



Provided by the author(s) and University of Galway in accordance with publisher policies. Please cite the published version when available.

Title	Archaeological watermarks: Settlement, landscape and seasonal flooding in historical Ireland
Author(s)	O'Flaherty, Enda
Publication Date	2020-09-21
Publisher	NUI Galway
Item record	<a href="http://hdl.handle.net/10379/16614">http://hdl.handle.net/10379/16614</a>

Downloaded 2024-04-26T06:15:13Z

Some rights reserved. For more information, please see the item record link above.



Archaeological Watermarks: Settlement,  
Landscape and Seasonal Flooding in  
Historical Ireland

Ph.D Thesis

**Enda O'Flaherty**

**Volume I of two volumes**

Funded by the National University of Ireland Galway

College of Arts, Social Sciences and Celtic Studies  
Galway Doctoral Research Scholarship Scheme

**Supervisor: Professor Elizabeth FitzPatrick**

**Head of Department: Dr. Carleton Jones**

**School of Geography, Archaeology and Irish Studies**

**Faculty of Arts**

**National University of Ireland, Galway**

**2020**

## TABLE OF CONTENTS

<b>List of Figures</b>	5
<b>List of Plates</b>	9
<b>List of Tables</b>	11
<b>List of Abbreviations</b>	12
<b>Acknowledgements</b>	13
<b>Abstract</b>	15
<b>Chapter 1 – Introduction, methodology and sources</b>	<b>17</b>
1.1 Introduction	17
1.2 Methodology	21
1.2.1 Field survey	22
1.2.2 GIS	23
1.2.3 Aerial photography	25
1.3 Sources	26
1.3.1 Scientific and environmental data	26
1.3.2 Documentary and toponymic sources	28
1.3.3 Native primary documentary sources	28
1.3.4 English administrative records	31
1.3.5 Maps	32
1.3.6 Place-names	35
1.3.7 Secondary sources	37
1.3.8 Published and unpublished archaeological reports	38
<b>Chapter 2 - Theoretical frameworks</b>	<b>40</b>
2.0 Introduction	40
2.1 Landscape archaeology	41
2.2 Phenomenology	43
2.3 Historical archaeology	46
2.4 Space and Place: the approach of Human Geography,	48
2.5 Conclusions	40

<b>Chapter 3 - Turloughs - an environmental and topographical description</b>	<b>51</b>
3.0 Introduction	51
3.1 Environment and geology	55
3.1.1 Solid geology	55
3.1.2 Soils and glacial geology	57
3.1.3 Land use, ecological and botanical background	59
3.2 Hydrology and hydro-geology	60
3.3 Turlough deposits	64
3.4 Conclusions	65
<b>Chapter 4 – Previous archaeological research within turlough landscapes</b>	<b>67</b>
4.0 Introduction	67
4.1 Settlement studies in turlough environments	68
4.2 Previous research on the possible occurrence of crannógs on turlough floodplains	70
4.2.1 <i>Terloch Teóra Crích</i>	77
4.2.2 Resolving the hypothesis that crannógs occur on seasonal lakes	79
4.3 Excavated evidence for human settlement in turlough environments	80
4.3.1 Antiquarian investigations and early archaeological research	80
4.3.2 Modern excavated evidence for human settlement in turlough environments	82
4.4 Discussion and conclusions	99
<b>Chapter 5 - Human experience of turloughs through time; historic, literary and toponymic records</b>	<b>102</b>
5.0 Introduction	102
5.1 Human settlement and turlough environs in the native sources	104
5.1.1 Place-name lore and turlough environments	104
5.1.2 Toponymy, the cognitive landscape,	

and turlough place-names	112
5.1.3 Place-name evidence for the agricultural activity in turlough environments	121
5.2 The humanistic geography of turlough environments in the early modern period; drainage and management	125
5.3 Conclusions	132
<b>Chapter 6 - Turlough environments as a natural resource through time</b>	<b>135</b>
6.0 Introduction	135
6.1 The grazing of turlough lands through time	136
6.1.2 Documentary sources for the past grazing of turlough lands	144
6.2 Turlough fisheries, eel weirs, and winter fowl	149
6.4 Conclusions	164
<b>Chapter 7 - Seasonal flooding and strategic settlement in a dynamic landscape; Turloughmore Co. Galway</b>	<b>166</b>
7.0 Introduction	166
7.1 Defining the study area	168
7.2 Topographical description of Turloughmore	168
7.2.1 Solid geology	172
7.2.2 Soils and Subsoils	173
7.3 The palaeo-environment of Turloughmore	173
7.4 Grange Castle; exploiting the natural resources of Turloughmore at a Cistercian grange	175
7.4.0 Introduction	175
7.4.1 The medieval parish of Grange	177
7.4.2 The archaeological evidence for medieval settlement at Grange	178
7.4.3 Human interaction with the landscape of Grange through the medieval period	182
7.5 Seasonal flooding in the manorial landscape;	

strategic settlement and natural resources	189
7.5.0 Introduction	189
7.5.1 The historical record and borders of the manor of Corofin	190
7.5.2 The archaeological remains at Corofin	193
7.5.2.1 The possible moated site at Corofin	196
7.5.3 Corofin as a manorial centre in a resource-rich landscape	197
7.5.4 The economic benefits of Corofin's location; A corn-mill and fish weirs at Corofin in the medieval period	201
7.6 Annbally Castle; Late-medieval settlement on the edge of Turloughmore	204
7.6.0 Introduction	204
7.6.1 The archaeological remains at Annbally	204
7.7 Discussion and conclusions	207
<b>Chapter 8 - Turloughs as social environments;</b>	
<b>Communal spaces and places of assembly</b>	<b>209</b>
8.0 Introduction	209
8.1 Turloughs as communal spaces and a shared resource	213
8.1.2 <i>Páirc</i> lands and turlough tenure	218
8.2 Occasions of communal gathering on turlough floodplains	220
8.3 Sports, ball games and horse-racing on turlough floodplains	232
8.3.1 Horse racing on turlough floodplains	236
8.4 Summary and conclusions	240
<b>Chapter 9 - The cognitive landscape, management and natural symbiosis; human engagement with turlough landscapes in the past</b>	<b>242</b>
9.0 Introduction	242
9.1 Turloughs as Taskscapes	244
9.2 Turloughs, adaptation and settlement	250
9.3 Turloughs and the cognitive landscape	252
<b>Chapter 10 - Conclusions and future research</b>	<b>257</b>

## List of figures

**Fig. 1.1** A map of central Co. Galway showing Turloughmore, compiled for the third report of the commissioners appointed to enquire into the nature and extent of several bogs in Ireland in 1814 (after The commissioners on the nature and extent of bogs in Ireland 1812).

**Fig. 1.2** The distribution of turloughs in Ireland overlying a map of Irish Speakers as a percentage of the total population, barony by barony in the early 19<sup>th</sup> century. (after Fitzgerald 1984).

**Fig. 3.1** The distribution of turloughs in Ireland based on data obtained from the Geological Survey of Ireland (GSI 2020).

**Fig. 3.2** Petty's *Hiberniae Delineatio* showing the expanse of the 'Great Turlough' at Turloughmore in Co. Galway during the mid-17<sup>th</sup> century. The landscape was subject to extensive arterial drainage works primarily undertaken during the first half of the 19<sup>th</sup> century, with much of the former flooding regime now extinct (Petty 1656-58).

**Fig. 3.3** A simplified geological map of Ireland showing that turloughs predominantly occur in the west of Ireland and are associated with those areas identified by the GSI as (Dinantian) pure, bedded limestones. (after Sheehy Skeffington *et al.* 2006, 268).

**Fig. 3.4** The former extent of surface drainage pre-and post-arterial drainage works, based on the First Edition Ordnance Survey maps. (after Coxon 1986, 30).

**Fig. 4.1** A distribution map of turloughs and crannógs based on data available from the GSI and the SMR for Ireland. For the purposes of visual presentation of data, a small number of turloughs from east of the River Shannon have been excluded as they have shown no evidence for crannóg settlement.

**Fig. 4.2** First Edition Ordnance Survey map showing the crannog of *Cloghincha* (GA 104: 244) in the townland of Killeenmore, Co. Galway.

**Fig. 4.3** The location of excavated archaeological sites referred to in this chapter. The inset shows a concentration of excavations in south Co. Galway, the majority of which were development-led excavations ahead of the construction of the M-18 Galway-Limerick motorway.

**Fig. 4.4** The distribution of excavated archaeological sites in the townland of Caherweelder, Co. Galway that have been referred to in this chapter. The turlough floodplains are marked in yellow (after O'Mahony and Delaney 2010 (b)).

**Fig. 5.1** The dense distribution of turloughs within the early medieval territory of the Uí Fhiachrach Aidhne. (after O'Donovan 1843). The locality of Áth Senbó, to the north-east of *Meadraige* is highlighted in red.

**Fig. 5.2** An aerial photograph of the present landscape around the proposed area of Corcaraige Feda Manach and Turloch Silinde (Image source: Google Earth).

**Fig. 5.3** A breakdown of place-names associated with turlough environs based on the database compiled for this study.

**Fig. 5.4** The distribution of turloughs whose place-name elements suggest exploitation of the turlough floodplain for grazing purposes.

**Fig. 5.5** An extract from the First and Second Edition Ordnance Survey maps showing the area of Corofin and Cloonkeen Lough at the northern end of Turloughmore, Co. Galway, and the nature of the drainage regime, pre and post 19<sup>th</sup> century arterial drainage works.

**Fig. 6.1** Frizell's 1775 Map of a portion of *Oldtore* on the St. George Estate near Headford in Co. Galway showing settlement and cultivation ridges at the edge of *Turlough Monaghan* (Galway County Council Archives GS01/5).

**Fig. 6.2** The First Edition Ordnance Survey sheet depicting the eel weir and 'shoot house' at Coldwood/Pollnakirka turlough, Co. Galway. Pollnakirka is noted by O'Donovan (1838) 'as a small lake or pool of water convenient to an eel fishery'.

**Fig. 6.3** A simple drawing of a type of eel spear used on River Clare possibly dating to the late medieval period. This sketch was drawn from a specimen obtained at Annaghdown, Co. Galway and is held in the collections of the National Museum. (after Went 1943-4, 205).

**Fig. 6.4** Frizell's 1775 map of the townland of Turloughcor in Co. Galway with accompanying rent-rolls and a description of the land quality and natural resources. This description includes a short note referring to a weir which was in operation on the turlough (Galway County Council Archives GS01/5).

**Fig. 6.5** The distribution of fishing engines on turlough floodplains. It can be seen that these weirs are largely concentrated in south Co. Galway and associated with Jennings' and O'Donovan's Type A and B- riverine turloughs, which are most common in that area.

**Fig. 6.6** Distribution of weirs on Cloonkeen Lough and the Turloughmore floodplain, superimposed on karstic geological features identified by the GSI.

**Fig. 6.7** The First Edition Ordnance Survey map showing the floodplain at Turloughmore common with Carrygarve eel weir located to the south.

**Fig. 6.8** A plan completed for this study, of the turlough weir located at Garryland/Doolough Turlough in Co. Galway.

**Fig. 6.9** The First Edition Ordnance Survey map showing the weir between Coole Lough and Garryland/Doonowen Turlough in the townland of Doonowen.

**Fig. 7.1** The First Edition Ordnance Survey map with the 19<sup>th</sup> century flooding regime of the former turlough of Turloughmore shaded dark. Cloonkeen Lough is identifiable to the north as permanent lacustrine environment which was prone to swelling during periods of wet weather.

**Fig. 7.2** A topographical representation of the distribution of minor place-names recorded at Turloughmore including place-names relating to the various floodplains and islands of Cloonkeen Lough.

**Fig. 7.3** A shaded relief map of the solid geology of the Western Lowlands and Turloughmore showing the area dominated by undifferentiated Visean Limestone. The flooded area or Turloughmore has been inserted in place of the modern, artificial drainage pattern (GSI 2020).

**Fig. 7.4** HCI (Hydro-Climatic Index) plots for core samples taken at Abbeyknockmoy, Co. Galway. Peaks reflect dry conditions, troughs reflect wetter conditions, and dashed lines emphasise phases of change to wetter/cooler conditions, beginning with the major change around 4400 cal. BP. A rapid

deterioration in climate can be identified beginning at 1300 A.D. and persisting through to the 16<sup>th</sup> century (The Wolf Minimum). (after Barber *et al.* 2003, 532).

**Fig. 7.5** The First Edition Ordnance Survey map showing the extent of the former medieval parish of Grange and the modern townland of Grange East. The site of Grange Castle is indicated to the north along with the vernacular settlement clusters of Grange Lower and Grange East.

**Fig. 7.6** Petty's *Hiberniae Delieatio*, commonly called Petty's Atlas, showing the former parish of Grange as separate from the modern parish of Lackagh (Petty 1656-58).

**Fig. 7.7** The First Edition Ordnance Survey map showing the Grange Castle and 19<sup>th</sup> century vernacular settlement complex constructed on a raised platform at the site.

