acreage, type and condition of land, land use, and indirectly, land ownership. Both the pattern of distribution of rates within each parish and the comparisons between the parishes are very similar to those described by the 1782 analysis (See Figure 2.1.). In 1818 both parishes still show a very high percentage of extremely low assessments and few higher

FIGURE 3.3: ANALYSIS OF DISTRIBUTION OF RELATIVE LAND TAX ASSESSMENT IN 1818



RHIW LAND TAX ASSESSMENTS IN 1818



LLANFAELRHYS LAND TAX ASSESSMENTS IN 1818

assessments. This is more pronounced in Rhiw and is related to the small number of large lowland farms. Although containing a lower number of properties, Llanfaelrhys possessed a smaller number of assessments under five shillings when compared with Rhiw. This correlates with the higher proportion of undulating lower land and smaller amounts of former common within Llanfaelrhys. Both parishes contained the same number of assessments between five shillings and £2 and also of over £2. The 1818 returns confirm the stability in land ownership within the two parishes, indicating no change in assessed holdings since 1782.

The weight of taxation during the Napoleonic wars was heavier than that during the First World War. Taxes on farmers were said to have increased almost five fold in the former period. While Land Tax remained fairly stable, assessed taxes were trebled, and the new income tax became really effective in 1806. These taxes were unpopular as were the methods by which they were collected. Consequently, attempts to evade paying commissioners and excisemen were frequent and violent (7).

Table 3.3. Annual Value of real property as assessed in April 1815.

Rhiw	£464	1,652 statute acres.
Llanfaelrhys	£629	1,679 statute acres.

It will be noted from Table 3.3. that despite similar acreage, the real property value for Llanfaelrhys is considerably higher than that for Rhiw. This may be a result of the different proportions of former common land within each parish, or of differences in topographic and climatic conditions, land ownership and land utilisation.

The landownership implications of the enclosing of Crown common land within the study area were considerable. Formerly these extensive areas of Crown property were used by the community as summer pasturage for sheep and cattle, and as a source of fuel, stone and water. As a result of the Enclosure Acts, these areas were divided and allotted to the major land owners for inclosure and work to facilitate land improvement.

In the 1811 Enclosure Act proprietors in Rhiw and Llanfaelrhys were entitled in proportion to their estates and ancient rights to allotments upon the former common (8). Other allotments were sold to defray expenses, chiefly incurred in building a coastal embankment near Pwllheli planned in the same Enclosure Act.(9). The King, as Lord of the Manor of Bardsey, was awarded a twentieth part of the wastes, whilst the Bishop of Bangor, as the Lord of the Manor of Edern, and the Rector and churchwardens as Trustees of the poor of the several parishes, were allotted parts of the common to be enclosed for the poor for the purpose of supplying peat, turf and furze for fuel (10). Similar allocations were made in the Award implementation of the 1802 Rhoshirwaun Enclosure Act which included a small part of the study area (11).

Following the initial allocation of allotments by the commissioners, some land was resold as small holders were unable to pay off the mortgage (12). Other land was exchanged as land owners further consolidated their holdings (13).

Thus, as a result of these various arrangements, the private ownership of the former commons considerably modified the division and use of the land. The implications for settlement patterns, land ownership and land use of these two Enclosure Acts was probably the most significant single action affecting the local community during the

whole of the period under review.

II. ECONOMIC DEVELOPMENTS.

The period from 1782 to 1816 was one of considerable economic development in Caernarvonshire. The vogue of 'improvements' spread to many parts of the shire affecting agriculture, communications and industry (14). There was at the same time a considerable increase in the amount of literary, statistical and cartographic documentation, much of which is extant. These sources vary in their viewpoint from that of interested traveller, involved land agent, Board of Agriculture surveyors, land owners, newspaper proprietor and clergy and customs men responding to Government questionnaires. Census material, wills, probates and inventories together with other ecclesiastical documents provide additional sources of knowledge about current conditions. Together these provide a wealth of information concerning economic affairs in Caernarvonshire during this period and, although only some contain specific reference to the area of study, they do provide the necessary general background.

In agriculture, one of the chief factors necessary for development was that of appropriate leadership. This crucial element emerged in 1781 when Pennant, later Lord Penrhyn, secured control over the undivided Penrhyn inheritance, one of the largest estates in the county. He was resident on the estate, had the necessary capital and provided able local leadership with examples of improvements in stockbreeding, better farm houses, and mutually beneficial leases required to stimulate developments in estates throughout Caernarvonshire (15). Within the next 50 years the Penrhyn estate had acquired the Meillionydd estate which comprised a considerable proportion of the study area.

By the time of his death in 1808 Lord Penrhyn was described as having been responsible for 'greater advances towards improvements than during several preceding centuries' (16). Writing in 1809-11 Hyde Hall confirms in his description of Caernarvonshire the great improvements introduced within the previous thirty years (17).

The length and conditions of tenure in leases was repeatedly raised as crucial to development by those interested in agriculture (18). Tenancies at will were said to be detrimental to development (19). The adoption by the Penrhyn estate of 21 year leases with conditions of cultivation governed by the best contemporary practice, together with compensation to the tenant for any improvements made apparently resulted in both a doubling of rents and more thriving tenants (20). It was an often successful attempt to overcome the dual problems of insecurity of tenure and lack of capital (21). Davies notes that several other proprietors have since adopted this same plan (22). The improving agent goes over the estate farm by farm, new roads are formed, waste corners planted, crooked hedges straightened, meadows irrigated and wet land drained (23).

Earlier attempts, such as those of the Vaynol estate described in the previous chapter (p.51), which offered long leases with restrictive clauses designed to give the tenant security and encourage better husbandry often failed through lack of capital. Some tenants sought freeholds, fertile land and property in America (24). Other farmers, with long leases, were afraid of improving their lands lest they should then be turned out the next year or be subjected to a much higher rent (25).

The majority of farms were very small, and the condition and siting of farmhouses and their out-buildings often most unsatisfactory (26). Within the study area, in the parish of Llanfaelrhys, Hyde Hall noted

that 'the buildings were of a better description than usually seen in the neighbourhood' (27).

High amongst the obstacles to improvement were the issues of non residency of many proprietors and the lack of mutual confidence between landlord and tenant (28). Davies comments that "gentlemen of moderate income, residing in the county, transact the affairs of their own estates. Those of greater property commit the whole care to the management of agents, who are well qualified" (29). Other writers felt strongly that many agents were inadequate for their work (30).

However, these issues emphasize the problems of educating the large number of tenants in the improved techniques of drainage, manuring, drill husbandry, crop rotation, stock control and stock breeding. In 1794 Kay was appalled by the "very unaccountable opinion entertained by the farmers against clover and other improved seeds" (31). Hyde Hall felt progress was thwarted by tenants "tenacious of old habits and protected by their leases against an enforced change" (32). He emphasized the importance of Agricultural Societies as centralised organisations disseminating agricultural knowledge such as crop rotation and the use of drill husbandry (33). He notes a section of newly constructed paddock walling on land in Rhiw belonging to Sir Robert Vaughan for which the tenant had obtained a premium from the Caernarvonshire Agriculture Society, formed in 1807, and implies that such awards stimulate further improvements in both technique and attitude (34).

Sir Robert Williams Vaughan of Nannau, M.P. for Merioneth was a great friend and admirer of Arthur Young, the Secretary to the Board of Agriculture. The fact that it was one of his tenants who gained a premium for wall building in Rhiw would suggest that Vaughan encouraged improvements amongst his tenants within the study area as much as

amongst those in Merioneth.

Generally the initiative in Llyn itself was taken by the Edwards family of Nanhoron. In 1749 they bought the old Bodwrdda estate, much of which lies within the study area. Mr. Edwards of Nanhoron had, after the war, introduced Border Leicester blood into the area, thus improving the size and value of Llyn sheep (35). Within Llanfaelrhys Hyde Hall links examples of improvements with the encouragement given by the Edwards (36). He further comments that the great improvements introduced resulted in numerous applications for any vacancy, in spite of raised rents. Many tenants were, however, ill educated (37) and barred by status and language from reading or discussing agricultural matters with successful innovators (38). This was likely to have been the case within the study area. From 1808 those who were able to read English had the benefit of the North Wales Gazette, published weekly in Bangor. In its early years about one quarter of the contents consisted of contributions on agricultural topics (39). These informative articles were only available in English. The lack of agricultural literature in Welsh during this period hindered the dissemination of new ideas and methods.

The breeding and exportation of store cattle continued to be of utmost importance. In 1794 Kay notes that the native breed is thought the most hardy and therefore few attempts have been made to improve it (40). He does however also refer to two experiments at introducing Bakewell and Warwickshire bulls (41). Davies writes of the great numbers of cattle reared on the best soils of Anglesey and Llyn, and of the high quality of cheese made at Hirdref in Llyn (42). Specific upland areas in Rhiw designated for the summer grazing of cattle are noted by Hyde Hall (43). Together with reference to cattle

markets, fairs, and drovers these comments reinforce the importance of cattle within the local economy. Sheep were also important, but the number of horse had declined. Oxen were used in place of horses on occasions, and pigs were reared for profit (44).

The lack of satisfactory drainage, fencing and manuring is repeatedly emphasized. Kay commented on the loss of dung resulting from inadequate and dispersed out-buildings and lists lime, shellsand and moss as other manures used (45). Davies noted the lack of travelling roads, the great distances from lime, and the deficiency in the quality of other manures (46). Kay observed a variety of low old stone walls plus more effective newer enclosures which doubled the rent, presumably because of better stock control and opportunity to improve both stock and grain production (47). Davies describes the improvements effected when smaller enclosures in wet exposed situations allow ditches to act as drains and hedges as shelter (48). Kay comments that major drainage improvements should be the business of the proprietor, the farmer having neither the means nor the inclination (49).

In his survey of 1794 Kay observed that there was no proper system of crop husbandry and that oats, barley and potatoes were almost the only crops cultivated (50). This was still the case a decade later (51). However, he praises examples of crop rotation, commenting on the tenfold increase in value of the improved lands (52). He describes ploughing as shallow and unequal with no use of drilling machines (53). In 1810 Davies is able to describe improvements including the use in Llyn of the Norfolk rotation of crops including wheat, turnips, barley and clover (54). He also suggests increased use of flax, its seeds being useful in the rearing of calves (55). Around the same time Hyde Hall notes that potatoes and grain, crops

were coming into their own, that irrigation was known and applied, but that grasses remained undeveloped and there was a demand for improved cereal seeds (56). In a parish adjoining Rhiw he noted that some wheat was grown but that oats, as in the rest of the district, was the chief object of cultivation (57).

These comments highlight several issues (58). The farmers often lacked the capital necessary for major improvements for drainage or fencing and could not therefore provide well drained sheltered crop growing areas adequately protected from stock. Finance was also necessary to improve farm equipment, even if such equipment could cope with the state of local roads and the condition and slope of much of the land (59). Finally, a reliable supply of improved seeds was not readily available, thus hindering development. Amongst obstacles to improvements Davies also listed bleakness of exposure, stony soils and hilly wastes (60). These physical conditions were difficult to control and were added to by the climatic conditions resulting in a series of poor harvests in the 1790s (61).

This led to severe grain shortage in Britain and great increases in the price of grain generally (62). Together with other effects of the commencement of the Napoleonic wars in 1793 this resulted in rampant inflation (63). Similar conditions of war, food shortage and inflation in Europe meant that the overseas supply was restricted and there were no imports to Britain.

Concern about the failure of harvests, the rapidly rising price of grain, the threat of invasion and general social unrest prompted the Government to obtain a variety of statistical details concerning the state of agriculture. One method was by questionnaires, several of which were imprecise in content and the returns give an incomplete coverage of the country, county or district. The Home Office survey

of 1800 produced a reply from the vicar of Llaniestyn in central Llyn (64); the Board of Trade survey, also of 1800, obtained a return from the customs officer at Pwllheli, referring to coastal Llyn (65). Unfortunately, none of the Caernarvonshire 1801 Acreage Returns have survived.

The returns required by Government in 1800 augment the information available from other sources, although it must be stressed that these returns are to specific questions which emphasize grain production and which have not been completed by agriculturalists. These returns do however reinforce other statements from Llyn that barley and oats formed the main crops, with some potatoes and very little wheat, turnips or beans (66). An average of 50% inflation is recorded between 1798 and 1800 in the cost of grain and potatoes (67). The consumption of the produce of the harvest began as soon as the new corn was ready, with no old grain in store (68). Grain had been imported before the commencement of harvest (69), although it would appear that in N W Wales the harvest of 1800 was better than elsewhere (70). However, the people were said to subsist upon potatoes and bread made from barley and oats (71). These conditions are confirmed by other writers (72).

The results of wartime inflation were varied. The high price of food stuffs, especially grain, acted as a stimulant to agricultural developments by those with land and capital. Greater efficiency was sought and the suggestions of agricultural improvers such as Young were generally more closely followed (73). It has already been noted that in Llyn and the remainder of Caernarvonshire these improvements were somewhat haphazard in distribution and effectiveness.

As the gentry saw the rise in grain and livestock prices, the notion of enclosing and allotting those commons and waste lands gained in popularity (74). It was said that the commons were in any case

being overstocked with resultant poor quality animals (75). Some used the movement for enclosing land to add to their own lands in order to gain in political and social esteem and power (76). The scarcity of corn, particularly in 1800 is said to have strengthened interest in enclosures (77).

The earliest Parliamentary enclosure in Caernarvonshire, under a Private Act of 1802 was that of the extensive crown common of Rhoshirwaun, covering two or three thousand acres extending over several parishes in western Llyn including part of Llanfaelrhys within the study area (78). (See Map 3.1.). Here the major problem was that of squatters who had settled on encroached land. Their opposition to being ejected caused a lapse in implementation between 1806 and 1810 and the final award was not made until 1814 (79). Hyde Hall visited the district during this period of ferment and he notes that the resistance of the encroachers "was overcome by the opportune interference of a party of dragoons sent for to England for the purpose" (80). He considered the loss of right to cut turf for fuel on the former common would result in mass depopulation and the "general spread of misery in Llyn" (81). Another writer commenting on the likelihood of those ejected squatters leaving the district for industrial towns, the navy or for America incidentally describes the local subsistence farming when commenting on the squatters attempts to support themselves by fishing and working on farms when labour was required (82). This writer also declared that there was sufficient enclosed waste awaiting improvement to double the production of both corn and cattle without such new enclosures (83).

Amongst agricultural material in the early editions of the North Wales Gazette was at least one lengthy article on the beneficial consequences resulting from enclosing land (84). This article may have

been one of the influences encouraging the enclosure Act for Aberdaron, Rhiw, Llanfaelrhys with five other parishes in Llyn, which was passed in 1811, and which ordered 6,000 acres of commons waste and marsh lands to be enclosed (85). In contrast to the Rhoshirwaun common which was low marshy land, this Act included large areas of the highest land in Rhiw and Llanfaelrhys and was rough, sometimes rocky waste and common. In Rhiw Hyde Hall had nevertheless noted "some extent of common which is in general of a very good soil" (86). The aim of the Act was stated to be the division, allotment, inclosure and works to facilitate drainage and improvement of the land (87). Certain clauses were specifically designed to assist in agricultural development. For example, four crops of corn, or other produce obtained by tillage were to be exempt from the payment of tithes (88). Again, for the better preserving of the young hedges it would not be lawful for any person to depasture or keep any sheep or lambs upon the new inclosures for the space of seven years, unless they were effectually guarded to prevent any damage to fences (89). The dispute concerning the **pasturage** of sheep on these commons prior to enclosure and the possible entitlement of Aberdaron parishioners to allotments was discussed in the previous chapter. It illustrates the "needs of the time for increased land for pasture, as sheep from one parish overflowed into other parishes" and the fact that within the study area sheep were of utmost importance (90).

The implementation of this enclosure Act was probably the most significant single action affecting the land ownership, settlement pattern and land utilisation within the study area at any period in time. Only a relatively small percentage of the area enclosed was ever tilled regularly, but the effect of the separate pasturage on the stock of each tenant probably assisted in the development of a better breeding policy for the more forward working farmers and tenants. A major effect

of the Act was that upon the encroachers, and upon the poorest inhabitants. However, the population of the two parishes continued to increase up to the 1821 census, so it is clear that labourers and domestic servants were available for the increased work load on those farms with newly allotted portions of land to fence and bring under cultivation. The variety and extent of stone walling constructed following enclosure is indicated by documents concerning the Meillionydd estate (91). These also show a late example of the exchange of numerous strips of land scattered amongst another land owners land for a consolidated area of the newly enclosed common (92).

Mining and quarrying, by now of great economic importance in other districts in Caernarvonshire, were of little importance in Llyn (93). Lead mines at Penrhyn Du near Abersoch were worked intermittently during this period (94). It is however clear from a references to abundant ironstone in a local farm survey in 1808 and in a neighbouring parish, and from a description of Mynydd Rhiw in 1806 that even within the study area there was interest in and awareness of the potential of mineral working (95).

Afforestation was repeatedly advocated but in spite of the great efforts of Lord Penrhyn in planting six hundred thousand trees within sixteen years Kay comments that except around a few gentlemens' houses, the land was bare of trees (96). In describing the parish of Llanfaelrhys around 1809 Hyde Hall also comments upon the fact that few or no trees are to be seen (97). He describes the neighbouring parish of Bryncroes as bare of wood except for new plantations around the house of Gelliwig (98).

The woollen industry in Caernarvonshire remained a mainly spare-time home based concern and never achieved the specialisation and organisation reached in Montgomeryshire or Merioneth (99). Spinning

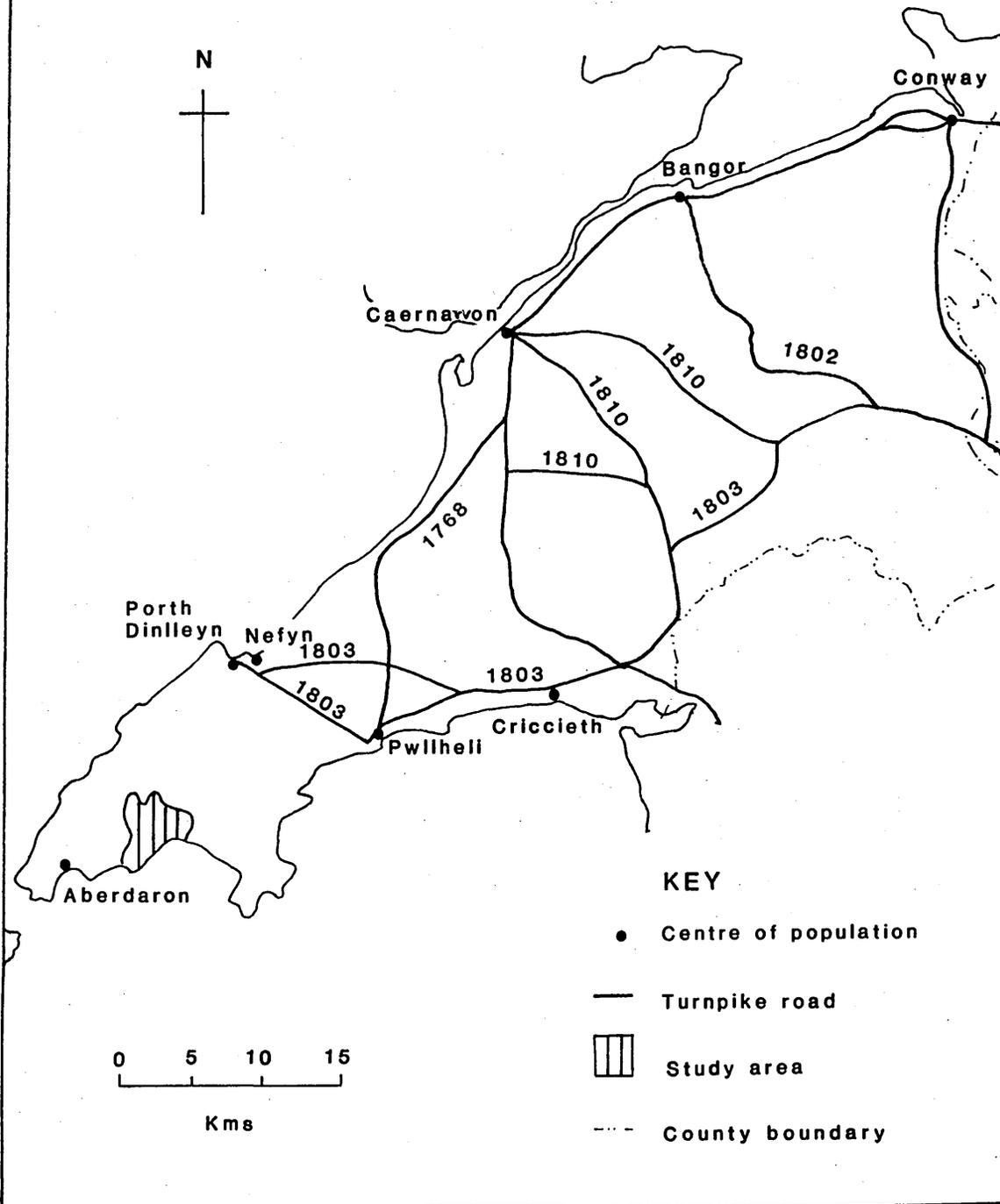
and weaving were, however, important aspects of the semi subsistence economy of many districts, each with its fulling mill (100). Within the study area Hyde Hall refers to the lichen gathered in Rhiw to extract a grey dye, the spinning and weaving of locally cultivated hemp and flax in Llanfaelrhys and also to two nearby mills for dressing cloth (101). In 1806 Pwllheli market was said to be well stocked with country woollen cloth of every kind, and with coarse linens (102).

The development of an effective road network was necessary in order to encourage the stimulus of trade and the exchange of economic, social and political ideas with visitors which the presence of a lively market town would provide. In 1794 Kay described the small town of Pwllheli as "a place of no trade, except for a few sloops that bring coals for the supply of the inhabitants of that part of the land" (103). Around 1800 William Williams suggested a road be built from Llanrwst to Llŷn as it would facilitate the conveyance of all the produce of Llŷn to the best markets of Wales and England (104).

By 1806 Pwllheli market is described as crowded and plentifully stocked with cattle, provisions and cloth (105). When speaking of Pwllheli market around 1809 Hyde Hall stated that he was informed that it was "more plentiful and reasonable than any within the county, possibly because of the larger opportunities for cultivation locally and the facilities of its export trade. Not only corn, but swine and cattle from the whole district of Llŷn, pass through or by this place, and from around Porthdinlleyn prodigious supplies of poultry and eggs go to the Liverpool market" (106). The fairs for the sale of cattle, swine and horses are also described. These marked improvements were in great part due to the opening up of the area by the Turnpike road in 1803 (107). (See Map 3.4.).

In 1810 Davies stresses the importance of the Turnpike roads

**MAP 3.4: COMMUNICATIONS IN CAERNARVONSHIRE
CIRCA 1810**



saying that they "helped agriculture, commerce and all types of internal improvements. Landed property increased in value as a result of the new roads, the introduction of manure and the convenience of disposing of surplus produce. Places formerly inaccessible to wheeled carriage were now equally situated. The promontory of Llyn consisting of good soil, was in a poor state of cultivation until within these few years when it was for the first time introduced to the world by means of new roads" (108).

From around 1811, three times a week a cross post from Pwllheli brought mail to Meyllteyrn, three miles from Rhiw, for distribution locally. It was maintained by the local gentry who, on the other weekdays dispatched a special messenger to Pwllheli for their correspondence (109). However, Hyde Hall remarked that the new turnpike was becoming grassed over for lack of wheeled traffic and that the insufficiency of commerce in most parishes failed to encourage and maintain roads of easy passage (110). In the parish of Llanfaelrhys, within the study area, he describes, as an example of improvement, "a new road, spacious and well made, upon a farm of Col. Edwards (of Nanhoron) done by the tenant himself for facilitating the interior business of the farm" (111).

Together these observations confirm a growing awareness of the need for, and the value of, a road network both within a farm and throughout the district, despite the paucity of suitable road surfaces and the lack of wheeled vehicles. The physical isolation of the general population was decreasing. It was however still mainly the gentry who undertook the hazardous uncomfortable journeys, often to their social and political functions (112). Drovers, sailors and now ex-soldiers, often travelled far and these were likely to exchange news and ideas and on their return discuss these experiences with local people.

Fishing was still a very important element within the economy. The herring fishery around Nefyn was described by Davies as "the most flourishing in all Wales. Many thousands of pounds are yearly turned in at Nefyn and at several places in the neighbourhood, in which great numbers of hands are employed; but for one season of the year of a few months, and most are idle during the rest of it" (113). Some of the fishermen of Rhoshirwaun also worked as farm labourers when required and this was probably common practice to augment income (114).

Another link between land and sea was that concerning the investment by farmers in shares in local vessels as is shown in probate inventories and wills (115). Both coastal and offshore traffic still played an important role in local transportation with the export around 1806 of corn, potatoes, butter and cheese and the importing of coal, limestone, shop goods and timber (116). Following the improvements to the harbour after the implementation of the 1811 Enclosure Act, Pwllhelli continued to expand as a port and as the county's chief ship building centre (117). The improved foreshore stimulated the building of accommodation for the holiday-makers now being attracted to the area (118).

The longstanding scheme for making Porthdinlleyn near Nefyn, the packet station for Ireland instead of using Holyhead, was finally defeated (119). The Llŷn had however already benefitted from the roads and inns built around 1803 from Tremadoc to Porthdinlleyn to support the scheme. As has been seen, these greatly assisted in the opening up of the region.

The work began at Porthdinlleyn harbour came to an end when the packet station project was abandoned. Had that scheme been successful, not only the communications network, but the whole economy and development of the Llŷn peninsula would have been very different (120).

Since 1782 Caernarvonshire had, in general, developed considerably

in terms of agriculture, industry and communications. The high corn prices prevailing during the French wars had been a powerful spur to agricultural improvements, especially those like enclosure and drainage involving a high capital expenditure. Even at the time some local observers feared that the high wheat prices were stimulating the extension to unsuitable soils of a crop which would never pay its way in normal times. With the conclusion of peace in 1815 the market collapsed and a long depression ensued. In place of the critical and informative discussions of agricultural topics which had enlivened the local press in the war years, there appeared a depressing sequence of notices of sales of farms or stock under distress, of compassionate reductions of rent, of farming bankruptcies and sluggish fairs (121).

In 1816 there was much distress following the bad harvests and there were fears of famine (122). The replies from North Wales to the 1816 Board of Agriculture questionnaire indicated an alarming state of affairs, reinforced elsewhere (123). The 1815-16 slump and onset of deflation brought prices down to the pre-war level (124).

On a more optimistic note it can be said that there were some permanent gains such as drainage and reclamation, better farm implements, a lasting increase in the cultivation of green crops and root crops and in consequence more fattening of stock on the farm itself (125). It has already been noted that the enclosure acts had resulted in a better harbour and coast road at Pwllheli. These improvements formed the basis for later developments as allowed by the future vagaries of weather, market forces, money supplies and Government policies.

Within Rhiw and Llanfaelrhys the most significant events of this period were those initiated by those major Caernarvonshire land owners who owned land in the study area. The enclosure of large areas of common

land dramatically changed land use and the pattern of settlement and land ownership, whereas the land owners' growing leadership in agricultural developments led to changes in leasing conditions and agricultural practice which in turn affected local land use. (Compare Maps 2.5. and 4.4.).

III. SOCIAL ISSUES.

Within the study area it would seem that this period was a time of increasing economic difficulty for the majority of tenants, labourers and craftsmen as they struggled to provide for themselves and their families the bare essentials of life (126). The constraints forced upon them by distant war, distant Acts of Parliament and often distant landlords were affecting the price and supply of food, where they were allowed to live and how they were to work the land (127). Higher rents and taxes resulted in many farmers being as poor as those they were forced to assist with the increasing Poor Rates (128). Increases in taxes on salt and coal, crucial commodities to a fishing community barred from much of the former fuel grounds of the commons, both resulted in smuggling and plundering of wrecks being recorded off Llyn[^] between 1785 and 1816 (129).

Many were said to be miserably poor, living in "disgraceful habitations of wretchedness" (130). This was partially attributed to the effects of enclosing the commons, which denied grazing and a small plot of arable to many of the poor (131). Unsympathetic landlords were also blamed (132). In Rhiw and Llanfaelrhys a turbary was set aside for fuel gathering, although this was specifically prohibited on Mynydd Penarfynydd (133). Poor housing and poor diet led to disease, against which there was inadequate medical care (134).

At this time knitting and weaving were sources both of essential clothing and of produce for possible sale (135). The collection of lichen for the extraction of a grey dye in Rhiw may have been used by local weavers, or sold for 1^d a pound, possibly for use for army uniforms (136). After 1815 craftsmen were badly affected, as were farmers, by the drop in trade (137).

The difficulties of making a living were such that considerable numbers of Llŷn people emigrated to North America (138). The combination of factors such as growing economic hardship, ejection from encroachments on commons, pressures on the land from the increase in population and the harrassment of many early Methodists led to several groups leaving Llŷn such as those from Llanengan in the 1790s, and those from Bryncroes in 1795 (139). In 1801, 348 people emigrated from Caernarvonshire, almost half the total for Wales (140).

A pattern was emerging from much of rural maritime Caernarvonshire, including the study area. The very few rich invested in agricultural improvements and prospered. There appear to be none from this category within the study area. The moderately prosperous small land-owners and the large tenant farmers were affected by the economic fluctuations but, by responding with new techniques and using newly enclosed lands, were capable of producing a surplus, employing others and contributing to the community. A small group of up to six families within the study area were in this category. Only those at Meillionydd, Penarfynydd, Bodwyddog and Plas Yn Rhiw would have had status and some financial gain chiefly from the effects on the Enclosures. The vast majority within the study area formed the category of the poorer tenants, the labourers and craftsmen described above. Gradually, with the encouragement of landlords such as the Edwards of Nanhoron, an increasing number of tenants began to use new techniques to some

advantage.

Generally however, conditions remained harsh and any alleviation obtained through local community life would play a major role in improving the quality of life. Within the study area the initiatives in community activity were mainly led by the Non conformists, particularly the Methodists who were rapidly gaining ground in Llyn (141). Several preached within the study area (142). Links between religion and education were strong and Robert Evans of Bodwyddog, Rhiw who in 1784 bequeathed £80 to be used for keeping a Welsh school circulating between the parishes of Rhiw, Llanfaelrhys, Aberdaron and Bryncroes was closely connected with local Methodists (143). The successors of the circulating schools of Griffith Jones were the Sunday schools established by Thomas Charles of Bala (144). Both children and adults attended classes taught by locally selected teachers (145). In Rhiw a Sunday School was started in 1802 in a cottage and by 1810 was moved to Rhiw church (146). Festivals brought together schools from a wide neighbourhood and these opportunities for the exchange of ideas and the habits of reading and discussions were said to be the cradles of democracy and spiritual revival (147).

An upsurge in chapel building commencing in 1811 when the Methodists left the Church of England coincided in the study area with the enclosure of the Rhiw and Llanfaelrhys upland commonland (148). In 1813 Nebo Independent Chapel was built on a plot from the former common in the col in the north-south ridge obtained from Thomas Rice, a local farmer who had purchased one of the allotments sold to defray enclosure expenses (149). Other non conformist groups met in local farmhouses (150). However, interest in the established church weakened (151). The British and the National schools' societies, founded in 1808 and 1811 respectively, had little early success in

Llyn (152). Botwnnog school continued to provide education for some local boys (153). There was therefore still little opportunity to learn English and thus gain access to information through that medium. There was however a Welsh literary awakening in Caernarvonshire, with poets and writers of repute coming from parishes neighbouring the study area (154).

It is no wonder that so many found spiritual solace and personal dignity in their deep involvement in the religious revivals of this period (155). It has been said that in Wales the Methodist Revivals were a vent for the personal and emotional expressions of the otherwise poor and insignificant masses whose English counterparts were more likely to protest and riot (156). This was probably as true of the study area as of any other part of Wales. This period was thus one of marked changes in the study area. The appearance of the landscape had changed to incorporate the new walls, farmsteads, cottages and modified land use following the enclosure of the commons, the increase in population and developing agricultural practice. These changes could be seen by all. Perhaps, however, an equally important development was that of the growth of a local community involved in an educational and spiritual dimension which took them far beyond their very limited economic condition and gave individuals a vision and a stability with which to face the difficulties of the coming years.

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- (2) G.A.S. CRO X/EA 1811. Aberdaron Inclosure Act. 51
Geo III c 49
- (3) British Library. Maps Library. O.S.D. 300, S.E.R. 260
- (4) U.C.N.W. Bangor Ms. 2636;
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- (5) Thomas, D. (1963) Agriculture in Wales during the Napoleonic
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- (9) Plume. G.A. (1935) The Enclosure Movement in Caernarynshire
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- (10) G.A.S. CRO X/EA 1811. Aberdaron Inclosure Act
- (11) G.A.S. CRO X/EA 1802. Rhoshirwaun Inclosure Act.
- (12) U.C.N.W. Perth yr Aur Ms. 4906
- (13) U.C.N.W. Bangor Ms. 2636
- (14) Dodd, A.H. (1968) op.cit. p.232
- (15) Idem. p.233
- (16) "North Wales Gazette" 26 Jan. 1808
- (17) Hyde Hall, E. (1952) op.cit. p.293

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- (19) Hyde Hall, E. (1952) op.cit. p.13
- (20) Kay, G. (1794) op.cit. p.9
- (21) Hyde Hall, E. (1952) op.cit. p.15
- (22) Davies, W. (1813) op.cit. p.101
- (23) Glynllifon Estate Office. E/49. Survey and Valuation of
1809 by T. Brown
- (24) Roberts, R.O. (1973) op.cit. p.34
- (25) Williams, W. (1806) op.cit. p.384; Kay, G. (1794) op.cit.
p.9
- (26) Idem. pp.9,10; Davies, W. (1813) op.cit. p.92;
Williams, W. (1806) op.cit. p.380
- (27) Hyde Hall, E. (1952) op.cit. p.305
- (28) Williams, W. (1806) op.cit. p.377, p.379
- (29) Davies, W. (1813) op.cit. p.76
- (30) Williams, W. (1806) op.cit. p.375, p.379;
Colyer, R. (1977) op.cit. p.403
- (31) Kay, G. (1794) op.cit. pp.13, 14
- (32) Williams, D. (1941) An Eye Witness account of Agrarian
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- (33) Hyde Hall, E. (1952) op.cit. p.12
- (34) Idem. p.304
- (35) Jenkins, R.T. (1945) A Drovers' Account Book, T.C.H.S.
p.57
- (36) Hyde Hall, E. (1952) op.cit. p.305
- (37) Idem. p.293

- (38) Williams, W. (1806) op.cit. pp.378,379
- (39) Dodd, A.H. (1968) op.cit. p.234;
"North Wales Gazette" 31 Aug 1808
- (40) Kay, G. (1794) op.cit. p.18
- (41) Idem. pp.18,19; Davies, W. (1813) op.cit. p.312
- (42) Idem. p.210, p.312
- (43) Hyde Hall, E. (1952) op.cit. p.304
- (44) Kay, G. (1794) op.cit. pp. 16-20
- (45) Idem. pp.10,11
- (46) Davies, W. (1813) op.cit. p.458
- (47) Kay, G. (1794) op.cit. pp.15,16
- (48) Davies, W. (1813) op.cit. p.124
- (49) Kay, G. (1794) op.cit. p.15
- (50) Idem. p.11
- (51) Williams, W. (1806) op.cit. p.380
- (52) Kay, G. (1794) op.cit. pp.12,13
- (53) Idem. p.20
- (54) Davies, W. (1813) op.cit. p.153
- (55) Idem. p.210
- (56) Williams, D. (1941) op.cit. pp.72,73
- (57) Hyde Hall, E. (1952) op.cit. p.300
- (58) Howell, D.W. (1977) op.cit. p.xiii
- (59) Jenkins, J.G. (1976) op.cit. p.55
- (60) Davies, W. (1813) op.cit. p.458
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- (67) Idem. p.87
- (68) Idem. p.88
- (69) Idem. p.89
- (70) Thomas, D. (1963) op.cit. p.51
- (71) Minchinton, W.E. (1964) op.cit. p.89
- (72) Williams, W. (1806) op.cit. p.391; Davies, W. (1813) op.cit. p.352
- (73) Thomas, C. (1963) op.cit. pp.7-8
- (74) Dodd, A.H. (1968) op.cit. p.235
"North Wales Gazette" 4 Oct. 1810
- (75) Kay, G. (1794) op.cit. p.17
- (76) P.R.O. C. 8221. p.214. Land Report of 1896
- (77) Williams, W. (1806) op.cit. p.399
- (78) G.A.S. CRO. X/EA. 1802. Rhoshirwaun Inclosure Act.
- (79) Plume, G.A. (1935) op.cit. p.106
- (80) Hyde Hall, E. (1952) op.cit. p.298
- (81) Idem. p.273, p.298
- (82) Davies, W. (1813) op.cit. p.270
- (83) Idem.p.270; Williams, W. (1806) op.cit. p.375
- (84) "North Wales Gazette" 4 Oct. 1810
- (85) G.A.S. CRO X/EA. 1811. Aberdaron Inclosure Act.
- (86) Hyde Hall, E. (1952) op.cit. p.304
- (87) G.A.S. CRO.X/EA. 1811. Aberdaron Inclosure Act. p.2
- (88) Idem. p.14
- (89) Idem. p.14
- (90) Plume, G.A. (1935) op.cit. pp.120-1; D.C.N.W. Bangor.
Porth yr Aur Ms. 12677-12680

- (91) U.C.N.W. Bangor Ms. 2636
- (92) U.C.N.W. Bangor Ms. 2636
- (93) Dodd, A.H. (1971) op.cit. p.131
- (94) Hyde Hall, E. (1952) op.cit. p.303
- (95) Glynllifon Estate Office. E/49, E.148.; Hyde Hall, E.
(1952) op.cit. p.288;
Williams, W. (1806) op.cit. p.416.
- (96) Dodd, A.H. (1968) op.cit. p.232.; Key, G.(1794). op.cit. p.16.
- (97) Hyde Hall, E. (1952) op.cit. p.305
- (98) Idem. p.298
- (99) Dodd, A.H. (1968) op.cit. p.257
- (100) Dodd, A.H. (1971) op.cit. pp. 233-5; Kay, G. (1794) op.cit.
p.18; Davies, W. (1813) op.cit. p.410; Williams, W. (1806)
op.cit. p.404.
- (101) Hyde Hall, E. (1952) op.cit. p.303, p.305, p.306
- (102) Williams, W. (1806) op.cit. p.412
- (103) Kay, G. (1794) op.cit. p.22
- (104) Williams, W. (1802) Observations on the Snowdon Mountains.
p.74
- (105) Williams, W. (1806) op.cit. p.412
- (106) Hyde Hall, E. (1952) op.cit. pp.282-3
- (107) Davies, B.L. (1977d) op.cit. p.165
- (108) Davies, W. (1813) op.cit. p.372
- (109) Hyde Hall, E. (1952) op.cit. p.288
- (110) Idem. p.268, p.275
- (111) Idem. p.305
- (112) Idem. p.277
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- (116) Williams, W. (1806) op.cit. p.420
- (117) Hyde Hall, E. (1952) op.cit. p.283; Thomas, D. (1952) op.cit. Appendix.
- (118) Dodd, A.H. (1968) op.cit. p.273
- (119) Elis Williams, M. (1984) Packet to Ireland. p.53; Hyde Hall, E. (1952) op.cit. p.270
- (120) Dodd, A.H. (1968) op.cit. p.274
- (121) Idem. p.242
- (122) Jones, D. (1973) op.cit. p.55
- (123) Dodd, A.H. (1971) op.cit. p.51
- (124) Idem. p.349
- (125) Dodd, A.H. (1968) op.cit. p.242
- (126) Williams, W. (1806) op.cit. p.391; Dodd, A.H. (1971) op.cit. pp.51,52,p.349; cf Tenen, I., This England 1714-1960.
- (127) Stratton, J.M. and Brown, J.M. (1978) Agricultural Records cf 1782-1816; Williams, W. (1806) op.cit. p.391; Jones, D. (1973) op.cit. p.13, p.20, p.32.
- (128) Kay, W. (1794) op.cit. pp.9,10; Davies, W. (1813) op.cit. p.360; Williams, W. (1806) op.cit. p.328; Jones, D. (1973) op.cit. p.51; Hyde Hall, E. (1952) op.cit. p.274, p.282, p.297, p.302, p.307; Evans, E.D. (1976) A History of Wales. p.192
- (129) Hyde Hall, E. (1952) op.cit. p.271, p.273, pp.298-9, p.322; Williams, W. (1806) op.cit. p.416; G.A.S. XD/36/66/1; Dodd, A.H. (1968) op.cit. pp.283-5
- (130) Williams, W. (1806) op.cit. p.393; Davies, W. (1813) op.cit.

p.82

Hyde Hall, E. (1952) op.cit. p.286, p.290, p.298

(131) Williams, W. (1806) op.cit. pp.404-5; Davies, W. (1813)
op.cit. pp.86-7, p.227

(132) Idem. p.270; Williams, W. (1806) op.cit. p.374;
Hyde Hall, E. (1952) op.cit. p.298

(133) G.A.S. CRO X/EA 1811. Aberdaron Inclosure Act; Glynliffon
Estate Office. E. 148

(134) Davies, W. (1813) op.cit. p.82; Dodd, A.H. (1968) op.cit.
p.296

(135) Evans, E.D. (1976) op.cit. p.192

(136) Hyde Hall, E. (1952) op.cit. p.303, p.305; Dodd, A.H. (1971)
op.cit. p.240

(137) Idem. p.349

(138) cf. Dodd, A.H. (1953) *The Character of Early Welsh
Emigration to the United States.*

(139) Dodd, A.H. (1968) op.cit. p.303

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Daleithiau T.C.H.S.* p.48

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(141) Evans, E.D. (1976) op.cit. p.89

(142) Owen, G.P. (1978) op.cit. p.200; U.C.N.W. Bangor Ms. 17335

(143) N.L.W. Wills. Rhiw; Owen, G.P. (1978) op.cit. p.97

(144) Evans, E.D. (1976) op.cit. p.112

(145) Idem. p.113

(146) Owen, G.P. (1978) op.cit. p.200

(147) Hughes, J. (1851) *Methodistiaeth Cymru* 1. p.346;

Evans, E. (1959) *When He is Come.* p.14.

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Jones, I.G. (1977) Denominationalism in 1801 and 1851.
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Caernarvonshire
- (149) G.A.S. CRO. X/EA 1811 Aberdaron Inclosure Act. Map and
Schedule; Williams, D. (undated) History of the Independents
in Rhiw. Unpubl. ms.
- (150) Hughes, C. (1969) Rhiw: Religion. unpubl. Cert. Ed.
dissertation, Normal College, Bangor
- (151) Dodd, A.H. (1968) op.cit. pp.344-5
- (152) Idem. p.377;
Williams, H.G. (1977) Education 1800-1870 p.191 in Bassett,
T.M. & Davies, B.L. (eds) Atlas of Caernarvonshire
- (153) Hyde Hall, E. (1952) op.cit. p.287
- (154) Dodd, A.H. (1968) op.cit. p.342;
Jones, B.L. (1977) The Literary Awakening in Arfon and
Eifionydd pp.127-8 in Bassett, T.M. & Davies, B.L. (eds)
Atlas of Caernarvonshire
- (155) Dodd, A.H. (1968) op.cit. p.388
- (156) Dodd, A.H. (1971) op.cit. p.348

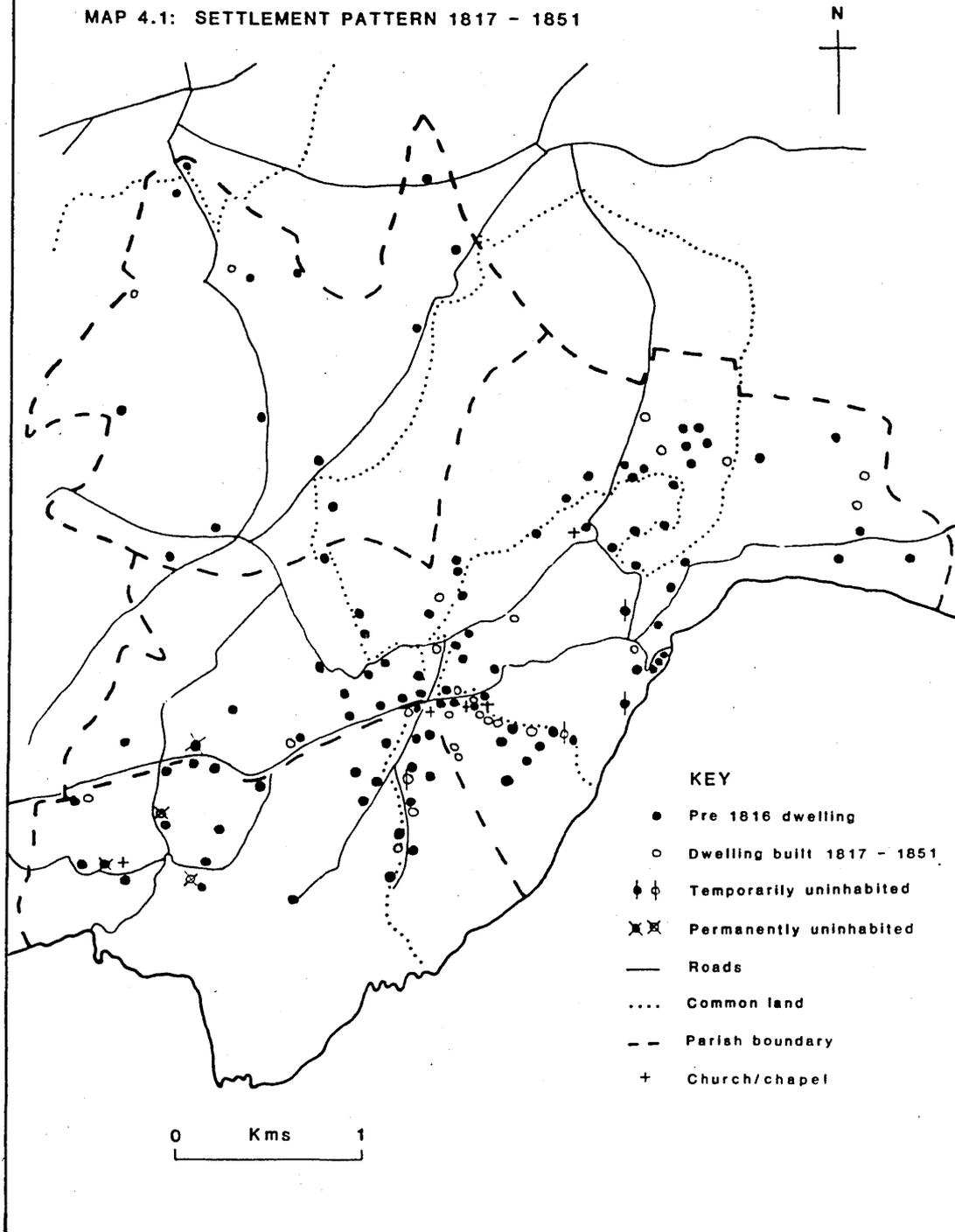
THE STUDY AREA BETWEEN 1817 AND 1851.