**Fig. 7.8** A plan completed for this study, of Grange tower house showing the plinth on which the tower is built and, the tower itself, the possible hall which lies to the west and the possible remains of the raised platform on which the complex was built.

**Fig. 7.9** The First Edition Ordnance Survey map showing *Cloghaungiblin* and the sub-division of lands within the turlough channel.

**Fig. 7.10** The First Edition Ordnance Survey map showing the field layout and road network for the medieval parish of Grange.

**Fig. 7.11** A plan compiled for this study, of the extant and excavated archaeological remains at Corofin super-imposed on the pre - 19<sup>th</sup> century drainage pattern in the area around Corofin Castle.

**Fig. 7.12** Highlighted, is the proposed extent of the manor of Corofin in the mid-13<sup>th</sup> century based on Knoxx (1901 (b)) and Petty's *Hiberniae Delieatio* (1656-58).

**Fig. 7.13** The Second Edition (revised) of the Ordnance Survey sheet for Corofin showing a linear feature running north-south on either side of the 17<sup>th</sup> century bridge.

**Fig. 7.14** The First Edition Ordnance Survey map depicting the tower house, platform and the village of Corofin.

**Fig. 7.15** Extracts from Petty's *Hiberniae Delieatio* and the First Edition Ordnance Survey map depicting the area around Carrygarve. Carrygarve is marked as *Curo* in Petty's 17<sup>th</sup> century publication with the nearby Lackagh Castle recorded as *Qworanonyn* in the 1574 list of castles and their owners (after Nolan 1901, 39).

**Fig. 7.16** A plan compiled for this study of Annbally towerhouse, bawn and the surrounding earthworks to the southeast which may have formed part of a series of flood defences.

**Fig. 8.1** Gurrauns race-course on Gurrauns Turlough, north-east of Tuam in Co. Galway. The outline of the race course is clearly marked on Larkin's 1812 Grand Jury map of Galway.

**Fig. 8.2** The First Edition Ordnance Survey map showing the site of Cathair na nIarla, the conjectured royal assembly place of the Uí Fhiachrach Aidhne (FitzPatrick 2004, 168) and possibly the later open-air manorial court of the Clann Uilliam Uachtair (FitzPatrick 2001 (a), 368) in the townland of Castlegar, Co. Galway. The site overlooks a former turlough floodplain to the north-west.

**Fig. 8.3** The distribution of enclosures and ringforts in the vicinity of the townlands of Lisnagranshy, Manninard, Pollnagarragh East and Parkbaun in south Co. Galway compiled for this study.

**Fig. 8.4** The First Edition Ordnance Survey map showing Raith Eassa Caoide in the townland of Raussakeera North, Co. Mayo. This ringfort has been identified as the inauguration site of Mac Uilliam Íochtair and is situated to the north-west of a 45 ha floodplain.

**Fig. 8.5** The First Edition Ordnance Survey map showing the site of Magh Adhair marked as Cregnakeeroge Fort and the limestone outcrop on the northern, eastern, and south-eastern sides.

**Fig. 8.6** The First Edition Survey map showing Loughkeeraun, Co. Mayo, a pond with a small floodplain beside an associated fair-green. The floodplain may represent a small, unrecorded turlough. Patrons' or 'patterns', were held here on 'Garland Sunday' (the last Sunday in July), 'Lady Day' (August 15<sup>th</sup>), and on the feast day of St. Ciarán on the 9<sup>th</sup> of September.

**Fig. 8.7** A depiction of a game of hurling in Connemara, Co. Galway in the mid-19<sup>th</sup> century. (after Hall 1853, 77)

**Fig. 8.8** A distribution compiled for this study, of documented horse-racing courses that occurred on turlough floodplains in the 18<sup>th</sup> and 19<sup>th</sup> centuries.

## List of plates

**Pl. 1.1** An aerial view looking north over Rahasane Turlough in Co. Galway which was in full flood during the winter of 2009. (after McDonnell 2010, 26).

**Pl. 1.2** An aerial view looking northeast over Carron Turlough in Co. Clare which was dry during the summer of 2010.

**Pl. 1.3** An aerial view looking northeast over Carron Turlough in Co. Clare which was in full flood during the winter of 2009.

**Pl. 4.1** A post-excavation photograph of an iron-working hearth or furnace of Iron Age date, located on the northern edge of Caherweelder Turlough, Co. Galway (after Hegarty 2010 (a), 10).

**Pl. 4.2** From the north, Cloghincha Crannóg on the receding waters of Rahasane Turlough, Killeenmore, Co. Galway. An artificial drainage channel is identifiable in the foreground.

**Pl. 4.3** From the north, Cloghincha Crannóg on the flooded Rahasane Turlough, Killeenmore, Co. Galway. (after Bunce 2008, 24).

**Pl. 4.4** A vertical aerial photograph of Terloch Teóra Crích showing the distinctive three streams referred to in the 12<sup>th</sup> century recension of *An Táin Bó Cuailgne* contained in the *Lebor na hUidre* (Image source: Google Earth).

**Pl. 4.5** The later well at Ballyglass West with the surviving steps and enclosing wall (after Kerrigan and Delaney 2010, 1).

**Pl. 4.6** Looking south-west across the enclosed burial ground at Owenbristy, Co. Galway while the turlough is in flood. (after Lehane and Delaney 2008, 7).

**Pl. 5.1** A view towards Lydacan Castle in the townland of Lydacan, Co. Galway, showing the turlough waters in full flood.

**Pl. 5.2** A vertical aerial photograph of the turlough in the townland of Ballinturly, Co. Roscommon. The artificial channel is evident to the south of the turlough floodplain (Image source: Google Earth).

**Pl. 5.3** An aerial photograph of the stripped field patterns, characteristic of the reorganisation of Rundale holdings around Cregmore, Co. Galway at the southern end of Turloughmore (Image source: Google Earth).

**Pl. 6.1** The receding turlough waters of Garryland/Doonowen Turlough, south Co. Galway, beginning to reveal the rich summer grazing lands of the turlough in the background, set in dense scrub-land.

**Pl. 6.2** An aerial image of Caherglassaun Lough in south Co. Galway show field boundaries forming a pattern radiating from the of the turlough basin (Image source: Google Earth).

**Pl. 6.3** Evidence of post-medieval tillage plots in the townland of Ballynacreg South, on the eastern edge of Turloughmore.

**Pl. 7.1** The rock-cut channel of the modern River Clare at Corofin from the north.

**Pl. 7.2** A view of Grange Castle facing southwest showing the rectangular tower with a partially bricked-up, raised doorway. The surrounding plinth raises the tower c.0.9 m above the surrounding ground level.

**Pl. 7.3** A view of the lancet window located in the church building to the east of the tower-house at Grange.

**Pl. 7.4** An aerial photograph of the Grange Castle complex (background) taken from the south-east during a period of severe flooding in 2009. Arterial drainage works had been overwhelmed and the former flooding regime in the locality was resumed.

**Pl. 7.5** An aerial photograph taken from the north-east of Corofin village showing the site of Corofin Castle next to the artificial channel of the modern River Clare (CUCAP BDN 77). Earlier earthworks relating to a deep-water channel or mill race are also evident to the north and south of the 17<sup>th</sup>-century bridge. A roadway, thought to be medieval in date is identifiable in the top left of the picture.

**Pl. 7.6** Corofin Castle from the north-west showing the tower at the platform upon which the tower is built.

**Pl. 7.7** A section of the mortared stone revetment which is evident on the south-eastern side of the platform upon which Corofin Castle is constructed.

**Pl. 7.8** A possible medieval roadway at Corofin, flanked by two parallel ditches

**Pl. 7.9** Aerial view of Annbally Castle from the south-west showing the tower, the remains of the bawn wall and the surrounding earthworks.

**Pl. 7.10** The northern elevation of Annbally Castle where a plinth upon which the tower house has been constructed is clearly visible.

**Pl. 8.1** The receding waters of Rahasane Turlough, Co. Galway. Weatherby's racing calendar for 1828 identifies the 2.57km<sup>2</sup> Rahasane Turlough as a place of sport and venue for horse-racing.

**Pl. 8.2** A vertical aerial photograph of the central part of the former floodplain of Turloughmore with the area of part of the former floodplain shaded dark. The flooding regime of the turlough has been completely negated by an artificial drainage channel and the field patterns within this area reflect the reclamation of these lands (Image source: Google Earth).

**Pl. 8.3** A view from the south of the mound of Magh Adhair, the historically attested inauguration site of the Uí Bhríain, descendants of the Dál Cais. The limestone escarpment to the east forms a natural amphitheatre with the Hell River lying to the west.

**Pl. 8.4** A vertical aerial photo of the turlough at Kiltulla, Co. Galway, the original site of the Galway races in the early 19<sup>th</sup> century (Image source: Google Earth).

## **List of tables**

**Table 4.1** Nine sites where a crannóg appears to have been constructed on a turlough floodplain. Each shows evidence for a permanent water body being present prior to modern drainage effort.

**Table 5.1** Turlough place-names that are reflective of specific agricultural activities.

**Table 6.1** Valuations placed on parcels of turlough at Turloughmore in the Books of Survey and Distribution (Simington 1962).

## List of Abbreviations

<b>AC</b>	Annals of Connacht
<b>AFM</b>	Annals of the Four Masters
<b>AI</b>	Annals of Inisfallen
<b>Ann. Tig.</b>	Annals of Tigernach
<b>MYA</b>	Million Years Ago
<b>CDI</b>	Calendar of Documents Relating to Ireland
<b>Co.</b>	County
<b>CUCAP</b>	Cambridge University Committee for Aerial Photography
<b>Ed</b>	Edition
<b>EDM</b>	Electronic Distance Measuring
<b>EIA</b>	Environmental Impact Statement
<b>EPA</b>	Environmental Protection Agency
<b>EU</b>	European Union
<b>GIS</b>	Global Information Systems
<b>GNSS</b>	Global Navigation Satellite Systems
<b>GPS</b>	Global Positioning Systems
<b>GSI</b>	Geological Survey of Ireland
<b>GWB</b>	Groundwater Body
<b>ha</b>	Hectare
<b>HCI</b>	Hydro-climatic Index
<b>KAP</b>	Kite Aerial Photography
<b>Km</b>	Kilometre
<b>OD</b>	Ordnance Datum
<b>OPW</b>	Office of Public Works
<b>OS</b>	Ordnance Survey
<b>OSI</b>	Ordnance Survey of Ireland
<b>QUB</b>	Queen's University of Belfast
<b>RIA</b>	Royal Irish Academy
<b>SMR</b>	Sites and Monuments Record
<b>TCD</b>	Trinity College Dublin
<b>TPI</b>	Topographic Position Index

<b>Early Medieval Period</b>	–	<i>c.</i> 500 to <i>c.</i> 1100
<b>High Medieval Period</b>	–	<i>c.</i> 100 to <i>c.</i> 1350
<b>Late Medieval Period</b>	–	<i>c.</i> 1350 to <i>c.</i> 1650
<b>Early Modern Period</b>	–	<i>c.</i> 1650 to <i>c.</i> 1850

## Acknowledgements

I would like to thank my supervisor, Professor Elizabeth FitzPatrick for her guidance and support through my PhD journey. There can be no doubt that without her encouragement and belief in my work, this thesis would not have come to completion. I must extend my greatest thanks for her tireless patience, support, and mindfulness.

For over a decade I have been irregularly frequenting the Department of Archaeology at NUI Galway in pursuit of this thesis. I owe a great debt of gratitude to the staff there, who have only ever been supportive, encouraging, helpful and obliging. Dr. Stefan Bergh in particular has taken keen interest in this work, and his knowledgeable input on landscape perspectives has always been appreciated. Maggie Ronayne has been kind enough to review this work prior to the finalisation of the text, and her thorough work and suggestions were also greatly appreciated. But I am truly in debt to the entire department – Angela, Conor, Joe, Carleton, Kieran, Sandra and Bernie, and Professor John Waddell – thank you for all that you do for students and researchers each semester, each year.

I would also like to thank the staff of the library at NUI Galway, particularly Special Collections Librarian Marie Boran for her tireless work and deep knowledge of the library shelves.

This thesis was not undertaken without great colleagues and peers to bounce ideas off over the years. Thank you to Joe Callan, Colleen, Brí, Thor, Rós, Eve and Siobháin, Mags, Treasa, Phylis, Paul Naessens and Silvina Martin. And I was lucky enough to have some, but all-too-little time with two wonderful colleagues; Matt Logue and Emmett Connolly. Both had adventurous spirits, both of them inspired and encouraged, and both of them are greatly missed by all who knew them. They are fondly remembered each time I walk through the campus, still present in the halls of memory.

A special mention is needed for my colleagues and friends at Rubicon Heritage in Cork, with whom I've enjoyed some wonderful years of excavating around Ireland and Britain, and who have always encouraged me to complete this work.

I owe all that I have and all that I am to some very special people in my life. Some life-long friends, Joanne and Brian are still there for me after several decades of friendship. My sister Sinéad and her beautiful daughter Ella always brighten up my life, and I am grateful for each moment I have with them. Eamon and Ciarán; those two younger brothers who ultimately outshine their eldest sibling with their vibrancy, kindness and thoughtfulness.

To my mother and father – there are no words that I can type here to communicate how much you have done for me over the years, and how much I appreciate the sacrifices you have made in your lives to give me what I have in mine. My mother passed away during the completion of this piece of work – she was sharp and intuitive, kind and empathetic to a fault. My father misses her, as do we all.

To my wife, Petra. Thank you for bringing to me, a confidence in myself that I could complete this work. Thank you for your endless patience and commitment, and your belief in me, not just for this project, but in life. This work is dedicated to you.

## **Abstract**

Turloughs are karst wetland ecosystems that are virtually unique to Ireland. They are intermittently inundated on an annual basis, mainly from groundwater. This thesis concerns the interaction of past communities with the dynamic nature of these seasonal lakes from the early medieval to the early modern period in Ireland (c.400AD-1850AD).

The primary aim is to investigate human interaction with the dynamic flooding regimes of turloughs through archaeological, historical, toponymic and folklore sources, and to identify evidence for their management and manipulation by communities in Ireland. Among the aims and objectives of this research is to determine the importance of these environments as valued and significant resources over time, and their role in the cognitive landscape of past communities.

Traditional archaeological methodologies are combined with the information gained from recorded contemporary human narratives. Three main theoretical models were used in the analysis of these landscapes. These included archaeological landscape theory which views cultural landscape as a product of the interaction of humans with the physical landscape, and historical archaeology which seeks to combine traditional archaeological methodologies with the information gained from recorded contemporary historical records. Concepts of 'Space and Place' and lost cognitive associations are drawn from the theoretical models associated with human geography where 'space' refers to the abstract physical environment without a particular substantial meaning, and place refers to how human populations are aware of and interact with a defined space.

This thesis demonstrates that turloughs, and their unique physiographic features, have been used as a significant natural resource through the historical period in Ireland and have frequently served as a focal point for human activity. A key finding of this thesis is that in the case of human settlement on turlough floodplains, symbiotic settlement which accommodated the natural, already productive flooding regime was preferred, and that the natural resources available in these environments, which included fisheries and seasonal grazing pastures, were strategically exploited by communities who settled in turlough landscapes in a manner that did not disturb

the natural hydrological regime. This contrasts with comparable contemporary settlement in fluctuating wetlands in Britain which engaged in large scale reclamation works, often to improve the productivity of holdings there. Other evidence shows that turlough floodplains were also exploited as suitable venues for a variety of ritual and social practices, through multiple cultural layers and contexts. The recognition of turlough floodplains as important venues for seasonal, communal, and symbolic assembly of population groups through time has been a particularly important finding of this research and identifies these landscapes as places for ritual activity as well as a resourceful and valued natural habitat.

# Chapter 1 – Introduction, methodology and Sources

## 1.1 Introduction

This thesis concerns the symbiotic or sympathetic interaction of human communities with the dynamic nature of seasonal lakes (turloughs) from the early medieval to the early modern period in Ireland (c.400AD-1850AD). The gaelic *turlach* anglicised as turlough is a term applied to those areas of land that are liable to flood in winter (hydro-period) but dry out, at least partially, in summer (Flanagan and Flanagan 1994, 159). They have been defined as wetlands at the interface between groundwater and surface water and occur predominantly on the well-bedded, pure limestone regions in the western third of Ireland, forming a significant part of this region's hydrological cycle (Waldren 2016, 28).

The central research questions that are addressed by this study are;

- Do the dynamic properties of seasonal flooding in turlough landscapes influence settlement and engagement with the physical landscape, and how is this engagement and influence expressed over time?
- Are flood-lands a significant resource and how can that resource be identified in past landscapes?

In addressing the central research questions, I use physical and cognitive data drawn from documentary sources and fieldwork, and interpret those datasets within the theoretical frameworks of landscape archaeology and historical archaeology to enlighten an understanding of past settlement and land-use around these seasonal lakes. Data relating to the physical landscape, including scientific studies of the physical nature of these environments, is coupled with documentary sources, toponymic survey and field survey, in order to present a deeper, more layered understanding of turlough environments. This approach allows for a fuller understanding of turlough landscapes, peopling those landscapes and interpreting their past significance to communities as places of both subsistence value, and as landscapes that accumulated significance and meaning through time.

The aims of this thesis are;

- To assess the dynamic nature of turloughs, identifying patterns in human interaction with, settlement on, and division of a deltaic resource
- To uncover and analyse evidence human engagement with, and management of these landscapes, determining their importance as a natural and cultural resource over time

The nature of seasonal flooding and an understanding of the archaeological, historical, toponymic and folklore evidence for its management and manipulation are central issues of this research. The knowledge that population groups and communities acquired about seasonal flooding and how that traditional knowledge was used to manage and exploit turloughs to their own benefit is explored drawing on a database of turlough sites compiled by the Turlough Database Consolidation Project (Mayes 2008), and a specific case study of the landscape of Turloughmore in Co. Galway which was conducted for this thesis. What emerges from this work is a new understanding of human engagement with the physical turlough environment, developing upon the existing scientific and environmental research conducted on flood-lands. The nature of that engagement can be described as symbiotic or sympathetic.

The broad chronological period and diverse sources involved in this research necessitated the use of three main theoretical approaches. These include firstly archaeological landscape theory, and secondly the theoretical models associated with historical archaeology which can both seek to combine traditional archaeological methodologies with the information gained from recorded contemporary human narratives. This thesis also examines the social archaeology of turlough landscapes through broad themes associated with gathering and ceremony within turlough landscapes from at least the Bronze Age, and continuing into the Early Modern Period across a diverse collection of practises. It is this continuity of thematic association for which thirdly, the theories of humanistic geography, space and place are important. In humanistic geography, the concepts of place and space form part of an underlying theory for the interpretation of landscapes in both the present and the past. This method of inquiry is based on the premise that landscape is a composite of

natural surroundings and human interaction with an environment, as it is perceived or understood in a society or population, and not a construct independent of human consciousness.

A wide range of both primary and secondary sources were consulted for this thesis, including published scientific and environmental reports, historical references to the use of turloughs, place-name evidence and archaeological excavation reports. Although there had been little previous research carried out on the subject of past human settlement in turlough environs, a great quantity and variety of source material from other disciplines was available to inform this study. This data was added to with further field survey.

Chapter 1 outlines in detail the methodologies and sources used throughout this study, while chapter 2 presents the theoretical models through which the data was interpreted. Chapter 3 summarises the distinguishing geological, hydrological and ecological characteristics of turloughs to provide an understanding of the unique physical attributes of these seasonal floodplains. Chapter 4 summarises the previous archaeological investigations in Ireland that have already contributed evidence and brief interpretations of human interaction with turloughs in the past, in order to identify periods, site types and activities that are associated with human settlement around these seasonal lakes. Chapter 5 approaches the subject of past human settlement in turlough environments from the perspective of the phenomenology of these landscapes, in other words, how they were perceived, valued, exploited and understood by past populations. Chapter 6 outlines the natural resources that are provided in turlough landscapes by the seasonal flooding regime of the turlough, which have been exploited by the communities who have settled in those environments through time. Chapter 7 demonstrates the influence of turloughs on historical settlement and land-use through a landscape study of an expansive turlough at Turloughmore in Co. Galway, identifying three medieval settlements at Grange, Corofin, and Annbally which present evidence for direct yet sympathetic engagement with the floodplain. Finally, chapter 8 examines the past association of some turlough floodplains with the assembly of population groups through time. It shows that turloughs served as settings for communal assembly in the past.

Previous research on turlough environments has almost exclusively been concentrated on the scientific aspects of turloughs – primarily hydrology, ecology and conservation matters, and there has been no previous study of the relationship between human settlement and turlough environments. Thus, the significance of data of that nature remains enigmatic for the understanding of human settlement and economy without archaeological contextualisation. This thesis provides that context. This thesis demonstrates that turloughs, and their unique physiographic features, have been used as a significant natural resource from an early time, and have frequently served as a focal point for human activity. The natural resources available in these environments, which include fisheries and seasonal grazing pastures, have been exploited by those who settled these landscapes. Other evidence shows that these floodplains were also exploited as suitable venues for a variety of ritual and social practices. The recognition of turlough floodplains as important venues for seasonal, communal, and symbolic assembly of population groups through time has been a particularly important finding of this research and identifies these landscapes as places for ritual activity as well as a resourceful and valued natural habitat.



**Pl. 1.1** An aerial view looking north over Rahasane Turlough in Co. Galway which was in full flood during the winter of 2009 (after McDonnell 2010, 26)

## **1.2 Methodology**

A comprehensive understanding of the archaeology of past human settlement in turlough environs was achieved using databases of recorded and potential turlough sites provided by the GSI and by Waldren (2016). A full inventory of archaeological sites in close proximity to turlough floodplains was created. This database of turlough sites and related settlement evidence was examined and significant settlement features that were worthy of further investigation were surveyed and included in this study. Particular objectives were established in order to address the central research questions through the medium of a major turlough landscapes at Turloughmore in Co. Galway, and supplemented with a broader examination of settlement in turlough landscapes throughout Ireland. Individual archaeological sites within those landscapes, which showed evidence for past symbiotic human settlement adjacent to the turlough floodplain, received a deeper investigation through the methods outlined below.



**Pl. 1.2** An aerial view looking northeast over Carron Turlough in Co. Clare which was dry during the summer of 2010.



**Pl. 1.3** An aerial view looking northeast over Carron Turlough in Co. Clare which was in full flood during the winter of 2009.

### 1.2.1 Field survey

The primary dataset for this thesis was derived from archaeological fieldwork which was principally, but not exclusively, carried out in the study area that is explored in Chapter 7. The selected study sites were initially approached and analysed in a desk-based study. Sites for further investigation were selected where settlement was deemed to have had a plausible socio-economic interaction with the flooding regime. This initial research was supplemented with sufficient preliminary fieldwork to establish a selection of sample archaeological sites which were subject to more intense survey. Two primary variables were considered in regard to settlement in close proximity to turlough environments:

- Settlement location relative to contemporary flooding
- Settlement forms and architectural evidence that indicated (a) adaptation to or (b) exploitation of flood-land environments

Fieldwork was targeted towards gaining the maximum amount of information about these variables, the goal being the identification and recording of patterns in the interaction between settlement and turlough environments. This involved the use of conventional archaeological techniques including computer-aided design (CAD), electronic distance meter (EDM), descriptive survey of archaeological sites, architectural analysis of the sites, mapping of the wider landscape through Global Navigation Satellite Systems (GNSS) and the generation of digital terrain models using Trimble GeoExplorers and their related software (GPS Pathfinder Office and TerraSync). The processing and presentation of much of this data involved detailed analysis through Global Information Systems (GIS) software, namely ArcGIS 9.3.

### 1.2.2 GIS

Global Information Systems (GIS) played an integral part in the processing and presentation of data discussed in this thesis. GIS is a powerful geographical data processing and analytical tool which is computer based and can be used to support a landscape archaeology approach to past human settlement. GIS manages geographically referenced data and combines database information and spatial or map information with a process of linking both (Clarke 2001, 2).

A landscape-archaeology interpretation of landscape as a cultural entity is, in part, related to the processual archaeological approach to archaeology, where the emphasis is placed on quantifying and recording data in order to reach scientific conclusions as to the lifeways of past societies and how they engaged with the physical landscape. The processual approach to analysing landscape is empirical, paying particular attention to the study of terrain and topography, settlement patterns and site structure as well as to site function (Renfrew and Bahn 2005, 210-217). The production of vast amounts of data relating to both archaeological monuments and landscape requires a powerful method of analysis, namely GIS data processing tools.

The heavy reliance of the processual school of archaeological thought on the quantification of this factual data as a means of understanding past societies led to the creation of the post-processual school of thought, with its emphasis on the personal and social factors and stimuli that shaped past societies (*ibid.*, 207). Key to

this was the realisation that monuments cannot be viewed as singular units of archaeological occurrence, but instead form part of a much larger archaeological palimpsest imposed on the landscape. This approach takes due consideration of the observable data and investigates trends within it (Chapman 2006, 12). Thus, for this thesis, the use of powerful data processing tools was central to the efficient processing of data over large geographical areas relating to monument distribution, typology and the character of the physical landscape.