1851 has been selected as a significant date at which to conclude this phase chiefly on account of the detailed information on the study area available from the Census Returns of that year (1). This includes information on population size, dwellings and occupations which can be compared with that of the 1841 Census. It also includes a national census of religious worship which, coming at an important stage in the development of Nonconformity in the study area, is of particular interest (2). It is also possible to analyse the detailed parish-based data contained in the Tithe commutation maps and schedules of the early 1840s as well as that in the 1847 Report on Education in Wales (3). By using these official documents together with a wealth of local and regional material it is therefore possible to discuss aspects of continuity and change within the study area in terms of settlement pattern, economic development and social and cultural issues.

I. SETTLEMENT.

When investigating the local settlement pattern the positive identification of dwellings during this period is facilitated by the format of the census enumerators returns in 1841 and 1851 and the detailed maps and schedules associated with the Tithe Commutation legislation produced in the early 1840s (4). The census returns name each dwelling and, as the enumerator walked around each parish, the location of dwellings whose names are illegible can usually be ascertained from their position between identified dwellings. The

MAP 4.1: SETTLEMENT PATTERN 1817 - 1851



tithe commutation maps, although not to scale, mark each dwelling, and the schedules usually name them. Together with fragmentary estate documents these sources enable the identification of almost every house by name (5).

Between 1817 and 1851 the total number of dwellings within the study area increased from 107 to 128. This included 27 new dwellings and the loss of six which became uninhabited either permanently or temporarily (See Table 4.1.).

Table 4.1. Settlement Development: 1817 - 1851.

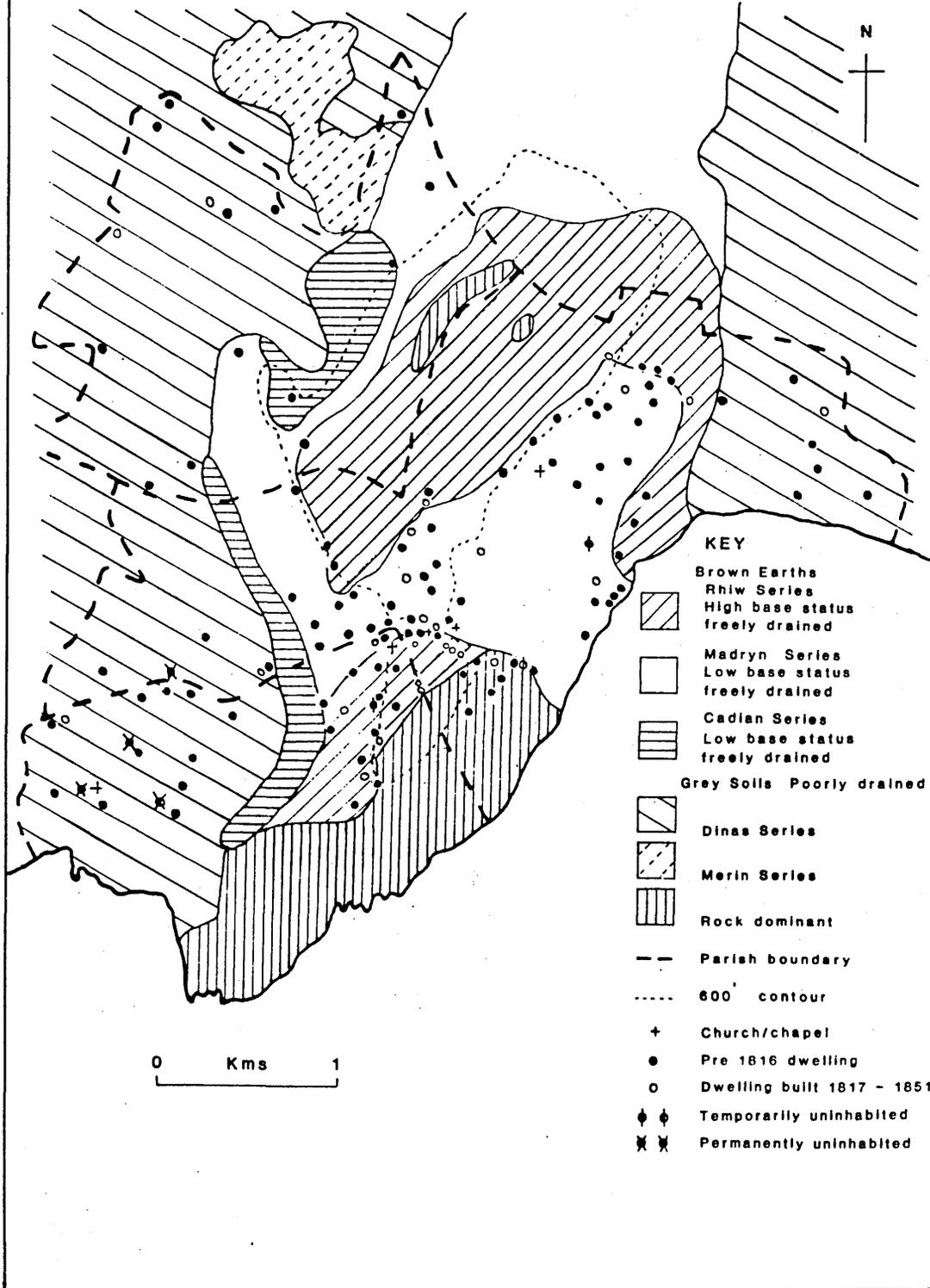
Total dwellings in 1816	107
Total dwellings in 1851	128
Dwellings uninhabited between 1816 and 1851 (temporarily or permanently).	6
New dwellings between 1817 - 1851	27
Overall increase in dwellings 1817 - 1851	21

Table 4.2. New Settlement Pattern: 1817 - 1851.

Total number of new dwellings	27
New dwellings within former upland common	21
New dwellings within former upland common on N. of col	5
New dwellings within former upland common on S. of col	16
New dwellings below upland common to the W.	2
New dwellings below upland common to the E.	4
New dwellings on roadsides.	10

Twenty one of the twenty-seven houses built since 1816 were built upon the former common lands (See Map 4.1.). Sixteen were built relatively close to each other just south of the col in the central

MAP 4.2: SETTLEMENT PATTERN 1817 - 1851 IN RELATION TO SOIL



ridge which runs north-south through the study area, thus benefitting from the extra light and warmth of the afternoon sunshine. Five were widely dispersed to the north of this col. (See Map 4.3. and Table 4.2.)

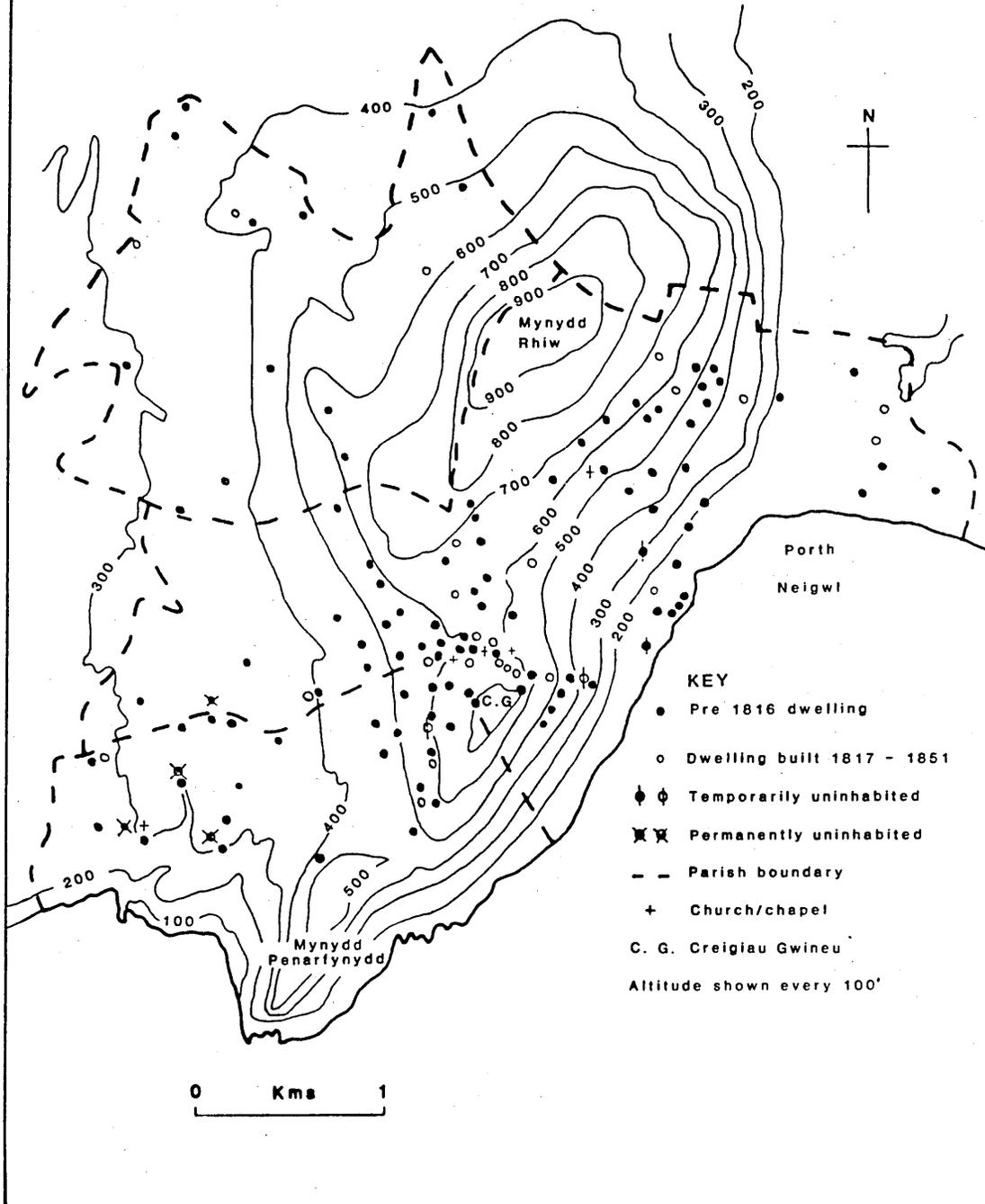
Six new houses were built during this period below the former upland common, two being to the west of the central ridge and four to the east. Ten of the new houses were built alongside tracks or roads, but none were built near the coast. (See Map 4.1, Map 4.3. and Table 4.2.).

Two houses had become permanently uninhabited by 1851, and the farm land of one was assimilated by the farm with which its fields were intermixed (6).

Nine of the dwellings listed in the 1851 Census Return were given the same name as other properties already listed. This would indicate that either two separate families were sharing one dwelling, or that extra accommodation had been built adjoining the original house, but still using the same name. This later explanation is accepted for seven of these dwellings as it is supported by observations in the field (7).

Twenty-one of the twenty-seven new dwellings of this period are to be found upon the former commons. This is not surprising as this land was less likely to be of high agricultural value and would therefore be more readily available for these cottagers and small holders. By this time however, land had to be bought or leased before a house could be built upon it. It is significant that eighteen of these twenty-one dwellings were built on land owned by local small landowners who had been allotted or had bought portions of the former common, whilst the other three were built upon the Plas Yn Rhiw estate which had a resident local landowner, at least until the death of Lewis Moore Bennett in 1850 (8). Of the six new dwellings built below the former

MAP 4.3: SETTLEMENT PATTERN 1817 - 1851 IN RELATION TO ALTITUDE



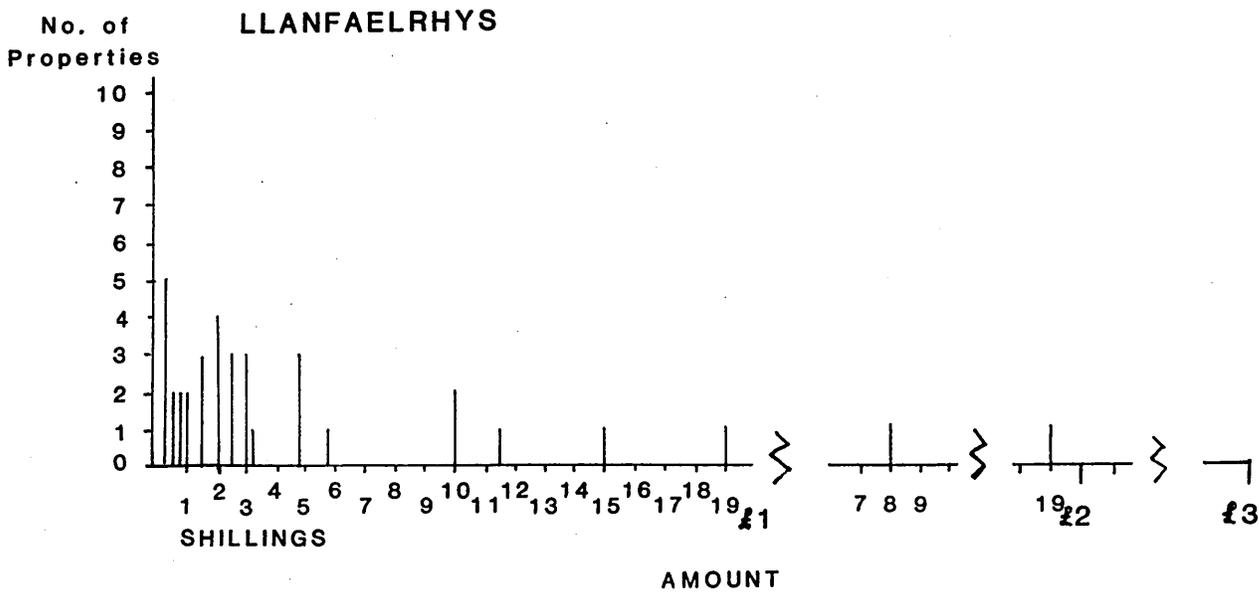
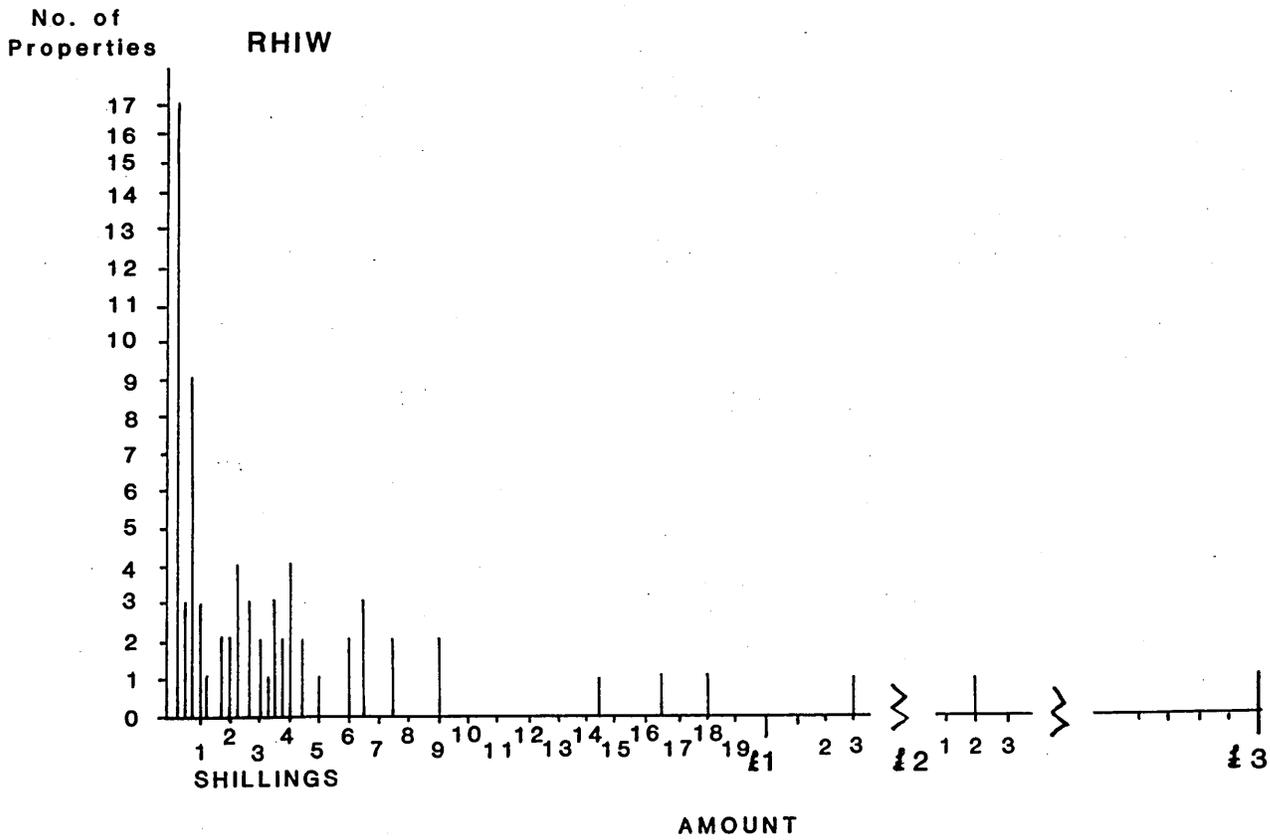
upland common two were also on Plas Yn Rhiw land. Two of the remainder were on owner occupied land which had been subdivided, and two were on the land of major land owners, one each on the Nanhoron and the Meillionydd estates. It would seem that availability of land for building was the key factor in site selection and that proximity to tracks or roads was an additional advantage gained where possible. Five of the dwellings within the former upland common were built as the new dwelling within a piece of land recently allotted or purchased. Although the majority of the new dwellings of this period had only a garden, at least eight included a small holding of several acres.

Twenty-three of the new dwellings were built upon soil of the fertile Madryn and Rhiw series of free draining Brown Earths, whilst only four were upon soil of the poorly drained gleys of the Dinas series. (See Map 4.2.).

Fourteen of the twenty-seven new dwellings were built between 600 - 700 feet about sea level, six were built below 300 feet O.D. and the remaining seven thus being between 300 - 600 feet above sea level. (See Map 4.3.). It would appear however that environmental factors such as soil type and altitude were of less significance in the selection of settlement sites than historical and social factors. Chief amongst these was the availability of land, most frequently within those parts of the former upland common, currently owned by local people willing to sell or lease building plots. As much of the former common was over 600 feet above sea level and upon the better soils, site selection was concentrated on physical factors such as aspect, slope and water supply within the almost predetermined range of altitude and soil type.

Analysis of the distribution of the rateable assessments of properties in the parishes of Rhiw and Llanfaelrhys made in 1839 is of

FIGURE 4.1: ANALYSIS OF DISTRIBUTION OF RATEABLE ASSESSMENTS IN 1839



interest as it reflects the influence of a wide range of factors both within and between the two parishes (9). These include acreage, type and condition of land and property, land use, and, indirectly, land-ownership. The very high concentration of extremely low assessments shown in both parishes is a significant feature which corresponds with the pattern already described of the building of cottages with little or no land within the former upland common particularly in Rhiw. (See Table 4.3. and Figure 4.1.).

Table 4.3. Rates Assessment in 1839.

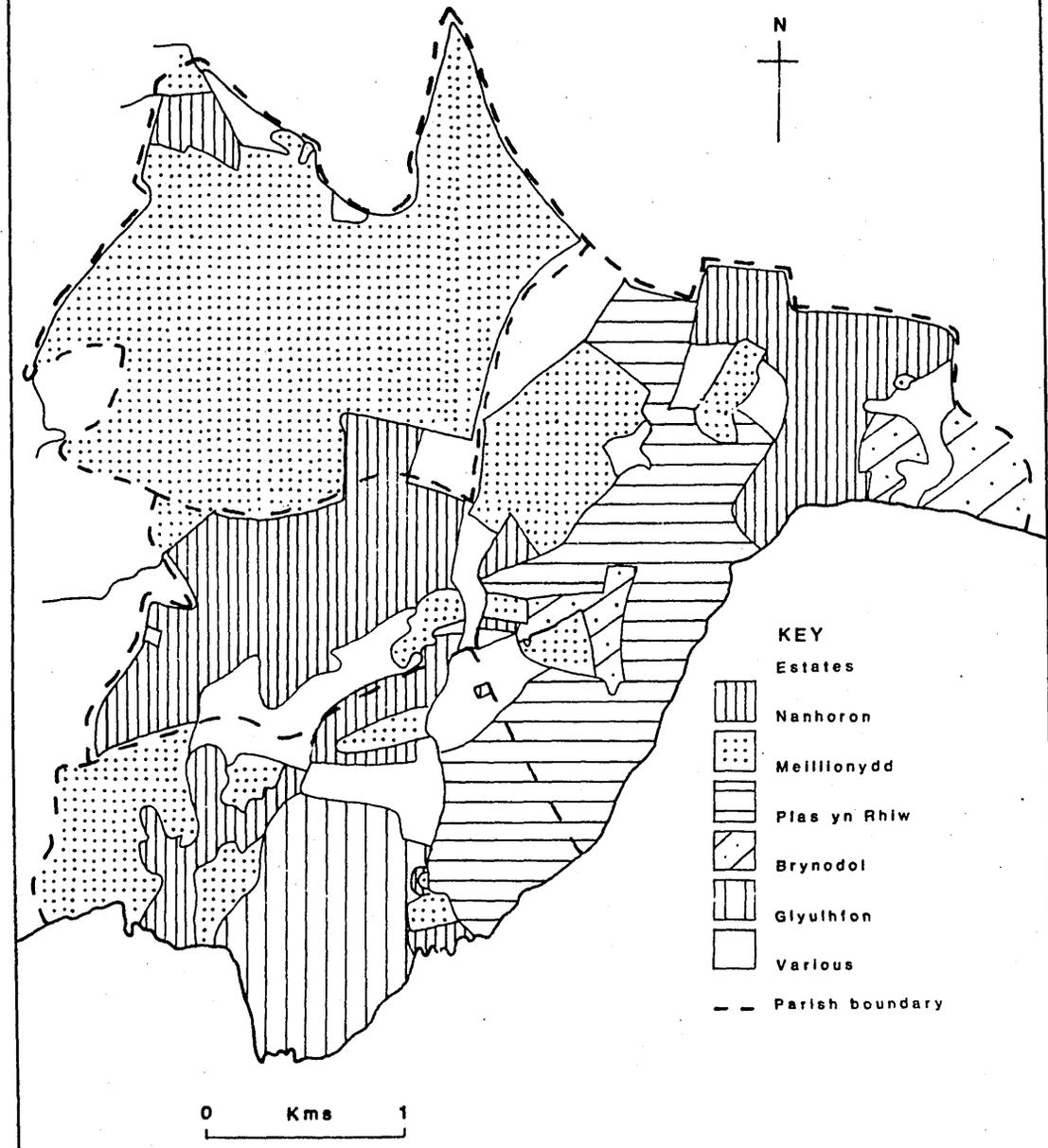
	Rhiw		Llanfaelrhys	
Number of properties assessed	74	100%	37	100%
Assessment of nil - 1/-	32	43%	11	30%
Assessment of 1/1 ^d - 5/-	27	37%	18	49%
Assessment of 5/1 ^d - 10/-	9	12%	3	8%
Assessment of 10/1 ^d - £1	3	4%	3	8%
Assessment of £1.0.1 ^d - £2	1	1%	2	5%
Assessment of £2.0.1 ^d - £3	2	3%	0	0%
Assessment of over £3	0	0%	0	0%

(To the nearest whole percent).

The range of assessments in Rhiw is greater than that in Llanfaelrhys, as it was in the Assessment in 1782. (See Figure 2.1.). In Rhiw only six properties are assessed at ten shillings or over, whilst in the smaller, less densely populated parish of Llanfaelrhys the number is five. This too is comparable with the 1782 assessment analysis (See Table 2.2.).

Landownership patterns scarcely altered during this phase of the review. There were slight modifications through both amalgamation and

MAP 4.4: LAND OWNERSHIP IN THE EARLY 1840s



Sub-division of holdings, and also through late examples of the exchange of isolated strips of land intermixed with the land of another and still surviving since times of shared ploughlands (10).

The tithe commutation maps give the earliest visual evidence of the landownership pattern within the whole of the two parishes. (See Map 4.4.). When compared with Map 2.5 this later map indicates the consolidation achieved by the larger land owners upon receipt of allotted sections of the former upland common. The area belonging to the numerous owner occupiers with a lower acreage is relatively small. Frequently the allotments apportioned to them were a considerable distance from the homestead, and the cost of fencing these smaller allotments was proportionately very high for the acreage involved. Thus the large land owner gained from the enclosures in far more than mere acreage.

Although the increase in the number of new dwellings during this period was much lower than that during the previous period studied; it was the second largest increase during the total period under review (See Figure 3.2.). This period also included, in 1821, the highest combined population for the parishes of Rhiw and Llanfaelrhys (See Figure 3.1.). This was presumably the result of the birth of children to many of the couples who had settled in the new cottages built during the previous decade.

The difference in settlement pattern between the areas containing the older widely dispersed dwellings within their own farmland, and those containing the newer cottages and small holdings of the labourers and fishermen, was becoming more pronounced. Eighteen of the new dwellings were built within half a mile of the col in the central north-south ridge. This added considerably to the density of the cluster of dwellings around and especially just south of the col.

(See Map 4.1.). The convenience of proximity to roads and reliable wells or springs (See Map 1.6.), together with the location and availability of land for building were already producing the seeds of a focal point for settlement within the community. The siting of the chapels of Nebo, Pysgah and Tan Y Foel, together with that of the first shop recorded in 1851 at Gorfwysfa confirm this trend.

II. ECONOMIC CONDITIONS.

The source of material now analysed to ascertain economic conditions is from two contrasting backgrounds. On one hand there is an increasing supply of generalised statistical material from national surveys, reports and commissions concerning such items as prices, wages and rents covering counties, or at least large regions of Wales. In contrast with these there are also the detailed house by house data from Census Returns and the field by field information from the tithe commutation maps and schedules (11).

There are very few general accounts of conditions within Llyn[^] and the occasional visitors such as Evans and Parry wrote mainly of the much visited famous sites like Bardsey Island and the market towns of Pwllheli and Caernarvon. Unfortunately there is little estate documentation at present available to augment the range of sources already mentioned. This lack of the specifically local source material which was available for previous phases of this review is in some ways compensated for by certain comparisons between each decade now made possible by using consecutive Census Returns. It is presumed that conditions within the study area were comparable with the general regional trends.

The depression which followed the conclusion of the Napoleonic

wars continued, intermittently, until mid century (12). A combination of bountiful harvests and large imports occasionally caused crises for corn farmers when prices fell as in 1818, 1821-23 and 1832-36 (13). Generally however the Corn Laws of 1815 maintained a high price for corn, and thus for bread.

Between 1824 and 1834 Corn Commissioners made returns on the total number of Quarters of wheat sold annually in certain agreed markets. From 1825 - 1828 Pwllheli was one of the 149 such markets in Britain, but it was then excluded, along with all but one of the other Welsh markets, because the size of the returns were too low to be of importance (See Table 4.4.). This confirms other descriptions of Llyn as being basically a cattle rearing area, with the small amount of arable being used to meet local needs.

Table 4.4. Amount of Wheat Sold at Pwllheli.

Year	Total number of Quarters of wheat sold
1825	220
1826	184
1827	199
1828 (first half)	139

In 1828 a sliding scale was introduced to ration the import of corn (14).

The drop in post war stock and dairy produce prices was much more serious for the Welsh farmer than the fall in corn prices. Following the 1815 summer drought it was reported in North Wales that horses and pigs were reduced in sale price by a half, milch cows by a third and other cattle by more than a half, thus bringing bankruptcy to many farmers (15). Livestock prices continued to fluctuate due to either climatic or financial constraints until the mid 1830s (16). Sheep

husbandry, which had been quite prosperous following the upturn after the post 1815 trade depression, suffered from serious outbreaks of sheeprot in 1830 and 1831, when "whole flocks were swept away" (17). Scarcity then led to high prices and prosperity for the sheep farmer in the remainder of the 1830s.

In 1839 - 1841 the bad weather and disastrous harvests resulted in farmers everywhere being forced to buy corn at famine prices for their own consumption. In 1842 and 1843 prices fell generally. In 1842 cattle prices at the Borth great cattle fair in Anglesey were 25 - 30% down on their 1841 levels (18). Corn, butter, fat pig and sheep prices also fell steeply in 1842/3 (19). After a general recovery in prices from the mid 1840s seemingly unaffected by the Repeal of the Corn Laws in 1846, this period concluded with the depressed years between 1845 - 1852.

Throughout the period these fluctuations in prices affected all aspects of the economic and social scene in the whole of Wales (20). It was stated in Caernarvonshire in 1817 that "parts of the county have been seriously alarmed by popular disturbances, on account of the high price of the necessaries of life" (21). By 1821, when the House of Commons Committee on Agriculture made its report, Welsh conditions had improved a little, but wheat cultivation was on the decrease, and much land had gone out of tillage (22). Country fairs were still almost deserted in 1822 (23). When the North Wales Chronicle resumed in 1829 the agricultural columns which had been such a prominent feature of its predecessor, the Gazette, it had few local correspondants who could be induced to contribute agricultural features (24). It was stated in the 1830s that Welsh farming capital was declining (25). Over this whole period the hardships and discontent in country districts was accentuated by numerous factors including the

effects of enclosures, low prices for produce, high rents, bad harvests, the increasing Poor Law rates and the cost of tollgates (26).

It has been said that although the concentration on store livestock within mixed farming gave only a small margin of profit, it did prevent the drastic variations in the level of prosperity experienced in England during this period (27). The Welsh problem was rather that of the typical peasant economy of poverty, over population and land hunger, aggravated to some extent in Wales by a cultural and political divide between landowners and the rest of the farming community (28). Pressure for land led to people leasing farms with too little capital and this in turn hindered innovation and economic growth (29).

The fall in prices after 1815 was not generally accompanied by a corresponding reduction in rents (30). Thus bankruptcies were frequent, as were sales of livestock following non-payment of rent (31). The unrealistic rent levels, together with a sharp rise in rates and taxes were a major difficulty for the poor tenant communities up to mid century (32). At times of particularly low prices and during the banking crises conditions were desperate (33). The peak of rural distress occurred in the late 1830s and early 1840s.

The amount of owner occupied land was small in Wales (34). This pattern is also shown by the 1840s tithe commutation schedules for Rhiw and Llanfaelrhys (35). (See Map 4.4.). The majority of landowners, whilst residing in a family mansion with a neighbouring home farm, rented out most of their land and derived their main profit from agricultural rents (36). They were therefore generally unimportant as agricultural producers. Home farms were quite often uneconomic, with experimentation with new techniques being an expensive luxury, although very important for agricultural development (37). Stock

breeding experiments occurred amongst the North Wales gentry and Ayrshire and Galloway cattle were introduced onto their home farms (38). Landlords continued to encourage agricultural societies such as those of Caernarvonshire and Merionethshire and these assisted in spreading information concerning improvements in husbandry (39).

Whilst usually divided from their tenants by the language barrier and religious persuasion as well as social class, many landlords were in close contact with their agents concerning the everyday running of estate affairs (40). The majority were not totally out of sympathy with tenants as is sometimes stated by the contemporary nonconformist and radical leaders (41). The Edwards of Nanhoron were said to set a good example to their tenantry in agricultural improvements (42).

Welsh land owners were undertaking an increasing share of the cost of repairs and improvements on their estates from the 1820s onwards (43). Letters written by the local clergyman on behalf of a tenant in Llanfaelrhys parish to the landowner in Dolgellau requesting assistance with the cost of repairing two ruinous cottages on the farm are local examples of this (44). On the smaller estates poverty hindered improvements, as neither owner nor tenant had capital available (45). However after 1847 money from public sources was available to assist with certain major agricultural developments such as drainage (46).

One of the continuing effects of the earlier enclosures together with the improvements in drainage and fencing was the increase in the value of land. In Caernarvonshire this rose by over 40% between 1815 and 1843, assisted by the improved road network (47). The consolidation of holdings continued, often by the mutual exchange of pieces of land by adjoining land owners (48).

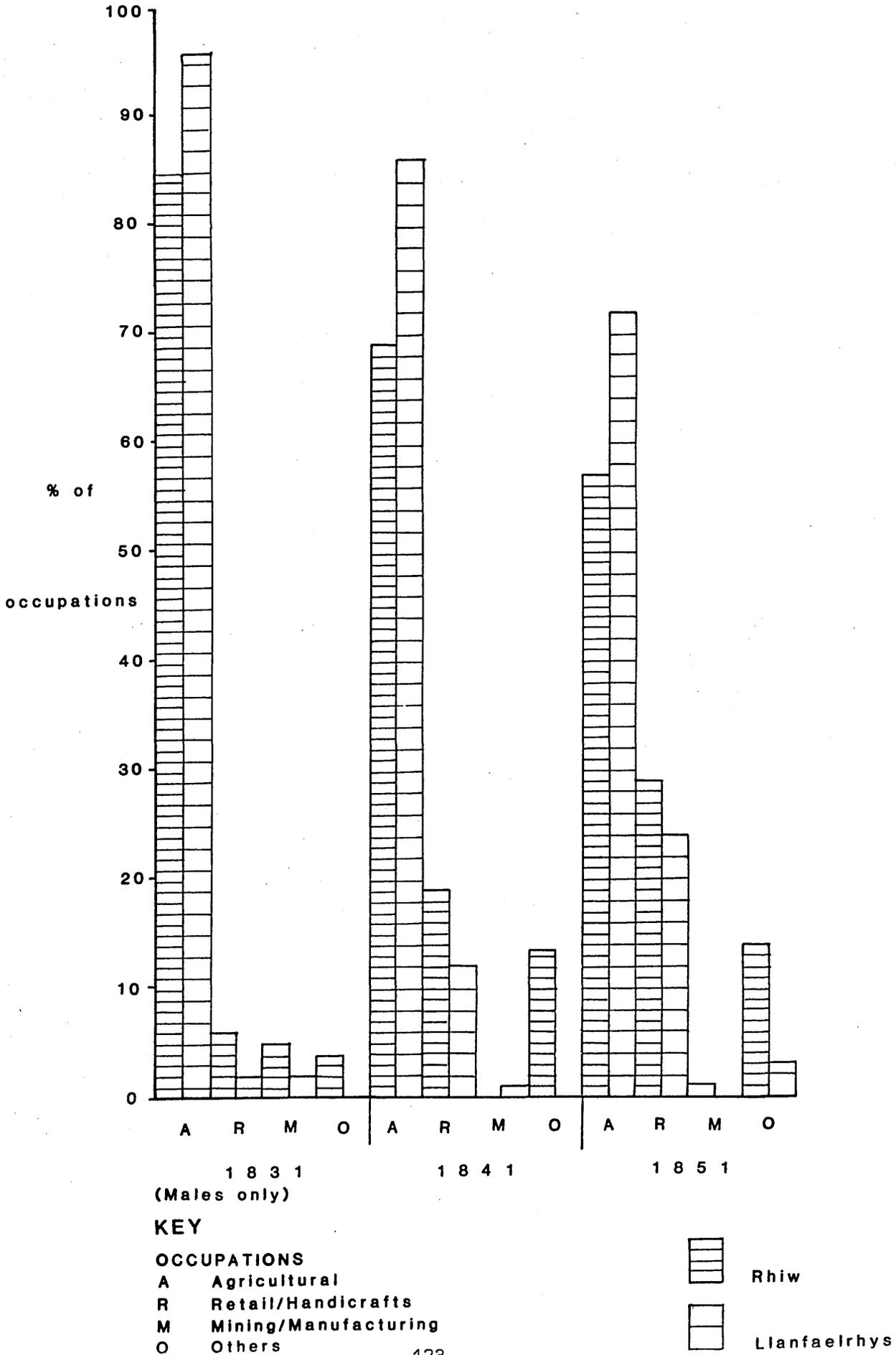
One result of the violent fluctuations in market prices was the

change from long leases to yearly tenure. This movement was a natural reaction to a period of crisis and uncertainty (49). In spite of the frequency of yearly tenure, holdings did not often change hands and families remained, often for generations, on the same farm, or within a small neighbourhood (50). The tendency towards hereditary family succession of tenancy was a consequence of attachment to the family homestead (51). Within the study area one family claimed to have farmed the Tyn Gamfa holding for three hundred years (52). This tendency further contributed to the land hunger as fewer holdings became available to "outsiders" (53). The smallness of holdings also meant that even farm labourers could realistically aim at becoming farmers, in spite of their lack of capital (54). The marked rise in population added greatly towards land hunger and this helped to keep rents high (55).

In the late 1840s the Welsh farmer was described as occupying "a small farm, with a small amount of capital, and as being little removed in mode of life, his labourious occupation, his dwelling or his habits from his day labourers" (56). In North Wales a dual economy of farming very small holdings of under fifteen acres combined with mining, weaving, fishing or labouring on large farms, was widespread (57). This is shown by occupational returns in the census returns within the study area (58). (See Figure 4.2.).

Agricultural trade continued to develop, particularly in periods of surplus, or when prices in industrial areas of England encouraged produce to be exported. By the 1840s it was estimated that 20,000 sheep a year were being driven from the Llŷn peninsula (59). In 1845 5,000 - 7,000 cattle were also exported from Llŷn (60). Although declining, the cattle trade was still of great importance (61). A decade earlier, in 1835, over 12,000 pigs were shipped in fat condition

FIGURE 4.2: OCCUPATIONS 1831 - 1851



to Liverpool from Anglesey and Caernarvonshire including exports from Porthdinlleyn and Pwllheli. Table 4.5. and Table 4.6. illustrate other aspects of agricultural trade from Pwllheli (62).

Table 4.5. 1847 Shipments of dairy produce from Pwllheli.

Butter	66 cwts
Cheese	Nil
Eggs	500 eggs

Table 4.6. Shipments of Corn from Pwllheli.

	1832	1835
Wheat	Nil	448 bushels
Barley	3,776	9,776 bushels + 4 sacks
Oats	200	360 bushels

The system of fairs and markets was important in the collection of produce and animals for sale and redistribution. Pwllheli continued to develop as the main centre for Llyn^A. In the 1830s Pwllheli market was said to be generally well supplied with corn.(63). By 1848 trade there was said to consist of shipment of salted herrings, butter, cheese, pigs and poultry, and the importation of shopkeepers' goods and coals. Provisions of all sorts were said to be cheaper in Pwllheli than elsewhere in Wales (64). In 1849 the extensive ship building industry and the developing tourist industry were described in addition to the market in Pwllheli (65).

The importance of the herring fishing at Nefyn was described in 1848, whilst the village of Aberdaron was described as being miserable

and poor (66). No other place in Llŷn was mentioned by Parry on that visit.

In the 1830s there was a flax dressing establishment in Pwllheli, and hempen nets were also made in the town (67). The leather industry gained importance with the making of boots, shoes, gloves, saddles and harnesses (68). This was probably linked to both the local livestock farming and local self sufficiency. In 1845 orders for shoe leather and leather nails from a local store were placed from Penarfynydd farm (69). There was an increase in general shopkeeping particularly in mining and quarrying areas of Caernarvonshire (70).

The communications network was improving. By 1817 long distance stage and fly waggons travelled periodically between Chester and Pwllheli (71). From 1822 a coach to accommodate the "gentlemen and clergy of Llŷn and Eifionydd" began plying between Bangor, Caernarvon and Pwllheli (72). In 1824 the turnpike road was extended from Pwllheli westwards towards Llanbedrog (73).

The direct impact of the railway came later to north west Wales, although the Holyhead - London line was completed by 1849, and Caernarvon station opened in 1852 thus influencing the mode of travel for people rather than goods in the region (74).

Apart from the continuing droving of cattle and sheep overland to England, an increasing amount of produce was carried by the coastal traders. The first steamship was seen off Llŷn in 1815 and by 1821 the first steamer had been built locally to connect the Mersey with North Wales (75). In 1821 the Bardsey Light House was built to protect the increasing coastal trade using the route around the Llŷn peninsula (76). In 1843 twelve vessels were driven ashore at Porthdinlleyn in one day during a severe storm. In the same year, 900 vessels visited that port, which was the closest to the study area (77). These numbers

indicate the increase in coastal traffic and its growing influence on local fairs (78).

The agricultural maritime connexion was strengthened by the number of farmers who owned shares in local ships. For example farmers owned 1/16th of the shares of the 259 ships built in Pwllheli between 1840 and 1849 (79).

Customs records show that there was considerable trading from the small coves of Llŷn. During this period twenty-nine shiploads containing butter, cheese, eggs and hens left local coves, including eight shiploads from Rhiw, whilst Rhiw received eleven of the thirty-five returning shiploads mainly consisting of shop goods and coal (80). Freight was, for example, carried on the 'Oceanic Steamer' to Penarfynydd farm from Porthdinlleyn in 1848 (81). Rhiw is also named as one of the coves in which the building of the small coastal boats occurred at this time (82).

During this period reports on farming practice indicate that there were issues hindering development. The majority of small farmers, despite their hard work, lacked the capital, education and enterprise to farm skillfully and scientifically. Consequently farming was often poor, unskillful and characterised by a distrust of money and frequently merely continued at subsistence level (83). The long period of depression killed any enthusiasm for agricultural developments (84). Animal manure and lime were the only fertilisers used on small holdings. The small labour force meant that cooperation and the reciprocal lending of horses, equipment and manpower between neighbouring farmers was an essential social element in major seasonal activities (85).

The physical optimum was not being reached for agricultural output was even lower than the limited levels imposed by soil and climatic

factors. The preponderance of small occupiers with little capital helps explain this lack of improved techniques as many were disinclined to adopt modern methods for both financial and cultural reasons, favouring instead the observance of old usages (86). Common criticisms by visiting agriculturalists were of poor management, the lack of liming and failure to make proper use of manure (87). There is evidence however that manure, lime and linseed and rape cakes were at times imported from Ireland for use on home farms (88). There is also evidence of some improvements at this time in north west Wales (89). It is likely that some of these improvements would be occurring within the study area, particularly on the few extensive low lying farms. Improvements reported within the region included better drainage, use of new farm implements and gains from land reclamation. An increase in green and root crops resulted in more fattening of stock on the farms (90). Mechanisation increased very gradually and brought a demand for a different type of labourer and the loss of some seasonal work (91). However, in the 1840s Parliamentary reports still spoke of bad fallowing, unscientific rotation and unsatisfactory leases (92).

Throughout this period tillage was usually subservient to grazing. A number of farmers were said to grow neither grain nor potatoes (93). Patches of gorse were planted to provide winter fodder for stock (94). Within the study area "Cae eithin", the Welsh for "gorsefield" is amongst the most commonly listed field names in the tithe maps of the 1840s (95).

The rent money was principally derived from profit from sheep and black cattle, sometimes from pigs and butter (96). Clothing was frequently woven from the wool collected on the small holding, even after the collapse of cottage industries in North East Wales due to

the competition from English Woollen factories (97). The more remote districts such as the study area, were still composed of largely self-supporting communities (98).

The lack of education, both generally and in agricultural matters, was quoted as a contributory factor in the lack of development (99). However, it has been established that one of the earliest books in Welsh on farming was published in 1816 by David Thomas of Caernarvon and was entitled "Practical Cultivation of the Land". A prize was offered at the 1832 Beaumaris eisteddfod for a Treatise on Agriculture and the winning article was later published. By the late 1830s single articles on different aspects of the agricultural industry began to be written for contemporary magazines both in English as well as in Welsh, and many prizes for such articles were awarded at local eisteddfodau (100). It is clear therefore that some agricultural literature was available in Welsh during this period. It is not known how extensively these publications were read, nor what degree of influence they had in encouraging the improvements which gradually occurred within Llyn.

There were few documents specifically giving details of agricultural practice within the study area at this time. In 1833 Rhiw was described as comprising a stiff clay soil in the lower parts, a gravelly soil in the higher lands and producing fine crops of barley and oats and excellent grass (101).