A number of datasets provided valuable information and an efficient method of processing large quantities of data. These included datasets relating to topography, monument distribution, soils, geology and territorial boundaries. Datasets used in this thesis included:

- Karst groundwater data (turlough distribution datasets)
- GSI bedrock data
- Teagasc subsoils data
- Record of monuments and places
- 1:50 000 Discovery topographical data in vector and raster format
- Geo-referenced aerial photography
- Territorial and political boundary shapefiles

The combination of GIS with other technologies such as digital, or EDM surveying, remote sensing, aerial photography and GPS survey has led to a rapid growth in the capabilities and application of GIS tools. There are two primary types of data that are used in GIS: vector data such as shapefiles which were specifically created for use during this research and define geographic regions, territorial units and former floodplains, and raster images such as geo-referenced aerial photography and geo-referenced First Edition Ordnance Survey sheets<sup>1</sup>. Coupled with this is data known as attribute data, providing information on the attributes of elements of this 3D space such as monument typology and classification. These two primary data types were combined and used to illustrate many of the themes discussed in this thesis.

---

<sup>1</sup> The First Edition Ordnance Survey map series was surveyed and published between 1825 and 1846. At a scale of six inches to one mile, it represented the first large-scale, detailed cartographic survey of the entire island of Ireland.

### 1.2.3 Aerial photography

Aerial archaeology is the practice of using aircraft to provide a high-level view of the historic environment based on conventional photography (Lambrick 2008, 13) and represents one of many methods of discovering, investigating and disseminating information and knowledge about the physical remains of the past. One common application of aerial archaeology is the identification of archaeological sites and monuments that were previously unknown. However, aerial photography also plays a vital role in understanding the historic environment. This remains a strong theme within landscape approaches to archaeology, with more effective uses of aerial techniques being developed in recent years. There is an increasing recognition that traditional site-based approaches cannot adequately capture the full richness of the landscape, especially when settlement patterns, floodplains and other features of the broader landscape are taken into account.

There is no general guide to aerial photography collections in Ireland (*ibid.* 26). Nonetheless, a large number of individual collections are available to the archaeologist from a variety of sources. These include aerial surveys undertaken in the recent past by institutions such as the GSI, and older surveys such as that of the Cambridge University Unit for Landscape Modelling (formerly the Cambridge University Committee for Air Photography, and still widely referred to as CUCAP) between 1951-5 and 1963-73. The collection held by CUCAP includes the largest and most accessible body of aerial archaeological photography taken by a single institution in Ireland and has been examined for this thesis. This collection was particularly useful in light of the acceleration in development in Ireland between c.1990 - 2008 which has resulted in the destruction of many archaeological sites, and the CUCAP collection provides aerial photographic documentation of many archaeological sites which are now destroyed.

The OSI holds an archive of aerial photography and provides an active aerial reconnaissance and mapping programme for updating standard maps at a variety of scales. The 1995, 2000 and 2004-5, vertical coverage is digitally indexed by grid reference and available to view online. Also a valuable online resource to this study was the archive of satellite imagery held by Google Earth which offers blocks of high quality satellite photography material with a resolution of up to 1-2m per pixel.

This thesis also contains a number of aerial photographs taken by the author during a period of extreme flooding in November 2009. These photographs proved particularly valuable for interpreting the landscapes of former floodplains where natural drainage regimes had been disrupted by anthropogenic drainage efforts of recent centuries. These oblique aerial photographs were taken from a fixed-wing aircraft at a low altitude of approximately 150m. Further oblique aerial photography was undertaken at specific sites using the kite aerial photography (KAP) technique at an altitude of 35-50m.

### **1.3 Sources**

A wide range of both primary and secondary sources were consulted including published scientific and environmental reports, historical references to the use of turloughs, place-name evidence and archaeological excavation reports. The nature of these sources and how they were used in this thesis is outlined below.

#### **1.3.1 Scientific and environmental data**

An extensive bibliography of 324 papers and publications, which was compiled by the School of Natural Sciences at Trinity College, Dublin (TCD) in 2007, revealed that flood-land research on Ireland was largely concentrated on the environmental aspects of turloughs – primarily hydrology, ecology and conservation matters, and that there had been no focus on the relationship between past symbiotic human settlement and turlough environments. Nonetheless, this body of literature proved a useful resource for the interpretation of these landscapes in an archaeological context.

Chapter 3 of this thesis presents a synopsis of the distinguishing geological, hydrological and ecological characteristics of turloughs, and allows an understanding of the unique physical attributes of these seasonal lakes for their interpretation in an archaeological context. In compiling this chapter, I consulted a range of texts about the geophysical characteristics of turlough landscapes in order to see how those attributes affected settlement archaeology. These sources included unpublished PhD

research, such as Coxon's (1986) seminal study of the hydrology and geomorphology of turloughs, and MacGowran's (1985) study of the phytosociological and ecological conditions of turloughs in the west of Ireland. Unpublished reports from the Turlough Conservation Project at TCD (2009) and further environmental and flood assessment reports from governmental bodies such as the Geological Survey of Ireland (GSI) (2004) and the Office of Public Works (OPW) (2010) provided additional source and reference material, and further environmental data. The GSI has contributed much to the hydro-geological understanding of turloughs and is a repository for much of the available information through its karst database. A baseline list of 304 turlough sites in Ireland has been compiled by the GSI, although more recent desktop research by Waldren (2016) indicates that there is likely over 483 karstic flooding regimes in Ireland, though many these have not been verified on the ground. The combined work of the GSI and Waldren (*ibid.*) formed an essential database of turlough sites and has been used with reference to past human settlement in turlough environs. Throughout this thesis, turlough sites are identified by feature-name and the county within which they are located, in accordance with the GSI and Waldren database formats. Where a feature name was absent, the turlough floodplain is referred to by the townland and county within which it is situated.

Given the catalogue of *c.*324 publications and papers that bear a relationship to the understanding of the unique and diverse environmental characteristics of turlough landscapes, it was sufficient to supplement these studies, which were frequently concerned with the detailed analysis of specific geophysical attributes of turloughs, with further overarching reports and studies by authors such as Goodwillie (1992), Sheehy Skeffington *et al.* (2006) and Waldren (2016). Palaeo-environmental studies in the west of Ireland, such as that of Blackford and Chambers (1995) and Lomas-Clarke and Barber (2004) were also consulted and allowed a greater understanding of past environmental conditions and the nature of human activity in the vicinity of some turlough landscapes. For the cases such as at Carron Turlough in Co. Clare, palaeo-environmental and palaeo-ecological studies by Crabtree (1982) and Feeser (2009) proved particularly useful in reconstructing the past environmental conditions that once existed in that landscape. Similarly palaeo-environmental studies from

Abbeyknockmoy (Hughes and Barber 2004) provided data for interpreting the wider landscape around Turloughmore.

The majority of these papers, texts and reports are synthesised in Chapter 3 to provide the reader with a firm knowledge-base for many of the environmental conditions discussed throughout this thesis. This chapter provides data that is key to the interpretation of the significance of turlough lands for past populations in an archaeological context, and draws on a broad, interdisciplinary understanding of turlough floodplains from a scientific and environmental background. Where appropriate, further reference to specific previous scientific research has been incorporated into individual chapters and sections examining specific landscapes and environments.

### 1.3.2 Documentary and toponymic sources

Given the broad chronological span of this thesis, a wide variety of documentary and cartographic sources that were produced in a multitude of cultural contexts were available to assist in, and inform, the study of past human settlement in turlough landscapes during the historical period in Ireland. Historical archaeology is an approach to studying and understanding the past that brings together diverse source materials, related to past cultures and societies, with the findings of archaeological enquiry (Wilkie 2006, 14). In the study of historical archaeology, texts are not only sources of information, but also artefacts that have been produced in particular cultural-historical contexts for specific reasons (Wilkie 2006, 13; Moreland 2001, 26). Fundamental to the correct use of written records in archaeological enquiry, is an understanding that those documents must be viewed as artifactual remains that were produced and had efficacy in the production and reproduction of social structures and are therefore open to interpretation (Moreland 2001, 26). The theoretical frameworks associated with historical archaeology are discussed further in section 2.3.3.

### 1.3.3 Native primary documentary sources

References from native primary sources, especially those in the native chronicles were consulted in relation to past events, people and populations relevant to this study. The referencing of turlough landscapes and place-names as distinct and

identifiable centres of settlement and human activity in a number of native chronicles indicates that these landscape features were recorded as places of note in the cultural landscape through time. Frequently however, entries contained in such sources tend to identify place-names or the location of a settlement or floodplain only.

Some of the native primary sources used in this thesis represent later medieval facsimiles of earlier original documents. Simms (2009, 20) highlights the clear limitations of the late medieval facsimiles and notes that in copying the information from earlier manuscripts, original documents were frequently reworded and abbreviated with original entries sometimes being misunderstood and misinterpreted. Frequently, the censoring of certain topics, that detracted from the honour of the Irish nation or the Catholic Church, occurred. However, many of the external influences identified by Simms, (*ibid.*, 21-33) that often corrupted the information and entries into the various annals of Ireland, are not of significance to this study. This is particularly true of those manuscripts and annalistic references that relate to Gaelic Ireland in the later medieval period when entries in the annals are derived from accounts composed within a few years of the actual events and are considerably more reliable (*ibid.*, 22).

The annals comprise a record of events arranged under the year of occurrence, that were deemed significant at the time of writing, such as exceptional weather, destruction of property, battles and deaths. Although references to turlough landscapes are infrequent in the chronicles, they were useful in peopling these environments and they provide detail relating to specific events and settlements associated with those landscapes. The principal texts used in this study are: *The annals of the kingdom of Ireland by the four masters* (AFM) (O'Donovan 1848-51), *The annals of Connacht* (AC) (Freeman 1944) and *The annals of Tigroneach* (Ann. Tig.) (Stokes 1895). AFM were consulted most frequently in this study and contain the fullest, island-wide coverage of events from prehistoric times to 1616 AD. O'Donovan's edition of AFM are accompanied by informative footnotes, particularly useful because of the detailed information on place-names gleaned by him through his work with the Ordnance Survey. O'Donovan's insights have been referred to in Chapters 5 and 8 which examine aspects of the cognitive landscape of turlough

environments as it is reflected in the proxy record of place-names associated with those landscapes.

The genre known as *Dindshenchas* or traditional lore of place-names, compiled mostly in the 12<sup>th</sup> century has also been useful to this study, specifically the topographical poem *Turloch Silinde* which was translated and published by Gwynn (1913, 376) and which represents the most revealing reference to turlough landscapes included in the body of native primary sources. Also useful to this research is the *Onomasticon Goedelicum locorum et tribuum Hiberniae et Scotiae* (Hogan 1910). It has a comprehensive index, with modern identifications, to the Gaelic names of places and tribes referred to in the corpus of native chronicles.<sup>2</sup>

Early medieval Irish law tracts translated and edited by Fergus Kelly (1997) in his *Early Irish farming; a study based mainly on the law-texts of the 7th and 8th centuries AD* were also consulted for the purpose of interpreting the significance of turlough landscapes for Gaelic farming practices in the pre-Norman period. These law tracts were originally written in the *scriptoria* of monastic communities between the late 7<sup>th</sup> and 9<sup>th</sup> centuries and are preserved in manuscript form dating from the 12<sup>th</sup> to the 16<sup>th</sup> centuries (Simms 2009, 91; Warner 1990, 30). Although there were no references from the early medieval law-texts found to directly relate to turlough landscapes, the wealth of information contained in them provided a general insight into the farming and land management practices for this period and the relationships between farming populations and the physical environment.

A number of early publications and translations of genealogies, with commentary, proved invaluable in peopling the early landscapes of turlough environs and culturally contextualising many landscapes. Examples include *The Tribes and customs of Hy-Many, commonly called O'Kelly's country* (O'Donovan 1843), and *The Genealogies, tribes and customs of Hy-Fiachrach, commonly called O'Dowdas* (O'Donovan 1844).

---

<sup>2</sup> Although this work is in the process of being updated and validated, a complete historical dictionary of Irish place-names has not yet been produced. Therefore, Hogan's index was consulted for chapter 7.

#### 1.3.4 English administrative records

Records generated by the British administration in Ireland, especially surveys and maps of the 17<sup>th</sup> to 19<sup>th</sup> centuries, have been a useful source of reference to turlough lands for this thesis. Colonialism appears as a complex, layered process, the implications of which extend to the writing and practice of history and archaeology and our understanding of the past (Lawrence and Shepherd 2006, 69). The observations of colonial writers provide an important insight into the significance of turlough landscapes for non-native settlers in the west of Ireland. Turlough landscapes are noted by a number of observers and commentators from as early as the 17<sup>th</sup> century, such as King's *Of the bogs, and loughs of Ireland* (1685). In the mid-17<sup>th</sup> century, the Books of Survey and Distribution (MacGiolla Choille 1962) make a distinction in value between parcels of turlough lands and other lands in the west of Ireland. Throughout that period and into the late 19<sup>th</sup> century, observers noted the distinct characteristics of these landscapes which were liable to flood in the winter months through groundwater sources, often with reference to the potential economic benefits of draining what were often termed 'wastelands'. The majority of these commentators were frequently concerned with the improvement of wetlands and the increase of productivity.

A great deal of information was gleaned from sources that relate to the drainage of turlough lands in the mid-19<sup>th</sup> century, particularly the *Reports from committees on the drainage of lands in Ireland* (Harding 1853). Primary sources of a late date that were used in this study also include topographical dictionaries compiled by observers such as Young in the late 18<sup>th</sup> century, and Lewis in 1837, and agricultural surveyor's reports of the 18<sup>th</sup> and 19<sup>th</sup> centuries, such as Dutton's *Statistical and agricultural survey of the county of Galway with observations on the means of improvement* (1824) and Caird's (1850) *The plantation scheme or the west of Ireland for a field for investment*.

Historical archaeology uses documents primarily in three ways: to identify the people who once lived at a particular site, to understand the social and cultural contexts of the occupation site, and to understand the meanings and lives of the objects they recover (Wilkie 2006, 16). With reference to individual archaeological sites that were examined in this thesis, a variety of documentary sources were found to relate to an

individual site, person or community associated with that site, landscape or territory. Sources used include ecclesiastical documents such as the *Ecclesiastical taxation of 1306* (Knox 1904) and *The extents of Irish monastic possessions 1540-41* (White 1943). Crown documents such as the *Calendar of fiants* and the *Calendar of documents relating to Ireland* (CDI) were also used throughout this thesis to shed light on the nature and significance of individual settlements and events in relation to past human interaction with turlough landscapes. The Books of Survey and Distribution also greatly informed this thesis regarding the significance and value of these flood-lands during a period of social upheaval in the mid-to-late 17<sup>th</sup> century. The Book of Survey and Distribution were compiled c.1680 as a result of the wars of the mid-17<sup>th</sup> century after the Cromwellian conquest of Ireland. They provided reliable information on land ownership and land quality, particularly in the study areas of this thesis.

### 1.3.5 Maps

The cartographic representation of a landscape feature, such as a turlough, that may vary in size and form both seasonally and over an extended period of time, required analysis to determine the influence that variation may have had on human interaction with particular turloughs. Unfortunately, there is little reliable map evidence for many of the areas where turloughs occur. The earliest accurate map that includes depictions of turloughs in any degree of detail is John Browne's *Map of Connaught*. Although delivered in February 1591, its composition is likely to date to the 1580s (Dunlop 1905, 313). It is considered an excellent piece of cartography, being the only map of Connaught made during the second half of the 16<sup>th</sup> century. Browne's depiction of Turloughmore and Dunkellin Turlough is disappointing however, with only a symbolic representation included, and a lack of detail concerning the floodplains. The largest turlough in Ireland at that time, Turloughmore, is depicted as a narrow channel and its area is ill-defined in relation to nearby settlement. However, the fact that Browne marks turloughs at all on his map indicates that they were a notable landscape feature.

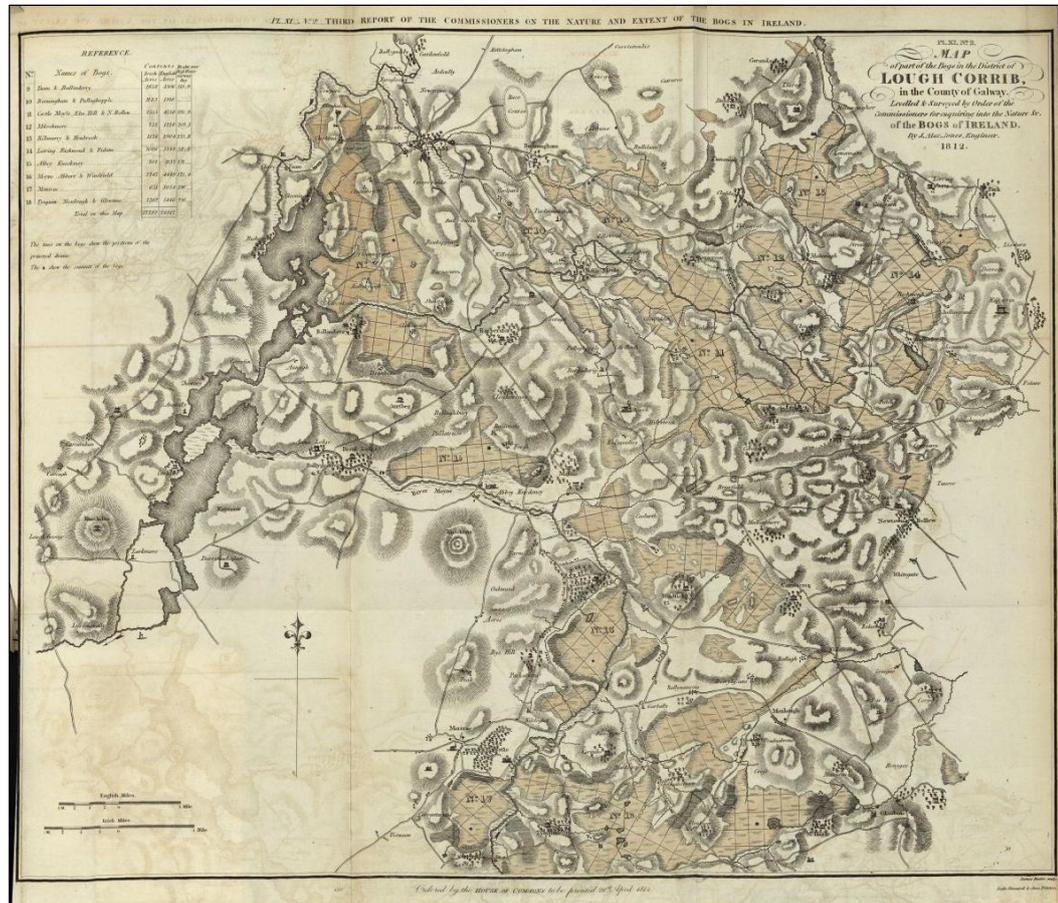
The Down Survey maps (1654-9) of Sir William Petty are the earliest large-scale maps to which many historians and archaeologists turn for evidence of landmarks and settlements. Because the earlier Strafford Survey of Connaught and adjoining

territories (1636-40) had been conducted in Connacht, Petty mapped all the baronies of Ireland except those of counties Galway, Roscommon, and Mayo (Ó Domhnaill 1943, 382) and so few cartographic sources pertaining to many turlough environs survive from the Down Survey. Therefore, the earliest surviving cartographic source that accurately documents a turlough floodplain is Petty's *Hiberniae Delineatio* (based on the Down survey) published c.1671-2 (Fig. 3.2 and 7.6). This map proved particularly useful and provided detail of the physical and cultural landscapes of Turloughmore for chapter 5.

A noticeable stagnation occurred in the mapping of Ireland over the subsequent 100 years. The iconic cartography of Taylor and Skinner in their 1778 publication *Maps of the roads of Ireland*, is of little value to this study. The purpose of those maps was to illustrate communication routes between populous areas and not to map the landscape. Therefore, in instances where they do portray landscape features, there is inaccuracy. A number of small-scale estate maps commissioned by private landowners in the 18<sup>th</sup> and 19<sup>th</sup> centuries do include useful depictions of some smaller turloughs. For example, Frizell's 1775 Map of the St. George Estate near Headford in Co. Galway (Fig. 6.1) depicts settlement clusters and cultivation ridges at the edge of Turlough Monaghan.

Prior to the publication of the First Edition Ordnance Survey maps, there are two further large-scale cartographic sources of note. The first of these are the maps drawn up by the Bog Commission in the early years of the 19<sup>th</sup> century (Fig. 1.1). Appointed in 1809 to inquire into the nature and extent of several bogs in Ireland, accurate maps detailing the areas around 'wastelands' were published in the second decade of the 19<sup>th</sup> century (Prunty 2004, 72). These maps include depictions of a number of turloughs. The sample extract shown in Fig. 1.1 depicts Turloughmore in detail, and includes the landscape immediately to the east of the flooding regime. The second of these early 19<sup>th</sup>-century maps are the *Grand Jury County Maps*, published during the same period (Fig. 8.1). This cartographic source is accurate in its depiction of the landscape and records much of the natural drainage pattern, including many former turlough floodplains prior to extensive drainage works carried out over subsequent decades. Furthermore, this map is the earliest

cartographic source for Co. Galway that depicts archaeological sites and settlement forms such as enclosures and castellated settlements.



**Fig. 1.1** A map of central Co. Galway showing Turloughmore, compiled for the third report of the commissioners appointed to enquire into the nature and extent of several bogs in Ireland in 1814 (after The commissioners on the nature and extent of bogs in Ireland 1812).

It is not until the publication of the First Edition Ordnance Survey maps during the early-to-mid 19<sup>th</sup> century that we begin to see accurate representations of turloughs as lands *liable to flood* rather than as water bodies in their own right. It was established by Coxon (1986) that those turloughs unaffected by later drainage schemes and whose areas were recorded on the First Edition Ordnance Survey maps as lands *liable to flood*, were near identical in area and flooding pattern, confirming the accuracy of the recorded lines of inundation. However, representations of turloughs on these maps are not consistent, with individual surveyors often using their own discretion and conventions. Coxon (*ibid.*, 9) suggests that in areas where

turloughs were common, the word ‘turlough’ was frequently used in conjunction with the symbol for marsh or flow bog with a line of inundation sometimes being marked. Several are simply marked as rough pasture and are difficult to identify from these cartographic sources alone. In several instances, place-names hint at the nature of the physical geography of the area. For the purposes of this study, Coxon’s findings were taken into consideration. It was assumed that the lands recorded as *liable to flood* in the 19<sup>th</sup> century were accurate representations of the extent of turlough floodplains at that time, and so were used for this thesis to reconstruct the floodplains of former turloughs which have since been affected by later drainage works, or in many cases, completely effaced from the landscape.

### 1.3.6 Place-names

Chapter 5 of this thesis examines aspects of the cognitive landscape, through the proxy record of place-names associated with individual turloughs, gathered by the Ordnance Survey in the first half of the 19<sup>th</sup> century. Place-names frequently describe the use, experience and perceptions of the landscape by humans, and the naming of places creates a wealth of information about that land which has been bestowed with those place-names.

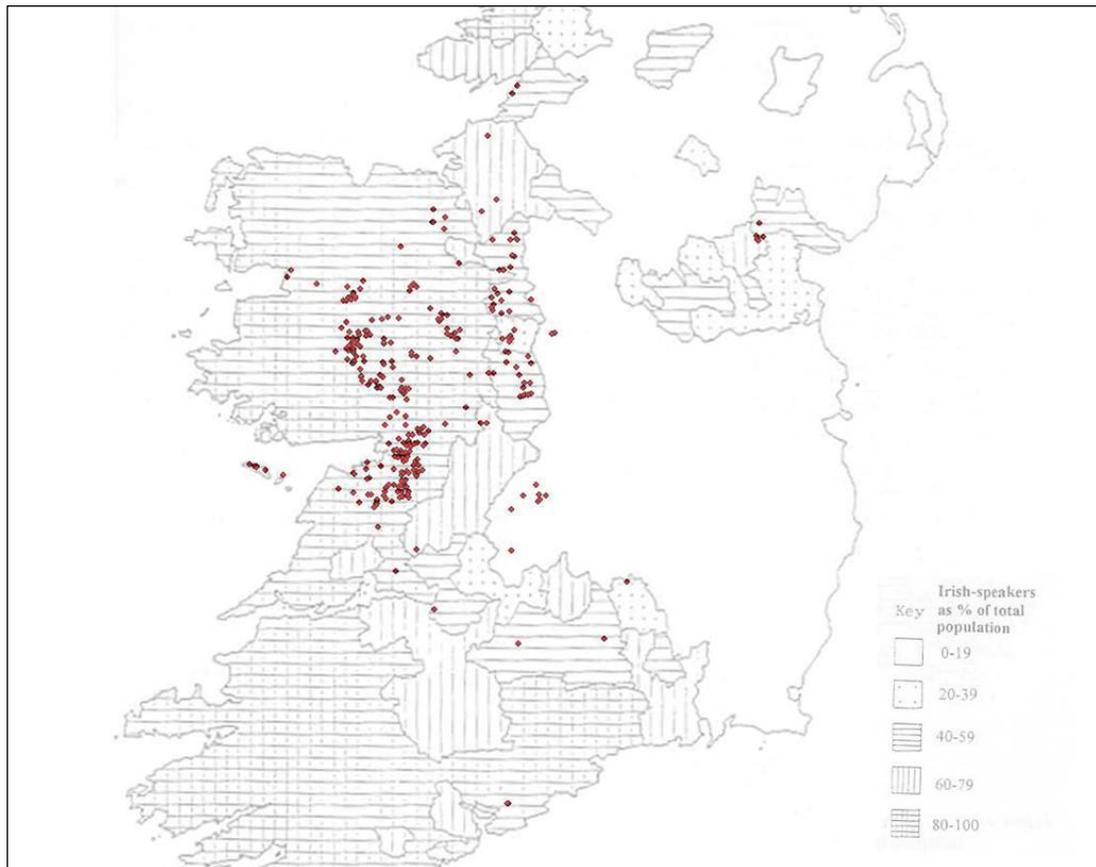
As a by-product of the First Edition Ordnance Survey map series, the Ordnance Survey sought to officially validate versions of Irish place-names that had been progressively modified to various degrees to suit the speech, spelling conventions and orthography of new settlers and administrators to Ireland from the late 12<sup>th</sup> century onwards. Although the original Irish-language versions of these place-names were still being used by the vast majority of the population through this period, official documents provide little evidence of this. Therefore, the task of decoding landscape through place-name analysis in Ireland has been complicated by the affects of this toponymic change.