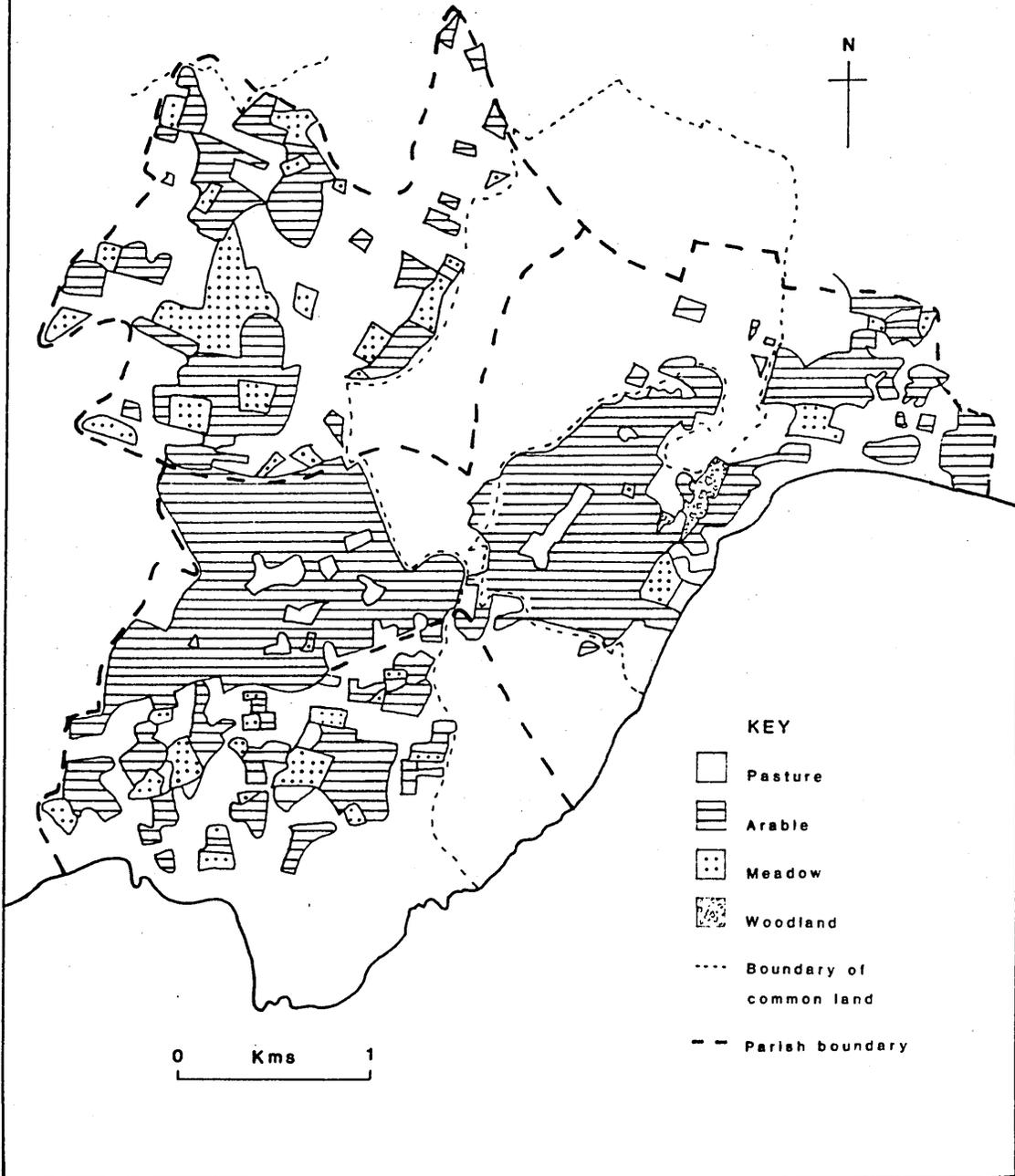
A decade later an immense amount of detailed information was collected in the maps and schedules of the tithe commissioners surveys (102). This was in response to an act passed in 1836 to commute all tithes in kind and substitute a fluctuating money payment. known as a corn rent adjusted each year on the basis of the seven-year average price of wheat, barley and oats. The Tithe Commissioners first established the boundaries of every tithe district; in the case of the

study area the whole of each of the two parishes formed a separate tithe district. Field by field surveys were then carried out by the Tithe commissioners in order to determine the value for every portion of each parish. The resulting maps therefore indicate boundaries of fields, roads, woods and streams and the position of buildings, whilst the accompanying schedules provide information about the owners, occupiers and state of cultivation and area of each field. Their comprehensiveness gave a complete record of the agrarian landscape in the 1840s (103). (See Map 4.5.).

Within the study area the tithe commutation maps and schedules show that all field and parish boundaries were the same in the 1840s as they were in 1947, at the end of the period being reviewed (104). The majority of fields listed in the schedules are named. These names are commonly descriptive of the field's size, shape, usage or its relative position to the farmhouse. Frequently occurring names include the Welsh equivalent of 'gorsefield', 'potato strip', 'new field' and 'large meadow'. Old and new influences are also recorded as in "old quillet", "old mill field", "chapel field" and "manganese field" (105). The tithe maps record the variety in consolidation amongst farm holdings. They give the earliest complete records of land utilisation field by field and this can be compared with the other sources of agricultural information.

Map 4.5. indicates that the former boundary of the upland common-land continued to be the upper limit of arable farming, with only a very few exceptions. In Rhiw extensive tracks of land were under tillage, whereas in Llanfaelrhys arable, meadow and pasture land was widely dispersed throughout the lower lying part of the parish. The higher proportion of meadowland in Llanfaelrhys compared with Rhiw was probably linked with the emphasis on cattle rearing. Land utilisation

MAP 4.5: LAND UTILISATION 1842/44



within the parishes of Rhiw and Llanfaelrhys is also shown in Table 4.7. where it is combined with details of grain produced in the year of the survey. This analysis supports the more general reports of agricultural practices modified by the ability of local farmers and cottagers to use the physical and climatic features of the study area in their attempts to provide such a living as was possible. The high percentage of oats grown is likely to be related to the cattle rearing.

Table 4.7. indicates that in Rhiw 46% of cultivated land was arable land, compared with 23% in Llanfaelrhys. However Llanfaelrhys produced 50% more grain than Rhiw. This is likely to have been due to the differing environmental features in the two parishes. However, as records in Rhiw were collected two years after those in Llanfaelrhys it may be that the effects of the disastrous harvests of the mid 1840s account for part of the difference in productivity. 77% of Llanfaelrhys and 53% of Rhiw were described as meadow, pasture or hill pasture and this again confirms the importance of stock rearing.

Table 4.7. RHIW Tithe Commutation Schedule. November 1844.

Land Utilisation.

1,300 acres of cultivated land of which

597 acres are arable land	i.e. 46%
100 acres are meadow land	8%
222 acres are pasture	17%
367 acres are hill pasture	28%
5 acres are woodland	0.3%
9 acres are Glebe land	0.7%

LLANFAELRHYS Tithe Commutation Schedule. November 1842.

Land Utilisation.

1,950 acres of land of which

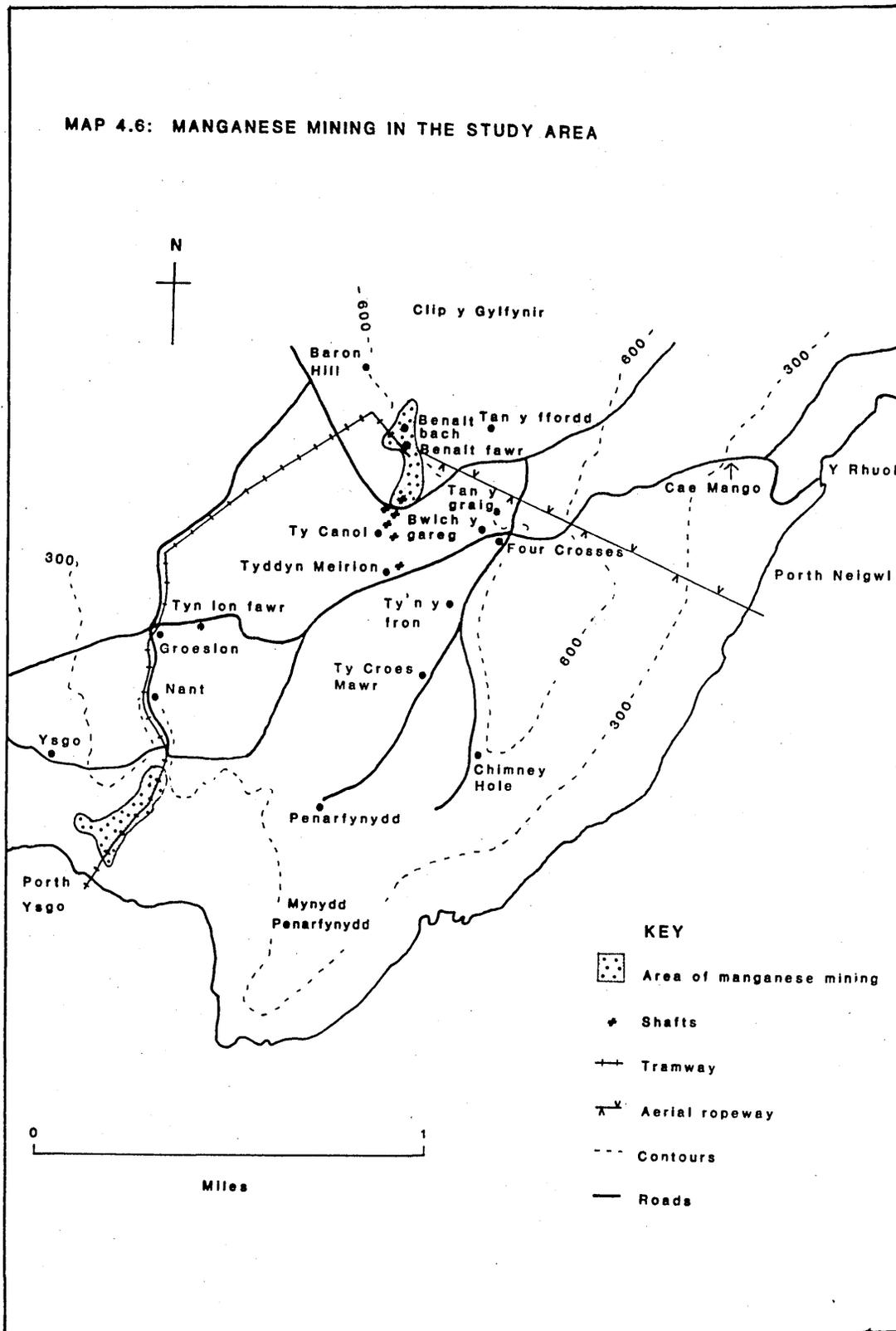
450 acres are arable land i.e. 23%

1,500 acres are meadow land and pasture 77%

In the period following the Napoleonic wars mining began to take a more important place in the economy of North West Wales. In particular the demand for copper ores resulted in new interest in the lead and copper mines of Penrhyn Du near Abersoch, only six miles from the study area (106). It was said that a great deal of money might be made by mining in Wales in a proper fashion and this aspect of the economy was now commented upon in travel guides such as Parry's 'Cambrian Mirror' and Evans' 'Walks Through Wales'(107).

Newspaper advertisements proclaimed the likelihood of valuable metallic ores and spoke with enthusiasm of the recent developments and

MAP 4.6: MANGANESE MINING IN THE STUDY AREA



future prospects (108). Many companies were floated to work the minerals of Wales, particularly around the boom years of 1824-25 (109).

Manganese was discovered within the study area in 1827 (110). Much of the correspondence concerning the developments of the Manganese mining between 1828 and 1830 has survived amongst the Nanhoron estate papers, and these documents give evidence of the development of this venture (111). (See Maps 4.6. and 6.5.). It is not known whether the manganese within the Nant and Ty'n Y Llan farms on the Nanhoron estate in Llanfaelrhys was found in the Nant Y Gadwen stream gorge by chance or as a result of methodical searching. Mr. Andrew Burt, the Englishman overseeing the developments for Col. Edwards, the Landowner, had in 1827 bought Neigwl Ganol, a farm in the nearby parish of Llandegwning (112). It may be that he had previously investigated the area for mineral deposits. However, since Burt stayed at the Tremadoc residence of W.A. Madocks, the M.P. - developer responsible for promoting the building of the Porthmadog embankment, the harbour at Porthdinlleyn and the turnpike network, it is possible that it was through Madocks that Burt became interested in the development of the region (113).

By April 1828 the London Assay Office confirmed that the mineral found was Manganese and in July Burt had received the results of a chemical examination of the Manganese in the form of an open report written by Dr. Andrew Ure, a well known professor at the Andersonian College in Glasgow and publisher of the Chemical Dictionary (114).

Samples of the Manganese were sent with the recommendations of this Report to manufacturers of chloride of lime and bleaching salt in Dublin, Belfast, Newcastle, Glasgow, Liverpool, London, Hamburg and St. Petersburg. Specifically mentioned are a large bleaching works in Knaresborough, Yorkshire, the large paper manufacturers of Edward Arnold and Sons near London, and a glass manufacturers in London (115).

By October 1828 Burt reported that the Mine Agent had arrived at the mine, with a miner and two boys to instruct the Welsh men and boys how the wash and clean the Manganese (116). This implies that local labour was employed. It was said that 50 men worked at the mine in the 1830s (117). Although the lease for mineral working on Nant and Ty'n Y Llan farms included a right of road to the sea through Nant farmland, it seems that Manganese ore was carted to Abersoch, and sometimes to Porthdinlleyn from whence it was shipped to Liverpool and London (118).

Plans in 1828 to build a stamping and crushing mill at Abersoch on the river adjoining Burt's estate were postponed, in spite of the stated preference of manufacturers for Manganese in powder form rather than as ore (119). Reference is made to the competition for British and foreign markets from the Manganese mines of Devonshire, Warwickshire and Merionethshire, and to expertise available from Cornwall (120).

Little reference is however made to the local effect of the mining except for a demand for compensation by the tenant at Nant farm in 1829 (121). Local landowners and tenants must however have been observing developments. In December 1828 Lord Newborough leased for one year the mineral rights on Penarfynydd, a large farm near to the site of the Nant mine, and containing a rocky headland, to a local man (See Map 4.6.) (122). No renewal of the agreement is extant and it is now known that Penarfynydd does not contain manganiferous deposits (123).

In the two editions of Lewis' Topographical Dictionary of Wales published in 1834 and 1840, the Manganese is reported to be of a very superior quality. It is said to be being worked with very great success, with about 50 persons being employed, and the produce being principally sent to the Liverpool market (124). As other entries for

Rhiw have been altered by the second edition, it must be presumed that these statements applied both in 1834 and 1840.

New interest was shown in the manganese mines in the 1840s. About 200 acres of the former upland common was leased by the Crown for 21 years from 1844 (125). This included much of the rocky Mynydd Rhiw which had not previously been leased for mineral workings (See Map 4.6.). (126). It was leased by Robert Williams, a master mariner from Rhiw, later connected with Tyddyn Meirion farm where one field was called 'Manganese field' in the 1842 tithe map (127). Robert Williams' partner, William Jones, had previously been engaged as a manager of the Penrhyn Du mines near Abersoch to which his family had moved from the lead mines in Denbighshire (128). Clearly this combination of mining and shipping expertise was a sound idea. The upland Rhiw mine proved successful.

Also in 1844 a lease for 21 years was granted to three local men to search for minerals on Baron Hill, adjoining the Mynydd Rhiw site (129). (See Map 4.6.). In the same year a Llanfaelrhys tenant wrote to his landlord "touching manganese diggings in my neighbourhood" (130).

The 1841 Census returns note a miner living at Chimney Hole, a small Llanfaelrhys cottage whose unusual name suggests the tenant's connections with England (131). By 1851 that family had moved away, but a miner in manganese was living at Tan Y Ffordd, quite near the Rhiw mine (See Map 4.6.). (132). Andrew Burt was still the owner of Neigwl Ganol farm at the time of the 1842 tithe survey and may still have been involved in the operation of the Nant mine (133).

Accurate details of production were not kept prior to the 1880s, although in 1830 an agreement to purchase Manganese from Nant mine quotes a first delivery of 70 tons, and thereafter 500 tons annually (134). However, as only 229 tons were in stock in November 1829 it is

uncertain whether this quota was met (135). At the same time it was stated that plenty of manganese could be raised if a market was found for it (136).

This theme runs through the history of mining within the study area. From these small beginnings Manganese mining affected the economic development of the area. Already it was bringing new people into the parishes with their different experiences and expectations. It was also beginning to provide an additional source of employment and income to augment the level of subsistence of the small holders and cottagers, and gave hope of possible material improvements. Developments however only occurred as a reaction to the market demand for Manganese, and, as this fluctuated, so too did the importance of the manganese mining within the total life of the local community.

III. SOCIAL ISSUES.

The study area was greatly affected by fluctuations in economic conditions, particularly the reduced need for farm labourers in the post 1815 depression. This interacted with the fast growing population resulting in scarcity of employment opportunities (137). Labourers' families were barely maintained on potatoes, oatmeal and milk (138). Rural housing conditions showed little advance (139). Most farm labourers were hired for six or twelve months and boarded at the farm (140). This is confirmed in Table 4.9. which indicates numbers of agricultural labourer's wives as head of household in 1851 (141). Poverty was rife (142).

A characteristic feature was the absence of any pronounced class division between tenant farmers and their labourers. They usually worked, ate and worshipped together and, as they shared the same

frugal existence the agricultural unrests occurring elsewhere was absent from Llyn (143).

Poor rates continued to increase and in the 1830s the average expenditure on the Poor in Rhiw was over £111 (144). Rhiw and Llanfaelrhys parishes became part of the Pwllheli Union and in 1840 the Pwllheli workhouse was completed, with a Llanfaelrhys man appointed as one of the four Relieving Officers (145). The local parish cottage housed eight in 1851 whilst another thirteen were on parish relief (146).

One result of these and other difficulties was an increase in emigration, particularly in the "hungry forties" (147). Reports of success from early emigrants also induced others to follow (148). The figures in Table 4.8. are substantiated by notes in the 1831 Census returns (149). After 1851, when twenty emigrants left Western Llyn, migration patterns altered and local men now moved to Caernarvonshire quarrying areas, themselves depleted by early emigration (150).

Table 4.8. Emigration to the U.S.A. 1795 - 1860.

From Caernarvonshire:	
Years	Number
1795 - 1801	586
1802 - 1816	1
1817 - 1820	326
1821 - 1830	497
1831 - 1840	513
1841 - 1850	2,235
1851 - 1860	1,390

Table 4.8. continued.

From Llŷn: 1795 - 1860	
Total	1,653
From the parish of Aberdaron	411
Bryncroes	135
Llanfaelrhys	69
Rhiw	47

By the mid nineteenth century the decaying of domestic manufacturing and subsistence farming was forcing people to buy in shops, markets and fairs and the improving communications network hastened the standardisation of goods (151). However, wills of this period available from the study area indicate that there was little surplus money. One included a bequest of over £200 and four of between £1 - £10 (152). References are also made to bequests involving weaving instruments, a feather bed and lists of farming stock and implements of husbandry (153). Smuggling continued and petitions against the leather and salt taxes were supported (154). Local people would also have suffered from the prohibition of the killing of rabbits and game (155).

Table 4.9. Occupations recorded in Census Returns:1841 and 1851

Occupation	1841			1851		
	Rhiw	Llanf.	Total	Rhiw	Llanf.	Total
Agricultural labourer/ general servant	48	30	78	41	21	62

Table 4.9. continued.

Occupation	1841			1851		
	Rhiw	Llanf.	Total	Rhiw	Llanf.	Total
Agricultural labourer's) wife)	-	1	1	12	1	13
Farm/House Servant	15	23	38	15	12	27
Farmer	15	20	35	16	21	37
Independent/Pauper) relief)	15	-	15	14	3	17
Miller	3	-	3	1	-	1
Mason	3	-	3	3	-	3
Joiner/carpenter	2	4	6	4	1	5
Weaver	7	-	7	3	1	4
Mariner/fisherman	2	-	2	1	5	6
Fisherman's wife	-	-	0	3	1	4
Butcher	-	-	0	1	-	1
Karrier	1	-	1	1	1	2
Shoemaker	-	-	0	2	0	2
Tailor	1	4	5	1	3	4
Mantle/dress maker	1	2	3	-	2	2
Merchant/tobaccodealer	1	-	1	1	-	1
Blacksmith	1	-	1	1	-	1
Miner	-	2	2	1	-	1
Clergy	1	-	1	1	-	1
Sexton	-	-	0	1	0	1
Gentleman	1	-	1	-	-	0
Lady	1	-	1	-	-	0

Tables 4.9, 4.10, 4.11 and Figure 4.2. indicate the overwhelming involvement with agriculture, especially in the parish of Llanfaelrhys with its higher proportion of better land and consolidated holdings (156). In 1851 twenty-three of the forty-two Llanfaelrhys households were farming households, the average holding being fifty-one acres. Only three farms were over 100 acres and the majority were under 20 acres (157). Figure 4.2. indicates the gradual increase in the proportion of non agricultural occupations from 1831 to 1851 (158). This trend was more pronounced in Rhiw, which contained the majority of the new settlements and the emerging focal points of settlement around the col in the central ridge (See Map 4.1.).

Table 4.10. The Influence of Agriculture on the Labour Market.

Occupations indicated by Census Returns.

	Number chiefly employed in			Percentage in		
	A Agriculture	B Trade, Manufacture, Handicrafts	C All Other	A	B	C
RHIW						
1811	70	5	0	93%	7%	0%
1821	76	7	2	90%	8%	2%
1831	57	9	11 *	74%	12%	14%
LLANFAELRHYS						
1811	37	7	0	84%	16%	0%
1821	44	2	0	96%	4%	0%
1831	38	2	6 *	81%	5%	14%

* indicates widows and paupers.

Table 4.11. Analysis of Occupations in 1831.

	RHIW		LLANFAELRHYS	
	Number	Percentage	Number	Percentage
Males over 20 years	79	100%	57	100%
Agriculture:				
Occupiers employing labourers	6	8%	11	19%
Occupiers not employing } labourers }	27	34%	12	21%
Labourers employed in } agriculture }	34	43%	32	56%
Manufacturing, Machinery	4	5%	1	2%
Retail Trade, handicraft.) Masters or workmen)	5	6%	1	2%
Education	-	-	-	-
Labourers not in agriculture	-	-	-	-
Other males over 20 years (not servants)	3	4%	-	-
Female servants	12		15	

The interrelated effects of education and religion were modified by the population increase and the economic hardship of the period, whilst remaining powerful influences in the community through which individuals could find fulfilment (159). The two Sunday Schools of 1817 were joined by a third in 1824 (160). However, neither British or National schools had much success in Llyn prior to 1847 (161). In 1833 thirty Rhiw children were attending a daily school which circulated through four parishes (162). Some 120 people (20% of the population) were attending Sunday School in 1833 in the study area (163). By 1847 Rhiw children had the right to attend the Bryncroes school free (164). Botwnnog School, although, like most schools, decried by the 1847

Education Commissioners, remained open (165). They did however commend much of the Sunday School provision which, for the study area, is summarised in Table 4.12. Comments in 1848 suggest that generally the Sunday Schools were responsible for developing a hard working and morally strict population (166).

Table 4.12. Sunday Schools in 1847.

Denomination	Llanfaelrhys	Rhiw		
	Calv. Meth.	C of E	Wesleyan	Independent
Name	Tany Foel	Parish Church	Pisgah	Nebo
Date established	1820	1841	1834	1813
Dimensions	30 x 18	N.A.	24 x 18	24 x 18
Also used for services	Yes	N.A.	Yes	Yes
Nos of teachers:				
Male	10	2	6	6
Female	3	1	2	1
Paid	No	No	No	No
Nos of scholar				
U. 15 Male	15	N.A.	20	11
U. 15 Female	14	N.A.	20	25
Over 15 Male	22	N.A.	10	7
Over 15 Female	18	N.A.	8	16
Total	69	20	58	59
Day School	No	No	No	No
Distance to home	All under 1½ miles	All under 1½ miles	All under 1½ miles	3 over 1½ miles
Sexes taught separately	Yes	No	Yes	N.A.

Table 4.12. continued.

	Calv. Meth.	C of E	Wesleyan	Independent
Taught in Welsh	Yes	Yes	Yes	Yes
Nos. able to read Scriptures	60	N.A.	30	29
Scriptures learned by heart	Yes	Yes	Yes	Yes
Taught doctrine and hymns	Yes	Yes	Yes	hymns
Disciplined by	Laymen	Minister	Laymen	Laymen
Children questioned	in printed form	N.A.	verbally & printed form	verbally & printed form
Length of Lesson	3 hours	N.A.	N.A.	2-4 hours
Nos. attending worship there	All	Majority	45	59
Prayer & Hymn. to open & close	Yes	Yes	Yes	Yes

N.A. - Not Available.

Within the study area 1817 - 1851 included the peak period for the establishment of chapels and the erection of their earliest buildings. The Independent chapel, Nebo, consecrated in 1814, remained small in numbers (167). The Independent Wesleyans built Pisgah chapel in 1834 after a local revival in 1833 (168). By 1844 Pisgah chapel had been bought for the Wesleyan Methodist Association by William Jones, Groeslon, a manganese miner whose father had been a leadminer and a Wesleyan lay preacher since 1800 (169). This is the earliest of several examples of newcomers to the study area bringing new influences and ideas to the possibly inwardlooking community. The Calvinistic Methodists established a Sunday School and then a chapel at Tan Y Foel

in the 1840s (170). With a relatively low percentage of the population now attending the established Church, the various tithes payable to the Church were unpopular (171).

Table 4.13. Accomodation for Religious Worship in 1851.

Parish	Rhiw	Llanfaelrhys	Total
Population in 1851	376	255	631
Sittings in parish	436	242	678
Accommodation ratio	115.95	95.90	107.4
Places of worship in parish	3	2	
Denomination:% of parish sittings			
Independent	36%		
Baptist			
Calvinistic Methodists		55%	
Wesleyan Methodists	21%		
Church of England	43%	45%	

Table 4.13 indicates the accommodation for Religious worship available in the study area recorded in the Religious Census of 1851 (172). In common with many small rural maritime parishes where the parish church alone could accommodate most of the population, the parishes of Rhiw and Llanfaelrhys could together accommodate over 100%, in fact 107.4%, of their combined population (173). It has been suggested that there is a correlation between the religiosity of an area and its economic and social structure. Agricultural and associated tradesmen were said to be creatures of habit, whereas fishermen and craftsmen were said to be more independent and to express their occupational individuality and independence through their chapel allegiance (174). Alternatively, the intellectual stimulus

and theological exchange was suggested as a cause of doctrinal divisions within sects and an increasing gulf between Church and Dissent (175).

Table 4.14. Pwllheli Union: 1851. Attendance per 100 worshippers.

Calvinistic Methodists	62
Independents	16
Baptists	9
Wesleyan Methodists	7
Church of England	6

Table 4.14. shows the pattern of denominational adherence in the Pwllheli Union in the 1851 records. In addition to religious fervour, there appears to be some correlation between religious provision and adherence and the size, social complexity and geographical siting of each particular region (176). By the mid century the pattern of denominationalism in Caernarvonshire was firmly established and thereafter constituted a determining influence in cultural and political life both within each parish and throughout the county (177).

Throughout this period the growth of education, motivated by both Church and Chapel, increased awareness of new social and economic possibilities. It is a significant factor in understanding the balance between stability and change within the study area at this time. The stability of economic, social and settlement patterns were being shaken by a marked growth in population, a changing settlement pattern, economic hardship, new Poor Law reforms, a broadening in the range of occupations and an increasing awareness, through education and religion, of the possibilities of change. Some encountered change by moving away

to quarrying areas of Caernarvonshire or to the reported freedom in North America. The majority however, met change within their own community as habits of land usage, agricultural practice and religious allegiance were challenged and modified during this period of extreme poverty and economic hardship.

- (1) PRO. HO. 107/2514. Census. 1851. Rhiw. Llanfaelrhys
- (2) PRO. HO. 129 Ecclesiastical Returns. Census of 1851
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THE STUDY AREA BETWEEN 1852 AND 1885.

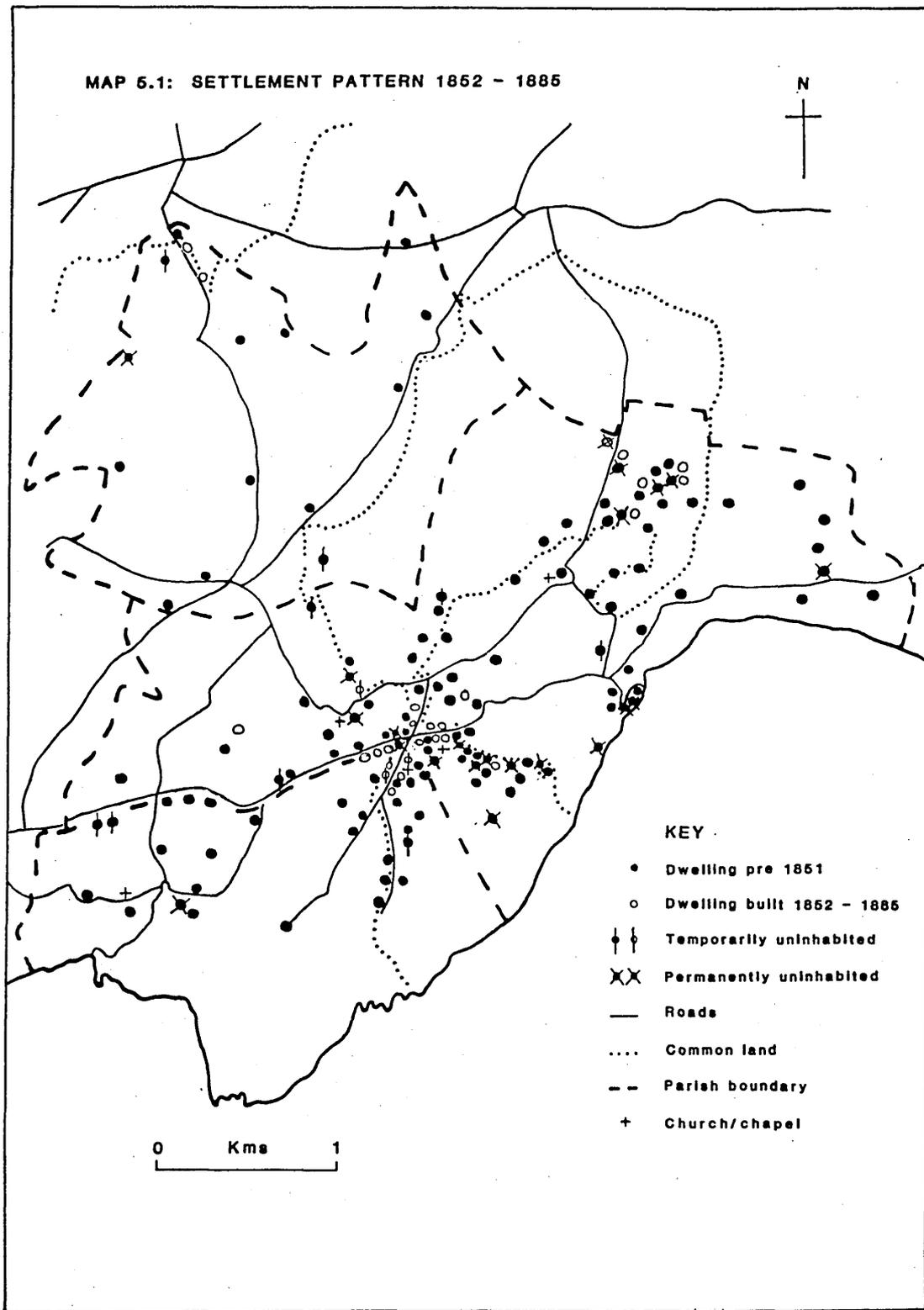
During this period an analysis of the 1861, 1871 and 1881 Census Returns allows one to compare recorded aspects of the structure of the parishes such as settlement, occupations and place of birth over three decades (1).

For the later part of this period the Agricultural Returns provide data which is compared at five yearly intervals (2). These give a more detailed appraisal of agricultural production than any previous information and are augmented by material available from estate documents and plans, from generalised Government Reports and from the recorded memories of people living locally at the time.

The opening of the village school and the establishment of the first village amenities also occurred during this phase of the study. Developments in church and chapel life continued to be important within the district. The mining of manganese still formed only a very minor and intermittent aspect of the economy and the influence of outsiders was still minimal.

1885 has been selected as the end of this time phase in this study of these two rural parishes in order that aspects of continuity and change over the previous three decades can be considered prior to the examination of the important changes which occurred after the 1886 developments in the manganese mines.

MAP 6.1: SETTLEMENT PATTERN 1852 - 1885



I. SETTLEMENT.

Marked changes in the settlement pattern occurred during this period. Between 1852 and 1885 the total number of dwellings within the study area increased by six from 128 to 134. However, this small overall growth masked a significant increase of twenty-nine new dwellings combined with a loss, permanently or temporarily, of twenty-three dwellings (See Table 5.1.).

Table 5.1. Settlement Development: 1852 - 1885.

Total dwellings in 1851	128
Total dwellings in 1885	134
New dwellings between 1852 - 1885	29
Dwellings uninhabited between 1852 and 1885 (temporarily or permanently)	23
Overall increase in dwellings 1851 - 1885	6

In addition to analysing the location of new dwellings built during this period, it is also appropriate to analyse the distribution of those dwellings which became uninhabited and suggest possible reasons for the apparently short term nature of 17% of the housing stock.

The pattern of distribution of new dwellings is shown in Map 5.1. and in Table 5.2.

MAP 5.2: SETTLEMENT PATTERN 1852 - 1885 IN RELATION TO SOILS

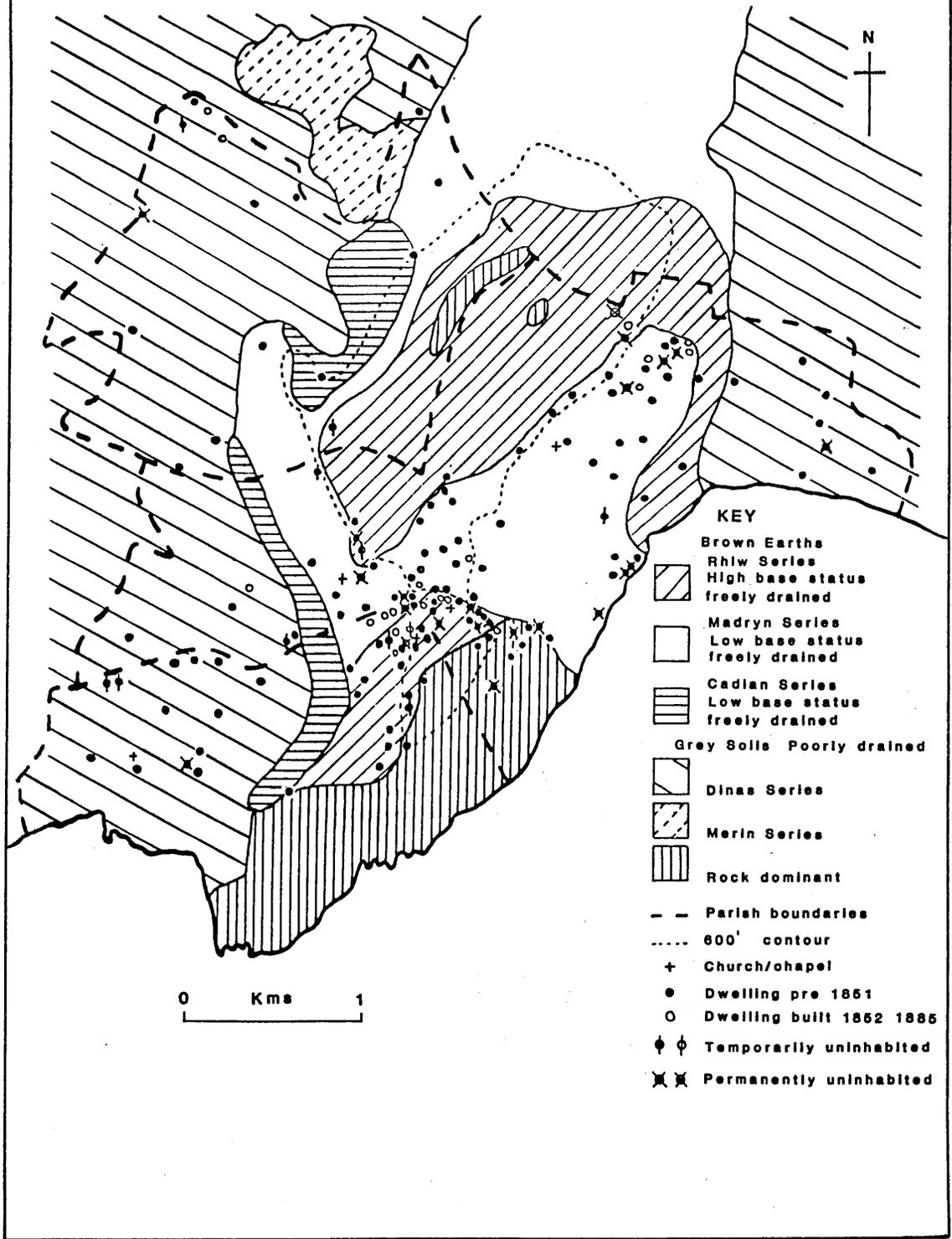


Table 5.2. Pattern of New Dwellings: 1852 - 1885.

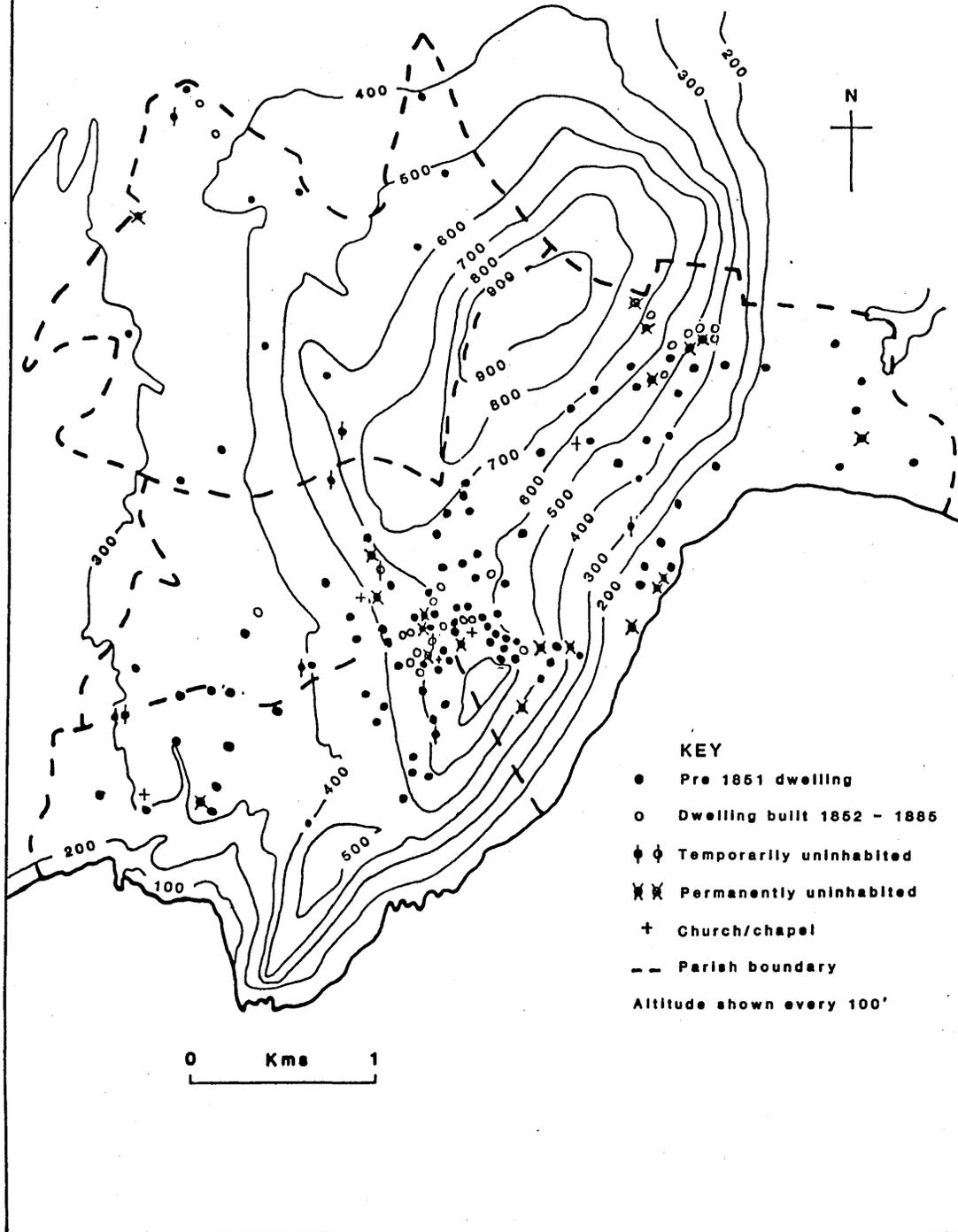
Total number of new dwellings	29
New dwellings within former upland common	18
New dwellings within former upland common on N. of col	8
New dwellings within former upland common on S. of col	10
New dwellings within former lowland common	2
New dwellings below former upland common on West	6
New dwellings below former upland common on East	3
New dwellings on/near roadsides	24
New dwellings near crossroads in col.	15

Eighteen of the twenty-nine new dwellings were built within the former upland common. Twelve of these were near the col in the central ridge which runs north-south through the study area whilst six were on or near the shelf of land east of Rhiw Church, thus establishing a major centre of settlement near the col and a lesser concentration near the church.

Twenty-four of the twenty-nine new dwellings were built alongside or close to tracks and roads, emphasising the growing importance of vehicular access. The only farmhouse built away from roadways was Ty'n Y Cae (House in a field). It was deliberately sited to enable the farmer's wife to look after a nearby aging parent and was a condition of the marriage! (3).

As in earlier periods, the vast majority of new dwellings were built upon the freely draining and more fertile soils. (See Map 5.2.). In contrast with earlier periods the majority of new dwellings in this period lay between 500 - 600 feet above sea level and not 600 -

MAP 5.3: SETTLEMENT PATTERN 1852 - 1885 IN RELATION TO ALTITUDE



700 feet (See Map 5.3. and Table 5.3.). This may well be related to the situation of the land belonging to landowners willing to lease building plots, combined with a desire to build near roads and a water supply. These now appear to be more influential in site selection for new cottages than the environmental factors indicated in earlier periods.

Table 5.3. Altitude of New Dwellings: 1852 - 1885.

Altitude	Number of Dwellings
Over 700'	0
600 - 700'	8
500 - 600'	14
400 - 500'	2
300 - 400'	3
Under 300'	2

Nine of the new dwellings were upon land belonging to the Nanhoron Estate. It is of interest to note that the manganese mining at Nant and Benallt was also upon Nanhoron property. It may be that this landowner encouraged the building of cottages with leasehold on his land in order to promote local mining and other development, or merely that he was willing to assist cottagers in this way. This was in marked contrast to the absence of new dwellings upon the Penrhyn or Glynllifon estate property.

The remainder of new buildings were sited on the land of owner occupiers or on small farms owned by local people. There were no new dwellings built upon Plas Yn Rhiw land in contrast with former periods.

The pattern of land ownership had scarcely altered, since the comprehensive maps of the Tithe Surveys in the early 1840s, but no similarly comprehensive map or schedule listing land owners exists for the 1852 - 1885 period. Rent rolls and other documents do exist amongst the papers of the larger estates represented within the study area. These, together with a variety of material relating to a number of the smaller properties, indicate that a few changes in land ownership occurred when small plots of land were purchased for the building of homes. An example is Sea View which was built between 1881 and 1883 (4).

One major change in ownership pattern however was that of the Plas Yn Rhiw estate. In 1874 the sole heir, Capt. William Williams died a bachelor and left the estate to his half brother who lived in America. At the ensuing auction the house and four of the sixteen lots were purchased by Mr. Roberts of Hendre, a friend of the Edwards family in Nanhoron (5). He moved to Plas Yn Rhiw with his family but the change in ownership pattern did not appear to affect the settlement pattern of the district at all. The other purchasers can not be identified.

An important feature of the settlement pattern between 1852 and 1885 was that of the temporary nature of many dwellings. It appears from the Census Returns that a considerable number of dwellings were given the same name. Possible reasons for this were discussed in the previous chapter (page 110). During this period the tendency increased so that, for example, in 1861 up to five dwellings shared the name 'Penrallt' and another four 'Four Crosses'. Sometimes such a dwelling consisted of only one householder and it may be that the named dwelling consisted only of an outhouse or single room attached to the original building. It is difficult to trace the sites of several of

these temporary dwellings which only occur in one Census return and it is unlikely that they were substantial or freestanding buildings. They do not appear on any maps and do not leave clear evidence in the field (6).

Another aspect of the problem of tracing dwellings is that the names given may alter between one Census and the next, particularly if there is a change of tenant. Continuity can be assumed between 'Ysgoldy' (School House) and 'Chapel House' as a result of information from local religious writings and personal reminiscences. However the dwellings in Rhiw parish named 'Ty Newydd' (New House) in 1861 may have become abandoned a decade later, but may equally have been given another name and become a permanent feature in the landscape. There is therefore some degree of uncertainty and these dwellings are shown as temporary on the maps and in the tables. Continuity is only shown when it can be reasonably demonstrated.

The majority of dwellings temporarily uninhabited on one particular Census night were probably cottages awaiting new tenants. On several occasions these were the more remote cottages such as Ty Hwnt I'r Mynydd, Pant, Bwrth and Baron Hill, some distance from both water and roads. Occasionally rebuilding is given in the Census return as the reason for a lack of tenants, for example in the two cottages of Ty'n Rhyd in Llanfaelrhys in 1851.

Only two of the substantial houses are listed as uninhabited on Census night 1881. Crugau Mawr may have been empty between tenants. In 1878 it was noted in the Nanhoron estate rent roll to be in bad repair, the tenant being a 66 year old widow, whose great grandson is known to have later taken the tenancy (7). She may have died around 1881. Plas Yn Rhiw may have been empty because the family and servants were staying elsewhere. They were in the district in September 1880 and

October 1881 as visits to Rhiw School are recorded in the School Log book (8). During this period the total population within the study area fell considerably from its 1851 level (See Figure 3.1.), whereas the total number of inhabited dwellings gradually increased (See Figure 3.2.). This presumably indicates that there was a slight decline in the average family size.

It is noticeable that the majority of the temporarily uninhabited and short life dwellings were in the parish of Rhiw, frequently within or near the former common land and usually within a short distance of the crossroads in the col in the central ridge where much of the recent growth in settlement had occurred. Most of the houses permanently uninhabited by the end of this period were those remote from roads and water supply. For example, three were on the coast, and two groups each of three on separate remote areas of rocky upland.

The convenience of proximity to a road and the growth in density of settlement near and especially south of the col probably stimulated further building in that part of the study area, with the resulting abandonment of more remote dwellings. The building of the school and two shops close to the crossroads, and the opening of an Inn at Penponcyn in the col were additional factors in the further development of this area as the focal point of settlement within the two parishes. Thus, in order to meet the changing needs of the local community, this part of the study area was developing a more nucleated settlement pattern in contrast to the widely dispersed pattern of settlement shown throughout the whole of the study area one hundred years earlier.

II. ECONOMIC ENDEAVOUR.

Throughout this period, as during the previous phases of this study, agriculture formed the mainstay of the economy within the study area and within Caernarvonshire as a whole. There are two complementary sources of information from the study area which can be compared with regional and national trends in the rural economy. These are the Agricultural Returns, required annually parish by parish from June 1867, and a detailed account of farming in the 1860s in the neighbourhood of Trewen, a farm in a parish bordering on the study area (9). The former consists of bare statistics, whereas the latter adds comments, albeit with the dangers always accompanying reminiscences, and is from a more sheltered lowlying area than the greater part of the study area. It appears that the local people who recorded aspects of their life within the study area during this period were not personally involved in farming, and it does not therefore feature significantly in their writings.