The process of documenting place-names in Ireland for use on the First Edition Ordnance Survey sheets involved recording the Irish form of each local name. Translations of the Irish forms of these place-names were provided in the Ordnance Survey field-name books. Topography, maps, written records, native chronicles and other documents were examined, and it was recommended that a standardised

English spelling of the name based on all the accrued evidence, including the Irish form and its meaning, should be used on the OS sheets (Mac Giolla Easpaig 2008, 167). However, those charged with recording Irish place-names frequently encountered not only Gaelic versions, but often a series of varying anglicised versions. All variations were recorded in the field-name books and the anglicised version that most accurately represented the original Gaelic name was used (Muhr 1992, ix). Regular substitutions of English words for approximate Irish sounds occurred. New place-names that originated in the English language were introduced, although these were, for the most part, recorded for market towns, country houses, villages and farms that were newly established through plantation (Nash 1999, 466).

For this study, the task of interpreting and translating place-names, and identifying the perceptions of turlough landscapes, was complicated by a paucity of surviving native records and the later anglicisation of place-names, as outlined above.

Nonetheless, in some cases, a chronologically stratified array of sources could be used to aid in the correct interpretation of the anglicised forms of place-names. At the time they were compiled, the ordnance survey field-name books frequently documented all recorded versions of place-names and provided references to written sources for those place-names. However, for this study, establishing the precise temporal genesis of Gaelic place-names for many turloughs was frequently impossible. Nonetheless, as stated above, the majority of place-names in Ireland pre-date the 17<sup>th</sup> century, with only a handful pre-dating the earliest forms of the Irish language (Flanagan and Flanagan 1994, 2). Therefore, it is taken that many of the Irish language place-names dealt with in this thesis are reflective of the cognitive landscapes of Gaelic communities from the early to the late medieval period. Where later, English language place-names had blanketed earlier, undocumented Irish language place-names, they were easily identified. Figure 1.2 indicates that during the early 19<sup>th</sup> century when the work of the Ordnance Survey was being carried out, the Irish language was very much dominant in areas where turloughs most frequently occur. Flanagan and Flanagan (*ibid.*) suggest that in areas where the Irish language had survived during this period, additional source-material may have been forthcoming from local knowledge and thus, the likelihood of an accurate translation of the anglicised form of a place-name was stronger.



**Fig. 1.2** The distribution of turloughs in Ireland overlying a map of Irish Speakers as a percentage of the total population, barony by barony in the early 19<sup>th</sup> century (after Fitzgerald 1984).

Where translations of place-names were used in this thesis, they have been included as a footnote to the main text with permanent hyperlink to the place-names database of Ireland. This database has been created in collaboration with the place-names branch of the Department of Arts, Heritage and the Gaeltacht. This is a comprehensive management system for place-name data, archival records and place-names research conducted by the state and provides a comprehensive and reliable source for place-name translation in Ireland.

### 1.3.7 Secondary sources

There has been little or no previous archaeological or historical research carried out on past symbiotic human settlement and interaction with turlough environs. Given the geographical spread of turlough sites in the west of Ireland, the broad

chronological brief of this thesis, and the absence of previous research on the topic, it was necessary to consult a wide range of secondary sources for this study.

The core theoretical frameworks (section 2.3.1-4) that support this thesis are based in both landscape and historical archaeology. A phenomenological interpretation of the unique topographical, ecological and hydrological features of turlough environments, and their implications for, and impacts on human settlement in the past was achieved through the sub-discipline of landscape archaeology. Seminal works by authors such as Tilley' *Places, paths and monuments: a phenomenology of landscape* (1994), Collins: *Decoding the landscape* (1994) and Muir' *New reading the landscape: fieldwork in landscape history* (1999) were consulted and some of the theories and methodologies outlined by them were adapted and applied to turlough landscapes. Core texts that are concerned with the theoretical frameworks of historical archaeology were also examined. These include *The Cambridge companion to historical archaeology* (Hicks and Beaudry 2006) and Moreland's *Archaeology and text* (2001).

Landscapes examined in this thesis required supplementary reading of secondary sources that were specific to both the individual case studies and to the variety of individual archaeological sites that spanned a wide sample of typological, cultural and temporal contexts. In examining ecclesiastical landscapes for example, texts concerned with the specific archaeology of ecclesiastical landscapes were consulted including publications by Donkin (1958-7) that concern the landscape of monastic settlement. Similarly, where research concerned the medieval manorial landscape, secondary sources consulted included: *Anglo-Norman manorial settlement in Ireland; an assessment* (Graham 1985) and Holland's *The Anglo-Normans in Co. Galway* (1987). Publications including *The archaeology of medieval Ireland* (Barry 1987) *Medieval Ireland: an archaeology* (O'Keefe 2000) and *The archaeology of medieval rural settlement in Ireland* (O'Connor 1998) also provided a broader historical and archaeological context for this study.

#### 1.3.8 Published and unpublished archaeological reports

Excavation reports formed an important component of this research and added to the understanding of the nature and significance of past human settlement in turlough

environs. The majority of archaeological excavations in Ireland have been undertaken in the last 20 years, with only a small portion of those excavations being published to date. At the time of writing, a total of 34 archaeological investigations had been undertaken on, or in the immediate vicinity of, turlough floodplains. Chapter 4 summarises and examines the results of these excavations, the majority of which were pre-development investigations with just 4 conducted for research purposes. The results of past archaeological investigations produced evidence for human interaction with these seasonal lakes dating from the Neolithic to the early modern period. In many cases, it was shown that this interaction specifically related to, and utilised the local hydrology of the turlough floodplain. Few of the excavations that have been carried out near turlough floodplains investigated archaeological remains associated with the historical period in Ireland. However, excavations that revealed a concentration of human activity or a specific use of the turlough floodplain during a particular period were useful to this study. Bronze Age burnt mounds were by far the most prevalent site type associated with turlough landscapes. Examples are found at Moigh Lower in Co. Roscommon and Fahee South in Co. Clare, and in Co. Galway, at Coldwood/Foorkill, Roevehagh, Caherweelder, Moyveela and Ballinillaun.

## **Chapter 2 - Theoretical frameworks**

### **2.0 Introduction**

The broad chronological period and diverse sources involved in this research necessitated the use of three main theoretical approaches. These are the theoretical models of firstly, archaeological landscape theory, secondly the theoretical models associated with historical archaeology, and finally the theoretical models of humanistic geography.

The basis of archaeological landscape theory is that the cultural landscape is a product of the interaction of humans with the physical landscape (Keller 1994; Gkiasta 2008; Tilley 2008; Harmansah 2014), a theory that is ideally suited to the study of past human settlement and turlough environments accommodates the environmental sciences and the humanities combined.

The theoretical models associated with historical archaeology are broadly dichotomous, with both New and Old World approaches. This dichotomy is explored further in section 2.3, with this thesis adopting the Old World approach in tandem with the theories associated with landscape archaeology, to take due regard of the conflict which often arises between the documentary and archaeological record. This theoretical model found ready application to the study of folklore, place-names and the identity of people in turlough landscapes. It was through the use of these theoretical approaches that turlough environments were ‘peopled’ through time.

Within the theoretical models associated with humanistic geography the concepts of place and space form part of an underlying theory for the interpretation of landscapes in both the present and the past. The term ‘space’ refers to the abstract physical environment without a particular substantial meaning, while the term ‘place’ refers to how human populations are aware of and interact with a defined space, and how that space is understood and valued.

The theoretical models of humanistic geography and archaeological landscape theory present complimentary analyses of past landscapes beyond understanding

only the physical landscape and human interaction with both built and natural environment. This is of particular importance when interpreting the role of the turlough landscape in the cognitive landscape of past communities. Further to this, the theoretical models associated with historical archaeology highlight previous misinterpretations of the importance of these floodplains, allowing for reinterpretation of turloughs as also being important 'places' within the cognitive landscape of past populations.

## **2.1 Landscape archaeology**

The place of watery environments in landscape archaeology has until recently, been occupied mainly by the subfield of wetland archaeology. Wetlands include salt-marshes, fenland, peat bogs, river margins and lake margins. In recent decades there has been a growing interest in theorising these landscapes, especially in post-processual and interpretive approaches that focus on the meaning and creation of space and place, relations of power and social standing, the politics and expressions of social identity and, experiential and phenomenological methodologies. Landscape may refer to the inhabited or perceived environments of human communities in the past, and may incorporate both natural and artificial elements (Holtorf and Williams 2006, 235). Many forms of material culture are involved in the negotiation of identity through time including the physical landscape and space, and both are inherently linked to socially and culturally mediated remembrance and memory of place and its significance (*ibid.*). Thus, landscapes may be viewed as accumulators of memory and can be seen as a record of past human settlement and interaction with the physical environment (*ibid.*). This fact is of particular significance for chapter 8 which examines the continued use and re-use of specific turlough floodplains as assembly places by a variety of population groups through time.

Landscape archaeology is a multi-strand approach to the study of culture with the study of landscape advocating an emphasis on the relationships between material culture and human modifications and adaptations to the natural environment. Thus, space, is not a passive medium, but an active agent or stimulus of change and understanding (Llobera 1996, 614). While human activities leave their spatial/temporal imprint on the landscape, those same practices are informed by the already existing spatial order and the landscape is filled with cognitive

understandings, meanings and connotations (*ibid.*). Ingold has concisely summarised the key concepts which define landscape archaeology as follows:

'Landscape is the world as it is known to those who dwell therein, who inhabit its places and journey along the paths connecting them' - Ingold 2010, 62

Conventionally, within western philosophical traditions since the 17<sup>th</sup> century, the world has been perceived to be composed of two elements, generally described as objects and subjects. Nature, the world of objects, is seen as an inanimate and immutable essence that existed prior to its description by subjects. Subjects on the other hand, are perceived as animate and are therefore invested with the ability to manipulate and describe the inanimate world of objects (Jones 2002, 3). The study of landscape archaeology has evolved to include how landscapes were used by subjects/humans to create, naturalise, and reinforce social conditions and to announce social status to communities in the past. In this study, examples of this include the designation of turlough floodplains as seasonal, communal, and symbolic assembly spaces through time (chapter 8). This designation is anthropogenic and though reflective of some of the physiographic conditions that are characteristic of the floodplain, the designation and understanding of the landscape and its significance is cognitive. Chapter 8 demonstrates that past cognitive landscapes are often preserved in the naming of places and these place-names reflect cognitive landscape associations that have largely been forgotten or lost through time.

Defined in this manner, archaeologists such as Delle (1998) have theorised landscape as being composed of three components: the material, the social, and the cognitive landscape. Material space or landscape is that which is created by humans, either through physical means or through the establishment of definitions, descriptions and rules of what a space is reserved for and how it should be used and perceived (*ibid.*, 38). Social space dictates a person's relationship with both others and the material space (*ibid.*, 39). Cognitive space determines how populations and communities comprehend their social and material spaces and how the world around them is understood as an entity (*ibid.*). Thus, the focus of attention reverts to the individual as the importance of a larger spatial unit, the landscape, is recognised as essential to

understanding the socialisation of an individual (Llobera 1996, 614). This theory is of particular importance in chapter 5 which uses the record of place-names that are associated with turloughs to examine forgotten associations and understandings of turlough floodplains.

The fact that environment has an influence on human activity stresses the environmental attributes of the physical landscape and cultural activity is viewed in relation to a specific environmental context (Gkiasta 2008, 9). In his study of the archaeology of riverine environments, Edgeworth (2011, 15) highlighted the tendency of some archaeological studies to focus on the more traditionally defined elements of material culture and to overlook the natural environment as a cultural artefact which has been artificially shaped and manipulated by humans in the past. Archaeological sites and monuments can be seen as a locus of economic activities and behaviours. Surrounding terrain and, for example, its agricultural capacity or the availability of natural resources are, however equally important to understanding the perceptions of past populations of the broader world. Chapter 6 of this thesis specifically examines turlough landscapes with respect to their contribution to past societies as a natural resource. This chapter serves to contextualise within the landscape, many of the archaeological sites discussed throughout this thesis, with particular importance in the Turloughmore case study (Chapter 7).

Throughout this thesis, the theories and methodologies of landscape archaeology were utilised to examine the material, social and cognitive space of turlough floodplains. Field survey and documentary sources are used in the examination of both the material and social spaces associated with these seasonal lakes throughout this thesis. Chapters 5 and 8 examine aspects of the cognitive landscape through the medium of the proxy record of place-names associated with these environments, and other documentary and archaeological evidence to draw conclusions as to the significance and situation of these spaces in the phenomenological experience of these lands through time.

## **2.2 Phenomenology**

A phenomenological approach to archaeology emphasises the use of sensory experiences to view and interpret an archaeological site or cultural landscape. This

approach to landscape archaeology espouses the ideas of philosophers such as Heidegger and Merleau-Ponty who advocate the idea of *In-der-Welt-sein*, being-in-the-world (Tilley 1994, 13) and that all human understanding and experience of the world around us, and its past, is to some extent subjective. Tilley's seminal 1994 publication *A phenomenology of landscape: places, paths and monuments* attempted to establish the methodology and benefits of a phenomenological approach to landscape archaeology, with particular emphasis on the landscapes of prehistoric societies. Tilley and other phenomenological archaeologists stressed the importance of being-in-the-world and experiencing past archaeological landscapes, not just through the eyes and actions of an external observer, but as an immersed, integral and integrated observer of the landscape. The human senses form an integral part of this phenomenological approach as they are our means of experiencing the world during fieldwork, and a reconnection with the senses is advocated.

The phenomenological approach to the study of landscape archaeology had its genesis in the emergence of post-processual theories and methods in the closing decades of the 20<sup>th</sup> century. Landscape archaeology, as a sub-discipline of archaeology, came to the fore in the 1970s and was born out of an increasing realisation that monuments could no longer be viewed as singular units of archaeological occurrence, but instead formed part of a much larger archaeological palimpsest imposed on the landscape (Fleming 2006, 267). The post-processual approach from which the theories and methods of phenomenology developed, advocated that archaeology was subjective rather than objective, and evidence ascertained from the archaeological record was often relative to the perspective of the archaeologist responsible for uncovering and presenting the data (Trigger 2007, 452). The reliance of the preceding processual school of archaeological thought on the quantification of data as a means of understanding past societies was superseded by the post-processual school of thought, with its increasing emphasis on the personal and social stimuli that shaped past societies. Processual archaeology had considered space as an abstract dimension or container in which human activities and events took place (Tilley 1994, 9). It was through the superseding post-processual school of thought that phenomenology, as a distinct branch of landscape archaeology, first came to prominence and began to see landscape as a medium

within which the activities of human populations created friction and experiences which were often influenced by the physical world which surrounded them.

Tilley (*ibid.*) argued that, simply by looking at two-dimensional depictions of a landscape, such as on a map, archaeologists failed to properly understand how communities living in hunter-gatherer and agricultural societies actually related to and experienced landscape and space. In the phenomenological approach, an over-reliance on vision as an interpretative tool was deemed to be a hindrance to a holistic understanding of past landscapes and societies. It was argued that prehistoric people placed more emphasis on other senses, such as sound and smell for hunting and navigational duties, whilst taste and touch would have also played a part in people's connection with the landscape. This activation, or reactivation, of the archaeologist's senses forms the central theme of the phenomenological discourse in landscape archaeology.

The theories and methodologies of phenomenological archaeology have been applied to this study of turlough landscapes. In approaching the study of these seasonal lakes, careful consideration was given, not just to the location of individual archaeological sites in relation to the immediate floodplain, but also to the broader landscape setting. Aspects of the cognitive landscape were taken into account using the proxy record of place-names associated with these landscapes which aided in interpreting the landscape setting of some monuments and sites. Due regard was also given to the palaeo-environment of these landscapes with palaeo-environmental studies being used to correctly contextualise former landscape settings and flooding regimes. Comparison was also drawn between the Turloughmore study area examined in chapter 7, and other turlough sites which had not been influenced by extensive drainage programmes and anthropogenic changes to the natural landscape. In the case of Turloughmore, a floodplain that has been defunct since the mid-19<sup>th</sup> century, extreme weather conditions during November 2009 resulted in a resumption of the former flooding regime. This rare occurrence offered a unique opportunity to approach the archaeological sites that were once situated on, or in close proximity to the former floodplain, with greater phenomenological understanding of their past landscape setting.

### **2.3 Historical archaeology**

The chronological brief of this thesis spans the early medieval to the modern period in Ireland. This period represents the literate past, with a wide variety of written documents present in a multitude of cultural and temporal contexts (see section 2.1). The definition of historical archaeology presents is dichotomous among archaeologists. The dichotomy is largely geographical with the New World traditions defining the subject as post-Columban, and Old World theories that establish broader connections with documentary archaeology of all literate societies (Gilchrist 2005, 330). In the New World, the subject is often confined to the period of capitalist expansion or European colonialism after Columbus, omitting subjects dating prior to 1492, while in the Old World the axis is more often drawn according to sources and methodology. Andren (1998) asserts that historical archaeology is principally methodological, uniting the archaeology of documented periods ranging from ancient Egypt and Mesopotamia right up to the 20<sup>th</sup> century. Gilchrist (2005, 330) highlights that such definitions cast a wide net to include all documentary archaeology. Similarly, Moreland (2001) defines historical archaeology by the presence of written documents in the society that is being investigated.

It is clear from the title of this thesis, that the focus is on the literate past in Ireland and that the work is an endeavour in historical archaeology by the Old World definition. Therefore, this thesis has adopted the theories and methodologies of that branch of the discipline in tandem with landscape archaeology, and takes due regard to the methodological approaches to, and understandings of, the written record. A careful understanding of the conflict which often arises between the documentary and archaeological record must be recognised. According to Moreland, historical archaeology should not treat documents merely as sources, but rather engage with writing and texts as a form of social practice (Moreland 2001). In the study of historical archaeology, texts are not only sources of information, but are also artefacts that have been produced in particular cultural-historical contexts for specific reasons (Wilkie 2006, 13).

In this study, early modern documents that advocate the drainage and manipulation of turlough lands must be viewed in their cultural context, and an understanding of the driving economic and political forces and the political conditions that produced

these documents is needed for their correct interpretation. In recent years, some historical archaeologists have emphasised the partial nature of written sources arguing that since they were often produced by and for the elite, they have little to say about the activities of the rest of the population (*ibid.*, 19) and were sometimes tainted by their creation in an agent-relative context. Early modern documents in Ireland that advocate the drainage of turlough floodplains to free up more marginal lands with only a seasonal availability, are mostly reflective of an elite colonial class and are often not reflective of the attitudes of those who occupied and farmed turlough landscapes.

The writing of historical archaeology shows far more explicit engagement with the problems of narrative and representation than most such work in other traditions of archaeology (Joyce 2006, 48) and documentary evidence and archaeological findings can be quilted together to understand individual past lives (Wilkie 2006, 13). This understanding of the value of historical documents to the practise of archaeology has not always been clearly understood, and the discipline of historical archaeology has frequently been undermined as less consequential to our understanding of the literate past compared to historical studies. The *Hawkesian Ladder* of the capabilities of archaeological methodologies (Hawkes 1954, 161-2) implies that the capability of the discipline of archaeology to correctly inform us of the nature of human settlement in the past is limited. According to Hawkes, writing over half a century ago, archaeological methodologies are limited to producing data regarding archaeological phenomena and informing us of the subsistence economies of human populations. However, without supplementary written sources, Hawkes asserts that archaeology is poorly equipped to inform us of the nature of past socio-political institutions, religious institutions and spiritual life. Nonetheless, Binford (1972, 96) has argued that the ability of archaeology to generate knowledge of the past was not inherently blighted by the incomplete nature of the archaeological record. In recent decades, the value of historical archaeology has begun to be recognised and its role in interpreting the past has come to be acknowledged.

Moreland (2001, 17) sounds a note of warning and suggests that sites chosen by historical archaeologists were (and to some extent still are) dictated by a desire to complement the information provided in the written sources. This thesis engaged

with the theories of historical archaeology and sought to engender the respective turlough landscapes with a deeper narrative, through the use of documentary sources, in order to people the landscapes in question. Due consideration was given to the nature and validity of the documentary sources that were utilised and examined. Most frequently however, many of the documentary sources that were examined were of a relatively objective discourse and dealt purely with factual data which seldom elicited social relations. Nonetheless, over a broader time-frame, it is possible to identify underlying agendas in those texts that deal with land value and land reclamation. Texts of the early and later medieval periods that identify the value of turlough lands as a grazing resource must be understood in reference to a largely pastoral farming community who exploit this resource seasonally as part of a grazing strategy. Therefore, references to turlough floodplains during this period reflect the positive aspects of the physiography of these environments. During the early modern period, documentary sources that refer to turlough lands in relation to the potential for improvement, emphasise the negative aspects of seasonal availability in the desire to increase profitability of lands that were frequently in the possession of a section of society that was, in many ways, no longer directly connected with the natural landscape.

#### 2.4 Space and Place: the approach of Human Geography,

This thesis examines turlough landscapes through the historical period, though broad themes associated with gathering and ceremony within turlough landscapes can be identified from at least the Bronze Age, and continuing into the Early Modern Period across a diverse collection of practises. It is this continuity of thematic association that is of most importance here, and for which the theories of Humanistic Geography, Space and Place are most important.

In the humanistic geography the concepts of place and space form part of an underlying theory for the interpretation of landscapes in both the present and the past. Space refers to the abstract physical environment without a particular substantial meaning, while place refers to how human populations are aware of and interact with a defined space. The term 'space' has commonly been used in place of cultural landscape to describe landscapes that were produced or mediated by human behaviour in order to elicit certain behaviours and understandings of the physical

environment (Delle 1998, 37). Retrospective memories, tied to landscape, can create the past at particular places and through social practices (Holtorf and Williams 2006, 235). The significance of this fact forms a fundamental element of the theoretical framework of landscape archaeology, and an understanding of the significance of space and place in understanding past interpretations of environment. Chapter 8 of this thesis demonstrates how culturally inherited associations of communality and assembly with turlough landscapes were reflected in a thematic continuity of the communal assembly of communities in these landscapes through time. Similarly, chapter 5 of this thesis has identified many of these lost cognitive associations that were preserved in the toponymic record for these landscapes.

In his examination of historical landscapes in Ireland, Duffy (2007, 15) states that the past lives on in the landscape which surrounds us. This is a core tenet of humanistic geography, space and place. 'Space' can be described as a location which has no social connections for a human being; little more than a Cartesian conceptualisation of the physical environment. No value has been added to this space by human activity. According to the pioneering work of Tuan in his seminal work *Space and Place: the persepective of experience* (1977) 'it is an open space... ...it does not invite or encourage people to fill the space... ... and no meaning has been ascribed to it'. It is more or less abstract (*ibid.*, 164). However 'Place' is more than just a geographical or physical location, and can be described as a location created by human experiences and actions. Again, according to Tuan (*ibid.*, 6) a 'place' does not exist of observable boundaries and is besides a visible expression of a specific time period. The literature on place and landscape that has appeared in recent decades is large with notable authors including Nicholas Entrikin (1991) who pioneered the use of these concepts in landscape studies.

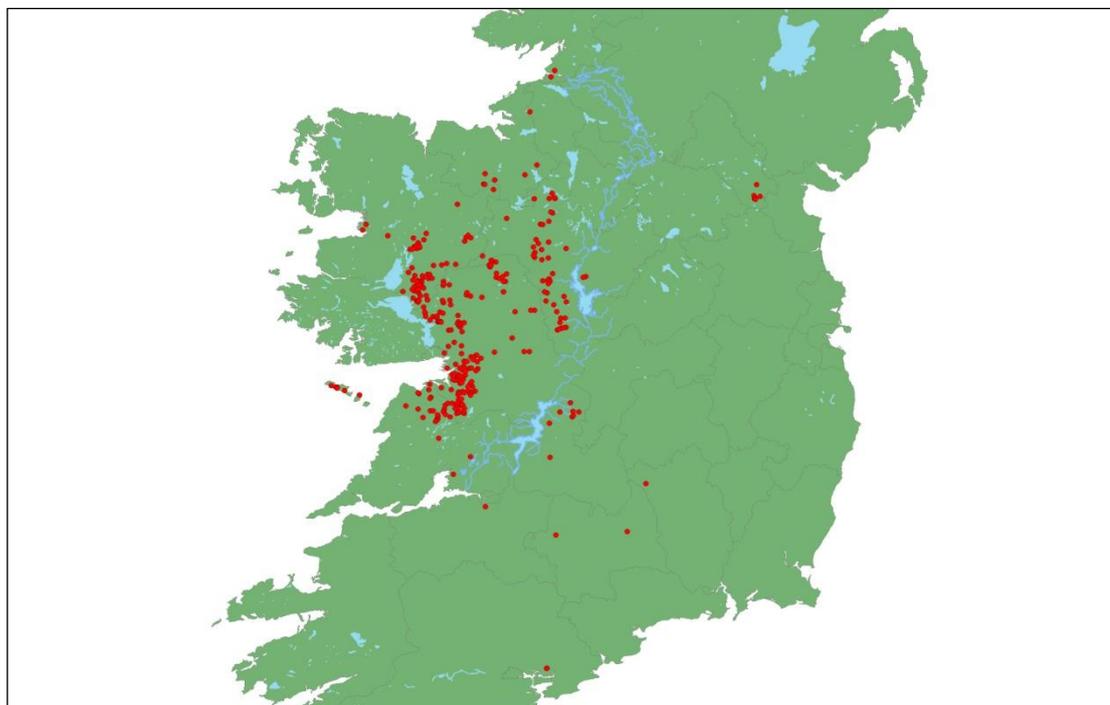
The work of Entrikin was further developed in the discipline of landscape archaeology where it is now an accepted methodology for historical landscape interpretation. In his examination of environment, society and landscape in Medieval England, Tom Williamson (2013) makes the point that 'old-fashioned' landscape studies in archaeology are frequently concerned with identifying patterning as a consequence of physical geography (*ibid.*, 2). Modern archaeological landscape studies stress the significance of place in interpreting the landscape, and

understanding the importance of place and space as a method for understanding landscapes. Places and spaces, through their associations with past events, act like reservoirs of memory. Modern landscape studies, such as the work of Harmansah in Anatolia (2014) take important note of the fact that past landscape associations continue to be an important source of culture and identity, and that there is an embodiment and emplacement to human life in landscape that cannot be denied (*ibid.*, 140).