Table 5.4. Selected Agricultural Returns - Crops. 1867 - 1885.

Crop	Acreage in Rhiw					Acreage in Llanfaelrhys				
	1867	1870	1875	1880	1885	1867	1870	1875	1880	1885
Oats	79	73	92	87	67	162	165	170	155	144
Barley	44	46	42	46	35	91	86	86	92	70
Wheat	2	-	-	-	-	-	1	-	-	-
Potatoes	40	35	35	30	30	55	53	46	40	32
Turnips/Swedens	8	9	7	9	11	25	16	18	15	21
Other root crops,) Vegetables Vetches)	4	5	9	4	5	9	8	23	15	10

Table 5.4. continued.

	1867	1870	1875	1880	1885	1867	1870	1875	1880	1885
Clover & grasses	114	804	119	151	184	219	499	240	555	342
permanent pasture & meadows	460	342	610	629	615	592	361	786	675	753
Woods & Orchards	-	-	15	8	-	-	-	-	-	-
Bare fallow & uncropped arable	78	12	-	-	-	217	2	-	23	-

Table 5.4. indicates the acreage under various crops within the parishes of Rhiw and Llanfaelrhys between 1867 and 1885. The proportion of land under arable is small, but this would be expected in an area of mixed farming, with the emphasis on livestock, particularly dairy- ing and cattle rearing (10). In common with post 1867 statistics for the whole of Wales, the importance of arable farming in the study area peaks around 1880 (11). Areas such as this, with small acreages under arable, were utilised to produce cereal for domestic use and for livestock feed (12). The more predominantly pastoral districts, such as the study area were therefore shielded from some of the drastic fluctuations affecting 'high farming' in England during this period (13). The tithe commutation schedules of the 1840s indicate a higher acreage under arable then than in the 1860s. This may however be due to the food shortages of the 'Hungry Forties' or to different methods of data collection.

It can be seen from Table 5.4. that oats was the chief cereal grown in the study area, with barley covering roughly half as much acreage, and with a negligible amount of wheat. More barley and wheat

are recorded in the lowlying Trewen where it was noted that corn growing was a strong feature of such lowlying districts, and where over one third of a farm was under barley (14). Wheat was regularly grown on some lands near Trewen (15). Here, with the exception of a little feed for horses and pigs, the corn was sold, providing one of the main sources of revenue (16).

A considerable acreage of potatoes was grown, with proportionately more in Rhiw than Llanfaelrhys. Both parishes produced more than was described at Trewen (17). This probably emphasises the increasing need of potatoes as a staple diet amongst the many cottagers and tiny small holdings in the study area, particularly in Rhiw, as against the higher standard of living likely at Trewen farm, where it was recorded that use of poor seed potatoes accounted for the scanty crops grown (18).

Reasonable acreages of turnips and swedes were grown in Llanfaelrhys, but little in Rhiw. There was a very low acreage of mangolds in either parish, and only a little more at Trewen (19). The two exceptions to these low averages may be due to experimentation one season with a larger acreage of one particular crop. Fluctuations may also be due to local climatic conditions. There were negligible amounts of carrots and no cabbage, rape or vetches grown in either parish. However, in 1874 Penarfynydd farm ordered 12 lbs. of red clover seed from a Pwllheli nurseryman (20). At Trewen vetches were mixed with oats to feed the horses during periods of long or hard work (21). The deliberate cultivation of gorse is described around Trewen. It was cut in alternate years for many seasons, being bruised and chaffed and added to livestock feed (22).

The acreage of clover and other grasses in Llanfaelrhys was almost double that in Rhiw, although in both parishes the acreage declined

over the period under review. After the high acreage recorded in 1867 only minimal acreage was then recorded for bare fallow and uncropped arable. The acreage of permanent pasture and meadow grass, exclusive of hill pasture, varied considerably. It was higher in Llanfaelrhys than in Rhiw as would be anticipated from the different environmental conditions.

Better grass seeds were said to be generally available in the 1870s, but were not commonly used (23). In 1883 it was reported in North Wales that "as in other matters, farmers have a tendency to go in for cheapness rather than for excellence, the result being a rapid and luxurious growth of weeds instead of luxurious grasses" (24). Generally traditional methods and attitudes persisted, inhibiting the widespread adoption of improved methods of pasture management (25).

No orchards nor woods were recorded during this period in Llanfaelrhys nor around Trewen, and only a few acres were noted in the parish of Rhiw (26).

Table 5.5. Selected Agricultural Returns: Livestock: 1867 - 1885.

Stock	Number in Rhiw					Number in Llanfaelrhys				
	1867	1870	1875	1880	1885	1867	1870	1875	1880	1885
Cows/heifers in) milk or in calf)	78	85	83	105	113	147	146	138	129	136
Other cattle 2 yrs +	57	51	47	66	70	58	93	99	43	50
Other cattle 2 yrs -	80	82	69	91	110	143	136	162	132	202
Total Cattle	215	218	199	362	293	348	375	399	304	388
Sheep/lambs 1 yr -	283	291	240	264	308	409	330	376	374	380
Sheep over 1 year	611	692	629	767	618	698	616	692	818	642
Total Sheep	894	983	869	1031	926	1107	946	1068	1192	1022

Table 5.5. continued.

	1867	1870	1875	1880	1885	1867	1870	1875	1880	1885
Pigs	107	103	99	131	112	210	237	201	181	163
Horses ag. use		18	7	32	28		33	21	57	45
unbroken		18	20	10	14		21	33	4	26
breeding mares	Not	2	9	8	9	Not	8	19	5	6
Total horses	Reco rded	38	36	50	51	Reco rded	62	73	66	77

Table 5.5. indicates the June Livestock Returns for the parishes of Rhiw and Llanfaelrhys from 1867 - 1885. There was a considerable increase in the numbers of cows and heifers in milk or in calf within Rhiw, but a slight fall occurred within the larger numbers recorded in Llanfaelrhys over this phase in the review. A similar pattern is recorded in the numbers of the other cattle of 2 years and over, although these numbers peaked in Llanfaelrhys in the 1870s. In both parishes there was a marked increase by 1885 in the number of cattle of under 2 years.

These trends concur with the regional and national trends following the expansion of the demand for lean stock in the 1850s which had halted the price decline, and the generally increased use of supplementary feed such as oil seed cake which had contributed to the increase in profitability (27).

In the 1850s the cattle drovers still played a crucial role in the economy, taking vast numbers of sheep and cattle from districts like Llŷn to England. Those from Trewen were amongst the livestock fattened in Leicestershire and Northamptonshire (28). Many were taken on to Smithfield market where in 1852 - 54 over 266 thousand cattle

a year were sold, most having come from Wales (29). A description of the important Barnet fair with the Welsh drovers and their cattle in 1856 paints a vivid picture of the final phases in the economical chain which started in the study area (30). Right up until the 1880s cattle were still shod prior to their journey hence the settlement at Efail Newydd (New Smithy) on the drovers' route in mid Llŷn (31). Half of the drovers used the turnpikes and paid the tolls, whilst half preferred to use the ancient routes across open country (32). Drovers were still important conveyors of news and ideas, thus lessening the isolation of many cattle rearing districts such as the study area. They also brought back money into the economy, money essential to pay the rent (33).

In 1859 a Northamptonshire grazier praised the qualities of stamina in the North Welsh cattle (34). Of the cattle of North Wales, the Anglesey and Llŷn types were of greatest importance, being much preferred by the English graziers (35). The Agricultural returns do not record differences in breed amongst cattle, but it is almost certain that those in the study area would have been the favoured Llŷn type.

As the railway network extended, the need for drovers diminished. The railway reached Shrewsbury in 1856 and by 1860 lines to Pembroke, Aberystwyth and Holyhead were open. Droving was now only necessary to the nearest railway station, Pwllheli, some twelve miles from the study area (36). At first many drovers accompanied cattle on trains (37). Soon, however, many became dealers (38).

Now that cattle were taken to England by train and not walked out, they could be fattened in Wales. The English preference was for black cattle and these sold at higher prices than other colourings of Welsh cattle (39). Attempts were made in 1867 by Morgan Evans to

form a Herd Book for black Welsh Cattle (40). This was however, not successful until 1874 (41). Then breeding was confined to the best and licensed bulls and standards improved. At Trewen it was recorded that no new breeds were tried, the best bull calf being retained for the herd (42). However the introduction into Llŷn during this period of new blood in the prize winning Welsh Black cattle is also recorded (43), and the purchase of one black cow in 1879 a local sale is noted in the records of Penarfynydd farm (44).

Table 5.5. indicates that considerable numbers of sheep were kept in both the parishes of Rhiw and Llanfaelrhys, but as the breed is not recorded it is not possible to distinguish the lowland Llŷn sheep from the mountain Rhiw breed. However around Trewen it is noted that lowland Llŷn sheep were kept while mountain sheep such as the Rhiw breed were regarded with disdain (45). This concurs with general statements that stock improvements were slow to occur (46). Sheep numbers peaked in Rhiw in 1869 and in 1880 in both parishes, when the numbers of lambs were also high. At Trewen ewe lambs were kept for breeding and weather lambs were sold the following spring and sent to Anglesey and Cheshire or sold to provide for the visitor trade along the North Wales coast (47). In Llŷn local wool was retained and used to provide blankets, flannels and clothing (48). Throughout this period there was a woollen factory at Pencaerau, half a mile west of the study area able to meet the needs of the districts (49).

Being more dependent on sales of store sheep and mutton than upon wool, Llŷn farmers were less seriously affected by the decline in wool prices which resulted from large imports of foreign wool after the mid 1860s (50). This is probably the main reason why

there is no indication that the study area conformed with the overall pattern of a declining sheep population and increase in cattle numbers in Wales from 1876 to 1885 (51).

Over twice as many pigs were kept in Llanfaelrhys as in Rhiw. Numbers remained reasonably steady throughout the period. Fat pigs from Trewen were sent by dealers as far as Birmingham (52). A few breeding sows were also kept at Trewen, where the custom of giving a suckling pig to married labourers is recorded (53).

A considerable number of horses were kept in both Rhiw and Llanfaelrhys, mainly for agricultural use. The highest number recorded for such use was in 1880 in both parishes. A small number of breeding mares were kept and there was a considerable number of unbroken horses. The custom of selling horses at Pwllheli fair is recorded at Trewen (54). An average of 100 horses were said to leave Pwllheli for London after this fair (55).

Table 5.6. Selected Agricultural Returns: Holdings. 1867 - 1885.

Number who :	In Rhiw					In Llanfaelrhys				
	1867	1870	1875	1880	1885	1867	1870	1875	1880	1885
keep livestock but) do not occupy land)	1	1	2	2	-	-	-	-	-	-
Occupy land	32	34	32	30	36	27	25	25	25	25

Table 5.6. indicates that the number of people occupying land remained static in Llanfaelrhys but varied slightly over this period in Rhiw.

The size of holdings with the study area in 1870 is shown in Table 5.7. The preponderance of holdings of under 20 acres in Rhiw probably accounts for many of the differences in the variety of acreage of crops and of numbers of livestock recorded in the two

parishes.

Table 5.7. Size of farms or holdings in 1870.

Acreage	Number in Rhiw	Number in Llanfaelrhys
Up to 5 acres	7	2
5 - 20 acres	17	9
21 - 50 acres	6	9
51 - 100 acres	3	2
above 100 acres	1	3

The smaller^{the} holding, the less likelihood there would be of sufficient capital and enterprise to risk developing new ideas. Instead the staple diet of potatoes would be crucial. The variations in the numbers of holdings within Rhiw probably indicate the failure of some of these small holdings to remain viable.

Most land in the study area was owned by a few very large estates. (See Map 4.4.). These six landowners therefore owned approximately 90% of the study area. The remaining 10% was owned by over thirty farmers and cottagers with holdings well below the average of 47 acres given for Wales as a whole at this time (56). This pattern is confirmed by the 1873 'Return of Owners of Land' statistics, which indicate that one half of Caernarvonshire was owned by six landowners whose estates included Penrhyn and Glynllifon and each averaged over 25,00 acres (See Table 5.8.) (57).

Table 5.8. Division of Land Ownership c 1870.

Estate	Percentage of study area owned.
Penrhyn and) Glynllifon)	40%
Nanhoron	20%
Plas Yn Rhiw	20%
Bryn Y Gwin) & Brynodol)	10%

Thus as agricultural conditions generally improved from the 1850s, these were the landlords who increased investment in their estates (58). By the late 1870s many estates, including the Nanhoron land within the study area, had been revalued (59). After the 1870s outlying parts of some Llŷn estates were being sold off, often to tenants (60). High agricultural prices and a favourable land market assisted this trend (61). Land owners no longer needed large estates to raise votes after the 1867 extension of the franchise, and estates were costly to manage. In Wales the favourable land market continued into the 1880s (62). However, within the study area the only major sale of land was that of the entire Plas Yn Rhiw estate in 1874 (See page 165).

There is no evidence from the study area concerning the role or style of the land agents operating on behalf of the larger estates. However it is clear that, as has been shown in other parts of Wales, the roles of the land agent continued to be of great importance, even though they were not popular among the tenants (63). Their role frequently involved representing their rich anglicised Anglican land-owners who were frequently absent, and liaising with and guiding the efforts of the tenants (64). Many however were unable to speak

Welsh (65). Another important role was that of keeping the accounts of the estate and in the study area several of the rent rolls bear the agent's signature (66).

By the late 1850s yearly tenancies were prevalent in North Wales and were noted in the neighbourhood of Trewen (67). It was also recorded that "the Squire at Nanhoron would rarely, if ever, turn a man out and terminate a tenancy for default with his rental. Payment in crops and in kind would be accepted in lieu of rent" (68). After the 1868 election the eviction of some Caernarvonshire tenants for voting against their land owner caused much unrest, and is still referred to, over one century later (69). But the land hunger was such that there were always men ready to take a farm (70).

Table 5.6. confirms information available from the Census Returns that within the study area consolidation of small farms did not occur, as it did in England in the 1870s. (71).

The owner of Penarfynydd farm, Llanfaelrhys, was among the many landlords who contracted out of the 1875 Agricultural Holdings Act, but compensation for tenant's improvements was later made compulsory in the 1883 Agricultural Holdings Act (72). Generally rents increased from the 1850s to the 1880s (73). In the few extant rent rolls available for the study area increases appear to be at change of tenants, and were not too great (74). The small amount of evidence for estate development available in the study area during this period confirm the general trend reported in Wales indicating investment of capital. For example, the outbuildings of Plas Newydd and Bodwyddog bach farms on the Penrhyn estate were rebuilt in 1867 and the farmhouse of Penarfynydd, Llanfaelrhys, was rebuilt by the Glynllifon estate around 1885 (75).

It was noted that in Wales many landlords discriminated between

Churchmen and Dissenters and between radicals and liberals and that there were often deepseated religious, linguistic and socio-cultural differences between larger landlords and the tenantry (76). In the study area this was probably the case with the Glynllifon and Penrhyn estate lands. Despite the isolated cases such as on the Nanhoron estate lands, where tenants farmed with the confidence of freeholders, the lack of confidence combined with an absence, prior to 1883, of compulsory tenant right, continued to act as a disincentive towards the investment of any available capital in their farms (77). This would be as true within the study areas as elsewhere in Wales.

There is insufficient evidence from the study area to identify the key factors and rate of change in farming techniques during this period. It can be presumed however that the influence of agricultural articles in newspapers, the publication of Eisteddfodau essays concerning agriculture and the growth of Agricultural Societies and Shows all assisted in the diffusion of new ideas (78). Generally however, change was slow (79). The interrelated factors were complex and reflected the strength of local contacts, the flow of information and the distance between users and potential adopters. Change was also often dependant on land size, use of product - mix, levels of personal mobility and the use of intermediate distribution points such as Agricultural Societies and shows as for example the Llyn and Eifionydd Farming Society in 1864 (80). Language was a very important additional factor in remote districts such as the study area (81).

In the neighbourhood of Trewen, liming was general until the 1870s after which high prices deterred widespread use (82). By the 1880s artificial fertilisers such as super phosphates and basic slag

were becoming popular (83). Cheap effective drainage pipes had been available since the 1840s (84). By this period draining around Trewen was said to be generally improved (85). Farm implements were gradually being improved, but seed was still broadcast by hand and hay was mown with a scythe (86). In the 1870s for example, Penarfynydd farm bought a new spade, gorse sickle and shovel, having purchased a smooth roller in 1868 for 5 shillings and threepence (87).

There was, of necessity, much cooperation between farmers in the use of labour and equipment, especially as they began to share the use of large items (88). New machinery was often first seen on the home farm, where it gave rise to much interest (89). Gradually steam, then tractor power increased and standard machinery was bought instead of the individualised items previously made locally (90).

The majority of holdings in the study area were typical of the small Welsh family-type farm and were largely self contained, producing most of the basic food and clothing required. However the market was crucial in supplying the money for the rent, tithes, local taxation and labourers' wages (91). The biggest element in farm income was the sale of store cattle and store sheep and this money paid the rent. Income from butter, cheese, poultry and eggs met current expenses (92). Reports from Llyn concur with the general movement noted in the 1870s from self sufficiency towards an increased dependency on outside markets, particularly in the larger holdings (93).

From 1853 until the late 1870s Welsh livestock farmers shared in the growing general prosperity of meat and dairy producers in Britain as they responded to the growth in home demand (94). Most prices peaked in the 1870s, the "golden age" of farming (95). Although reared in distant regions such as the study area, cattle

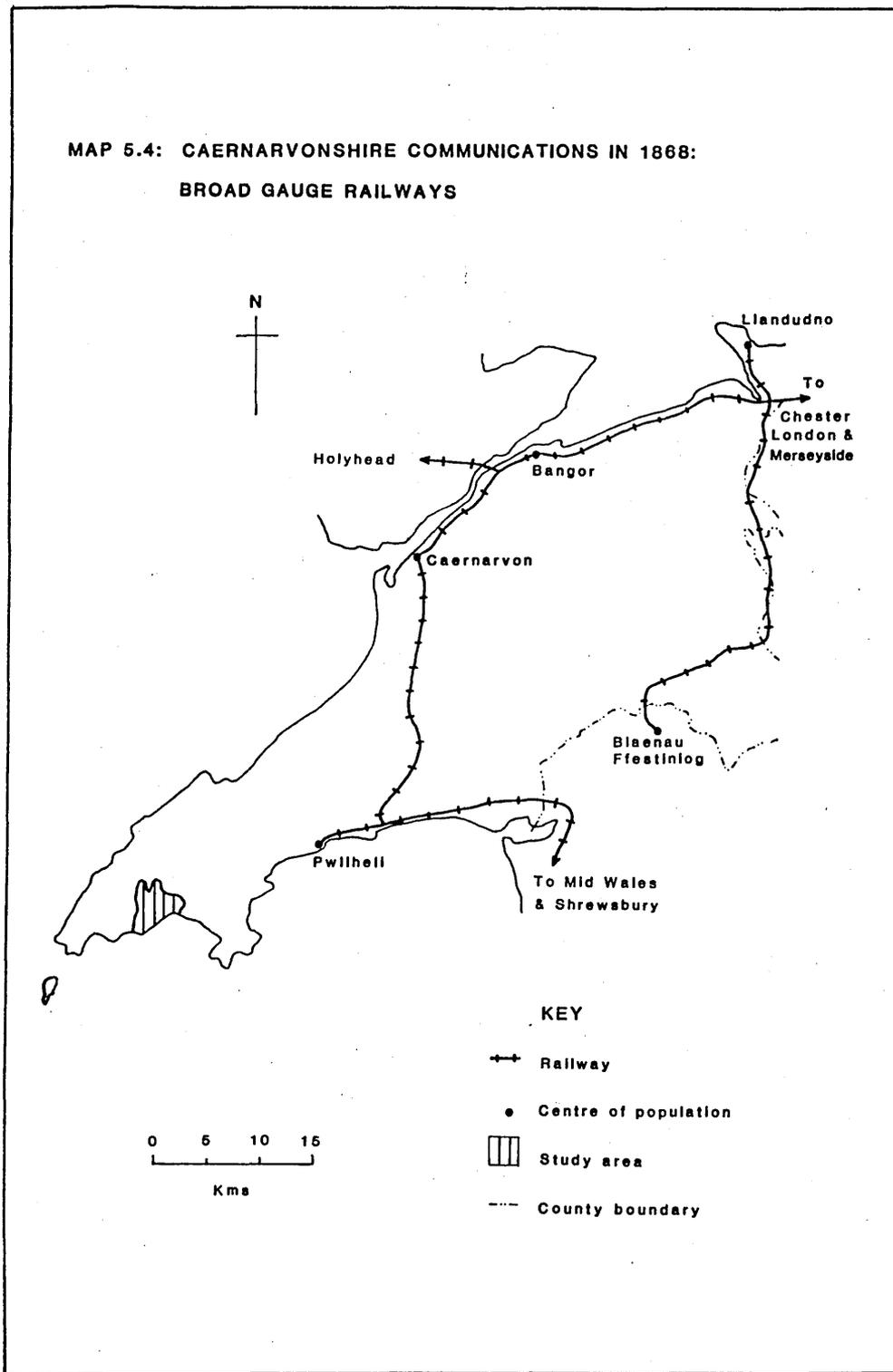
were sold for consumption mainly in urban England, and local prices and volume of demand were therefore closely linked to the national and international economic scene. It was not until the mid 1880s that the beef market was influenced progressively more by foreign imports (96). The development of refrigerated ships enabling the cheap and rapid transit of carcasses from the United States and elsewhere resulted in imported meat becoming a more important determinant to domestic prices than varying weather patterns (97). Prices therefore fell for both store and fat cattle (98). Until this collapse of beef prices around 1885, breeding herd sizes in the store cattle rearing countries had continued to rise (99). Now the livestock as well as the grain economy was affected by the 'great depression' which spread through British agriculture (100).

In contrast with many upland areas, there was no withdrawal from the cultivation of marginal land in the study area, although there was some depopulation as labourers migrated to industrial areas (101).

One independent source of information related to agricultural practice within the study area is the Rhiw School Log book (102). Regular references are made to pupil absences due to attendance at the Hiring fairs at Sarn during this period (103).

The influence of the extending railway system upon the trading and general communications network necessary in the agricultural economy was considerable. In 1867 the railway network was extended to include Pwllheli (See Map 5.4.) One line passed through Caernarvon and continued along the North Wales coast to Chester and Merseyside, whilst another branched off around Cardigan Bay to Shrewsbury. Thus suddenly there was quick and easy inland access for people, goods and animals to and from Llyn.

**MAP 5.4: CAERNARVONSHIRE COMMUNICATIONS IN 1868:
BROAD GAUGE RAILWAYS**



These new links enabled the produce of Llŷn to quickly reach the growing industrial markets of Lancashire and this was a key factor in the increased prosperity of those producing short life dairy products (104). It was now also possible, through the improved rail network, for farmers from Llŷn to actually see the improved products and new machinery recommended by others, thus generally encouraging better farming methods (105).

Other aspects of the economy were also markedly affected by the arrival of the railway at Pwllheli. For example, many of the functions of the stage coach in carrying mail, people and goods were usurped (106).

There was also an increase in the number of travellers and holiday makers (107). In Pwllheli this led to the building of hotel accommodation on the sea front (108). Guide books such as Murray's Handbook to North Wales in 1874 and Jenkinson's Smaller Practical Guide to North Wales in 1878 described interesting trips which visitors could undertake (109). Both mention Rhiw and Llanfaelrhys by name in the text (110). Jenkinson described the Llŷn promontory as lying outside the ordinary tourist route and little visited (111). He also noted that an omnibus ran daily between Aberdaron and Pwllheli, and this would have passed very near the study area (112). Tourists also caused an increased usage of English as the Welsh sought to meet their visitors' needs (113).

Men such as Capt. William Williams of Rhiw had become internationally prominent as master mariners commanding trans atlantic emigrant and cargo vessels (114). It was said that "the whole of Llŷn was permeated with sea life. Even the hay carts were redolent of it, with eye splice, bowline, clove hitches and timber hitch and every rope end properly finished off in sea fashion. The solid

paintwork about the farms could be recognised at half a glance as sea-taught" (115).

Small local working schooners carried passengers and parcels. The cargoes of smacks and ketches were made up of coal, "groceries, ironmongery, fruits, books and drugs - the day to day needs of local shop keepers" (116). Sea transport to small local coves was easier than using the rough roads in areas such as Llŷn. (117). Even the harbour of Rhiw in Porth Neigwl had its pilot, a retired sea captain, who assisted ships bringing in coal and taking away manganese ore. Following numerous wrecks, a foghorn was established at Bardsey Island in 1878 (118). Parcels were carried by sea from Llŷn to relatives in Liverpool (119). It was however still easier to travel by sea from Porthdinllaen in Llŷn to Caernarvon for religious gatherings than to go overland (120).

Many of the ships were owned in shares (121). The shareholders were often farmers from the neighbouring countryside so the sea played a far bigger part in the country's economy than the number of active participants would suggest. Many invested their savings in small ship building companies (122). Within the study area it is recorded that several owned shares in ships, among them Robert Evans, tenant of the large farm of Penarfynydd (123). This continued a pattern established earlier.

However, from the 1870s, after the advent of the railways, ship building began to decline (124). The last vessels were built in Pwllheli in 1878 and in Nefyn in 1880 (125). The exception was Porthmadog when the demands for slate in Hamburg and the Baltic ports opened new trade until 1914 (126). Several Rhiw men were mariners involved in these voyages (127).

Local fishing continued to play an important role in obtaining

food, particularly for the poor cottagers who cured the salted herring on their roofs for use later (128).

As the railway era brought external competition to Caernarvonshire, many of the small industries began to decline (129). This was delayed in some more remote areas where some, such as the Pencaerau Woollen factory, within a mile of the study area, continued as viable units (130). The number of the small local craftsmen such as the saddlers and shoemakers declined with the external competition of mass produced goods. (131). At least one Rhiw shoemaker left during this period to search of better trade in the slate quarrying district (132).

Thus, prior to the 1870s much of Llyn was still isolated from the effects of the external competition later brought by the railway network from urban industrialised regions. The high prices enabled small upland farms, industries and mines to remain viable and, indeed, to bring a measure of prosperity to the larger better organised concerns(133). However, by the mid 1880s agriculture and mining faced foreign competition. In upland Britain as a whole many of the least efficient producers failed and migration of capital, labour and entrepreneurship occurred (134).

In several respects the the remoteness of the study area and the tenacity of the population in their determination to survive despite harsh conditions resulted in less change here at this time than in some other remote regions.

Certainly the rarity of the particular mineral - manganese - found earlier within the study area resulted in its continued working, despite the small quantity available and the remote situation of the mines. It is likely that the manganese was worked only intermittently within the study area throughout this period. The

discovery of rich manganese ore in Germany in the 1850s decimated the manganese mining in Devon and Cornwall, and it is probably that the North Wales manganese mines were also affected (135).

At this time local people worked the manganese using opencast surface pits (136). Few official references to manganese occur but shipping returns for 1854/55 show passing dues paid by ships carrying manganese from local beaches as follows: (137).

Aberdaron: Iron Ore 5 loads: (Liverpool 2; Runcorn 3)

Manganese Ore 1 load (Runcorn)

Bringing back coal.

Rhiw & Abersoch: Iron Ore 4 loads: (Liverpool 2; Runcorn 1;

Saltney 1)

Manganese Ore 11 loads: (Liverpool 9, Runcorn 2)

Bringing back coal.

It is not known whether this was a typical or an unusual amount of trade, nor what comprised a load, but the beaches mentioned confirm information in the Nanhoron estate papers.

In April 1857 twenty tons of 'lump manganese' was shipped from Aberdaron to Liverpool. Another seventeen tons was shipped in August 1857 from Porth Ysgo, in the study area (138). This load was raised on Gallt Ysgaw on the property of the Penrhyn estate (139). This confirms that the three major estates within the study area were all involved in attempting to profit from the manganese even at this relatively early stage in its development (140).

The Nant ore was usually shipped from Porth Cadlan, a safer beach than its neighbour Porth Ysgo. (See Map 4.6.). It was taken

away by the small sailing vessels that supplied the local demands for coal and flour as well as domestic requirements. The small vessels' owners were often local Master mariners. Transport from the mine was usually by a team of donkeys along the winding cliff path. Ore from the Benallt mine was carried by donkeys to ships in Porth Neigwl where a pilot assisted navigation (141). (See Map 4.6.).

Mining was generally carried out as an individual enterprise. A tradition of mining developed, but it was still on a very small scale and most miners had also to farm or fish in order to obtain a living (142). The above statements based upon reminiscences are supported by information in the Census returns which in Rhiw in 1861 list Robert Jones, Four Crosses Fawr as a miner and manganese proprietor, and three other men as miners (143). One, Thomas Bilshaw, had been born in Liverpool and lodged at Tan Y Graig. Having the first non-Welsh surname listed in the Census Returns, he was probably one of the first Englishmen to come to live and work in Rhiw. Tan Y Graig was the home of Owen Williams who, with his brother Isaac Roberts, Bwlch Y Garreg, were said to have been amongst the first to dig for manganese to the west of Clip Y Gylfinir (144). (See Map 4.6.). They are also noted as miners in the 1881 Census returns (145). A thirty five year old woman and her fourteen year old son are recorded as working in the mines in 1861 (146).

Evan Williams, Benallt, started the search for manganese around Benallt (147). Mynydd Penarfynydd was mined for copper, but unsuccessfully (148). Another miner, R. Parry, came to Tynlon Fawr farm from Mynydd Parys, the Anglesey copper mine and it is said that he may have been searching on behalf of others (149). In the 1861 Llanfaelrhys Census return his widow is listed as both a farmer

and a manganese proprietor. Another person is listed as both farmer and miner whilst a third is named as a miner with his brother being the farmer of their small holding (150).

Records of manganese output at this time were not accurately or centrally kept. It is however stated that in 1867, 5 tons and in 1872, 50 tons of manganese ore were produced in Caernarvonshire, presumably at the mines within the study area (151).

The 1871 Census returns for Rhiw and Llanfaelrhys however show no one working in the mines (152). Those recorded as miners in earlier Census returns are listed as being employed in agriculture. However a widow and her son were living in a building called "Hen Office" - the old office - near Benallt in Rhiw. This name does not occur on any other Census returns and it seems likely that the couple were living in a building used earlier by the mine when it was active.

In the 1881 Census only three men in the study area were recorded as being involved in mining (153). Although living in different houses, all three were related by marriage; one was listed as a farmer and manganese proprietor, one as a farmer and manganese miner and the third merely as a miner (154).

A central list of the mines of England and Wales was kept from 1872 (155). None of the manganese mines appear to be listed between 1872 and 1885.

Unfortunately, no plans or large scale maps exist for the area in this period. The area was not surveyed for the O.S. 25" to 1 mile maps until 1888. No extant estate maps show the manganese workings. None of the visitors to Llyn[^] commented on these remote and intermittent mineral workings, possibly because they were small unprofitable mines, so common in Wales (156).

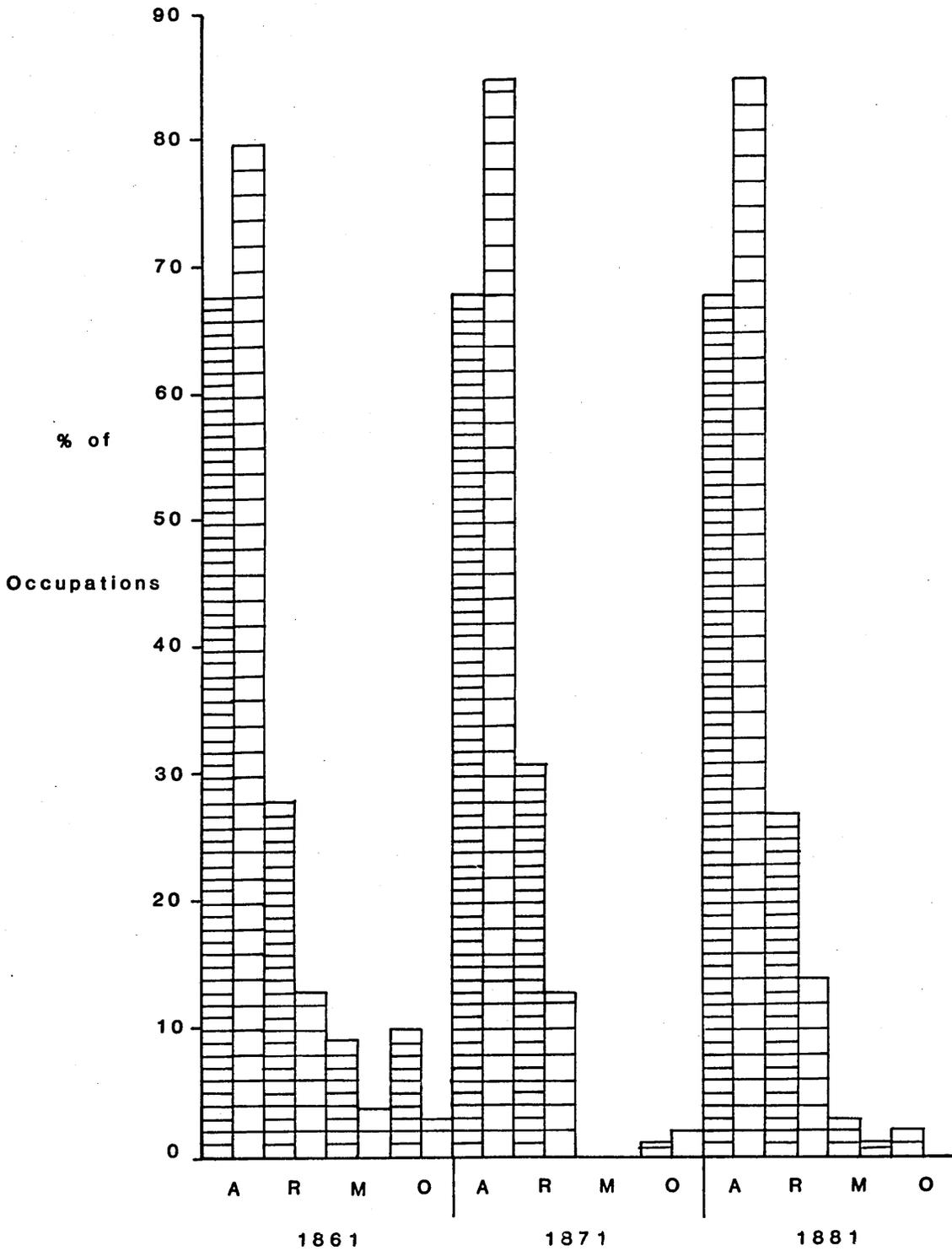
The discovery was made in 1883 of practical methods of capitalising on the fact that manganese, when added to steel, imparted valuable properties of wear, resistance and hardness (157). By late 1884 and early 1885 interest in manganese ore revived generally and from that date onwards there were important changes in mining in the study area.(158). However, during this phase of the review manganese mining played a fluctuating and minor role in the economy of the community. Perhaps its main contribution was that of the influence and stimulus of the new blood bringing new ideas to the area, rather than any financial profit.

III. SOCIAL ISSUES.

The devastating poverty of the majority of families in the study area at this time has been recalled both by men who remained and by some who left the area in the 1870s (159). The community was still largely self contained and self supporting, with potatoes butter-milk and fish comprising the local diet (160). There were no real shops, merely items for sale kept in local dwellings (161). Generally fuel was heather, turf and driftwood, although some coal was brought to Y Rheol and delivered by cart to the school and larger farms (162). Local wool was spun and woven, no doubt assisted by the Pencaerau woollen factory (163). Weaving instruments were part of a Rhiw weaver's will dated 1854 (164). Itinerant tailors, cobblers and basket makers worked from farm to farm (165). All these examples indicate the continuity of an interdependent community.

Housing conditions remained very poor. On some estates, such as Glynllifon, cottages were prohibited, whereas on others, such as

FIGURE 5.1: OCCUPATIONS 1861 - 1881



KEY

OCCUPATIONS

- A Agricultural
- R Retail/Handicrafts
- M Mining/Manufacturing
- O Others

-  Rhiw
-  Llanfaelrhys

Nanhoron, they were encouraged, thus influencing settlement pattern (166). Agricultural work practices were little improved, with low wages and long hours (167). Female field labour was noted in the 1870s, but was declining (168). Holidays were few and were granted for weddings, funerals, eisteddfodau, preaching festivals and fairs, indicating the areas of interest of the community (169). The biannual hiring fair at Pwllheli was a major social occasion, necessitating a week's closure at Rhiw Board School (170). The continued similarity of life style of tenant farmers and their labourers together with the scattered nature of the labour force led to mutual understanding rather than the Trade Union activity found elsewhere (171).

Using material from the Census Returns of 1861, 1871 and 1881, Figure 5.1. indicates that there was no decline in the proportion of the population of the study area engaged in agriculture, as was the position elsewhere (172). This was probably a result of the remoteness of the area from developing industrial areas and the delay in the use of new methods and machinery which decreased labour forces elsewhere. During this period there was no increase in the proportion employed in the retail or mining industries. (cf Table 4.11 and Figure 5.1.). The variety of trades and crafts undertaken did however increase (173).

Figures 5.2 & 3 indicate the very high proportion of inhabitants born within their parish of residence, particularly in Rhiw. Between 1851 and 1881 there is however a gradual increase in the proportion born in an adjacent or more distant parish to that of later residence. This indicates some increase in mobility amongst the population, with the accompanying opportunities for fresh ideas and new methods to enter the study area. Figure 5.4. shows a similar pattern in the

FIGURE 5.2: BIRTH PLACE OF INHABITANTS OF RHIW

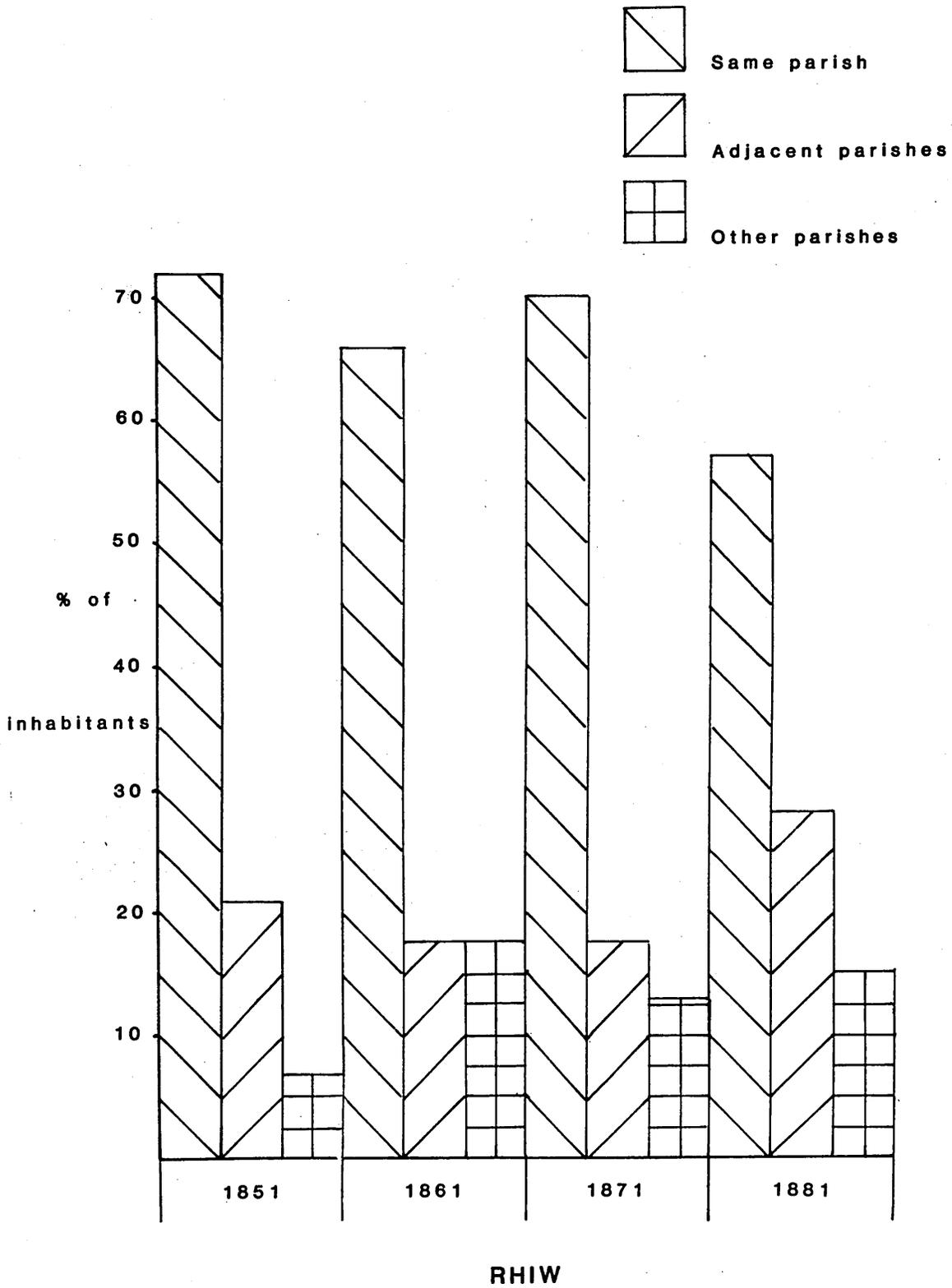
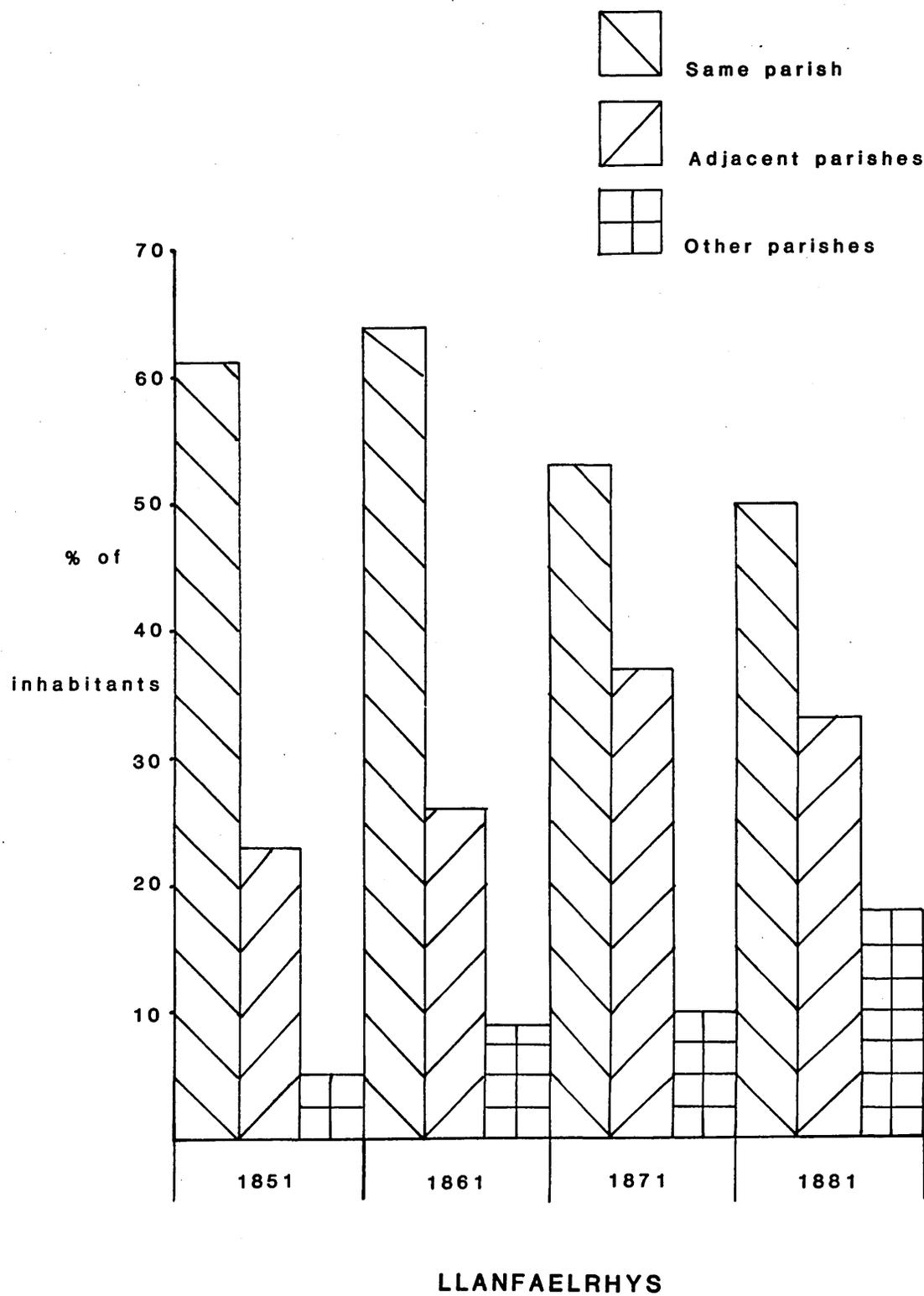
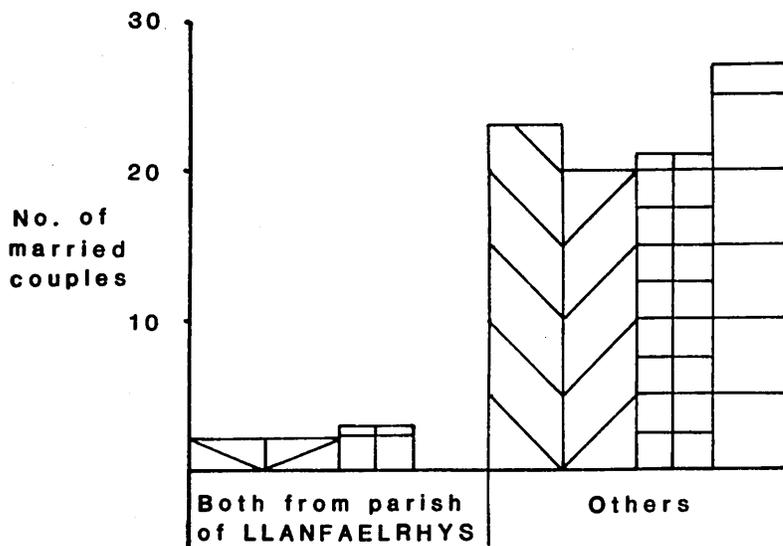
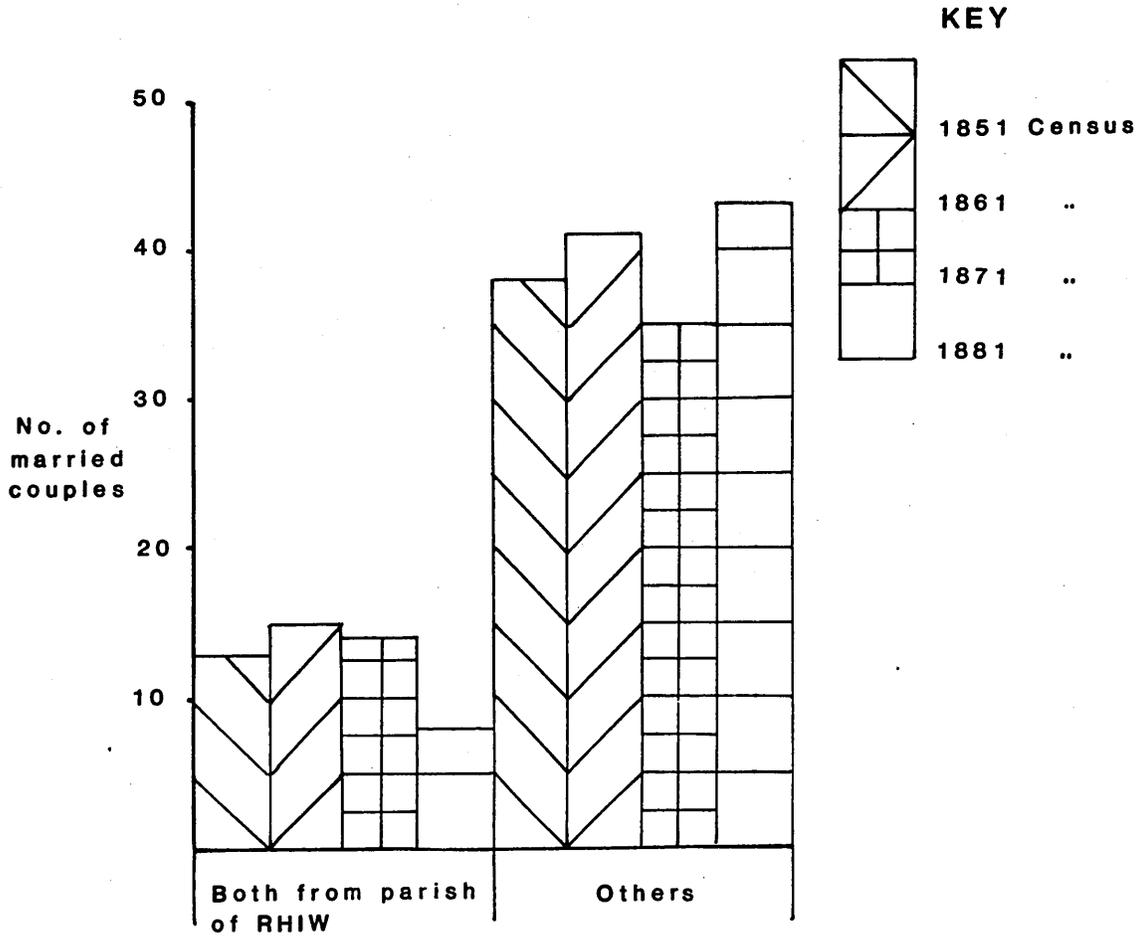


FIGURE 5.3: BIRTH PLACE OF INHABITANTS OF LLANFAELRHYS



**FIGURE 5.4: BIRTH PLACE OF MARRIED COUPLES IN
1851 - 1881 IN RHIW AND LLANFAELRHYS**



analysis of parishes of birth of married couples in the study area, confirming this gradual trend. News filtered back from North American emigrants, and sailors recounted events in Europe and Australia (174). Thus in spite of the areas' apparent isolation, local people were becoming more aware of the world beyond their own community.

Local involvement in the establishment, after 1870, of the Rhiw School Board is indicated by the variety of visitors ranging from cottagers to the gentry (175). Subscriptions from Lord Penrhyn and assistance from the Misses Roberts of Plas Yn Rhiw to the school and local clothing clubs indicate some concern by the gentry for the community (176). Account books for the locally administered Highway Rates in Rhiw from 1880-1884 reveal a range in rates between £3.7s.0d for the large Bodwyddog farm to 2d for the parish cottage (177). Most gave their labour, according to the centuries old system, rather than pay cash (178). Little money would have been available for doctors' bills, although these are recorded at Penarfynydd in 1877 and 1879 (179). Medical care was only slowly spreading into rural Caernarvonshire and there were only five doctors in Llŷn by mid-century (180). The Rhiw Board School Log book regularly refers to school closures on account of measles, fever, diphtheria and other diseases (181).

A note in the 1871 Rhiw Census return states that the decrease in population was due to deaths, probably resulting from the poor material conditions, and to removals, presumably for economic reasons (182).

The only schooling available in the study area prior to the 1870s was that given by two small voluntary day schools (183). The Rhiw Board School, which also served Llanfaelrhys opened in May 1877 and

by June had seventy four pupils on the register (184). It was built in the developing focal centre of the district, near the col. From the outset it was affected by the strong local interest in religion, with school closures for church and chapel meetings (185). However, the education offered differed in both cultural richness, appropriateness and medium from that of the chapel schoolroom (186). In response to the 1847 Report of Education, a narrow education in English was offered in writing and arithmetic (187). The use of the Welsh Not, to punish any Welsh spoken in school, was common (188). English became equated with success and wealth, order and civilisation (189). Higher education was rarely available, although at least two boys from the study area did become teachers during this period (190).

Most chapels had a literary society giving opportunity to all for discussion and debate on theological, philosophical and political topics (191). People travelled to attend literary and musical meetings (192). This intellectual stimulus must have assisted in the consideration of new ideas in these remote communities (193).

All three chapels within the study area were rebuilt during this period. Nebo (Independent) was rebuilt in 1856 and again in 1876 (194). Pisgah (Wesleyan Methodist) was rebuilt in 1874 on a new site (195). Tanyfoel (Calvinistic Methodist) was rebuilt in 1876 (196). Reasons for rebuilding are not apparent but it may be that, following the opening of the new Pisgah Chapel, the remaining congregations rebuilt as some sort of status symbol. Finance was raised by a very large number of chiefly small donations, much as it was to help establish the University Colleges of Wales (197). The dramatic religious revival of 1859 greatly increased Non conformist membership in comparison to that of the established church (198).

Rhiw church was however rebuilt in 1861 (199).

Several disestablishment issues were causing concern. The conflict over tithes, the privileged position of the Church of England in a country of non conformists and the language issue were debated by communities with a deepening national consciousness (200). Methodism was no longer a powerful sedative, but rather a political force (201). Non conformist leaders made great use of Welsh medium newspapers and other publications, particularly after 1860 (202). Although evidence cannot be given, it is likely that those in the study area were influenced by these publications as much as those elsewhere in Caernarvonshire (203).

The privileges enjoyed by the established church in worship, by the gentry and by the English language were challenged as Liberalism gathered force (204). With the extension of the franchise in 1868 a Liberal candidate won in Caernarvonshire, and the quarrymen and farmers evicted for supporting Liberalism are still recalled, over a century later (205).

Some amelioration in working conditions occurred in rural areas from the 1870s onwards (206). However in the study area devastating widespread poverty was said in the early 1870s to contrast with the rich intellectual stimulation available (207). The shoemaker's shop, chapel schoolroom and Botwnnog Grammar School were said to supplement and reinforce each other well (208). The greatest changes came from the developing realisation that the intellectual and personal enrichment, gained more from chapel than school, led to involvement in social issues and political struggles in which the few rich gentry families were no longer certain to win. There was therefore increasing potential for change.

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- (14) Amaethwr Arfon (1967) 2 Sept. op.cit. p.9
- (15) Idem. p.9
- (16) Idem. p.9
- (17) Idem. p.9
- (18) Idem. p.9
- (19) Idem. p.9

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- [21] Amaethwr Arfon (1967) 7 Oct. op.cit. p.6
- [22] Amaethwr Arfon (1967) 2 Sept. op.cit. p.9
- [23] Howell, D.W. (1977) op.cit. p.17, p.129
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- [25] Colyer, R.J. (1976) op.cit. p.7
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- [32] Idem. p.397
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- (61) Howell, D.W. (1977) op.cit. p.24
- (62) Idem. p.35
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- (69) Colyer, R.J. (1978) op. cit. p.646; Howell, D.W. (1977)
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- (178) Idem
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- (186) Dodd, A.H. (1968) op.cit. p.382
- (187) G.A.S. E.S.I. Rhiw 24 Oct. 1877; 7 Jan 1884, 30 Jan. 1884,
24 Apr. 1885
- (188) Evans, G. (1981) Land of My Fathers. p.396
Rees, D.B. (1981) op.cit. p.45
- (189) Evans, G. (1981) op.cit. pp.373,374
- (190) c.f. John Griffith, Bryn Goleu & William Rowlands,
Rhiwlas, Rhiw
- (191) N.L.W. John Griffith. Family papers. Letters dated
5 Feb. 1929 and journal
- (192) Owen, P.E. (1957) The Beginnings of the County Schools

- in Caernarvonshire. T.C.H.S. p.93
- (193) Evans, G. (1981) op.cit. p.400; Rees, D.B. (1981) op.cit. p.43
- (194) Williams, D. (undated) op.cit.
- (195) Hughes, C. (1969) op.cit. Rhiw - Religion
- (196) Idem.
- (197) Private poss. Ty Canol papers. Donations to Tan Y Foel Chapel; Davies, B.L. (1974) Sir Hugh Owen & Education in Caernarvonshire. T.C.H.S. p.156
- (198) Dodd, A.H. (1968) op.cit. p.343
- (199) Davies, D.T. (1910) Hanes Eglwysi a Phlwyfi Lleyn. p.246; N.L.W. Schedules of Church in Wales Records. p.69 Ref.52
- (200) Evans, G. (1981) op.cit. p.400; Rees, D.B. (1981) op.cit. p.43; Richards, G. (1977) The Established Church; 1850 - 1900 p.158 in Bassett, T.M. & Davies, B.L. (eds) Atlas of Caernarvonshire
- (201) Dodd, A.H. (1968) op.cit. p.333, p.356
- (202) Thomas, M. (1977) op.cit. p.202
- (203) Idem. p.203
- (204) Dodd, A.H. (1968) op.cit. p.360
- (205) Rees, D.B. (1981) op.cit. p.30
- (206) Howell, D.W. (1973) op.cit. p.281
- (207) N.L.W. John Griffith. Family papers. Letter dated 5 Sept. 1919
- (208) N.L.W. John Griffith. Family papers. Letter dated 5 Feb. 1929

CHAPTER SIX.

THE STUDY AREA BETWEEN 1886 and 1914.

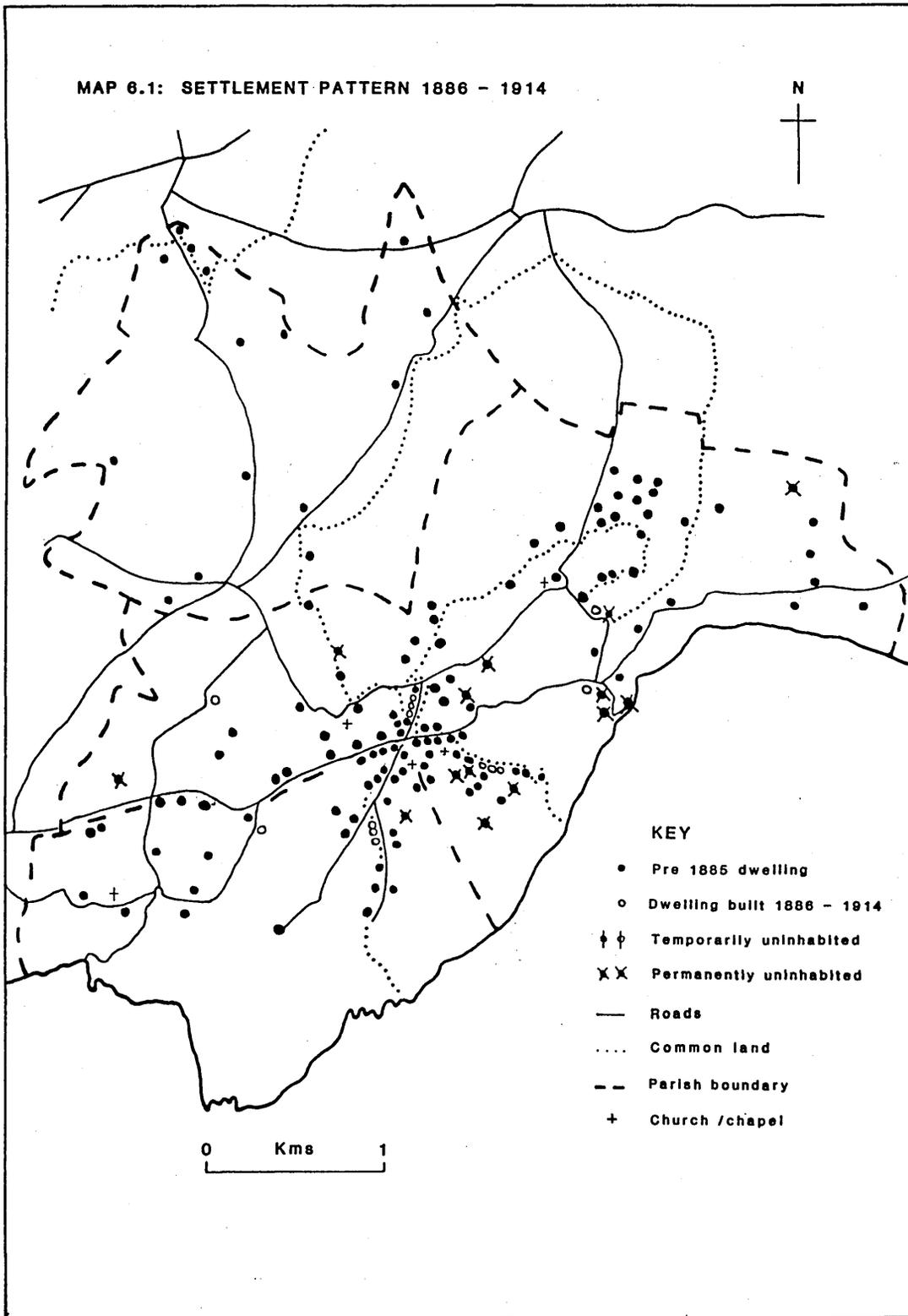
The nature of the available evidence alters considerably during this phase of the study. Ordnance Survey revisions in 1888, 1889 and 1914 indicate the sites of new buildings built since the previous revision and, for the first time, plot the positions of the manganese workings (1). A variety of statistical evidence and some correspondence describing the mining activity is also now available. The June Agricultural Returns are referred to at five yearly intervals and estate documents together with regional reports give details of other aspects of the agricultural economy.

The detailed statistical evidence previously obtained from Census data is not yet available for periods after 1881, but information concerning varied aspects of life within the study area is readily available, albeit in the subjective form of personal reminiscences. Photographs are yet another additional form of evidence from this time onwards (See Appendix I.).

1914 has been selected as a significant date on which to focus as the end of this phase in the study. This is chiefly because of the effect the First World War was to have upon the agriculture, mining and social life in the community. Until 1914 agricultural and mining developments were managed according to the preferences, wisdom and capital of the individuals concerned locally, whereas during the War the dictates of national government were speedily applied.

1914 formed a watershed in social, cultural and economic life and provides a cut-off point in the recollections of local people.

MAP 6.1: SETTLEMENT PATTERN 1886 - 1914



Events, habits and customs could be recalled by local people as having occurred before or after the start of the First World War. It has therefore been identified as an appropriate date on which to conclude the penultimate phase of this study.

I. SETTLEMENT.

The pattern of settlement continued to develop although between 1886 and 1914 there was an overall increase of only one dwelling within the study area. This however masked a significant increase of 13 new dwellings and the reuse of four dwellings temporarily uninhabited at the 1881 Census, contrasted against the permanent loss of 16 dwellings (See Table 6.1.).

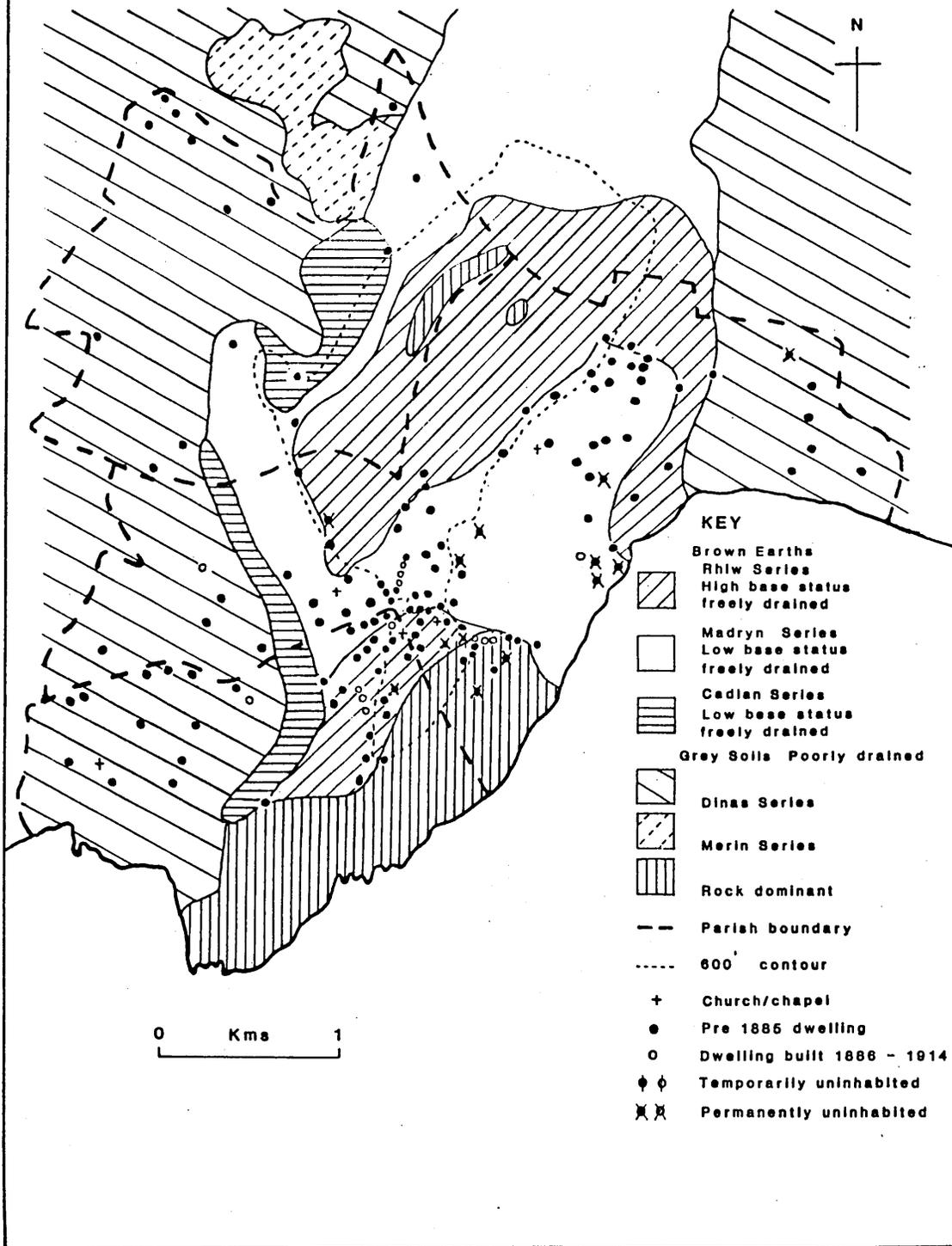
Table 6.1. Settlement Development 1886 - 1914.

Total dwellings in 1885	134
Total dwellings in 1914	135
Dwellings re inhabited around 1886	4
New dwellings by 1914	13
Dwellings uninhabited by 1914	16
Increase in total of dwellings	1

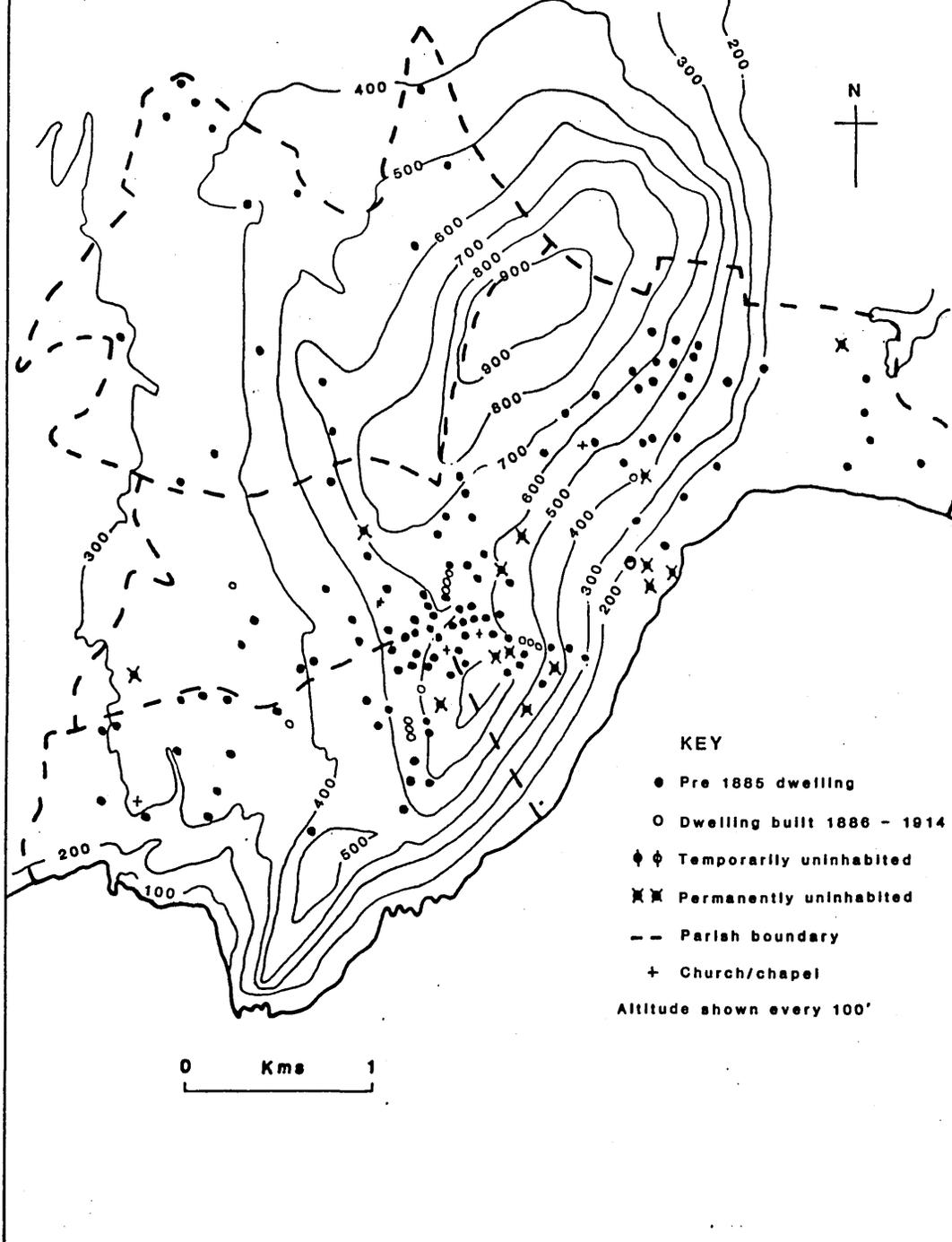
Table 6.2. New Settlement Pattern 1886 - 1914.

Total number of new dwellings	13
New dwellings within former upland common	6
New dwellings within former upland common in col	3
New dwellings below former upland common to the W.	5
New dwellings below former upland common to the E.	2
New dwellings on side of road/track	13

MAP 6.2: SETTLEMENT PATTERN 1886 - 1914 IN RELATION TO SOIL



MAP 6.3: SETTLEMENT PATTERN 1886 - 1914 IN RELATION TO ALTITUDE



The pattern of distribution for the new dwellings is shown in Map 6.1. and Table 6.2. Their siting relative to soil type and altitude are indicated in Map 6.2. and Table 6.3. combined with Map 6.3.

Table 6.3. Altitude of new settlements: 1886 - 1914.

Over 700' O.D.	0
600 - 700' O.D.	3
500 - 600' O.D.	6
400 - 500' O.D.	1
300 - 400' O.D.	3
Under 300' O.D.	0

Twelve of the thirteen new dwellings were neither farms nor small holdings and the siting of all but two on the best soil type is incidental, as is the concentration between 500 - 600' O.D. (2). The significant features are the siting of every new dwelling beside a road or track, the position of twelve of the new buildings on plots of land owned locally rather than by the large estates, and the increased concentration of dwellings in the col (3).

In 1893 the settlements on Mynydd Rhiw were described as "too scattered to be regarded as a village, yet occupying positions quite apart from farms" (4). Four detached dwellings were built close to the boundary of Ty Croes Mawr farm, and a terrace of three dwellings was built close to the boundary of a former piece of commonland (5). It would seem that these were built to meet a need for local accommodation without land, probably caused by the developments in this period at the manganese workings.

Three substantial dwellings were built after the 1904 mining boom. They were adjacent to each other on two pieces of land on the road running north-south along the col in the central ridge. This development completed the change from the original settlement pattern of widely dispersed farmsteads by super imposing the equivalent of one side of a village street along the former strip of commonland along which the nature of dwellings was now as follows:- cottage; new dwelling; new school house; new dwelling with shop; cottage with shop; school; dwelling with Post Office and store, and cottage with garage at the main cross roads of the study area. (See Appendix I. No. 1.). It was the increase in business associated with the mines which resulted in this sudden nucleus of servicing facilities in this part of the study area.

Another significant feature of this period was the rebuilding of many dwellings. One farm house was rebuilt in a new location, and two other dwellings were built to replace adjacent buildings which then became derelict (6). During this period at least another five dwellings were rebuilt on their original sites, three of these being rebuilt by the Penrhyn estate prior to 1912 (7).

In addition to these three sites lost as a result of adjacent rebuilding, one remote farmhouse became deserted as the land was merged with its neighbour (8). Another five dwellings were also deserted, probably due to their remoteness from tracks and a water supply (9). One farm formerly shared by two families became one dwelling (10). The two parish cottages fell into disuse before the end of this phase as economic and social conditions improved. The old mill fell into disrepair; one farm collapsed into a mine shaft and one house was engulfed by the sea (11). It is significant that no dwelling in the developing cluster around the col became derelict

during this period.

In 1890 the two properties belonging to the Bryn Y Gwin estate had been sold, at least one to the sitting tenant (12). However, the sale in 1912 of at least half of the holdings of the Penrhyn estate within the study area to the sitting tenants brought about a major change in the land ownership pattern. Most of the sixteen holdings were sold with only a few being retained by the estate. It was significant that this occurred after a period of local economic improvements and that it was generally the expensive larger farms which were not sold (13).

Details of the population and numbers of dwellings are indicated in Figures 3.1. and 3.2. The lack of census data makes it impossible to ascertain how many families continued to share a dwelling and it is presumed that with the falling population and improving conditions few did so. It is also presumed that no dwellings remained uninhabited for other than a normal period between tenants.

It can be said therefore that the most significant features concerning settlement pattern in this period were the further development of the nucleated settlement along the col and the desertion of several of the more remote cottages built in the earlier periods of land hunger.

II. ECONOMIC CHANGE.

As in previous periods, agriculture continued to underpin the economy of both the study area and the whole of Llŷn. However, local developments in manganese mining created additional opportunities within the study area during this phase.

The acreage under various crops within the parishes of Rhiw and

FIGURE 6.1: CROPS 1867 - 1935

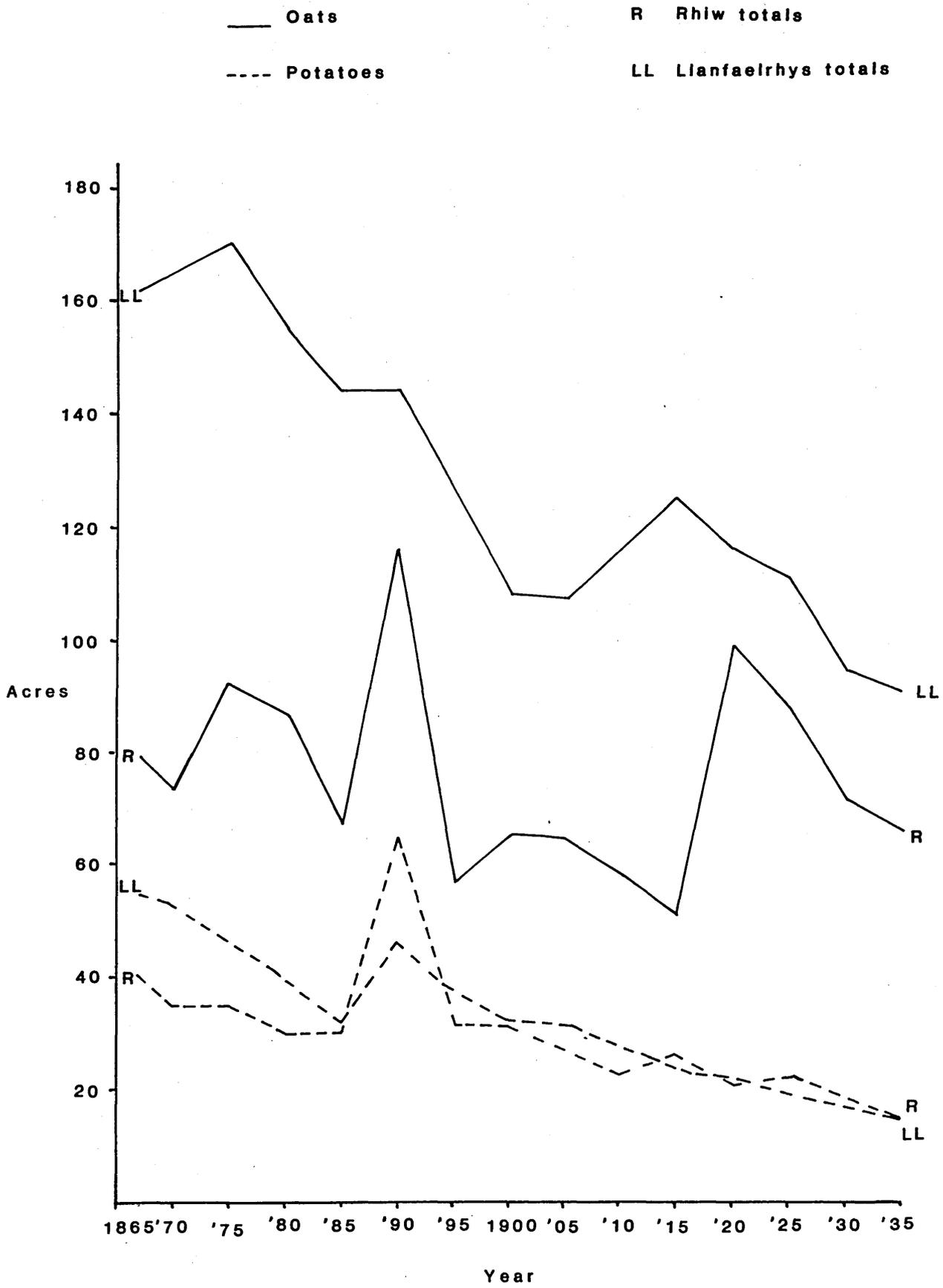
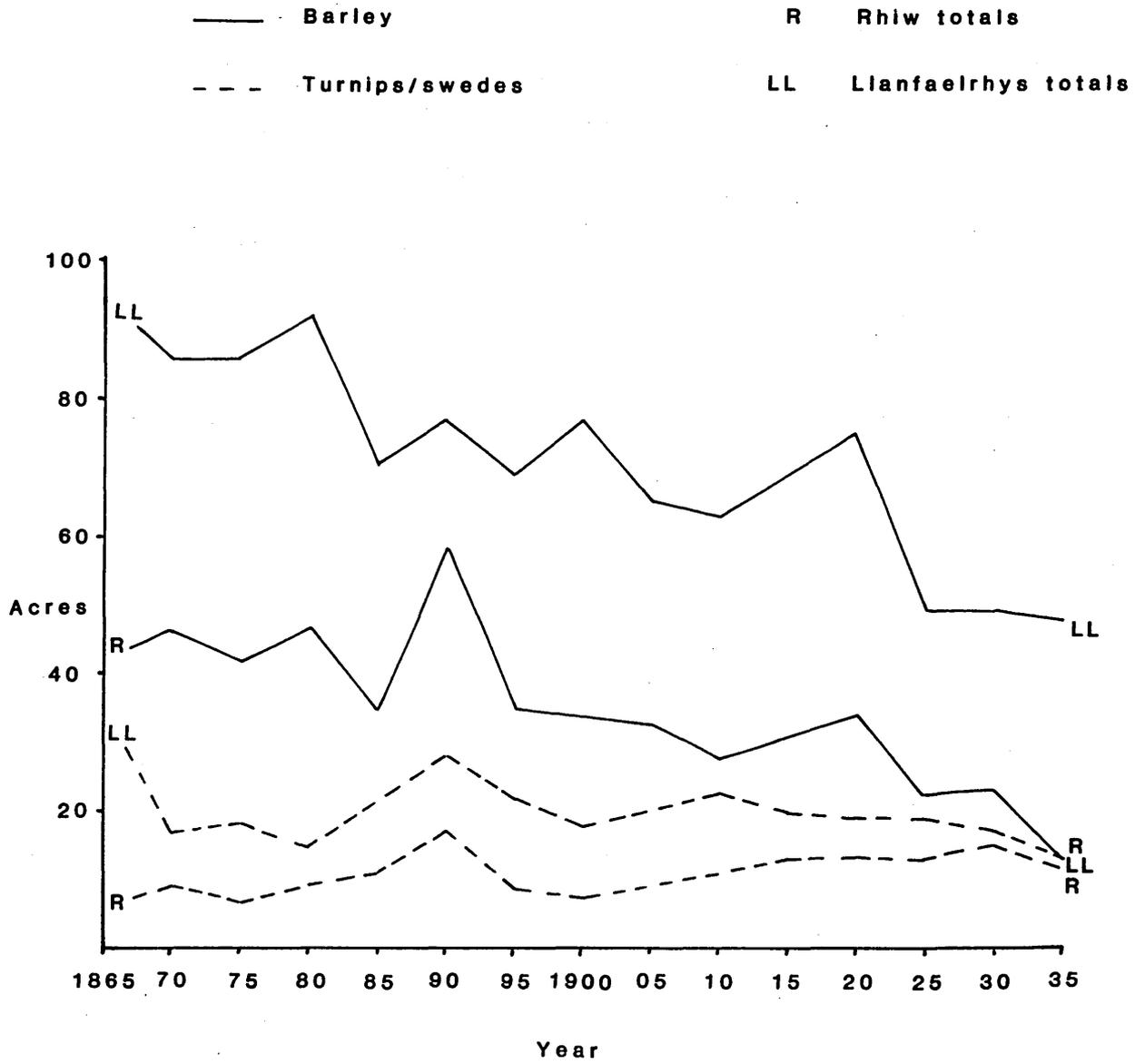


FIGURE 6.2: CROPS 1867 - 1935



Llanfaelrhys between 1885 - 1935 and 1867 - 1935 are indicated in Tables 6.4. and 6.5. and Figures 6.1. and 6.2. respectively. In this chapter only those details recorded for the period 1885 - 1915 will be considered.

As was indicated in the previous chapter, the proportion of land under arable in each parish was still very low, and was smaller in Rhiw than in Llanfaelrhys. This is as would be expected in an area of mixed farming with the emphasis on livestock and where one parish, Rhiw, contained a higher proportion of the more exposed rocky and higher land. (See Maps 1.2. and 1.4.).

The proportion of arable under oats, barley, potatoes and root crops in the study area remained similar to that during the previous phase. (See Tables 5.4. and Tables 6.4. and 6.5.).

Although the acreage under arable recorded in 1890 was higher than any other recorded between 1867 and 1915, it was still lower than that recorded in the Tithe commutation schedules of the 1840s. As was indicated in the previous chapter, this may be due to different methods of data collection or to earlier lower productivity requiring a higher acreage in an attempt to meet local needs (See Map 4.5. and Table 4.7.). Between 1885 and 1915 there was a small decrease in the total acreage under arable in both parishes; minor fluctuations are indicated in Tables 6.4. and 6.5.

Throughout this period within both parishes there was at least twice as much acreage under clover and grasses as under oats. There was four times as much land under permanent pasture and meadow as under oats. As in the previous phase acreage varied considerably and was higher in Llanfaelrhys than in Rhiw as would be expected from the differences in environmental conditions.

It is difficult to isolate variations caused by factors such as

Table 6.4. Agricultural Returns: Selected Crops in Rhiw 1885 - 1935.

Crop	Acreage										
	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935
Oats	67	116	57	65	64	58	51	99	88	71	66
Barley	35	59	35	34	33	28	31	34	22	23	14
Wheat	-	-	-	-	3	-	1	-	-	-	-
Potatoes	30	64	32	31	26	22	26	21	22	18	15
Turnips/Swedes	11	17	9	8	9	11	13	13	13	15	12
Other root crops, vegetables, vetches	5	5	11	3	7	3	1	7	2	9	11
Clover and grasses	194	120	103	288	104	125	198	233	253	245	167
permanent pasture and meadows	615	564	752	593	740	577	440	287	280	303	407
Wood and orchards	-	-	8	-	-	-	-	-	22	-	-
bare fallow & uncropped arable	-	-	-	3	-	-	-	1	1	-	-

N.B. Hill pastures not included.

climate, quality and type of seed, and the preference of tenant or landlord, from those reflecting regional and national changes. The general, albeit, slight, decline in acreage, especially from 1900, is in line with national trends (14).

The influx of workers to the manganese mines, especially during boom years may have caused an increase in locally grown produce

Table 6.5. Agricultural Returns: Selected Crops in Llanfaelrhys
1885 - 1935

Crop	Acreage										
	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935
Oats	144	144	127	108	107	116	125	116	111	94	90
Barley	70	77	69	77	65	63	69	75	39	39	38
Wheat	-	-	-	-	1	-	1	-	-	-	-
Potatoes	32	47	37	32	31	28	24	22	19	17	16
Turnips/Swedes	21	29	22	18	20	23	21	19	19	17	14
Other root crops vegetables, vetches)	10	8	7	6	7	5	6	2	4	6	4
Clover and grasses)	342	386	346	390	335	347	298	210	218	224	131
permanent pasture and meadows)	753	765	866	632	626	553	619	680	654	677	755
woods and orchards)	-	-	-	-	-	-	-	-	8	-	-
bare fallow & uncropped arable)	-	-	-	-	10	-	-	-	-	-	-

N.B. Hill pastures not included.

between 1885 - 1890 and 1900 - 1910.

In 1893 a four year rotation of oats, roots, barley and seeds was described as being followed by many and the change from corn growing to stock raising prior to that date, was also noted (15).

The growing of gorse as winter fodder was reported as being peculiar to Llyn but was not included under the national headings used by the

Agricultural Returns (16). In 1886 and 1898 references to the purchase from a Pwllheli nurseryman of rye grass, vetches, small beans, swede seeds and basic slag indicates that at least one farmer from the study area was obtaining good seed and fertiliser (17).

It is likely that all the crops grown were used locally to feed either the people or the livestock. During this period the corn mill at Hen Felin near Plas Yn Rhiw fell into disuse, but that at Felin Uchaf on the boundary with Aberdaron parish near Plas Newydd was still used to grind local corn (See Map 6.1.). The increased acreage of potatoes, particularly in the parish of Rhiw, during the depths of the agricultural depression around 1890 probably indicated the effort made particularly by cottagers in Rhiw to produce more of the chief item in their diet.

The livestock returns between 1885 to 1935 for Rhiw and Llanfaelrhys are indicated in Tables 6.6. and 6.7. respectively. Tables 6.6. and 6.7. with Figures 6.3. and 6.4. indicate the total numbers of horses, pigs, sheep and cattle within each parish between 1867 and 1935. In this chapter those details concerning the period 1885 to 1915 will be considered. The relative numbers of each species remained much as was described in the previous chapter. During this phase the number of pigs decreased markedly in both parishes, whilst numbers of horses declined only slightly. (See Figure 6.3.). In both parishes the number of cattle increased slightly between 1885 - 1915 (See Figure 6.4.).

There was a significant increase in the total number of sheep within the study area during this phase of the study. This concurs with the trend reported in 1893 and in studies on the agriculture of this period throughout Wales (18).

FIGURE 6.3: LIVESTOCK 1867 - 1938

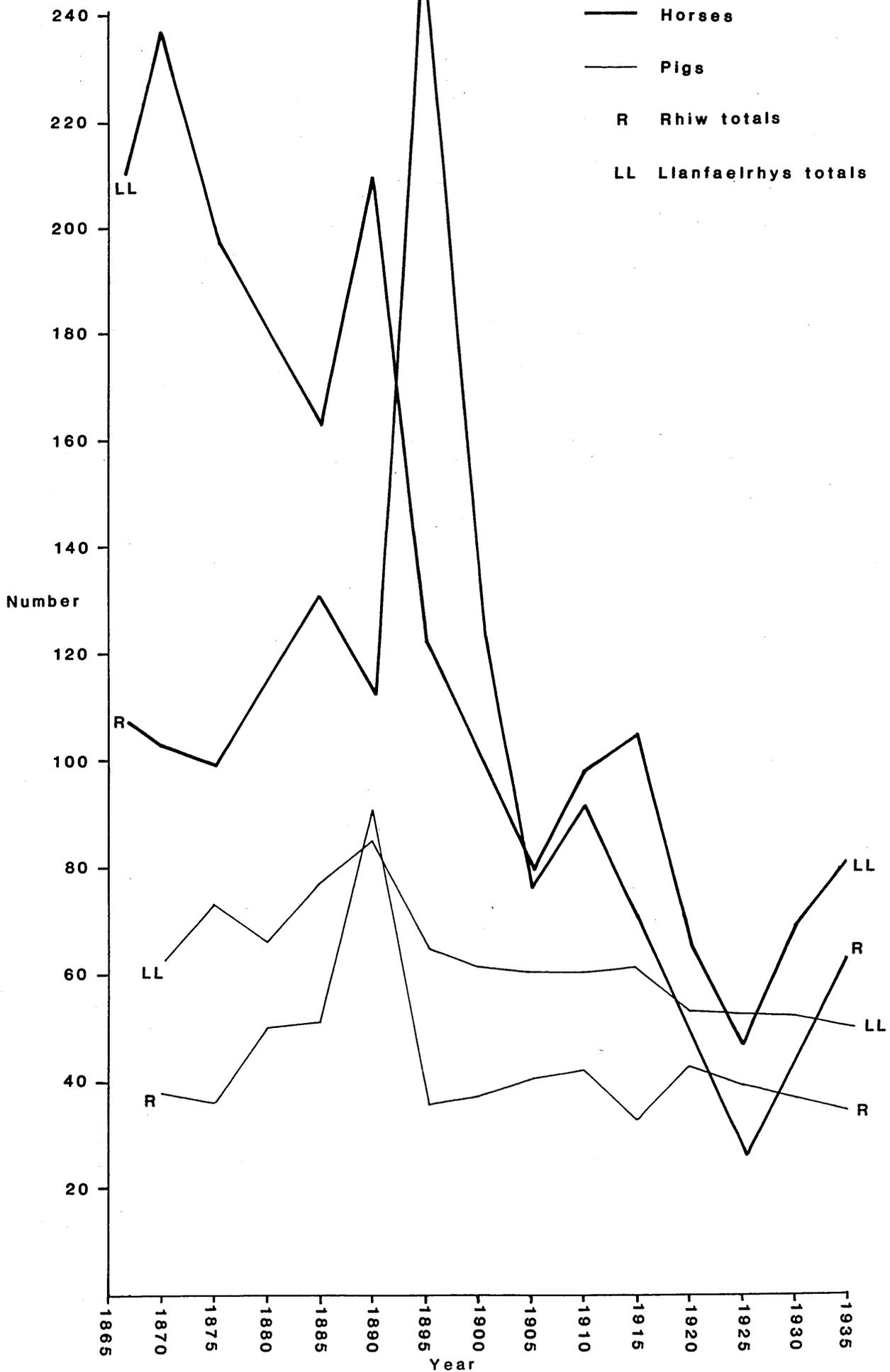


FIGURE 6.4: LIVESTOCK 1867 - 1935

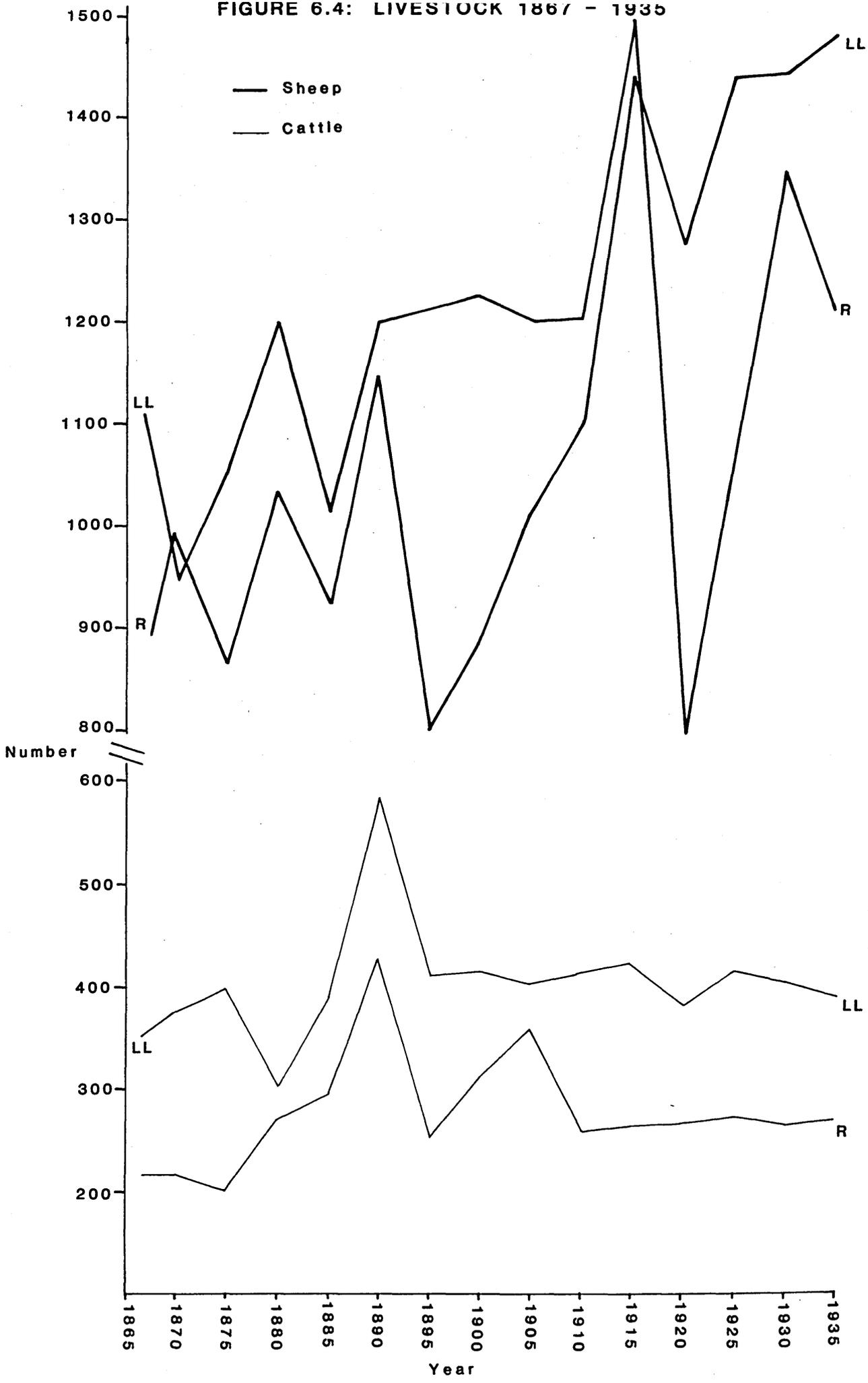


Table 6.6. Agricultural Returns: Selected Livestock in Rhiw:
1885 - 1935

Stock	Number										
	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935
CATTLE: total	293	425	256	319	356	259	264	287	295	282	290
cows in milk	} 113	} 131	} 105	} 92	} 143	90	95	87	101	86	78
cows in calf						16	21	22	17	28	28
Other cattle) 2 year +)	70	122	32	43	16	16	10	44	25	18	21
Other cattle) 1 - 1 years)	} 110	} 172	59	106	105	56	68	69	69	65	73
Other cattle) 1 year -)			60	78	92	81	70	65	83	85	90
SHEEP: total	926	1154	799	880	1010	1105	1498	779	1057	1342	1214
Rams for service)	NA	NA	NA	NA	NA	NA	NA	18	15	25	31
Breeding ewes)	} 618	} 715	290	381	294	532	723	347	533	675	617
Sheep over 1 year)			279	272	255	140	135	140	40	53	73
Sheep under 1 year)	308	439	230	227	361	433	640	274	469	589	495
PIGS: total	112	251	125	77	92	71	68	71	27	43	63
breeding sows)	} 112	} 251	18	8	10	12	3	5	3	2	7
others)			107	69	82	59	65	66	24	41	56
HORSES: total	51	91	35	37	40	42	33	43	39	37	34
ag. use + breeding mares)	28	51	19	22	29	29	24	31	32	26	23
For transport)	} 23	} 40	} 16	} 15	} 11	} 13	4	6	4	3	3
others)							5	6	3	8	8

Table 6.7. Agricultural Returns: Selected Livestock in Llanfaelrhys:
1885 - 1935

Stock	Number										
	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935
CATTLE: total	388	579	415	420	403	422	441	374	418	402	388
cows in milk	)	)	)	)	)	117	114	102	101	102	86
cows in calf	)136	)160	)130	)129	)125	12	17	24	41	36	59
other cattle)))))))))))
2 years +	50	121	90	68	57	37	83	41	56	39	58
other cattle)))))))))))
1 - 2 years	)202	)298	90	100	110	139	133	116	101	124	93
other cattle)))))))))))
1 year -	)	)	105	123	111	117	94	91	119	101	92
SHEEP: total	1022	1205	1222	1252	1208	1214	1432	1276	1438	1441	1478
Rams for service)))))))))))
	NA	NA	NA	NA	NA	NA	NA	18	24	23	20
Breeding ewes	)	)	339	444	457	537	618	542	753	558	789
	)642	)647)))))))))
Sheep over 1 year	)	)	548	401	356	214	266	162	35	231	58
Sheep under 1 year)))))))))))
	380	558	335	407	395	463	548	554	626	629	611
PIGS: total	163	210	124	100	80	98	105	67	47	69	82
breeding sows	)	)	10	10	12	9	7	6	3	10	12
	)163	210)))))))))
others	)	)	114	90	68	89	98	61	44	59	70
HORSES: total	77	85	65	61	60	60	61	53	52	52	50
ag. use + breeding mares)))))))))))
	45	53	43	28	42	43	38	34	37	26	37
for transport	)	)	)	)	)	)	)	7	7	5	16
	)32	)32	)22	)33	)18	)17)))))
others	)	)	)	)	)	)	16	12	9	10	9

Local farmers took wool to the Pencaerau woollen mill just beyond the boundary of the study area in the parish of Aberdaron. An account dated 1873 indicated that this mill produced mainly for the local market spinning and weaving blankets and flannel (19). Up until 1890 the mill undertook carding for outside spinners in addition to spinning or twisting and spinning knitting yarn (20). In 1901 red and white flannel, shirt flannel, socks and yarn were amongst items produced. Part of the earnings of at least one worker was received in goods and local craftsmen were also paid in goods or services (21). Its remote position in western Llyn[^] was probably the reason for these late examples of a bartering system and for the fact that Pencaerau mill continued to use hand looms until it closed in 1912 (22).

From 1895 to 1915 there was, within both the parishes of Rhiw and Llanfaelrhys, a gradual increase in the numbers of sheep under one year and of breeding ewes. This supports general statements concerning the increased market demand for younger leaner sheep and lambs as eating habits altered and improved transport networks enabled meat to quickly reach the centres of population in England (23). The marked decline after 1890 in the number of cattle over two years old in both parishes similarly supports this trend.

There is no indication as to the reason for the more marked fluctuations in the numbers of sheep, cattle, horses and pigs in Rhiw compared with fluctuations in Llanfaelrhys. It may be associated with the larger number of smaller holdings.

Generally the information from the study area confirms regional and national trends that during the agricultural depression from the late 1870s until 1900 the proportion of pasture land increased as did the numbers of sheep along with the growing importance of cattle,

particularly dairy cattle (24). Llŷn was reported to have been less affected by fluctuating grain prices than many regions with fewer numbers of livestock (25).

From 1887 severe agricultural depression due to the fall in prices resulting from foreign competition spread throughout Caernarvonshire and forced many landlords to allow tenants to fall into arrears with their rent. In Llŷn this is known to have occurred on the Vaynol and Cefnamwlch estates (26).

As a result of national agrarian discontent a new Board of Agriculture was established in 1889 (27). In 1893 a Royal Commission on Labour was set up to report upon the conditions of the agricultural labourer (28). One of the districts investigated in detail in Wales was the Poor Law Union of Pwllheli which included the study area along with the whole of Llŷn (29). One of the commissioner's open meetings was held at Sarn, only some three miles from the study area and comments are therefore likely to include conditions within the study area (30). The 1893 report confirmed the fame of Llŷn cattle (31). It also commented on the large numbers of pigs reared locally (32).

In spite of the physical isolation of the Pwllheli Union it was noted that farmers had availed themselves of the newest agricultural methods which were capable of adoption in their district (33). The active role of farmers alongside their labourers and the lack of a social gap between the two groups was regarded as unusual when this district was compared with others in north Wales (34).

In the early 1890s it was stated that in Llŷn the supply and demand for labour were fairly equal and that girls and women no longer worked out in the fields (35). It was also noted that the foremost farmers realised that it was impossible to pay current farm rents by farming along the old lines (36). On larger farms within a

few miles of the study area more root crops were produced, necessitating the use of more men and horses (37). But the numbers employed in agriculture were said to have fallen, partly as a result of shorter working hours and the scarcity of married labourers with the ensuing employment of lads (38). Mowing machines, chaff cutters, and horse rakes were being employed instead of extra men (39). Labourers were by now required to do almost any farm job rather than specialise as formerly (40). Another factor was the reliance on unpaid family labour as the agricultural depression spread (41).

Between 1882 and 1893 it was stated that there had been a marked improvement in general efficiency. The South Caernarvonshire Agricultural Society and the local ploughing matches were reported to have been instrumental in these developments (42). However, it was hoped that more labourers would attend the Welsh lectures on agriculture and gain more scientific knowledge (43).

Levels of earnings in agriculture were lower in Llyn than further east (44). It was reported in 1893 that labourers generally kept pigs, the money from their sale being used to pay the cottage rent (45). Pigs were seldom killed for the use of the family (46). It was also reported that in Llyn fresh meat was only consumed on Sundays (47). It is likely that many of these comments on conditions within the Pwllheli Union generally also applied to the study area.

By the mid - 1890s there was a general return to improved conditions, to relative economic stability and to the use of better farming techniques (48). The fall in labour costs and input costs together with cheaper fertilisers and continued rent abatement led to greater efficiency (49). The food demand for young cattle and

sheep resulted in a greater turnover in capital which enabled some improvements to be carried out (50). In 1898 however it was noted in Llyn that times were still not good for small cattle breeders, although the black cattle of Llyn were highly valued in Leicestershire (51). It was also stated that the price of wool was low and that of mutton still fluctuating (52).

From 1900 to 1914 the trend towards dairy cattle and improved livestock continued (53). There was relative stability between land under pasture and under crops. When there was similar acreage, average yields improved (54). There was however less improvement in grassland farming (55). There is no specific evidence within the study area for these trends, but it is reasonable to presume that many occurred in Rhiw and Llanfaelrhys as elsewhere.

The comments concerning agriculture found in the Rhiw School logbook for this period are, in contrast, strongly indicative of practice and customs with the study area (56). Most frequent are the references each May and November to the Hiring fairs at Pwllheli and Sarn. Attendance at school was low, or school was closed as children attended the fairs or assisted their parents on the farms whilst the labourers attended the fairs (57). Attendance was again low at school in early April on account of potato planting (58). A week in mid June was devoted to sheep washing and shearing and children were again absent assisting their parents (59). In July pupils absented themselves to help with haymaking (60). Attendance was again low during the September corn harvest and the corn threshing in October (61). Lifting the potato harvest in October yet again resulted in low attendance at school (62). Other occasional activities such as a ploughing match in the neighbourhood and an agricultural show in nearby Aberdaron also resulted in school closure and

Table 6.9. HOLDINGS

Analysis of Agricultural Returns in Llanfaelrhys. 1885 - 1935.

Size of holding	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935
1-5 acres) Owned)	NA	1	NA	NA	NA	NA	1	1)))
									) 3	) 5	) 6
1-5 acres) Rented)		10					5	8)))
6-20 acres) Owned)		0					1	1)))
									) 13	) 12	) 12
6-20 acres) Rented)		11					10	22)))
21-50 acres) Owned)		0					0	1)))
									) 12	) 11	) 11
21-50 acres) Rented)		8					9	10)))
51-100 acres) Owned)		NA					0	1)))
									) 2	) 3	) 3
51-100 acres) Rented)							2	1)))
101-150 acres) Owned)		NA					0	0)))
									) 1	) 1	) 1
101-150 acres) Rented)							1	1)))
151-300 acres) Owned)		NA					0	0)))
									) 1	) 1	) 1
151-300 acres) Rented)							1	1)))
300 acres +) Owned)		NA					0	0)))
									) 0	) 0	) 0
300 acres +) Rented)							1	0)))
Mountain land only)		NA					0	1	1	1	1
total no. of holdings)		NA					30	48	33	34	35

were thus noted down for posterity (63).

Evidence concerning land ownership, farm holdings and the working relationship between landlord and tenant within the study area is incomplete. Statistical detail in the former from the Agricultural Returns is very patchy, and contemporary and later comments on the latter are subjective.

It is however clear from Tables 6.8. and 6.9. that both in 1890 and 1915 the vast majority of holdings within the study area were very small, being mainly under 20 acres. Indeed in Rhiw almost half the holdings were under five acres. Within the study area the Agricultural Returns indicate that approximately 96% of holdings were rented in 1915. In 1893 it was recorded that there were eight freeholds in Rhiw and three in Llanfaelrhys (64). These figures confirm the general comment that most of Caernarvonshire belonged to a very small number of vast estates, with the associated implications discussed in the previous chapter.

It was generally agreed that the slow rate of agricultural development in Caernarvonshire was due as much to the socio-cultural divisions within rural society as to the physical environment (65). The Welsh landed gentry interest became increasingly alienated from their tenants (66). The emergence of the Tithe war in the late 1880s was a movement of small farmers increasingly opposed to paying tithes on religious grounds (67). When prices fell, the system of seven year averaging resulted in tithes falling less steeply. Thus the religious and economic grievances combined and by 1891 the law was changed and the tithe was paid by the landlord (68). However this was usually covered by an increased rent, as at Penarfynydd in Llanfaelrhys (69).

Renewed agrarian discontent nationally lead to the establishment

of the Royal Commission on Labour in 1893. One of the Commissioners' recommendations was that familiarity with Welsh should be a prime consideration in the selection of land agents as at that time few of them could speak Welsh (70).

After many years of claims of discrimination by anglicised and Anglican landlords against Welsh speaking Nonconformist tenants, a Royal Commission was appointed in 1894 to investigate the land question in Wales (71). Amongst evidence minuted at Pwllheli were suggestions for improvements of the land laws giving back the cost of improvements, security of tenure and provision for fixing a fair rent (72). Landlords remained politically unpopular although many of the accusations against them were refuted by the Welsh Land Commissioners (73). Many landlords did spend money during this period on improving farmhouses on their estates (74). Within the study area the Penrhyn estate rebuilt at least three farmhouses (75).

However, with the likelihood of increased tax and death duties, many landowners began to sell outlying land on their estates (76). In the study area most of the Penrhyn estate land was auctioned as part of £45,000 worth of the estate sold in 1912 (77). It was said that the erosion of landlord's political power and the decline in income from land resulted in a lack of capital for agricultural improvements and a feeling that the non economic returns of power and prestige no longer outweighed the disadvantages (78). Within the study area, as elsewhere, many tenants bought their holdings (79). This evidence however does not match the Agricultural Return figures for 1915, unless those tenants repaying mortgages were still listed as renting rather than owning land.

The ending of cropping covenants in 1908 resulted in a loss of influence by landlords and agents on the farm activities of their

tenants. This, together with the increasing numbers of owner occupiers caused the unit of decision making to move from the estate to the individual holding. However, with the high mortgages, owner occupying farmers had less capital for improvements. There was interest in the work of the Agricultural Colleges and Research Institutions which replaced the landlord as the formulator and disseminator of new agricultural techniques. Within central Llyn an agricultural college and experimental farm were established at Madryn.

Success in the agricultural economy was very dependent upon marketing (80). For the study area, the focus was the weekly market day in Pwllheli (See Appendix I No. 10.). Cattle, sheep and horses were walked there leaving Rhiw hours before daylight (81). The journey by horse and cart took three hours each way and a seat had to be booked weeks ahead (82). The baskets of butter and eggs, fowls, sacks of rabbits and cartloads of piglets were priced by the official Pricer (83). The horse and cattle fairs at Pwllheli were major events and attendance at Rhiw school was especially depleted during the September Cattle Fair (84). The quality of livestock from Pwllheli Fair was renowned (85).

The basic communications network established during the previous phase of this study was only slightly modified. Turnpikes and tolls continued in Caernarvonshire into the 1890s (86). The state of the major roads was very poor and suitable only for light vehicles (87). From 1895 a bus service from Pwllheli via Sarn to Aberdaron passed a short distance beyond the northern boundary of the study area, and must have eased transport problems (88). In 1898 the road through Rhiw was described as being fit for walking and not for driving a motor vehicle (89). But by 1913 there was a daily service from

Aberdaron to Pwllheli (90).

The rebuilding of the railway terminus nearer the centre of Pwllheli in 1909 was probably in part to ease the transit of livestock and goods from the Maes (fair ground), and was achieved by the modification of the harbour (91). The railways also made Llyn[^] more accessible to Victorian holiday makers. The development of the Pwllheli South Beach area as a holiday centre in the 1890s brought many visitors (92). Abersoch, some six miles east of the study area, had been "discovered" by "Oxford and Cambridge" as early as 1898 (93). The hidden haunts of much of western Llyn[^] were by then being described for the more refined yet adventurous holiday visitor (94). Some of these must have traversed the study area. Rhiw is mentioned by name but not described in another Guide published in 1898 and the Penponcyn Inn at Rhiw was shown on the map in that book (95).

The western part of Llyn[^], however, remained relatively isolated by land and up to 1900 much traffic was still by sea. At Aberdaron coal, lime, salt and flour were still shipped in, whilst butter, eggs, cheese and poultry were shipped out (96). This coastal traffic continued up until the First World War (See Appendix I. Nos. 7 & 8) (97). Gradually steamers took the trade from sailing ships (98). Many Llyn[^] men continued to be involved in coastal trading (99). After 1914 many men transferred to merchant schooners and to oceanic voyages (100). Often these were the younger sons from farms for whom there was little opportunity of obtaining a farm holding; many Rhiw families had one son at sea (101). As in previous periods, farmers and tradesmen owned shares in local ships. Mrs. Griffith of Rhiw was the owner of a ship which disappeared without trace in 1891. (102). Although frequently dangerous, travel and the transporting of goods by sea was often preferred to overland routes. The old jetties,

harbours and limekilns testify to these former modes of transport which played their final role as carriers of the manganese and ironstone from the manganese mines in the study area. (See Appendix I No. 8.).

Interest in the manganese mines within the study area was revitalised at the beginning of this period by the increase in demand caused by two new factors related to the use of manganese (103). Firstly, the discovery that manganese, if added to steel, imparted improved qualities of wear resistance and hardness, resulted in an upsurge of interest in manganese mining in the mid 1880s (104). Secondly, from 1887, the blast furnace plant at the Mostyn Ironworks, Flintshire, specialised in the production of iron-manganese alloys for the British Steel industry, including the steelworks of north and south Wales (105).

Within the study area some miners opened small prospective pits with the help of their families and neighbours, but without capital. Success was usually only short lived as any ore found was soon exhausted due to the irregular nature of the outcrops (106). Although it is recorded that mining had continued intermittently since the discovery of the ore in the late 1820s, none of the manganese workings within the study area were noted in the North Wales List of Mines until 1887 (107). The Benallt mines were then owned by the local brothers Isaac Roberts and Owen Williams who were listed in the 1881 Census as mine proprietor and miner respectively (See Map 6.4.)(108). They continued working the mine on their own until operations were suspended in 1895 (109). The Rhiw mine was worked from 1886 until 1893 when it too was suspended (See Map 6.4.) (110). The Nant mine operated from 1891 - 1893 with two men, one of whom attempted to establish the Tyn Llan mine in 1893, but without

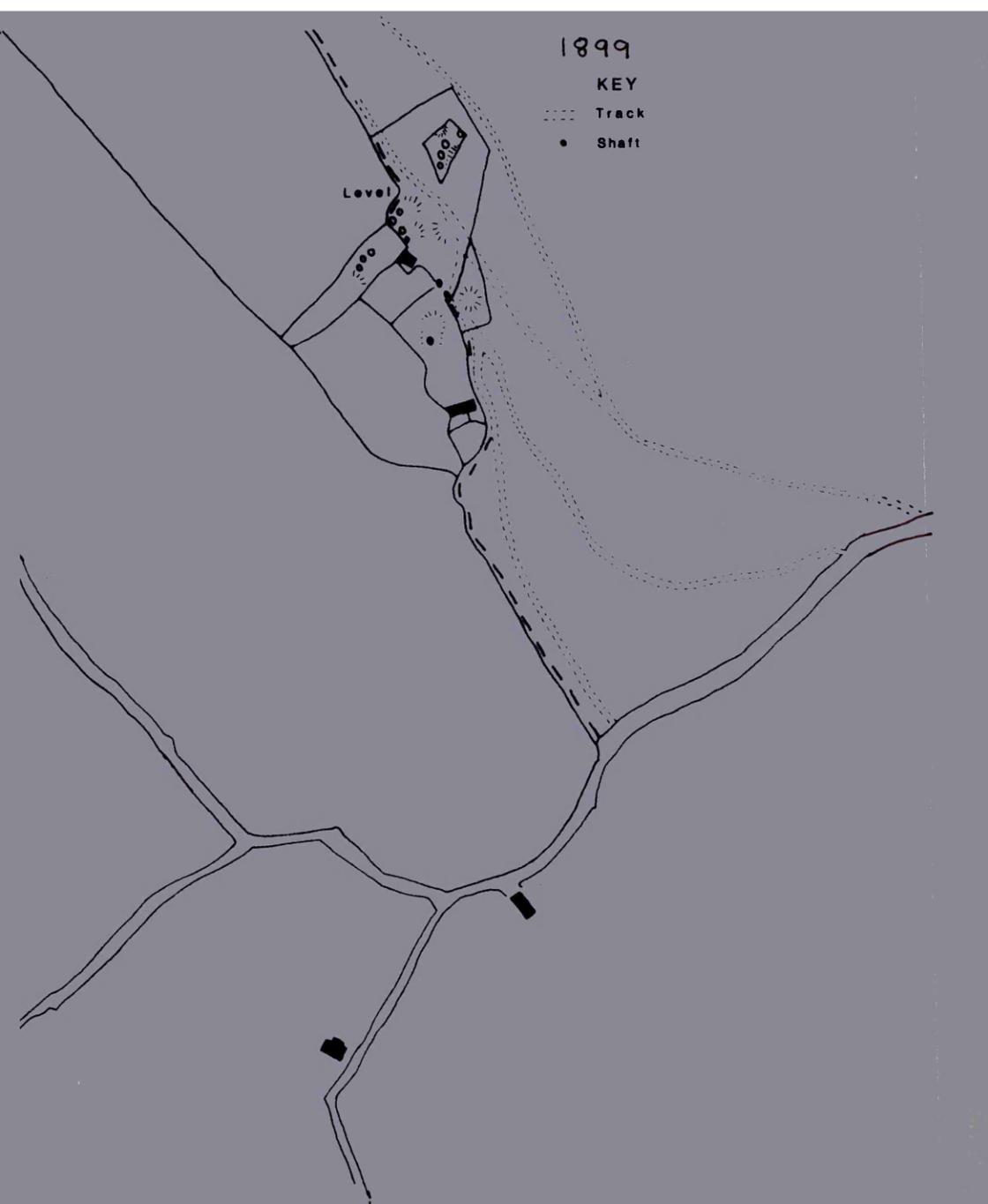
1899

KEY

--- Track

• Shaft

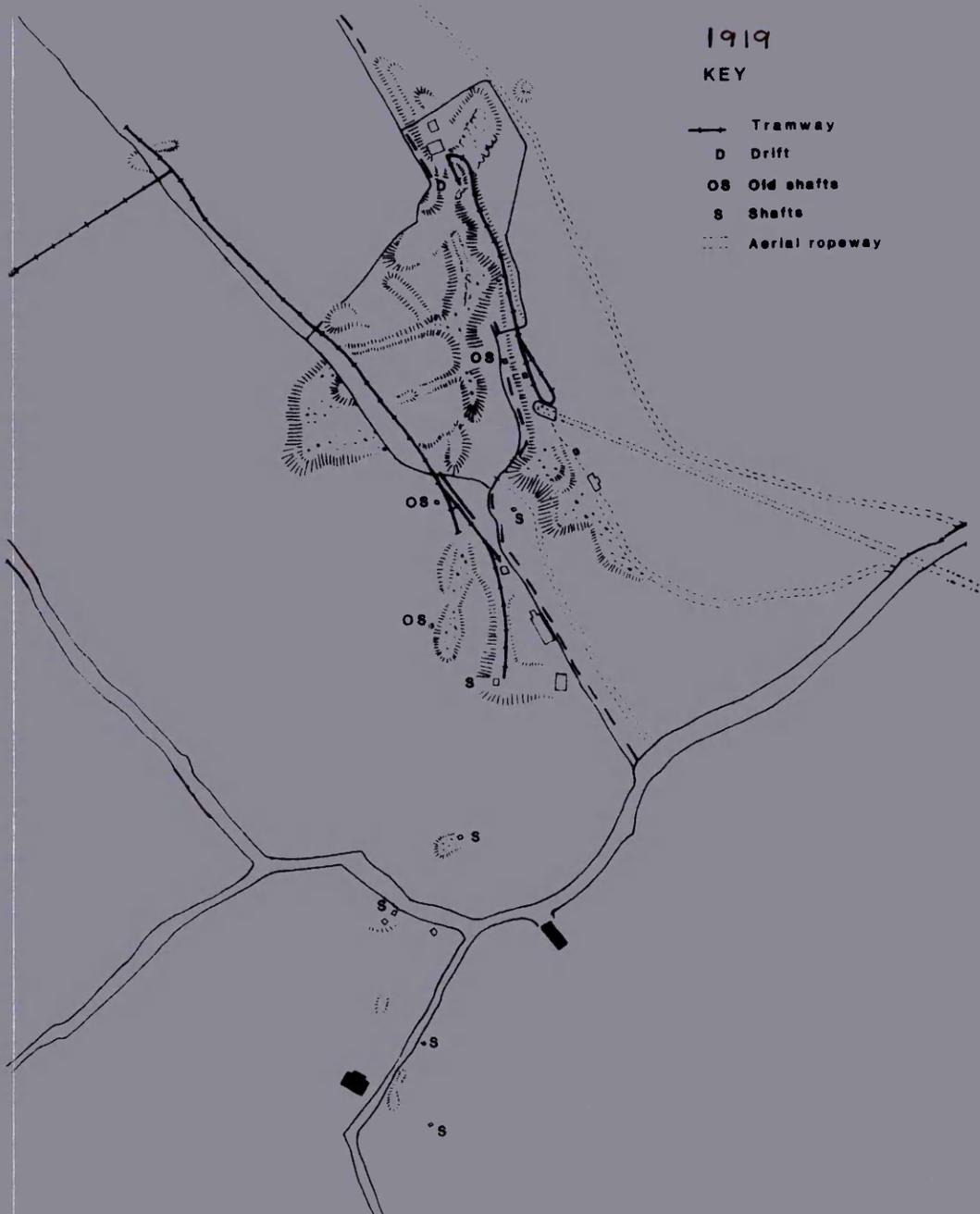
Level



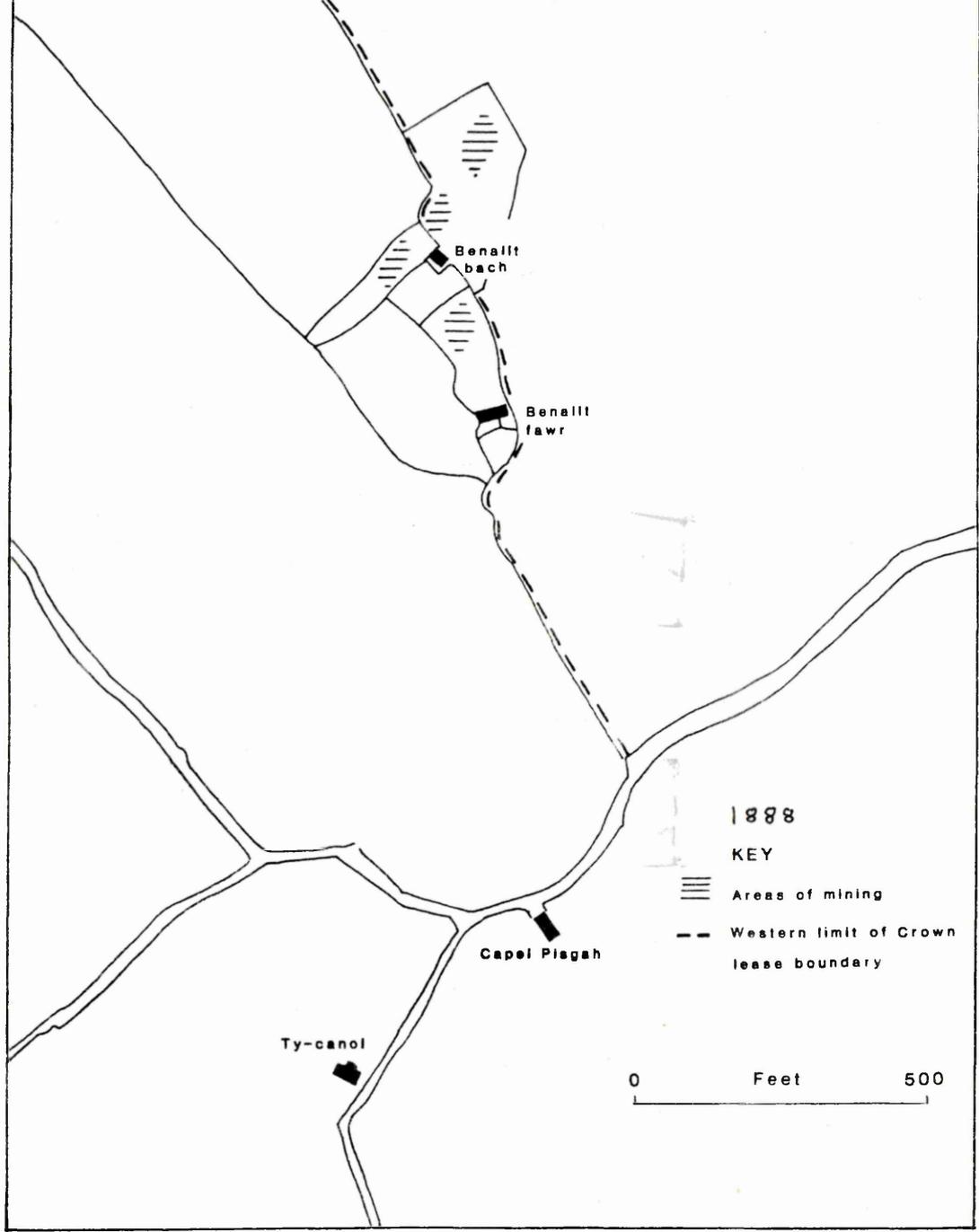
1919

KEY

- +— Tramway
- D Drift
- OS Old shafts
- S Shafts
- Aerial ropeway

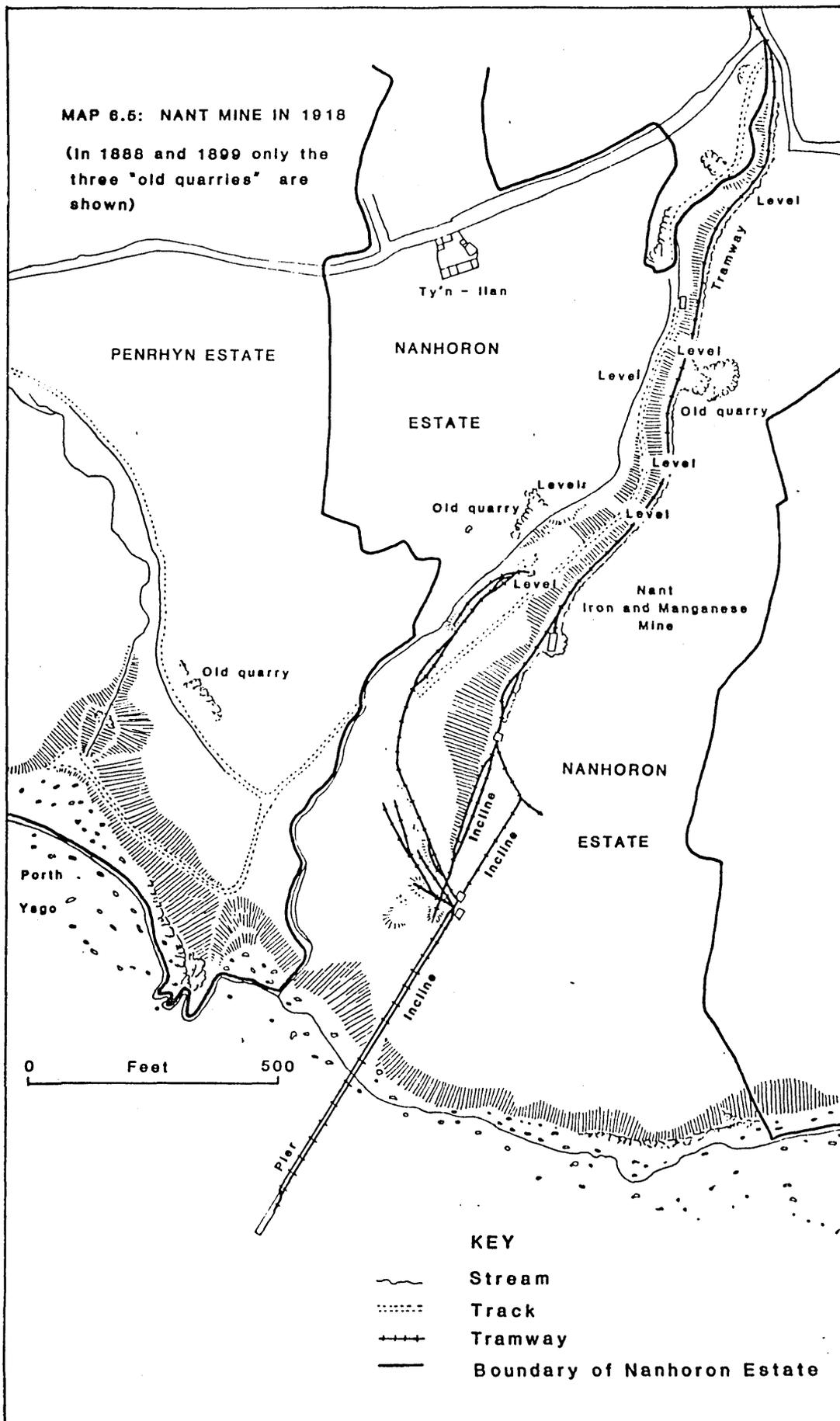


MAP 6.4: BENALLT AND RHIW MINES IN 1888, 1899, 1919



MAP 6.5: NANT MINE IN 1918

(In 1888 and 1899 only the three "old quarries" are shown)



success (See Map 6.5.) (111). In February 1893 the manganese production near Mynydd Y Rhiw was noted in the Royal Commission on Labour (112).

Most of the workings of this first boom were opencast pits, shallow shafts and passages (113). Underground working occurred mainly in the winter. Towards the beginning of summer the "Mango" would be washed, broken up and carried down to the beach to be sent away in small ships that came to Rhiw with cargoes of coal and lime (114). The 1888 survey for the Ordnance Survey 25" to 1 mile maps clearly indicates the extent of the mining at that time and names the workings as "manganese pits" at Rhiw and Benallt and as "old quarries" at Nant (See Maps 6.4. and 6.5.). A pit is also shown in Cae Mango near Tyddyn Meirion (115). In the 1899 revision of the map, three shafts and one level are shown at Rhiw and Benallt, although the manganese pits were said to be disused, whilst no change was indicated at the Nant site (116). These surveys concur with the available records collated in Table 6.10. which indicate that the Rhiw and Benallt sites were being worked in 1888 but not in 1899 and that the Nant mines were not in operation at either date (See Maps 6.4. and 6.5.).

The widespread collapse of this first mining boom has been related to the poor quality of the Welsh ores plus their inaccessibility (117). Overseas sources of richer and cheaper ores were being developed and from between 1892 and 1900 the mining within the study area was suspended though not abandoned (118).

In 1900 a twenty one year lease was granted by the Crown to E.J. Evans for obtaining metals, metallic minerals and ores within 200 acres situated in the parishes of Rhiw and Llanfaelrhys which had not before been in lease (119). Evans was a prospector and

1902	451	2	6	little work	0	3	451	1111
1903	385	0	10	little work	0	14	385	10
1904	7,347	0	87	600	0	12	7,947	113
1905	9,462	28	37	4,828	2	51	14,290	118
1906	2,894	8	30	17,300 ^x	49	6	20,194	195
1907	1,083	8	10	5,014	23	10	6,097	96
1908		0	2	2,946	11	19	2,946	34
1909	717	0	2	1,901	5	17	2,618	24
1910	315	0	2	5,028	15	7	5,343	24
1911		0	2	4,809 ^x	20*	6	4,809	28
1912		0	2	3,934 ^x	11*	6	3,934	19
1913		0	2	5,291 ^x	13*	9	5,291	24
1914		0	2	nil	13*	9	-	24

TYDDYN MEIRION
+ TY CANOL

s u s p e n d e d

* totals of Nant Mine + Benallt Mine.

x totals from Nant Mine + Benallt Mine.

Table 6.10. Manganese Output and Manpower. 1886 - 1914.

Year	RHIW		workers below/above ground		BENALLT		NANT		OTHERS		TOTAL TONNAGE	TOTAL NUMBER OF WORKERS
	Ore Raised (tons)		Ore Raised (tons)	workers below/above ground	Ore Raised (tons)	workers below/above ground	Ore Raised (tons)	workers below/above ground	Ore Raised (tons)	workers below/above ground		
1886	39	2	60	1	1	1					99	5
1887	50	3	158	2	0	0					208	7
1888	nil	4	55	2	1	1					55	8
1889	100	4	47	2	0	0					147	8
1890	nil	5	53	2	0	0					53	7
1891	200	3	35	2	0	0		2			235	8
1892	nil	3	nil	2	0	0		2			-	7
1893	nil	4	suspended	suspended	1	suspended	suspended	suspended	TYNLLAN nil	8	-	15
1894	nil	3	59	2	0	0			suspended		59	5
1895	100	2	suspended	suspended	2	suspended					100	4
1896	246	3			1						246	3
1897	suspended										-	-
1898	suspended										-	-

company promoter from Aberystwyth who was conversant with the small scale attempts on Mynydd Rhiw (120). After securing funds he obtained the service of a few experienced miners and developed a shaft leading to where he considered a valuable ore body would be found. Although his funds were exhausted after six weeks, the miners were so certain that they were near some ore that they continued for another fortnight until they struck ore (121). Within a short time a number of interested Birmingham business men arrived and it was decided to form a limited company backed with considerable capital resources (122).

By 1903 the North Wales Iron and Manganese Company had been formed to develop the Benallt and Nant Mines (123). The manganese ore was carted down to Porth Ysgo where, by the end of 1903 a jetty had been built to enable large sailing vessels and small steamers to call when conditions were favourable (124). From 1904 a tramway was built to transport the ore from the Benallt stockyard to the pier (See Map 4.6. and Appendix 1. No. 16). At first the waggons were drawn by men and horses but by 1906 a new steam locomotive was being used (125). By 1906 the North Wales Iron and Manganese Company had purchased the holdings of Syntir and Mynydd Y Graig from the Plas Yn Rhiw estate (126). However that area did not contain manganese bearing rocks (127).

The British Manganese Company, also formed in 1903, developed the Rhiw mine (128). Local farmers were engaged to carry the ore to a place where a stream crossed the road and where local women sorted and washed the manganese. It was taken by sledge to Porth Neigwl where it was loaded by wheelbarrow onto small ships when the weather was favourable (129). When it became evident that the mine was productive it was realised that a more efficient transport system was necessary. In 1903/4 an aerial ropeway was erected

leading from the mine to Graig Ddu, Porth Neigwl, where a jetty was built below Garth (See Appendix 1. Nos. 11 and 12.). As the Company had been registered with a capital of £130,000 these developments were economically sound. In 1903 expenditure included the following:

Purchase of lease	£2,000
Tramway	£576
Jetty	£182
Wages	£430
Freight and cartage	£213

The notebook of the foreman responsible for building the jetty indicates that men worked a twelve hour day, plus overtime to complete it (130). Steamers up to 1,000 tons were then able to use this jetty (131). Many German steamers took manganese and Iron ore to the east coast. Shipping ore was the most suitable mode of transport from this remote district where the roads were inadequate and the railways too distant. Much of the ore from both jetties was taken to Ellesmere Port (132).

The statistics shown in Figures 6.5. and 6.6. indicate the considerable increase in manpower and output when the ropeway and jetty were completed. Annual mine reports lodged with the landowner's estate documents give additional information (133). The 1906 report recorded a roof fall in July that blocked levels, that manpower had been reduced, and that other workings had been improved by the erection of a steam engine to bring ore to the surface (134). This may have been the steam engine described in May 1906 as being planned (135). At that time there were said to be five other steam engines working each day with 140 - 160 men in the works. Steam cranes and other machines were being used to

FIGURE 6.5: EMPLOYMENT IN MANGANESE MINING 1886 - 1914

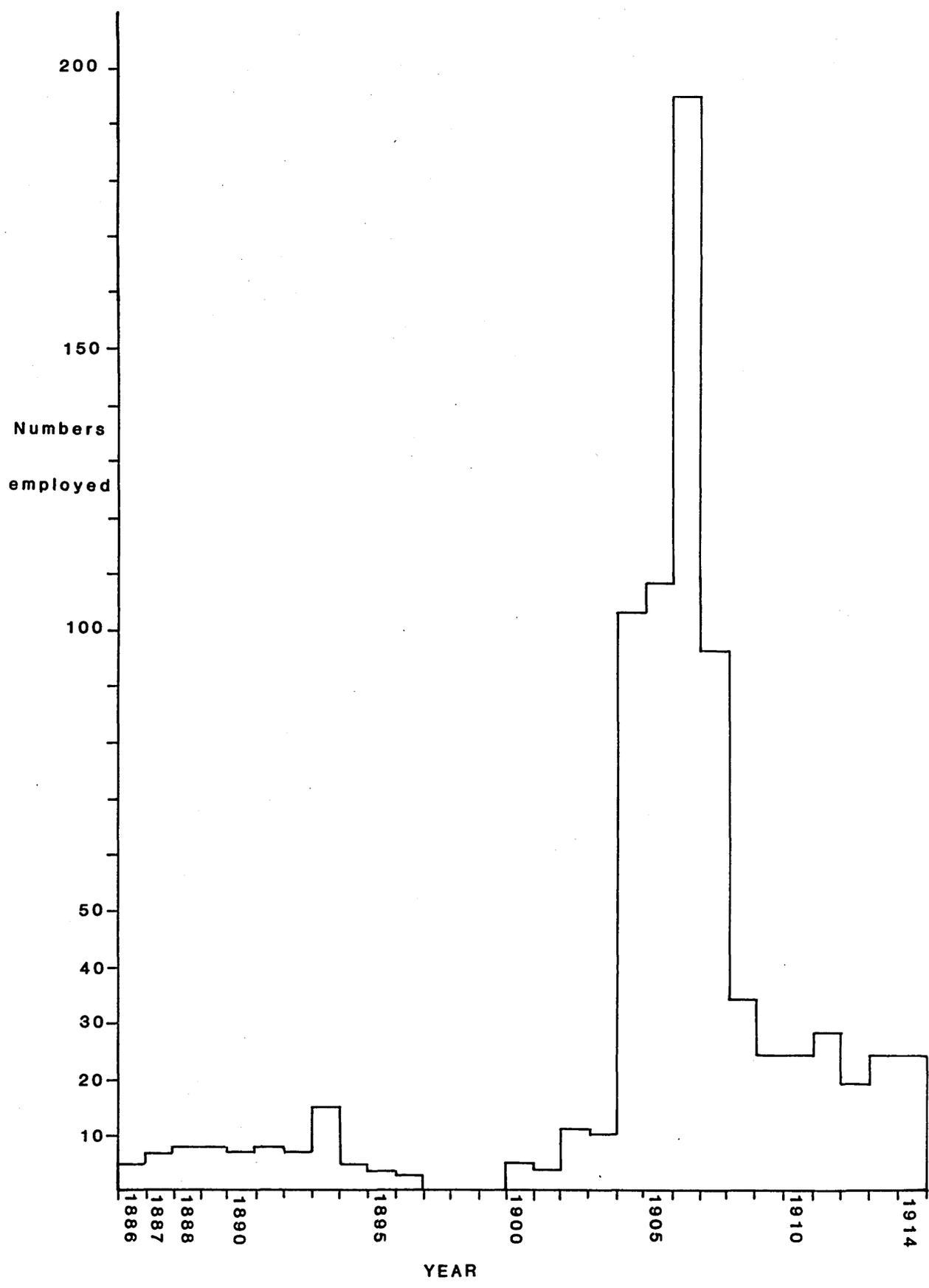
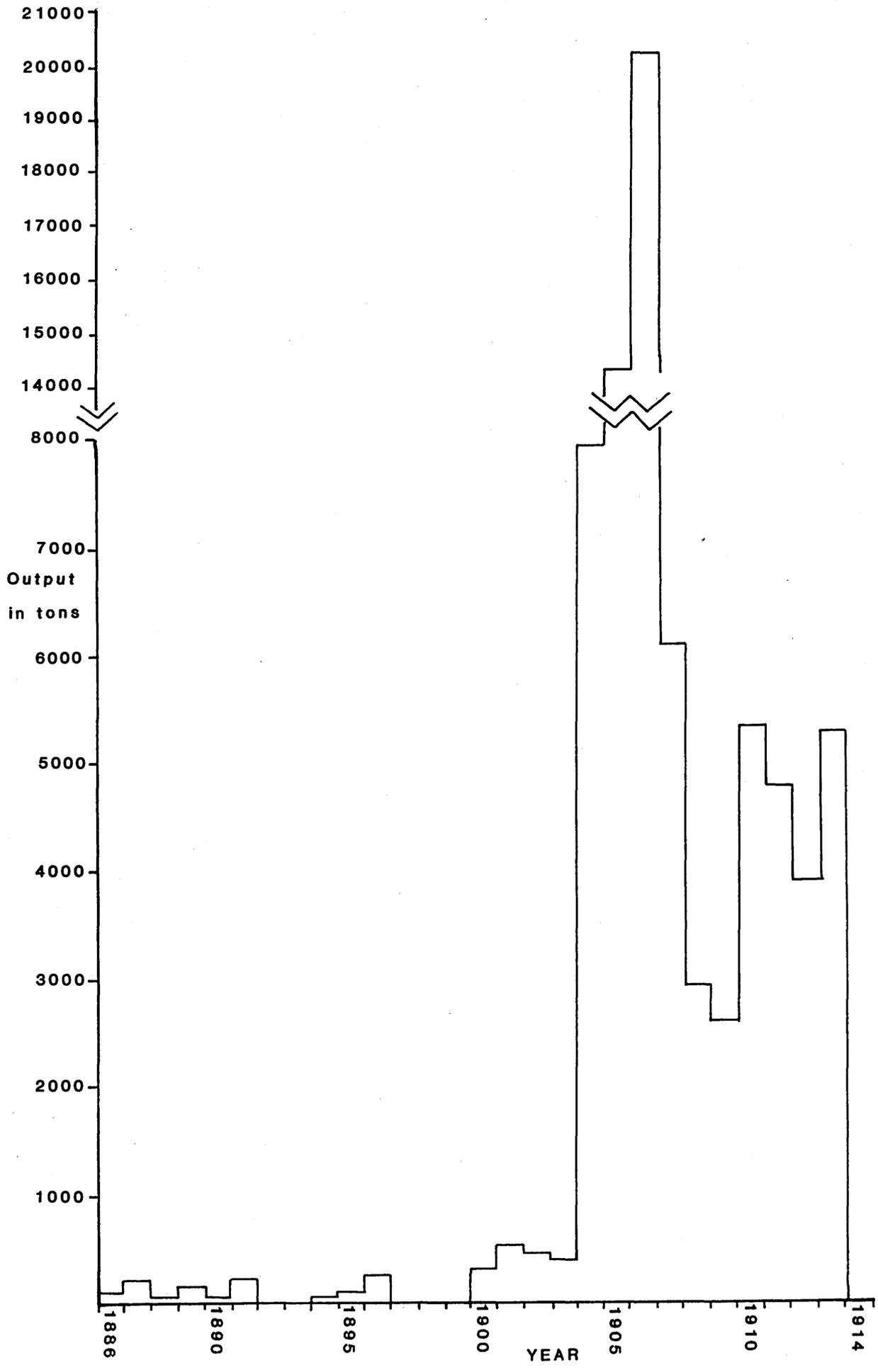


FIGURE 6.6: MANGANESE OUTPUT 1886 - 1914



clear the earth and lift the stones onto the rails or into the buckets of the aerial ropeway (136).

Manpower numbers from estate papers differ considerably from those for the Rhiw mine in the List of Mines records, possibly due to details being noted at different times of year. In comparison with Table 6.11. for Rhiw mine the estate's reports state the following (137):

Table 6.11. Manpower at Rhiw Mine 1904 - 1911.

1904	110 at mine; 10 on stage & tram
1905	60
1906	27
1910	12; then only 2.
1911 (Aug)	2
1911 (Sept)	1 caretaker.

These reports also stated that the pier was partly demolished during the winter 1910 - 1911 and had not been repaired (138). This would explain the absence of production figures after 1910 in the Lists of Mines (139).

In 1905 Wright from Llanbedr, Merionethshire leased part of Tyddyn Meirion farm and in 1906 he leased part of Ty Canol farm for mining purposes (140). He then leased one field of Tynmynydd farm for 21 years from 1907 (141). The Tyddyn Meirion and Ty Canol mines were listed separately, but output and manpower were combined in the records of operations between 1905 and 1909 (142). (See Table 6.10. and Appendix 1. No. 3.).

In March 1906 the tenant of Penarfynydd farm forwarded samples

of ironstone for analysis (143). By November 1906 he had obtained a Take Note on part on Penarfynydd from his landlord (144). Correspondence in 1907 and 1908 suggested that Companies from London, Llanberis and Amlwch were interested in working for manganese at Penarfynydd (145). One of these may have been the third company which had, in May 1906, recently opened in the study area (146). A local man was also recorded as being involved in mining for copper on Penarfynydd (147).

It appears that this sudden development of manganese mining occurred at this period as a result of the combination of three significant factors. In the first instance, persistence led to the discovery of a large and accessible ore body (148). Secondly, for the first time provision of adequate capital enabled the mines to be worked efficiently. Finally, these developments coincided with the Russian-Japanese war which reduced imports of Russian manganese to Britain. Thus manganese was available and accessible at the time when British industry required supplies. The study area produced above 90% of British manganese at that time. If in 1903 those miners had given up when Evans had exhausted his funds, then it is unlikely that the study area would have benefitted from this or the following periods of mining activity, and that would have had very considerable economic and social consequences for the development of the whole community.

As it was, the mining activity provided work for large numbers of people. Figure 6.5. shows the total employed according to the List of Mines figures (149). However, other sources gave varying and usually higher figures. In addition an article on Rhiw published in 1910 stated that about 200 men were employed in the mines (150). A photograph taken around 1907 at Benallt mine shows ninety one men

(151). (See Appendix I. No. 17). These variations may be due to the inclusion or otherwise of ancillary workers such as smiths and the men working the tramway, ropeway and piers. Whatever the figure, employment was available for local men at a wage probably far in excess of that for farm labouring (152). People travelled in daily from villages many miles away and it was also said that almost every house had its lodgers (153). Thus extra money was available and extra trade from both local families and miners brought an improvement for many in the standard of living.

Unfortunately this mining boom did not last long. After 1908 output declined, due partly to the exhaustion of accessible ore bodies. The chief reason however was the slump in demand and prices caused by the availability of large supplies of cheaper ores from Russia, India and Brazil (154). As early as 1904 a local agent had observed that the Rhiw mine would only pay whilst the circumstances remained as they were then (155).

By 1906 a liquidator was appointed for the British Manganese Company and by 1909 it had become a private company (156). Rockfalls and the damaged pier virtually halted production after 1910 (157). In 1912 the Company was still paying rental on land traversed by its aerial ropeway (158).

The North Wales Iron and Manganese Company also declined rapidly after 1907 in both manpower and output. It was recollected by someone who had worked there at this time that demand varied greatly. Sometimes there was a good stock and no orders, whilst at other times there was insufficient ore to meet the demand (159). Flooding did occur but not sufficiently to halt mining (160). When there was plenty of work, extra miners came in, and when there was little work, men worked on the land or as fishermen (161). This

intermittent pattern of production continued until 1913. No production was recorded in any mine within the study area in 1914 (162). (See Table 6.10).

Thus, during this phase of the study manganese mining had rapidly developed and, given the deprivation of this formerly entirely agricultural community, had strongly influenced the economic, and also the social cultural and physical characteristics of the study area. It is likely however that although employment at the mines brought higher and additional wages, the major financial benefits were enjoyed elsewhere by the Investors and Company Directors. By 1914 mining had waned and at the start of 1914 it seemed unlikely that the mines would ever again be worked profitably.

There were, during this period, attempts to open several quarries within the study area, but with little success. Treheli Quarries Ltd. had been formed in 1877 after leasing 71 acres at Treheli, Tyn Y Park and Ty Canol mountain. However, it proved abortive and never really did any business at all. It was dissolved in 1886 (163).

One of the major hindrances to developing industry in the study area was the lack of transport facilities. The exposed nature of the coastline and the lack of sheltered deep water harbour minimised the effectiveness of coastal traffic. Due to the lack of adequate roads and to the steep hills, heavy goods could not be transported overland. As in much of upland Britain most attempts to develop natural resources were thwarted by the small size of the ventures, lack of capital and inaccessibility resulting in the inability to effectively transport adequate production quotas in response to market demand.

By 1914 therefore all attempts at mining and quarrying within the study area had been suspended; the nearby woollen mill had also closed and it was again agriculture which was the mainstay of the local economy.

III. SOCIAL ISSUES.

For the majority within the study area the poverty described in previous chapters remained the chief characteristic of their lives. Most people still lived off the products of the land and sea and the community was still to a large degree self-sufficient (164). Shops mainly consisted of a few items kept in the front room of a dwelling house (See Appendix I. No. 12.). In 1906 facilities included three grocers, two cobblers, a tailor, a smithy, a flour and coal store, plus the three chapels, two churches, one elementary school, and the Post Office and the three English Companies working the manganese (165). Houses, particularly cottages, were damp, smokey and dark (166). Most still had earthen floors, and up to twenty were thatched (167). In 1891 70% of dwellings in Rhiw and 48% in Llanfaelrhys consisted of fewer than five rooms (168). Labourers were sometimes allowed the use of land for planting potatoes, and received seed potatoes, straw for pig litter and buttermilk from their employers. A poor level of diet, often mainly potatoes, butter-milk and fish, was common (169). Few other vegetables were consumed and turf, bracken and heather were still used for fuel (170). Tailors, dressmakers, cobblers and carpenters worked from farm to farm (171). Cloth and yarn for socks were still locally woven (172).

In 1891 there were eleven outdoor paupers in Rhiw and four in

Llanfaelrhys (173). A local charity provided free school tickets for poor children (174). Mutual informal assistance was given at times of accident and bereavement (175). A wide range of illnesses, several necessitating school closure, were recorded in the school logbook (176). Local folk remedies including herbal salves and milkmould were used to treat man and beast alike (177).

In all these aspects of the life of the community there had been few changes and only slight improvements since the previous century for the vast majority of the population.

The development in community life was triggered instead by two quite separate influences. The first, and probably more wide-reaching, was the continued influence of religion and education within the study area. These were closely linked, with the school closing to allow attendance at religious, musical and literary meetings and being itself used for events sponsored by church and chapel (178).

The transcending of denominational barriers, a feature of the 1904/5 Welsh Revival, is confirmed within the study area in the holding of combined meetings for prayer and for the young people (179). Around this period additional school closures due to revival meetings are noted (180). (See Appendix I. No. 9.). Church and chapel also organised choral and debating meetings and later a Literary Society was formed (181). Local adults and young people had the opportunity to participate publicly in eisteddfodau and to experience the responsibilities of self government in numerous community activities (182). This added to the opportunities given through the improving elementary schooling available in Rhiw (183). It was the effects however of the religious revival which were said to have influenced the character of individual and

community life in Wales up until the disillusionment of the First World War (184). The combination of educational, religious, musical and literary activity available to those in the study area gave far greater opportunities for personal development than did many urban areas.

The second factor influencing the development of the community was that of the manganese mining. One aspect of its affect was that, although the mines were worked only intermittently throughout this period, significant numbers of men were employed only in the boom years of 1904-1908. (See Figure 6.5.). Prior to this the mining had scarcely affected the economy and life of the community. However during those periods of activity there were many men lodging within the study area and this brought some economic benefit through their payment for board and lodging and the increased level of spending (185). Mining wages were generally higher than agricultural wages and this brought material relief to some.

Some miners came from afield and they would have brought new ideas, different habits, and sometimes a different mother tongue into this previously isolated community. There were records of physical if not social clashes between the cultural expectations of monoglot Cornish miners and monoglot local fathers concerned for their daughters' welfare (186). Chapel goers noted the lodging miners' use of Penponcyn Inn and implied their activities caused the loss of converts from religion to cursing and football-playing company (187). The more senior and skilled work in the mines was undertaken by foremen and engineers from England (188). One Birmingham mine agent brought his family to Rhiw and registered his children at the Rhiw school (189). Thus, although short lived, the periods of activity at the mines affected the community both

socially and financially.

In addition to these two major factors, other more general events and activities influenced those within the study area. These included the slow improvements in communications with the use of the Mailcart as a link with other services (190). The business and social aspects of the Hiring Fairs gave many the opportunity to meet a wider circle of people (191). So too did attendance at the variety of cattle fairs, markets, ploughing matches and similar events for which labourers were usually allowed a holiday (192). The spreading influence of local Welsh non-conformist press and militant non conformist liberals is unlikely to have been ignored totally in the study area (193).

During this period there had been some overall improvement in conditions. The community remained stable, strict but caring, and, with employment required at the mines if not on the farms during much of period young people had no need to move away for work. This was in contrast to many other rural areas at this time. Some of the community had been caught up in the mining activities which had brought some financial rewards in the boom years in the form of higher wages, new buildings and an increased availability of shops and goods. Others had been caught up in the religious revival and its social aftermath.

By the end of this period the mines were closed and the local economy was again reliant on agriculture. However the infrastructure of shops and services in the community was better than ever before. The mining had brought a new type of work and a different type of person into the community. Maybe these opportunities to diversify and to face new developments were a good preparation for the considerable changes which were now to occur.

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- (7) Namely Pant and Crugau Mawr; Bwlch, Tyn Gamfa and Conion
Ganol
- (8) Namely Ty Canol Rhos
- (9) Namely Penmynydd, Ty Hwnt I'r Mynydd, Bryn Gwynt, Fron
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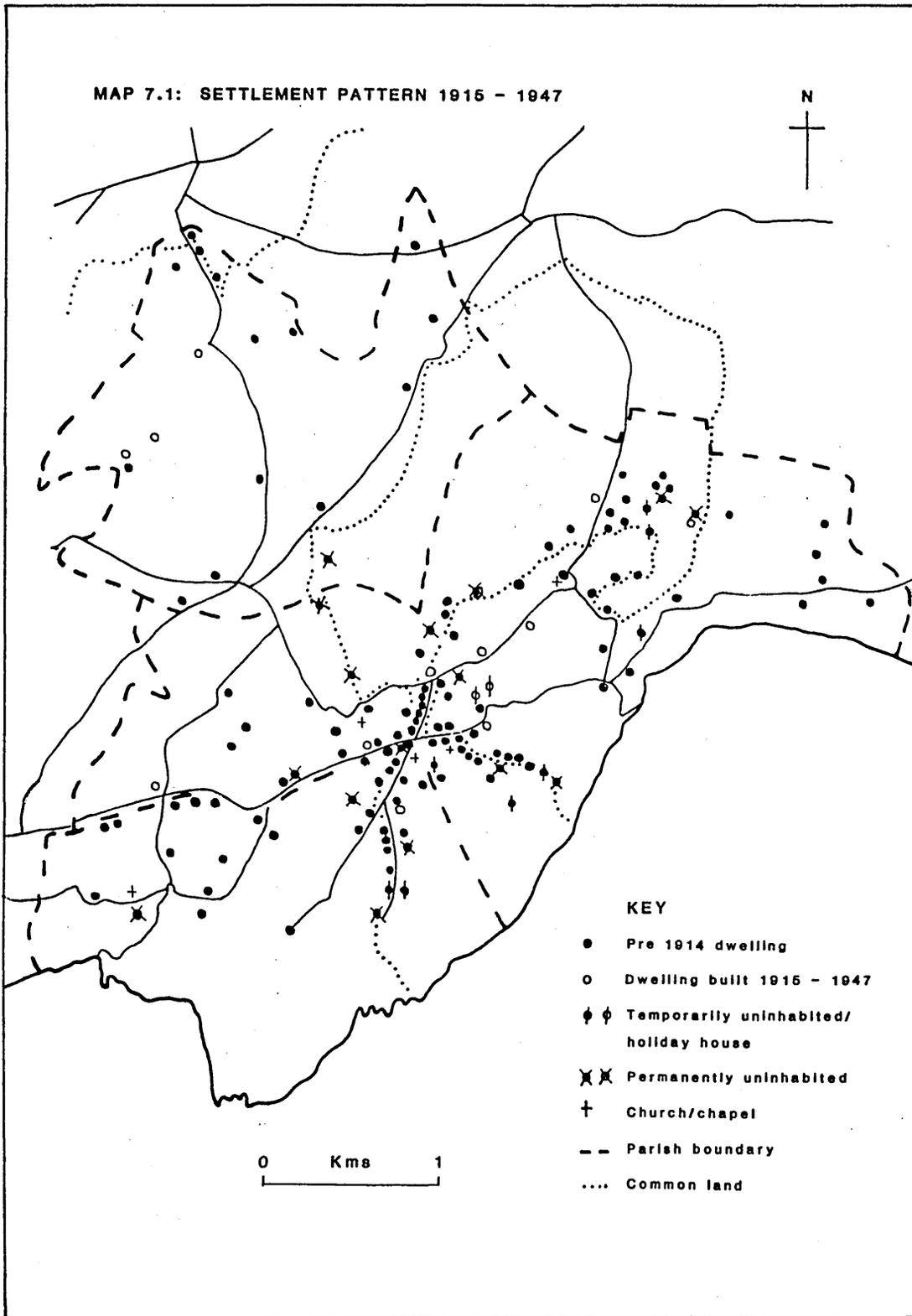
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THE STUDY AREA BETWEEN 1915 AND 1947

The final chronological phase of the study includes the periods covered by both World Wars and by the severe economic depression of the 1920s and 1930s. National government took greater control in both agriculture and manganese mining during war time in order to use the resources for the national good. After 1935 the already combined parish of Rhiw with Llanfaelrhys was amalgamated with that of Aberdaron (1). It is not therefore possible to isolate the returns for Rhiw and Llanfaelrhys from the larger unit after 1931 for census material and after 1935 for the Agricultural Returns (2). However, the Llŷn Survey, undertaken in 1947-49 by the Survey Council for Rural Wales, analyses aspects of population, housing, occupations, age ranges and language for a district which covered the whole of Rhiw and Llanfaelrhys except for twenty houses in the east and north (3). It included twenty one other houses to the immediate west of the study area. These two groups of houses are almost identical in the balance between farms and cottages and the findings of this survey are therefore being considered as though they dealt with the entire parish of Rhiw with Llanfaelrhys.

The Report of the Land Utilisation Survey of Britain (1938 - 1946) includes detailed reference to the Llŷn peninsula (4). The study area can be identified on the land utilisation map (See Map 7.4.). A detailed low altitude aerial survey of the district in 1946 recorded the field pattern, aspects of vegetation cover and the condition of buildings (5). A range of photographic evidence is also available (See Appendix I.). Together with the earlier

MAP 7.1: SETTLEMENT PATTERN 1915 - 1947



agricultural returns these records provide information concerning land utilisation and settlement pattern throughout this phase.

The government's lease of the manganese mines was terminated in 1947, thus concluding the 120 years of local mining activity. After the Second World War emphasis in agricultural practice began to change. Men returned from the Armed Services and English families began to renovate dilapidated cottages as holiday homes. 1947 has therefore been selected as an appropriate date at which to conclude this study of the parishes of Rhiw and Llanfaelrhys.

I. SETTLEMENT.

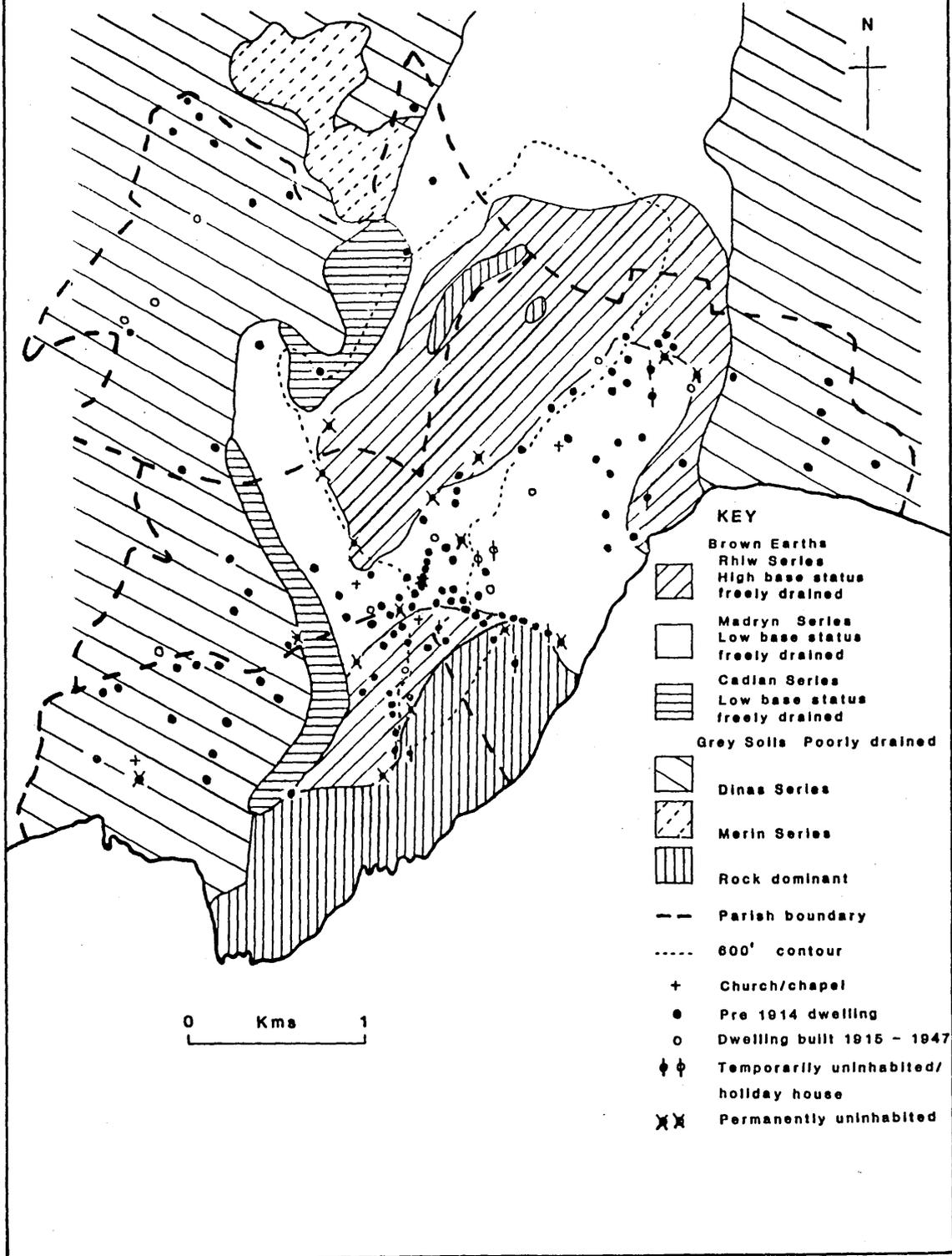
During this period the pattern of settlement within the study area exhibited some of the characteristics common to areas of rural depopulation, despite developments encouraged during periods of mining activity. Between 1915 and 1947 there was a significant decrease of 19 in the total number of inhabited dwellings within the study area (See Table 7.1, Map 7.1. and Figure 3.2.).

Table 7.1. Settlement Pattern 1915 - 1947.

Total dwellings in 1914	135
Total dwellings in 1947	116
New dwellings 1915 - 1947	15
Dwellings permanently uninhabited by 1947	16
Dwellings temporarily uninhabited in 1947	18
Decrease in total number of dwellings	19

The pattern of distribution for the new dwellings is shown in Map 7.1. and Table 7.2. Their siting relative to soil type is

MAP 7.2: SETTLEMENT PATTERN 1915 - 1947 IN RELATION TO SOIL



KEY

- Brown Earths
- Rhiw Series
- High base status
- freely drained
- Madryn Series
- Low base status
- freely drained
- Cadian Series
- Low base status
- freely drained
- Grey Soils Poorly drained
- Dinas Series
- Merin Series
- Rock dominant
- Parish boundary
- 600' contour
- + Church/chapel
- Pre 1914 dwelling
- Dwelling built 1915 - 1947
- ⊕⊕ Temporarily uninhabited/
holiday house
- XX Permanently uninhabited

0 Kms 1

Table 7.2. Pattern of New Settlement 1915 - 1947.

Total number of new dwellings	15
New dwellings within former upland common	5
New dwellings within former upland common and in the col	1
New dwellings below former upland common, to the West	5
New dwellings below former upland common, to the East	5
New dwellings on side of road/track	13

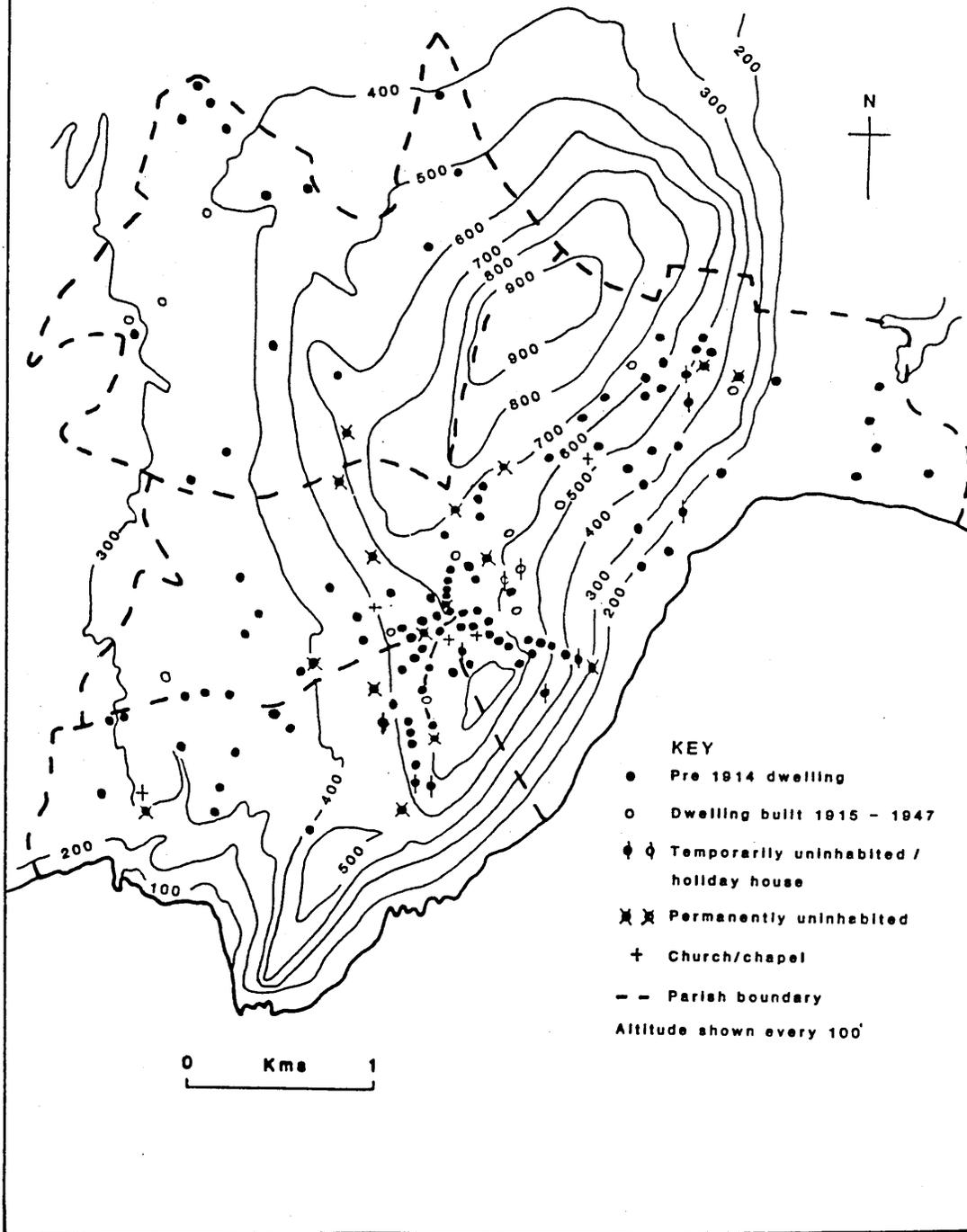
shown in Map 7.2. and to altitude in Table 7.3. and Map 7.3. Eleven of the fifteen new dwellings were built on the more fertile freely draining soils. However, as none of these were new farmhouses this relationship appears to be incidental.

Table 7.3. Altitude of New/Uninhabited Dwellings. 1915 - 1947.

Altitude	Number		
	New dwellings	Uninhabited (Permanently)	Uninhabited (Temporary)
Over 700' OD	0	0	1
600' - 700'	3	5	5
500' - 600'	7	3	4
400' - 500'	0	3	6
300' - 400'	4	4	1
Under 300'	1	1	1

It is significant that 13 of the 15 new dwellings were sited alongside a road or track and that nine are close to the nucleus of this relatively dispersed settlement and at an altitude of between 500 and 700 feet. The remaining two were the result of rebuilding or additional building on earlier sites.

MAP 7.3: SETTLEMENT PATTERN 1915 - 1947 IN RELATION TO ALTITUDE



Three new farms were created in the north west of the study area after the First World War by the deliberate local government policy of buying and subdividing former larger farms to provide holdings for returning service men. In this instance Plas Newydd was subdivided into four holdings all of which were situated on the less well draining lowlying gley soils, with one lying in Aberdaron parish.

The remainder of the new dwellings had virtually no land and were built on small plots purchased or leased from either local farmers or the remaining estates, and housed the mine agent and a retired Rhiw sea captain (6).

Five of the dwellings were erected as prefabricated structures. Two remained as such in 1947; one had been moved to a new site and rebuilt using stone, as was a fifth structure on its original site. This indicates that ease of labour and relative cheapness of imported materials were new factors in house building which contrasted with the tradition of using local material in earlier periods. The distribution of seven of the new dwellings around the cluster along the central col increased the size and density of this cluster relative to the generally dispersed pattern of settlement throughout the two parishes. (See Appendix I. Nos. 1 and 2.).

13 of the 16 dwellings which became permanently uninhabited during this phase were remote or away from roads, tracks and a water supply. Four farmhouses fell into ruin and their land was amalgamated with adjacent farmland. Only two of this group were near the central col.

Most of the 18 dwellings temporarily uninhabited in 1947 were small remote cottages. Ten were holiday cottages unused at the time of the survey and three more were soon to become such. Two

farms and one shop temporarily uninhabited were presumably awaiting new tenants as they were known to be inhabited shortly after the survey.

In the late 1920s the Nanhoron estate sold several of their farm holdings and cottages in Rhiw and Llanfaelrhys, frequently to the tenants (7). Another four properties were sold to tenants in 1947 leaving only three properties still belonging to the Estate (8). This was an example of the trends described on page 233. With the exception of the large Glynllifon estate property of Penarfynydd farm, a much higher proportion of farms and cottages were now owner occupied or owned by local people who leased to others. (See Table.7.4.C.). The range of house types and of the size of holdings in 1947 - 49 are shown in Tables 7.4. A. and B. (9).

It is significant that the number of inhabited dwellings in the parish of Rhiw and Llanfaelrhys fell to 108 in 1931 (See Figure 3.2.). (10). This coincided with the economic depression and the fact that most young people had had to leave the area to find employment. The re-opening of the manganese mines between 1939 and 1947 and the slowly developing tourist industry in the late 1930s were probably the chief factors in the increase of habited dwellings between 1931 and 1947.

The population total had also been falling sharply since 1911 but, in contrast to the number of inhabited dwellings, this decrease continued (See Figures 3.1. and 3.2.). The number of miners would have been negligible in 1921, 1931 and 1947 when the mines were not in production. The possibly high numbers during the years of mining activity were not recorded. Similarly, tourists would not have been present at the time of year when the Census

Table 7.4. Housing Statistics. 1947 - 1949.

A. House Type	Number
House	51
Farm houses	42
Bungalows	5
Cottages	35
Total.	131
B. Nature of Tenure	Percentage
Tenants	70
Freeholds	30
Leaseholds	0
C. Land Holdings	Number
Acreage	Number
Under 1 acre	50
1 - 5 acres	32
Over 5 acres	49
Source: Survey Council for Rural Wales: Llŷn Survey.	

Returns were made. There may therefore have been short term fluctuations in the population totals, but it is clear that, in common with many remote rural districts, there was a marked depopulation of the study area by 1947, when the population total was under half that of 1821.

The most important features concerning settlement pattern during

this phase were the desertion of many of the small and remote cottages built in earlier periods of land hunger, and the continuing development of the nucleated settlement near the col in the central ridge.

II. ECONOMIC FLUCTUATION.

Agriculture continued to dominate the local economy throughout the final phase of this study, although the impact of the intermittent manganese mining was at times a very significant feature.

This phase divides into three distinct periods which determined the social as well as the economic life of the community of Rhiw and Llanfaelrhys. These periods were the duration of the First World War, the inter war years and the Second World War.

From 1914 to 1918, during the First World War, farmers no longer retained the right to cultivate their land as they individually preferred. The Caernarvonshire War Agriculture Committee campaigned to increase food production by bringing more land under cultivation (11). In 1917 farmers were asked to state their crops for that year's harvest (12). The annual agricultural returns for crops are shown in Tables 6.4. and 6.5. and Figures 6.1. and 6.2. They indicate a slight increase in acreage under barley from 1915 - 1920 in both Rhiw and Llanfaelrhys, and a very marked increase in the acreage under oats in Rhiw. Variations in the acreage of other crops were insignificant, and the total acreage of arable was well below that of the 1840s and 1890s. The acreage under permanent pasture and clover decreased in both parishes, with more significant change in Rhiw, probably as a result of its more varied topography and lower acreage under cultivation (See Tables 6.4. and 6.5.).

Such a decrease occurred throughout Wales at this time (13).

The livestock returns for the study area during this period are indicated in Tables 6.6. and 6.7. and Figures 6.3. and 6.4. During the First World War cattle numbers fluctuated mirroring the general boom and the ensuing slump between 1915 and 1920 (14). Sheep numbers fell, dramatically so in Rhiw. This fall occurred generally throughout Wales from a peak reached in 1916. After that date the rapid increase in prices towards the end of the war induced farmers to sell large numbers for slaughter and flock size decreased (15).

In Rhiw the number of both horses and pigs increased whilst numbers in Llanfaelrhys decreased. (See Tables 6.6. and 6.7. and Figure 6.3.). This may have reflected an increase in the number of pigs kept by the higher total of cottagers in Rhiw, and of horses involved in transport at the mines.

Generally the agricultural economy of the study area began to prosper as the government guaranteed prices and encouraged higher production (16). In 1917 an Act was passed establishing a minimum wage for agricultural workers (17). There was however little change in farming practice. The larger farms were able to provide most of the food they required (See Appendix I. No. 6.). (18). Many cottagers not involved in agriculture helped as extra labourers at harvest time and in payment were allowed to take potatoes and other vegetables for their own use (19). Children continued to absent themselves from school to help with work in fields and gardens (20). Neighbouring farms continued to share horses and equipment and to combine labour at harvest time (See Appendix I. No. 5.) (21). The largest farms still had teams of horses working in shifts to complete ploughing and harvesting (22). In 1919 it

it was stated that 70 - 100 cattle were fortnightly bought at the Sarn Grading Station and then walked the twelve miles to Pwllheli station. About 100 pigs were bought there each week (23).

The wartime boom in agriculture continued until 1921 when the agreed guaranteed pricing system was stopped, prices fell and a period of increasing economic hardship commenced (24). Between 1920 and 1935 the total acreage under arable cultivation in both Rhiw and Llanfaelrhys fell considerably. (See Tables 6.4. and 6.5, Figures 6.1. and 6.2. and Appendix I Nos. 1 and 2.). In all but one category the acreage in 1935 was well below that in 1915. Acreages under clover in both parishes also fell, as did that under permanent pasture in Rhiw. These trends were in line with those throughout Wales and much of Britain (25). The corn mill at Felin Uchaf, on the western boundary of the study area ceased working in the late 1930s as the mill pond required extensive and expensive repair and there was no longer sufficient demand to make it worthwhile (26).

Overall cattle figures between 1920 and 1935 in both parishes were relatively stable. Generally there was a decrease in stock over two years old and an increase in young stock and in cows in milk and in calf (See Tables 6.6. and 6.7.). These confirm trends elsewhere in Wales in response to changes in market demand (27). One important change during the interwar years was the increased emphasis on milk production (28). The Milk Marketing Board's scheme was established in 1933 (29). By 1937/8 a Creamery and depot were opened at Chwillog in central Llŷn and milk was collected from farms throughout Llŷn, including some within the study area (30). However, complying with the necessary health and hygiene regulations was expensive, especially at a time of depression, and

the scheme spread slowly at first (31).

Cattle were still walked to the Auction Market at Sarn or sold to local cattle dealers at the farm (32). Most cattle from North Wales were still taken to England (33). English buyers were said to be a common sight at Sarn Mart (34). A Tourist Guide book of the period informs visitors of the heavy market day traffic and activity (35).

Numbers of sheep in both parishes increased from the low of 1920 but, by 1935 had returned to the 1915 numbers only in Llanfaelrhys. (See Tables 6.6. and 6.7. and Figure 6.4.). This upward trend was general in Wales at this time (36). So too was the fall in numbers of sheep over 1 year old and the increase in breeding ewes recorded in both parishes, due to changes in market demand (37).

The total number of pigs in the study area increased slightly between 1920 - 1935. (See Tables 6.6. and 6.7. and Figure 6.3.). However, numbers in Rhiw fell slightly. This may be one of the results of the increasing number of cottages falling vacant (38). It was noted that in small holdings and cottages the pig was frequently kept to provide the rent money when it was sold (39). The tighter pig keeping regulations and decline in the home curing of bacon were additional factors for the decrease (40). On larger farms in Llyn pigs were kept for home consumption (41).

Between 1920 and 1935 the total number of horses declined in both Rhiw and Llanfaelrhys. (See Tables 6.6. and 6.7. and Figure 6.3.). This was probably due to the increased use of the tractor for agricultural purposes (42). An increased number of poultry were kept on farms and cottages, and eggs were collected by agents of the Egg Marketing Board for sale in England (43).

A number of Cooperatives were set up to encourage marketing and buying of produce and machinery, but that established in Rhiw failed and many lost their shares (44). It was difficult for the small independent producer to keep abreast of modern practice or to apply the results of scientific research to their own work (45). As a result, many did not follow up-to-date methods.

Markets were very depressed in the 1930s (46).

The movement from arable back to grassland resulted in the need for fewer agricultural workers and therefore a drift away from rural areas by those seeking employment, particularly the young (See Figure 3.1.). Many from Rhiw went to the Caernarvonshire quarries (47). The hiring fairs were still held, but by 1928 had become merely an opportunity for a social gathering and excitement (48). In the depressed times in the 1930s many farmers managed to survive by using only unpaid family labour (49). Many were heavily mortgaged, having bought their land from their landlord prior to the First World War. There was now little money for development or even for fertilisers and it was said that lime deficiency was common (50). One farm within the study area is recorded as using manure with some basic slag from time to time (51). Although times were very hard and prices low, by working hard and being careful, small farmers in the study area were able to manage (52). Each farm still produced nearly all the food required for the family; only coal, flour and some groceries were bought (See Appendix I. No. 6.) (53). Prices were however beginning to improve prior to 1939 (54).

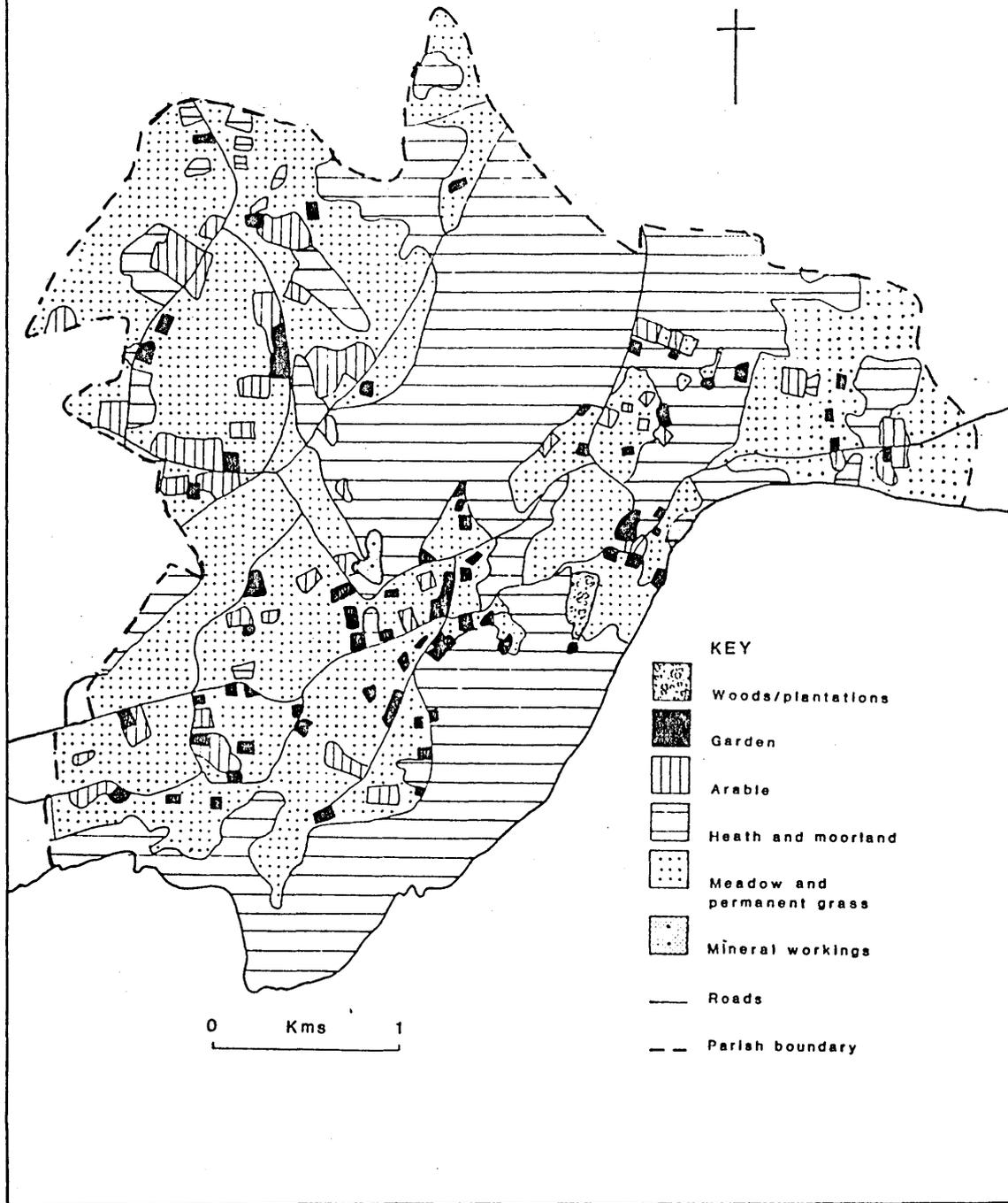
Wages for agricultural workers were as low as 10 - 18 shillings a week. Most grew potatoes and turnips and had poultry at their cottages and small holdings. Single men still lived in, sleeping

in the loft over the stables into the 1940s within the study area (55). In Rhiw some with small holdings also worked as agricultural contractors with a tractor to hire, as animal feed merchants, or by having a motor taxi for hire (56). Many were also rabbit catchers, paying farmers for the right of access and then receiving up to five shillings per pair of rabbits from agents who had a collecting point at Talafof (57). Sacks of rabbits were then taken to Liverpool and sold and the lorries returned with flour and coal. (58).

There was more mutual support within the community both in times of specific need after accidents or injury, and at harvest shearing and threshing time (59). People helped at neighbouring farms as the threshing machine moved through the neighbourhood, or used the neighbour's bull in return for other services rendered (60). It has been said that the transition from subsistence farming to production for the market was completed by the beginning of the Second World War (61). It is likely that it was the rationing and restrictions introduced after 1939 which completed this transition in less developed areas such as Rhiw and Llanfaelrhys where the farms were frequently small and more suited to producing for the needs of a family.

During the Second World War there were further restrictions and directives concerning what should be produced on farms within the study area as elsewhere (62). There was an increase in the acreage under the plough (63). An increased crop of potatoes, grown as demanded, was said to have been wasted and dumped over the cliffs (64). It is not clear whether this was a result of inadequate transport facilities, an exceptional harvest, or bad planning by the County Agricultural War committee (65). There was

MAP 7.4: LAND UTILISATION - 1932



however still only a relatively small acreage of arable in the study area (See Maps 7.4.). The acreage under arable had been higher in most earlier periods, for the reasons suggested previously. (See Map 4.5. and Tables 4.7,5. 4,6.4 and 6.5.). As generally in Llyn, the majority of this was under oats, though some barley was also grown (66). Wartime restrictions on the grinding of local corn closed most remaining mills (67). Most farms and small holdings continued to grow some vegetables and root crops for home consumption (68). Poultry were plentiful and eggs were still collected by the Egg Marketing Board's agents (69). Coupons for both human and animal food resulted in changed feeding methods (70). Small holders and cottagers came asking for food items such as butter which were sometimes surplus on farms. Animal feed was modified to include more potatoes, chaffed straw and gorse (71).

Sheep were kept on the areas of rougher grazing (72). The Lleyn breed was popular until the mid 1940s (73). This was a longwool cross between the Leicester and the Welsh mountain breeds developed in Llyn by the Nanhoron estate in the early nineteenth century (74). The small primitive tan-faced Rhiw breed still persisted in small numbers on Mynydd Rhiw (75). (See Appendix I. No. 4.).

The production of liquid milk rapidly increased within the study area after the establishment of the Chwillog Creamery. Milk brought a steady income and thus a rise in living standards, particularly for farms on the main roads (76). From 1940 it was possible to send ice cooled liquid milk of an improved quality to Liverpool, Manchester and London in good condition (77). Butter milk was no longer available on local farms for feeding to the pigs or as a drink, so the numbers of pigs decreased (78).

Welsh black store cattle continued to be of great importance and were sent to the Grading Station at Sarn for export and slaughter (79). Cattle were then taken by lorry to the railway station at Pwllheli (80). Short horn and Hereford bulls were being used on some of the large farms of the neighbourhood during this period (81). The cattle kept down the bracken by trampling on the young fronds in the rougher pastures; they were fed chaffed gorse which was still regularly cut from the gorse fields or field banks where it was grown for this purpose (82). The 1946 aerial survey indicates that the field patterns were the same as they had been in the 1840s and that fields were clear of bracken and gorse (83). The rough pasture areas were also mainly free of bracken, gorse and heather and were fired regularly to encourage new edible shoots and young grass (84).

A fair number of local men joined the Armed forces, particularly in the Second World War, thus reducing the labour force (85). However, by this time the transition from horse to tractor power was virtually completed (86). This increasing mechanisation coincided with the ploughing up of old pasture land coupled with the fall in agricultural labourers (87). Prisoners of war from a camp near Sarn worked as farm labourers on a few holdings within the study area (88). Food production levels were maintained and even increased although there was a shortage of some chemical fertilisers (89). The sharing of equipment and labour at busy times continued to be arranged informally between neighbours (90). (See Appendix I. No.5.).

During the period of the First World War land values and agricultural prices rose, but rents did not keep pace (91). The changed basis of death duties in 1919 resulted in further sales of

estate land, with many tenants buying their holding to obtain security of tenure rather than for financial gain (92). This continued into the 1920s, 1930s and 1940s in the study area where several of the small holdings and cottages still owned by the Nanhoron estate were sold (See page 269) (93).

The analysis of the size of holdings in Rhiw and Llanfaelrhys between 1915 and 1935 shown in Tables 6.8. and 6.9. indicates the predominance of the very small holding in both parishes. The number of owner occupiers compared with tenants is however not indicated after 1920. The numbers and size of holdings in 1947 - 49 are shown in Table 7.4.B. and the percentages of tenants and freeholders at that time are indicated in Table 7.4.C.

Major estates still owned the largest and most economically sound holdings in the study area such as Penarfynydd and Meillionydd farms (94). Until the late 1930s the tenants of such large holdings tended to become the opinion leaders as there was no formal organisation to inform and direct development (95). By 1939 various marketing boards, agriculture war committees and health regulations determined many of the agricultural changes. Security of tenure, minimum prices and assured markets resulting from the 1947 Agriculture Act ensured that there was no post war deflation as there had been in the 1920s (96). War-time had assisted farmers in the study area to become less isolated, individualistic and traditional by encompassing them within the national plans for agricultural development.

The livelihood of the local craftsmen became, in contrast, less secure as this period proceeded (97). Increased standardisation, improved opportunities for travel and a desire to obtain high status processed food and manufactured goods resulted in a decline

in local crafts such as shoemaking, tailoring and smithing (98). There were only two shops within the study area by 1947, one also being the post office (99). The garage became more important, selling petrol at the main crossroads in the study area (100). The pub closed in the 1920s in the depression after the mining boom during the First World War (101). A butcher continued to travel to the village several times a week (102). There were no fruit, vegetable nor drapers' shops in the village.

Rabbit catching was still an important source of income to the cottager and agents paid up to five shillings a pair at their collection points (103). Rabbits were causing a great deal of damage to crops within the study area (104).

Inshore fishing continued to provide an important element in the diet of poorer families, particularly during the Inter war period of depression when fish were smoked and dried for winter (105). The herring industry flourished in Llŷn during the 1920s (106). During wartime however coastal shipping ceased to be a safe form of transport (107). The local boats built specifically to sail in very heavy seas were no longer built in Rhiw and Aberdaron (108). During the Second World War larger vessels were bombed and mined off Llŷn and ships sheltered in the Porth Neigwl shallows from U boats (109). In the late 1940s it was recorded that eight local boats were kept in Y Rhuol at Porth Neigwl. It was stated that a good anchorage was required there if fishing was to be developed (110).

Inland the established transport network of roads and railways was improved only by those roadworks necessary due to increased motor traffic. Schemes in 1919 for an extension of the railway line into Llŷn came to nought (111). By 1945 it was noted that a

bus journey to Pwllheli market took only half an hour compared with the three hours journey at the beginning of the century (112).

Within the study area tourism began to develop after the First World War. A few farm houses took visitors on full board (113). Some empty cottages were bought by English families. This development occurred at a time of agricultural depression after the closure of the manganese mines and the loss of income from lodging miners. The additional income was therefore of great importance and as a result of advertising in the religious press and elsewhere the numbers of visitors increased. During the Second World War at least one holiday cottage was commandeered for the Clerk of the manganese mine (114). Another was used by a family evacuated from England (115). After the end of the war there were said to be ten 'summer residences' with nineteen houses taking visitors (116). There were however no hotels, boarding houses, camps or caravans (117). The maximum number of visitors in 1947 was estimated at 145 (118). Tourism was quickly becoming an important element in the local economy.

One family made an unusual contribution to this aspect of the community. Visiting the district from 1919 for holidays, the Misses Keating bought the derelict Plas Yn Rhiw mansion with part of its former estate in 1939. The house was gradually restored to its former glory, additional parts of the original estate were regained, and the property was donated to the National Trust in 1947 (119). These three ladies were determined to retain the unspoiled nature of the area, and fought off any attempts to popularise the area. They were therefore at times in direct conflict with those wishing to boost tourism by encouraging caravans and holiday amenities.

The outstanding views from the central ridge together with the beaches and coves of its coastline made the study area an increasingly popular haunt of holidaymakers.

Periods of war were closely associated with a high level of demand for Manganese from the mines in the study area. Activity at the mines involved an influx of workers, employment for local people, increased trade and a brief period of prosperity for many (120).

The manganese mines were re-opened at the outbreak of the First World War. By 1915 it was said that the mines were in full production and that this was the most active period in their history (121). Men moved from the quarrying districts of Caernarvonshire to meet the demand for labour (122). Many miners lodged locally and others travelled in daily from the surrounding countryside (123).

Information concerning the mines during this period is available from a wide variety of sources including government mineralogical surveys, company documents, the List of Mines and the recollections of many local people (124). (See Maps 4.6. and 6.5.). However the written evidence is incomplete due probably to wartime restriction of information, and is not identical when different sources are compared. This may be partly due to different methods and dates of data collection and partly to the previous exclusion of apparently previously unpublished documents which are included in this review (125).

The Rhiw mine had been flooded since May 1913 and the owner, the British Manganese Company, ceased trading and was dissolved by December 1918 (126). However in 1916 Wright became the agent of the new Rhiw Manganese Mines Ltd. which worked in conjunction with the small mines at Ty Canol, Tyddyn Meirion and Ty'n Fron (127).

(See Map.4.6.). In June 1917 it was reported that extensive mining operations were in progress both in the open and below ground and that the price then obtainable for the ore enabled mining to be profitable (128). In December 1919 it was stated that this Company had been purchased by Hudson Consolidated, a big concern planning major developments (129). However the Rhiw mines were closed by January 1921 (130). By March, H.M. Inspector of Mines in Bangor was requesting repairs to fencing in a dangerous state around the Crown Manganese mine at Rhiw, illustrating the dereliction of the site (131). (See Appendix I. No. 15).

The North Wales Iron and Manganese Company continued to own the Benallt and Nant mines until public records ceased after 1938. Benallt was flooded by May 1913, although some ore was obtainable from opencast working and the winding gear for the 110' deep shafts was still in position in 1914 (132). During the First World War the company's operations were concentrated on the Nant mine where nearly 4,000 tons of ore were produced in 1915 and over 9,000 tons in 1918 (See Table 7.6.) (133). During this period an additional incline and sidings were added to the tramway leading to the pier (134). (See Map 6.5. and Appendix I. Nos. 13 and 14.). The ore was worked using pneumatic drills (135). A coalfed engine working day and night kept the mines drained (136). At Nant the ore was obtained from one main ore body and was shipped in large lumps as it came from the mine. It was sent to Liverpool and thence to the smelters which required lumps rather than crushed ore (137).

The mines were now of national importance as the main producers in the United Kingdom of the manganese needed by the steel industry (138). Power was introduced with the use of oil engines, enabling the operation of air powered drillers and later electric power and

1931	nothing recorded	nil	nothing recorded	0	(2)
1932	-	nil	" "	0	(2)
1933	-	nil	" "	0	(2)
1934	-	nil	" "	0	(2)
1935	-	idle	0 1	0	1
1936	-	idle	0 1	0	1
1937	-	idle	0 1	0	1
1938	-	idle	0 1	0	1
1939				unknown	some
1940	863			863	some
1941)	no record	1,186	no official record		(Ministry of
) 8,394					(
1942)	" "	40,432	" "		(supply
					(
1943	12,299	" "	20,333	" "	62,000
					(Approx
1944	11,884	" "	17,607	" "	(150
					(
1945	2,586	" "	11,299	30	51
					(
1946	nil		Abandoned		-

□ combined figures for Benallt + Nant.

* combined figures for Rhiw, Ry Canol, Tyddyn Meirion.

Table 7.6. Manganese Output and Manpower, 1915 - 1946.

Year	RHIW		BENALLT		NANT		OTHERS		TOTAL TONNAGE	TOTAL NUMBER OF WORKERS
	Ore raised (tons)	workers below ground								
1915		0				19	7		4,585	26
1916		(10		23		23	8	50	3,372	51
1917	12,000	(6				30	15		6,093	71
1918		(20 *			9,306	23	13	328	10,481	166
1919		40		3		17	11		6,912	89
1920		5		3		16	11			(43
1921		closed				0	2			(2
1922		closed			nil	suspended				(
1923					358	suspended				(
1924				3	1,296	15	10		10,183	(29
1925				4	446	15	9			(29
1926			not worked		nil	0	1			(1
1927				3	971	0	4			(10
1928				2	30	0	8			(11
1929				0	nil	0	1		0	2
1930				0	nil	0	1		0	2

lighting (139).

At first horse transport was used to move the ore to Porth Neigwl from the Rhiw, Ty Canol and Tyddyn Meirion mines (140). (See Map 4.6.). Initially war conditions made it difficult to obtain goods by sea. It became necessary to carry coal and oil by road from Pwllheli to the mines, although the shipping out of ore was maintained under government control (141). However, towards the end of the war it was difficult and expensive to transport ore away by sea and, as a result of damage to the Porth Neigwl pier, its use was limited (142). In 1917 a fleet of ten motor vehicles carried ore from Rhiw mine to Pwllheli at a cost of £10.10s.6d. per vehicle per week (143). Between 1916 and 1919 the Ministry of Munitions was noted as having supported a variety of road transport to convey ore for the Rhiw mines, but owing to the state of the roads, the motors repeatedly broke down (144). The North Wales Iron & Manganese Company experienced similar difficulties with road transport (145). The tramway and pier at Porth Ysgo continued to be used by the Nant mine, but reference is made to the serious difficulties as regular shipments were frequently hindered by unfavourable weather conditions stopping the steamers of 250 - 500 tons from conveying the ore to Ellesmere Port (146). (See Map 6.5.). 2,000 tons of ore was said to be in stock awaiting shipment in 1919 (147). That year the chairman of the Company was strongly advocating the development of a railway extension from Pwllheli to Rhiw to assist in the transportation of manganese ore with additional benefits for agricultural development and for tourism but it came to nought (148). A list of sixteen ships used between 1913 and 1925 to convey manganese ore from Porth Ysgo is however a reminder of the continuing importance of the sea in the transportation of bulky and heavy products from areas as

remote as the study area (149). (See Appendix I. Nos. 13 and 14).

By 1920 foreign supplies were again available to British industry and the high cost lower grade ore from the study area was no longer in demand (150). Between 1920 and 1928 some work continued and about 10,000 tons was produced in Caernarvonshire, probably almost entirely from the study area (151). The North Wales Iron & Manganese Company closed in 1926 and the small level of production noted after that date was probably from opencast and accessible ore (152). From 1928 no manganese ore was produced in the United Kingdom until 1939. A caretaker is recorded as having oversight of the mines up to 1938 when public records cease. (See Table 7.6.).

During the 1914-18 wartime period of mining activity there was well paid work for any local men who wished to take advantage of it as a main or supplementary occupation. Lodgers brought in additional income and local trade was boosted. The collapse of the mining activity coincided with the deep agricultural depression of the 1920s and 1930s and the district plunged from an economic high to a period of great hardship. There was some migration particularly of young people seeking employment, although it was said that all who remained did find work within the neighbourhood (153).

In 1934 and 1935 approaches were made by two companies enquiring about both the North Wales Iron & Manganese Company and the British Mine Company, but it appears that nothing came of these enquiries (154).

In 1938 Mr. Prys, a Pwllheli Solicitor attempting to collect arrears of rent due from the Company working the mines on Nanhoron estate land during the First World War, read an article in The Times newspaper which described the way in which Germany was securing

independence from foreign resources, including manganese. Considering that war was likely, Mr. Prys decided to engage a former foreman from the mines and, with two men, obtained a Take Note and started exploring the mines (155). Brymbo Steel Company near Wrexham were persuaded to take a truck load a week. In 1940, 863 tons of ore were delivered (156).

By 1940 the Ministry of Supply agreed to subsidise the wage bill and small scale work continued. Imported manganese was by then virtually unavailable and the Ministry of Supply: Iron and Steel Control sent a consultant mining engineer to Rhiw. He arrived four days after Mr. Prys and his men had found a large ore body. This find was instrumental in the decision to recommend that the Ministry take over the mine, which was the only known source of manganese in the United Kingdom. In the Spring of 1941 the Ministry of Supply reopened the Benallt and Rhiw mines as one unit, with Mr. Prys as manager. Later up to 150 men were employed, working three shifts to obtain maximum production (See Table 7.6. and Appendix I. No.17). (157). The workings were extended (158). One shaft was deepened from 60' to 130' and the ore was obtained from headings driven from the shaft at three levels. Ore was allowed to gravitate to the lowest level and from this was hoisted to the surface (159). An electric winding engine, a crusher, offices, stores, smithy and changing quarters were quickly erected (160). Production of ore commenced in spring 1942 (161). The crushers were working day and night (162). The ore was crushed to 2 - 3" in size and was then transported by road to Pwllheli from a new loading bay by a fleet of lorries (163). These took the least hilly route to Pwllheli through Rhoshirwaun, Efail Newydd and Rhyd Y Clafdy (the old drovers route) when laden, and returned

empty over Mynydd Rhiw. This circular route prevented problems of lorries meeting on the narrow lanes (164). From Pwllheli the ore went by rail to the steelworks near Wrexham (165).

Cornish tin miners and Welsh colliers were brought in to provide skilled labour additional to that provided by local men (166). The men were working in cold wet conditions, but had showers, changing and drying room facilities (167). Mains electricity was brought in to the mines to work the compressor, lighting the site and a neighbouring chapel (168). Additions to Llwynfor were made to convert that house into a hostel for the influx of miners instead of them having to lodge throughout the area (169). The more senior staff boarded in houses in the village, or rented empty properties (170). One cottage was commandeered for the use of the clerk of the mine (171).

During 1942 a small contingent of the Royal Canadian Engineers assisted the Ministry of Supply. They camped on Ty Canol land and drained the Ty Canol and Court shafts (172). Then, using their diamond drilling equipment they were involved in 8,000 ft of exploratory drilling to extend knowledge of the geology of the mine (173). They supplied their own men, machines, transport and stores and charged only for the diamond bits used (174).

In 1943 the Nant mine was drained for exploration purposes, but was not worked. By 1944 resources were running low as some 40,000 tons had been extracted (175). A trial magnetometric survey had been carried out in 1942 but had failed to indicate orebodies (176). In May 1944 a new series of magnetometer traverses around the Ty Canol/Tyddyn Meirion area indicated magnetic anomalies and 10,000 tons of ore was then extracted from two of these sites (177). This was the first time that magnetometer

indications had been verified by underground exploration (178). It is recorded that between 1941 and the end of 1945 the mine yielded 62,000 tons of ore (179). Accounts stating tonnage were forwarded from the British Iron Management Company in London to the Nanhoron estate to whom royalties were due for part of the site (180). These indicate that over 35,000 tons of ore was raised from that section of the mine leased by Mrs. Gough of Nanhoron to the Ministry of Supply from August 1942 to July 1946 (181). (See Table 7.6.).

The mines were abandoned in December 1945, the site cleared and the shaft capped. It was however suggested that reserves of ore existed at depth (182). It seemed extremely unlikely that manganese mining would occur again in the study area.

The closure of the mines resulted in a sudden drop in income for many local families. With bonuses, wages at the mine had been up to £15 a week (183). This was as much as some agricultural labourers earned in a year on some farms (184). However, within a short time most men found work on farms and small holdings, or as builders, contractors and rabbit catchers, even though they were skilled miners and engineers (185). It was noted shortly after the 1939-45 War that the history of Rhiw had shown that to be solely a miner was to be frequently unemployed, and that mining was an occupation only for those periods when the mines were prosperous (186).

Thus the second period of wartime prosperity in both agriculture and mining in the study area came to an end. This time however, owing to the security of prices, agriculture did not enter a period of depression. In fact it was stated that after the war, agriculture was more prosperous than at any time within living memory (187).

The liquid milk sales continued to bring in ready cash but the secure high prices for store cattle was the greater attraction (188). As a result of past poverty, a lack of capital still hindered agricultural development (189). However, the communication network was better than ever before and there was also a wider knowledge of recent agricultural techniques and development. It seemed likely therefore that agriculture would continue to be the main source of occupation and income, and, augmented by the developing tourist industry, would provide an economic basis for the continued development of the local community.

III. SOCIAL ISSUES.

In the final phase of this study there were two major influences affecting the social and cultural life of the community, both of which varied in strength from time to time. First there was a growing centralisation of decision making by national and county government (190). Secondly there was the effect of the cyclical boom and depression in the local manganese mining.

The imposed changes initiated by central government concerning land utilisation were paralleled in the social context by such development as the introduction of the Old Age Pensions, unemployment and sickness benefits, and regulations concerning intermediate and secondary schooling (191). In general these brought improved conditions and increased opportunities within the study area to the level of those in the remainder of the country, with the noted exception of electricity, mains water and sewerage (192).

Educational opportunities for local people increased during

the First World War. Following the influx of miners from quarrying district of Arvon, Caernarvonshire, there was a demand for classes to be run by the Workers' Education Association. In 1917 the evening classes established in Rhiw were the first in South Caernarvonshire (193). These continued at least until 1923 (194).

There was a gradual decline in the influence of the chapels and churches in the study area during this phase. By the 1920s the importance and success of the Rhiw choirs was waning (195). Despite falling numbers some chapel based literary meetings did continue throughout the Second World War (196). In 1947 it was noted that denominational difference did not seem to hamper communal cooperation but that the cost of keeping the three chapels and two churches for the community must be burdensome (197). The long tradition of independent literary and theological thought seemed in 1947 to have almost disappeared (198). This change in community influence was augmented by the influx of English as well as Welsh miners, some of whom frequented the public house more than the chapel and church. As early as 1920 the Workers' Education Association took the initiative in organising a movement for securing a community centre in Rhiw. Funds were collected and a plot of land was purchased. The centre had however not been built by 1947 (199). However, the local Young Farmers Club and a branch of the Women's Institute were active in the 1940s (200).

A variety of external influences were imposed upon the community by reason of its high elevation and location on the Western peninsula of Britain with views of Anglesey, Ireland and South Wales. During the First World War a look out station was situated on Mynydd Y Graig, and local men were employed to keep watch (201). A rocket-fired Life Saving Apparatus was housed on

the slopes of Mynydd Y Graig to facilitate sea rescues. The rescue team was trained by visiting Board of Trade officials and practised regularly under a local leader (202). During the Second World War a look out station was sited on Clip Y Gilfinir (203). Bombing practice from the R.A.F. school at Penrhos near Pwllheli occurred in Porth Neigwl and a couple of stray bombs fell on Mynydd Y Graig, as did the wire and calico trailers used for target practice (204). U boats were seen offshore and, as elsewhere, all directional signs were removed (205). The study area was therefore not isolated from the effects of war.

Other externally imposed influences such as those arising from additional educational opportunities, the English-only network of the B.B.C. from 1923 onwards, the periodic influx of English miners, the considerable number of English evacuees in the Second World War and the increasing number of holiday makers since the 1930s had a marked effect on the spread in the usage of the English language within the study area (206).

Table 7.7. Use of Language by percentage of population.

Language	1921	1931	1947
Welsh only	68.1%	80%	8%
English only	0.7%	0%	2%
Both languages	31.2%	20%	90%

Table 7.7. indicates the percentage of mono- and bi-lingualism present in the community at times during this phase.

In 1947 the survey council of Rural Wales conducted a detailed survey into many aspects of rural life in the district of Rhiw as

elsewhere in the Llŷn peninsula (207). Tables 7.8, and 7.9, indicate the proportion of adults gainfully employed and the occupations followed. It is significant that agriculture continued to provide gainful employment for 56% of paid workers.

Table 7.8. Adult population: Work habits in 1947.

Category	Percentage of adult population
Gainfully employed	54%
Housewives	40%
Retired	6%

Table 7.9. Occupations followed in 1947.

Category	Percentage of paid workers
Agriculture	56.2%
Domestic Service	10.9
Building trade	10.1
General labourer	6.6
Mechanics	3.0
Armed Forces	2.6
Professions	2.2
Quarrying	2.2
Public Services	1.5
Transport	1.5
Food distributives	1.5
Fishermen	0.7

Table 7.10. Age Groupings in the Population, 1947.

Age Group	Percentage of total population.
Under 10 years	14.7%
10 - 20 years	10.9%
21 - 40 years	20.7%
41 - 60 years	35.1%
Over 60 years	18.5%

Tables 7.10 and 7.11 indicate the age groupings of the whole population and that of married couples in 1947. The low percentage of people aged 20 to 40, and particularly of married couples under

Table 7.11. Ages of Married Couples in 1947.

Category	Total	Percentage.
Total	61	100
Wife under 20	1	1.6
20 - 40 years	17	27.8
40 - 60 years	33	54.1
Over 60 years	10	16.4

40 years old is a direct result of the migration of people from the study area after the 1918 depression in the manganese mining industry (208). This had lasting significance for the area as it affected the future population size, school roll, employment market, local trade and leadership in community life.

Table 7.12 indicates the level of personal amenities available in local families. These were below the levels occurring in urban and less remote rural areas.

Table 7.12. Personal Amenities.

Criteria	Year	Percentage of total population
Car	1939	6%
Car	1947	11%
Wireless set	1947	69%
Telephone	1947	4%

Shortly after the Second World War it was stated that Western Llŷn was a residual area with a host of traditional attitudes and customs surviving in association with the use of the Welsh language (209). This was said to be an expression of isolation in economic and social as well as physical terms (210). To some degree this was true within the study area, but in Rhiw it was noted that mining activities brought with them an English element which at times led to a deterioration of the traditional way of life (211). The sudden but repeated intrusions of workers with a different language and tradition accompanied the periods of prosperity, only to be followed by periods of distress and migration (212). It was said that periods of increased population and prosperity led to a number of divisions in the religious and social life of the community (213). The suddenly increased status of some local people during periods of mining, together with the presence of English people accentuated divisions. These features were said to be more pronounced amongst the cottagers and small holders near the cluster of the village along the higher slopes and in the col.

The breakdown of the isolation which had previously hindered economic and thus social development of the study area had been a

highly significant factor during this period, bringing the community many of the benefits of the twentieth century.

The security of occupation and tenure now experienced by many farmers, together with the security of post-war farm prices indicated a good foundation for the future agricultural development of the study area. Standards of living were said to be higher than ever before in peace time (214). Capital investment and the basic amenities of mains water and electricity were however urgently required to develop both the agricultural and the growing tourist industries. If these were to be forth coming it seemed likely that the drift of young people from the district could be slowed down, and that agriculture, the backbone of the local economy, could in future be linked with the regular, albeit seasonal tourist industry. The income thus raised could maintain community ventures, particularly if the proposed community centre became a reality and help decrease the drift of people from the study area.

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CONCLUSIONS

A wide range of evidence has been gathered to support this thesis. This evidence is of a varied nature including government-initiated surveys, reports and censuses, authoritative works on particular aspects or periods of time, and the recollections of many local people past and present. Evidence from numerous estate maps and papers and other unpublished material has also been used. Variations in the type, depth and reliability concerning the particular parishes being studied as well as in the availability of data over time has meant that the evidence has not always been comparable. In some cases at particular periods in time for example, agriculture in the 1780s and the 1830s, this has necessitated the statement of generalisations for and trends within the region of Llŷn or the county of Caernarvonshire. Those available examples relating to the study area have been used to confirm or dispute such more general evidence. This has been more frequent in the investigation of agriculture than of mining. As the study area contained virtually the entire manganese ore extracted from Caernarvonshire, the problem of generalisation has not arisen. A variety of previously unpublished evidence concerning particularly the first fifty years of manganese extraction within the study area has been used to supplement information from published sources.

As the study area lies in the extreme north west peninsula of Wales, it was anticipated that the evidence would support the conventional model of highland Britain. The expectations were therefore of fewer changes occurring later, more slowly and with less

lasting effect than those changes occurring in lowland Britain. Other anticipated characteristics included a dispersed settlement pattern, interdependent agrarian communities and pastoral farming with subsistent crop growing. The slow diffusion of ideas through a hierarchy of land-owners to tenants and then to other small farmers, and the lack of good overland communications were additional anticipated features, as was the irregular tapping of mineral wealth as a supplement to agriculture.

During the latter part of the study, in common with much of highland Britain, the potential for conflict could be anticipated with the demands of urban and industrialised areas of Britain in the forms of forestry and particularly tourism.

Certain additional characteristics could be anticipated in the Welsh context of this study. These included various ramifications of the Welsh/English conflict over language and in social and political life, the church/chapel divide, the land question and the implications of the influence of religion and education on Welsh communities. This study has concentrated upon settlement pattern and land utilisation and relates to the Welsh context where appropriate.

Between 1782 and 1947 the parishes of Rhiw and Llanfaelrhys experienced the effects of a variety of changes in settlement pattern, land ownership and land utilisation, in addition to the effects of both locally and nationally initiated developments. The impact of differing combinations of these factors varied throughout the period studied, with most phases illustrating continuity, consolidation or very gradual development. There were relatively few occasions of marked change and when they occurred they were changes in kind rather than of degree (cf Enclosure Acts and mining).

Throughout the study area as a whole the dispersed settlement pattern remained a constant feature illustrating continuity, despite some clustering occurring at different periods for varying reasons. The development of the settlement pattern is indicated in Table 8.1, and illustrates several significant issues.

Table 8.1. Overview of Settlement Development, 1782 - 1947,

Dwellings	Number in 1782	Between 1782 and 1947		Number in 1947
		Number of new dwellings	Number of deserted dwellings	
Farmhouses	49	11	6	54
Cottage/houses on commons	4	85	48	41
Cottage/houses not on commons	0	50	29	21
Total	53	146	83	116

In 1782 the pattern was one of widely dispersed farmsteads scattered throughout the study area over all except the commonland. There were four cottages, all lying within the areas of commonland, with no clustering at all. (See Map 2.1.). In 1947 the pattern of farmhouse distribution was very similar with only six of the original forty nine farmhouses having been deserted, and eleven new farmhouses established. (See Appendix I. No. 2.).

However, significant developments in the overall settlement pattern are illustrated by the large numbers of virtually land-less cottages, and later houses, built to accommodate the growing population of agricultural labourers and craftsmen. 135 of these

dwellings were built, of which almost two thirds were sited on the former commons. It is equally significant that over a half of these new dwellings were not successful in the long term, and by 1947 were deserted. Approximately two thirds of these deserted dwellings were amongst those erected on the former commons. By 1947 over half of the dwellings in the study area consisted of cottages and houses, as opposed to farmhouses, in marked contrast to 1782. These dwellings were most densely clustered along the strip of former common lying across and immediately to the south of the col in the central ridge. (See Map 7.1. and Appendix I. No. 1.). This had become the centre of the community, containing the school, shops, Post Office, garage and two of the three chapels and was focussed on the crossroads where the road from Pwllheli to Aberdaron traversed the study area.

Successful site selection depended upon a variety of factors. In 1947 the vast majority of inhabited cottages and houses below the former commons were close to roads and to a good water supply. Distance from these two amenities had been a common factor amongst the cottages which had become deserted by 1947. Other environmental factors, such as slope, aspect and soil type, appear to be of significance in site selection, especially when the dwelling was associated with a small holding or garden. These environmental issues were however subsidiary factors, assisting the process of changing the settlement pattern, and only affecting choice after the crucial social factor of land ownership. Generally the only land available was that within parts of the former commons and on those estates whose owners were agreeable to such development. Some land owners refused to allow any building on their land and this significantly affected the settlement pattern. Many of the

available plots of land were at high and exposed positions in the study area and were built upon at times of high population or particular need. Altitude was thus one of several aspects of site selection influenced by the social factors determining the availability of land for encroachment, lease or purchase. It was due partly to the relatively good soils over much of the higher ground that many cottagers were able to exist, even if at subsistence level.

This study shows that settlement development occurred slowly within a framework of a continuing pattern of dispersed settlement, despite the apparent clustering of dwellings near the central col by 1947.

Economic continuity is illustrated by the fact that agriculture formed the basis of the local economy throughout the whole period under study. The stability given by the persistence in the pattern of farmhouses referred to earlier, of land holdings, and by the gradual acceptance of innovation appropriate in this topographically varied and remote area underpinned any other fluctuations in the economy.

Prior to the early nineteenth century enclosures the local economy had been one of mainly self supporting mixed farming which had barely changed since medieval times. Large farms produced store cattle for sale and most holdings produced virtually all their own basic requirements. The community was interdependent and was generally disinterested in, and untouched by, improvements in agriculture or in communications which tended to be initiated in Wales by the wealthy or the English.

Changes in emphasis occurred to meet changing market demands as for example corn in 1815, younger cattle in the 1890s, and

younger sheep around 1900. The proportion of arable land fluctuated as did that of the numbers of mature versus younger cattle and sheep, of numbers of sheep versus cattle and of the numbers of pigs and poultry. Land holdings and field patterns altered little between 1782 and 1947 with the exception of the allotments gained after the Enclosure Acts. By the 1940s however most of the major estates had sold their lands within the study area, frequently to the tenants. There was therefore a continuity in both land boundaries and in the families working the land, even though the land ownership pattern had been modified towards the end of the period of study. In 1947 the agricultural economy was strong, with emphasis on store cattle and liquid milk sales. Agriculture had gained from the enforced break with tradition during the Second World War, and continued to provide the basis of the local economy. This continuity of land use and settlement pattern had therefore proved the major economic and social influence throughout the whole period of this study.

One of the major barriers to change was the difficulty of an effective overland communications network. With the exceptions of cattle droving and local coastal traffic, Pwllheli market was, for most people, the limit of both travel and experience until the building of the Turnpike road and later the railway. Slow modes of transport and the poor condition of roads west of Pwllheli continued to hinder the movement of people and goods even up to 1947.

These physical constraints also hindered the effective communication of ideas and economic developments. The educational opportunities available, frequently in a religious context, nevertheless enabled literacy in Welsh and later in English to be achieved by many in the community. The printed word and later

the English-medium radio speeded the diffusion of ideas and thus the rate of change in various aspects of local life. This was to some degree associated with both the loss of individuality and the process of anglicisation. In the former it is clear that as the local consumer economy became more involved, through the slowly improving communications network, with the purchase of mass-produced convenience goods so the role of the local craftsmen declined (See Chapter 5 page 185). This gradual change accelerated after the turn of the twentieth century.

The early nineteenth century search for minerals throughout highland Britain intensified despite the poor network of roads, and many changes were initiated wherever ore was found and extracted. Within the study area it is clear that one of the chief harbingers of change was the spasmodic activity at the manganese mines. From the discovery of manganese in 1827 until the late 1880s ore extraction was insignificant and probably irregular. The mining sites were mainly on agriculturally non-productive land and the small number of men employed returned to agricultural work during periods when mining ceased. Even during these early stages however, English mine agents and miners were bringing new ideas to the area. This influence developed further during the periods of mining activity between 1886 and 1900, but its effectiveness is difficult to prove (See Chapter 6 page 239).

There was a major influx of miners, and correspondingly, of new influences, habits and ideas, during the boom years of 1904 - 1908 and again during the First World War. Miners lodged in farmhouses and cottages and there must have been a considerable exchange of ideas and opinions. Mining also brought an increase in earnings and thus in spending power amongst the miners and the families with whom

they lodged and so the general community benefitted. This was particularly so around 1918 when the study area was said to have been more prosperous than at any previous time in its history. It appears that the few larger farms were the only group not to benefit from the mining; indeed some lost labourers to the better paid work at the mines. During the Second World War mining was centrally organised by the government, the miners resided in a hostel and, apart from offering employment opportunities, had less affect upon the community than during the First World War.

By 1947 the mining activity had completely ceased, almost certainly for ever. Despite the very small area of land utilised by the mines, their influence on the economic and social life of the community had been very considerable. As a result of this alternative and usually subsidiary form of employment, many cottagers and smallholders had been able to make an adequate living. Population migration and the desertion of cottages had been partially stemmed and thus the settlement pattern had also been affected by the presence of the mines.

As in the other beautiful parts of highland Britain, tourism was another more recent force for change. By the late 1940s the slowly developing seasonal tourist industry was already proving a source of income for many local families. A number of cottages were maintained as holiday homes instead of becoming derelict, thus also affecting the settlement pattern. Tourism appeared to be taking over from mining as the intermittent secondary source of income and as a link with those from distant and frequently differing backgrounds and traditions (See Chapter 7 pages 282 and 297).

Several changes within the study area were the results of government intervention or assistance. The Acts of Parliament

enabling the enclosure of the lowland and upland common within the study area in 1802 and 1811 respectively were the results of landlords' wishes to capitalise on both the profitable grain market during the Napoleonic Wars and on the opportunity to acquire the commons for their own uses. The effects were probably more wideranging than anticipated in economic and social terms, in addition to the settlement implications already described.

The loss of use of the commons was a major factor in the increased poverty amongst the rising number of cottagers. Without their grazing rights they were unable to keep the few sheep and the cow which enabled many to provide for their families. Emigration and the workhouse were amongst the extreme solutions. Most however became agricultural labourers involved in the hedging, ditching and cultivation of these additional lands as, very slowly, improvements in agricultural practice spread into the study area. Improvements were required by the conditions in the leases of some estates, such as Glynllifon in the 1790s affecting Penarfynydd farm. They apparently spread only as and when, modified for local conditions, they were seen to be successful and could be afforded by other tenants and smallholders.

Only after the start of the First World War did the outside influence of the governments' requirements and aid breakdown the independence and isolation of the area by enforcing common levels of production and hygiene throughout the country. However, because of the physical environment of the study area, the imposed changes did not make a great impact. Small holdings and pasture land continued to dominate, albeit making more use of appropriate modern developments.

During the Second World War government departments organised

the manganese mining in the study area and, as elsewhere, determined many aspects of agricultural and industrial life. Enforced compliance brought change to many and influenced future levels of expectation.

Evidence from the study area confirms the anticipated influence of religion and education upon the way in which the local community coped with change. The religious and educational opportunities for involvement in community life and for self development were significant in preparing the local community both to accept some aspects of change and also to resist others in line with the growing Welsh nonconformist political consciousness. Particularly in the nineteenth century, the strong commitment of many to the religious developments of the period provided a crucial support through the very severe economic hardships and poverty experienced by all but the larger lowland tenant farmers. The community survived despite rather than as a result of the economic conditions.

One characteristic of the Welsh heartland is the survival of the Welsh language and of associated religious and cultural activities. In spite of the increased English influence in the study area during periods of mining activity and latterly from the tourist industry, it appears that anglicisation has been to a great measure resisted. There is little specific evidence from within the study area concerning other aspects of the Welsh/English conflicts over language, the Church/Chapel divide, the land question, or concerning political stance. It is unlikely that, despite more contact with English people through mining than the surrounding rural area, the parishes of Rhiw and Llanfaelrhys exhibited divergence from the regional response to these issues.

This study therefore illustrates that the various changes in

the settlement pattern and land utilisation within the parishes of Rhiw and Llanfaelrhys between 1782 and 1947 were superimposed upon a constant framework of mainly small agricultural holdings continuously worked with occasional spurts in the rate of agricultural development. Augmenting this, the growth of settlement, particularly around the col in the central ridge, provided homes for the growing population of agricultural labourers and craftsmen, many of whose remaining occupants later turned to mining and finally to the tourist industry as successive sources of secondary employment. Within its cultural and particularly its religious traditions, the local community responded to the various factors influencing change in ways which enabled it to overcome severe hardship, retain much of its own identity, and to face the future with some degree of confidence. Between 1782 and 1947 the local community of Rhiw and Llanfaelrhys was clearly modified by a succession of changes but such developments did not mask the overriding continuity shown in both settlement pattern and land utilisation.

This study endorses many of the expectations within the model of highland Britain by illustrating that the concept of continuity was, within the parishes of Rhiw and Llanfaelrhys, more influential between 1782 and 1947 than that of change.

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APPENDIX I. PHOTOGRAPHIC EVIDENCE.

1. Rhiw from Creigiau Gwineu, c.1930s.
2. Rhiw from Mynydd Penarfynydd, c.1938.
3. Ty Canol farm, Rhiw. c.1910.
4. Flock of Rhiw sheep, Ty'n Gamfa, Rhiw. c.1950.
5. Haymaking at Conion farm, Rhiw. c.1940.
6. Ty'n Rhedyn farm. c.1930s.
7. A typical Llŷn creek. c.1900.
8. Y Rhuol harbour, Rhiw. c.1930s.
9. A religious gathering at Pwllheli. 1909.
10. A typical market-day scene. c.1900.
11. Aerial ropeway, Rhiw. c.1904-1910.
12. Aerial ropeway outside Moelwyn View, Rhiw. c.1904-1910.
13. Porth Ysgo jetty. c.1920s.
14. Porth Ysgo jetty. c.1920s.
15. Benallt and Rhiw mines. Pre 1922.
16. Manganese miners at Nant mine. c.1900.
17. Manganese miners at Benallt mine. 1907.
18. Manganese miners at Benallt/Rhiw mine. c.1940.



1. Rhiw from Creigiau Gwineu, illustrating the cluster of settlement along one side of the road along the col in the 1930s.



2. Rhiw from Mynydd Penarfynydd, illustrating settlement, land use and the Benallt and Rhiw mines. c 1938.



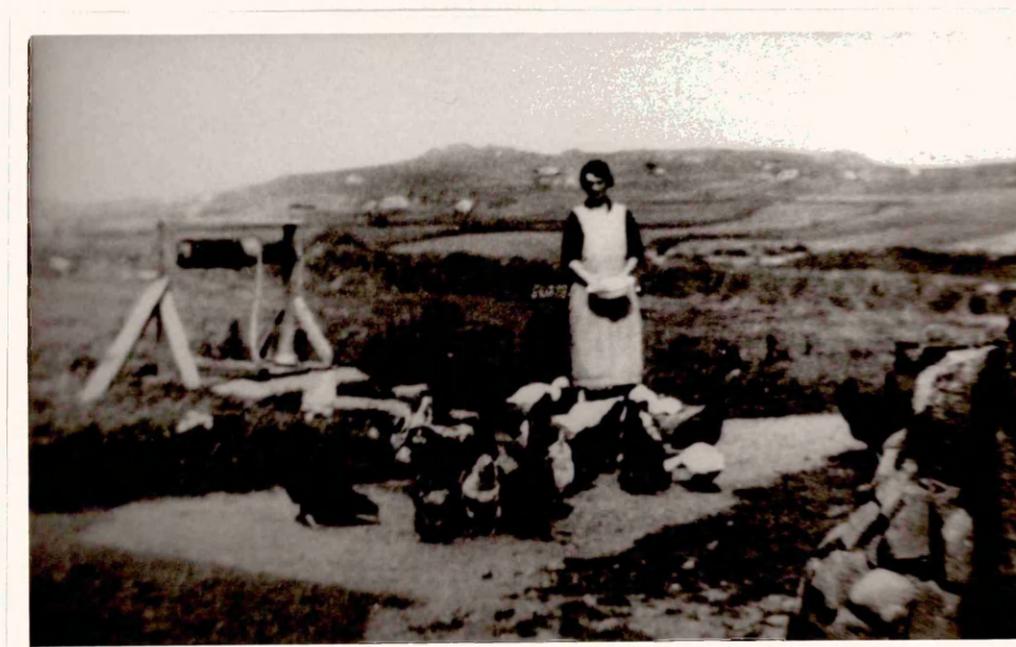
3. Ty Canol farm, which benefitted from the mine on its land. c 1910.



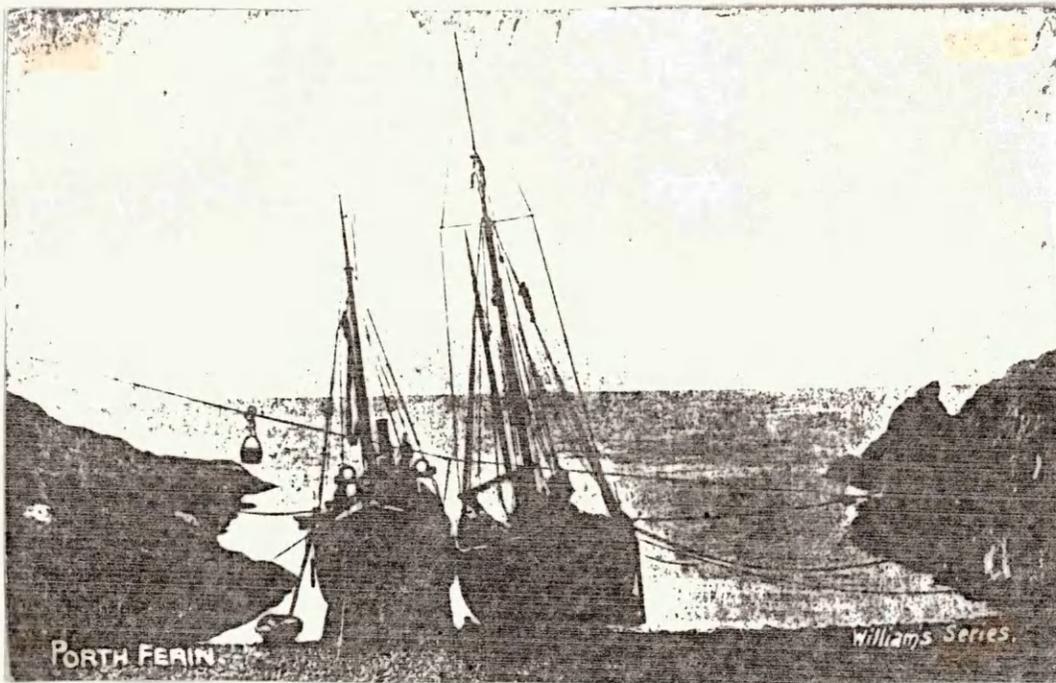
4. The last flock of the Rhiw breed of sheep, at Tŷn Gamfa. c 1950.



5. Cooperation between farmers at haymaking on Conion farm.
c 1940



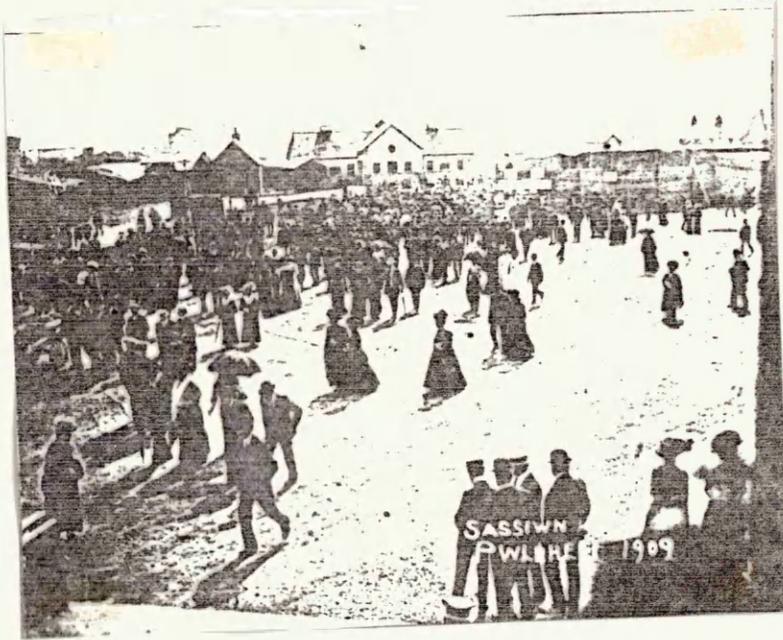
6. Continuing self sufficiency on the mixed lowland farm of
Ty'n Rhedyn. c 1930s. Note the Well.



7. A typical Llyn creek used in preference to overland routes.
c 1900.



8. The harbour of Y Rhuol, Rhiw, to which lime, coal and groceries
were shipped and from which manganese was exported. c 1930s.



9. A typical major religious gathering in Pwllheli, 1909.



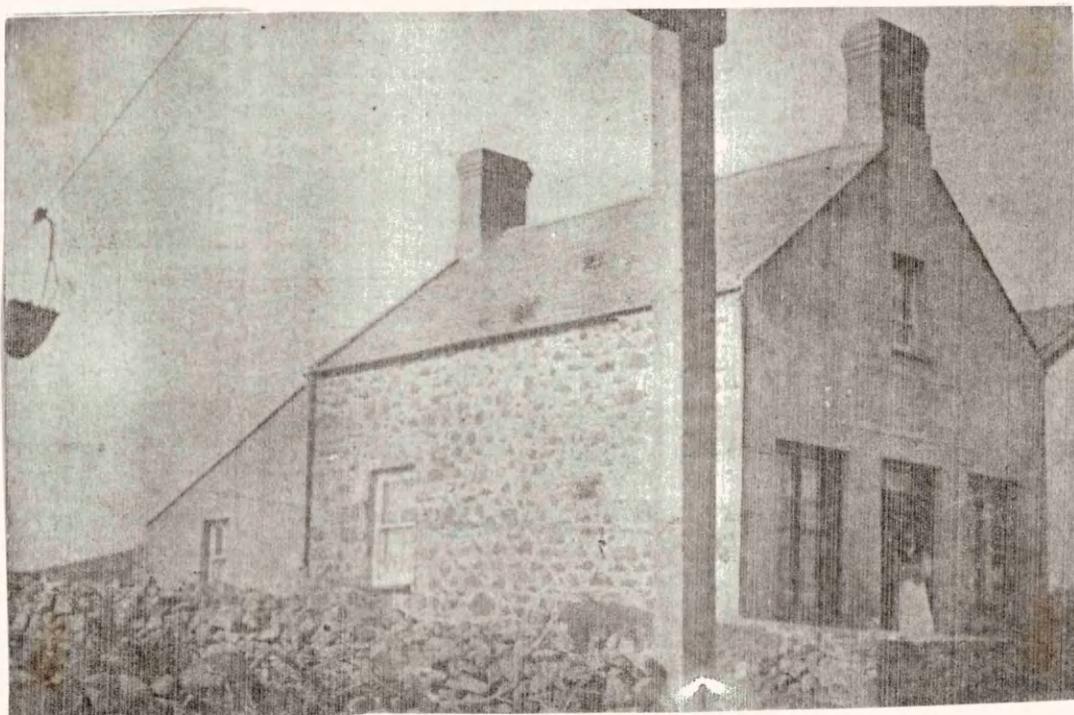
10. A typical market-day scene. c 1900.



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11. Aerial Ropeway from Rhiw Mine to Porth Neigwl jetty.
c 1904 - 1910.



12. Aerial Ropeway outside former shop at Moelwyn View.
c 1904 - 1910.



13. Jetty at Porth Ysgo used by Benallt and Nant Mines.
c 1920s. Looking West.



14. Jetty at Porth Ysgo used by Benallt and Nant Mines.
c 1920s. Looking East.



15. Shafts at Benallt and Rhiw mines. Pre 1922.



16. Manganese miners at the Nant Mine. c.1906.



17. Manganese miners at Benallt mine. c 1907.



18. One of three shifts of manganese miners at the combined Benallt and Rhiw mine. c 1940.