## **2.4 Conclusions**

Although there has been little or no previous research carried out on the subject of past human settlement in turlough environs, there is a great quantity and variety of source material available to the study of the subject. This thesis has approached past symbiotic human settlement in turlough environs holistically, incorporating evidence from a wide variety of sources that span both the sciences and social sciences. It embraces data from multiple disciplines in its approach to landscape in order to aid in a fuller understanding of the topic. It does not rely solely on the evidence available from documentary sources and field survey, but examines landscapes, both physical and cognitive, using the theories of landscape archaeology to enlighten an understanding of past settlement and land-use around these seasonal lakes. Data relating to the physical landscape, including scientific studies of the physical nature of these environments, is coupled with documentary sources, toponymic survey and field survey, in order to present a deeper, more layered understanding of these environments. This approach allows for a fuller understanding of turlough landscapes, peopling those landscapes and interpreting their past significance to communities as places of both subsistence value, and as landscapes that accumulated significance and meaning through time.

## Chapter 3 - Turloughs - An environmental and topographical description



**Fig. 3.1** The distribution of turloughs in Ireland based on data obtained from the Geological Survey of Ireland (GSI 2020).

### 3.0 Introduction

The purpose of this chapter is to summarise the distinguishing geological, hydrological and ecological characteristics of turloughs and to provide an understanding of the unique physical attributes of these seasonal floodplains.

Turlough is a term applied to those areas of land that are liable to flood in winter (hydro-period) but dry out, at least partially, in summer (Flanagan and Flanagan 1994, 159). They have been defined as wetlands at the interface between groundwater and surface water and occur predominantly on the well-bedded, pure limestone regions in the western third of Ireland, forming a significant part of this region's hydrological cycle (Waldren 2016, 28). Turloughs, of which there are *c.*304<sup>3</sup> in Ireland (Sheehy Skeffington 2006, 267), are glacio-karstic phenomena typically

---

<sup>3</sup> Sheehy Skeffington notes that this figure is based on a baseline list and not all turlough sites have been formally verified. The Turlough Database Consolidation Project (Mayes 2008) has identified 483 potential turlough sites (227 of which are yet to be confirmed in the field).

associated with the landscape of the Burren Plateau and the Western and Central Lowlands, west of the River Shannon (Fig. 3.1), although outlying examples have been identified in other regions. Key characteristics include a dynamic flooding regime, lack of surface outflow and ecological communities characteristic of wetlands.

A turlough is a pulsing hydrological system. Turloughs may be viewed as transient lakes resulting from a combination of high rainfall and, accordingly, high groundwater levels in topographic depressions in karstified limestone terrain. They fill mainly by inflows of groundwater through estavelles and springs, in addition to some surface runoff; they also ultimately empty through estavelles and swallow-holes (Waldren 2016, 28). There are two significant theories as to how turloughs formed. They may be glacial (glacial in origin) (Williams 1964, 1970), or possibly pre-glacial, having developed as a result of tertiary karstic processes (Coxon 1986; Coxon and Coxon 1997). It is thought likely that some turloughs may have developed as karst depressions through the tertiary period, with the possibility that they were subsequently modified by repeated glacial scouring and/or till deposition. Others may have been formed by glacial processes in the more recent quaternary period (Coxon and Coxon 1997, 37-55).

Drew (1976, 58) considers the evolutionary element to turlough formation suggesting that they may be glacially scoured bedrock hollows, but enlargement of the hollows may have occurred by lateral erosion, the hydrological functioning of the turlough having preceded the landform. The chronology of the geo-morphological appearance and hydrological function of those turloughs shown to contain deposits of marl is questioned further by Coxon (1986), with a suggestion that the modern, ephemeral hydrological function succeeds an earlier, permanent lacustrine environment present during the early Holocene in Ireland (c.10 000 – 9500 B.P.).

Although some patterns have been broadly identified in turlough distribution and orientation, generally northeast–southwest in south Co. Galway and east Co. Clare, and more variable in Co. Mayo, the determination of causes for these orientations is not exact. Where turloughs are shown to follow a geological structure (e.g. the direction associated with the Caledonian Orogeny 490-390mya), the possibility must

be considered that this is not due to the direct control of the geological structure, but rather the influence that the geological structure may have had on the direction of ice flow during the last glacial maximum and therefore on the construction of the surrounding topography by glacial erosion and deposition (*ibid.*, 350).

Visser *et al.* (2006) have summarised a collection of turlough typologies based on the distinct geo-morphological characteristics identified by a number of authors. These classifications reflect the disciplines of individual researchers and their particular interests in turlough systems, and they are generally based on a single aspect of turlough environments. A concise, over-arching typological breakdown of turlough sites has not yet been produced.



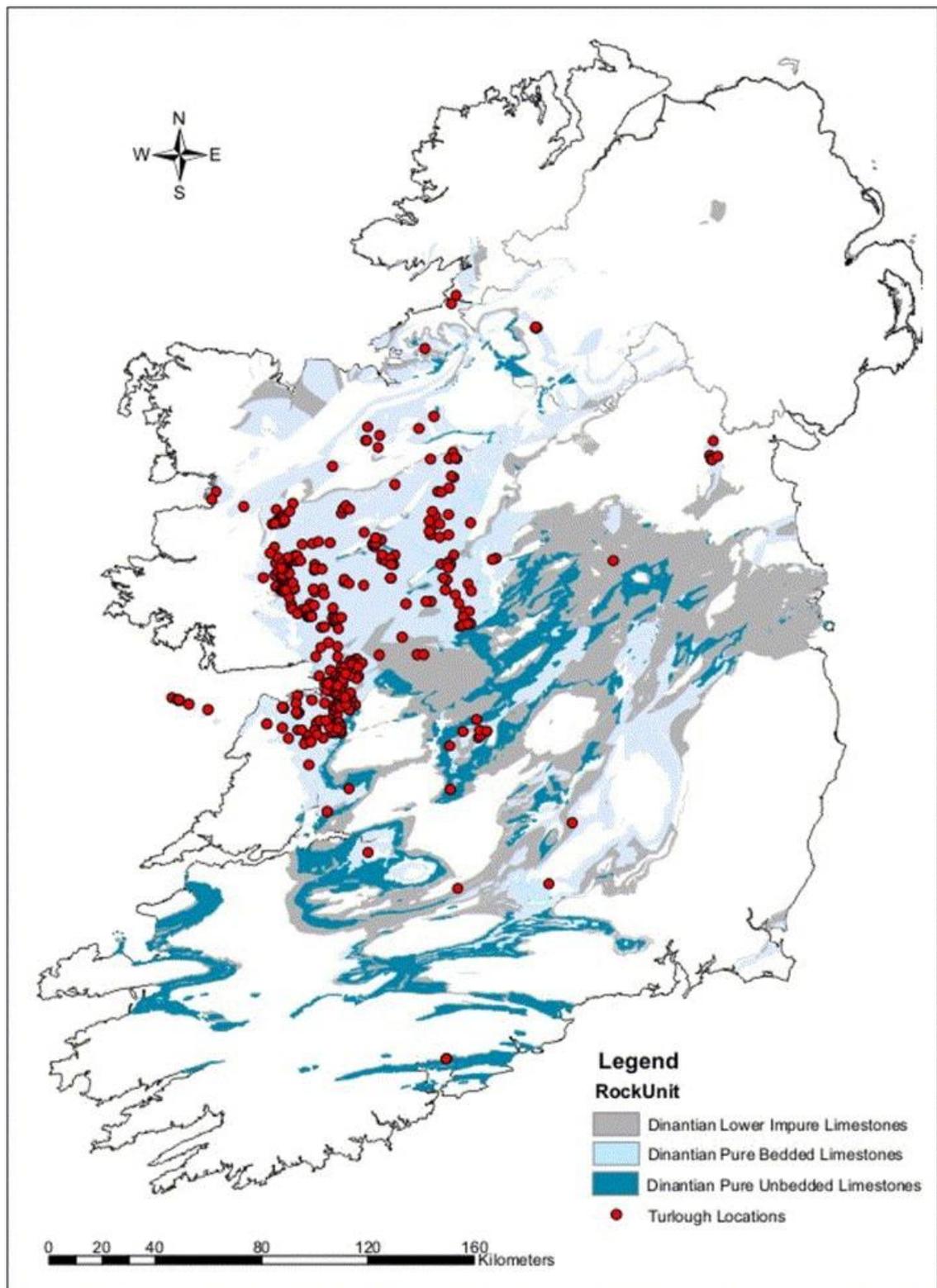
### **3.1 Environment and geology**

The focus of this dissertation does not require a lengthy preamble concerning the geological and scientific background to the phenomena of turloughs. Extensive scientific studies have been compiled by notable scholars in that field (Coxon 1986; Drew 1976; Ford and Williams 2007; Sheehy Skeffington *et al.*, 2006; Waldren 2016). Nonetheless it is thought appropriate to provide some key information here that relates to the typical landscape setting, hydrological conditions, and environmental characteristics of turlough landscapes.

#### **3.1.1 Solid geology**

Lithologically, turloughs are associated with areas of karstified limestone, the principal component being the mineral calcite (90-100%), but frequently containing the mineral dolomite (0-10%). Impurities such as quartz, argillaceous minerals, glauconite and chert may also be represented (Ford and Williams 2007, 10). The permeability (a measure of the capacity of the rock to transmit water) of limestone depends almost entirely on fracturing and further enhancement of fissure permeability by karstification (the chemical dissolution of calcium carbonate by groundwater). In general, clean, pure, bedded limestones have a better permeability than impure, muddy or clayey, poorly bedded limestone. Such pure, clean, bedded limestones are associated with the Carboniferous period in Ireland.

‘Karst’ is the term used to describe a landscape of exposed limestone containing caves and extensive underground water systems that develop on the afore-mentioned soluble rocks. In the context of the Irish landscape, the physical appearance of karst is often associated with areas of the Burren and the Aran Islands. However, this exposed appearance is largely a feature of glacial and post-glacial processes. Furthermore, the impact of anthropogenic activity has also contributed to the appearance of these landscapes, with the removal of vegetation cover causing accelerated soil erosion (Drew 1983, 113-24). However, the underlying structural geology of Ireland is dominated by limestones (40,000 km<sup>2</sup>) and there is potential for much of this underlying geology to represent palaeo-karst, which is a karstified landscape whose hydrological regime is now defunct due to obstruction by overlying geology and glacial deposits.



**Fig. 3.3** A simplified geological map of Ireland showing that turloughs predominantly occur in the west of Ireland and are associated with those areas identified by the GSI as (Dinantian) pure, bedded limestones (after Sheehy Skeffington *et al.* 2006, 268).

As can be seen from the accompanying distribution map (Fig. 3.3), turloughs are predominantly associated with the Burren Plateau and the Central and Western Lowlands of Ireland, an area considered to be karst which developed through the tertiary period and right up to the Pleistocene glaciations. Coxon's (1986) work on the lithology of turloughs dissected the geological data available in order to understand the lithological distribution of turloughs. It was concluded that the vast majority of turloughs, with few exceptions, occurred in Upper Limestones, in grey, well-bedded, clean calcarenite. The limestone in which they occur is almost always a very pure, Dinantian bedded limestone (Sheehy Skeffington *et.al.* 2006, 267). The greater purity of this limestone may render it more soluble, leading to a greater degree of karstification. Because the vast majority of turloughs were found to occur in rocks of similar lithology, it was not found possible by Coxon to explain the variation in the internal characteristics of individual turloughs on the basis of lithology. The Dinantian limestone is both well-bedded and well-jointed, enabling karstification to proceed by the widening of these lines of weakness. It is because of these characteristics and the thin, or often absent glacial drift cover, that turlough distribution is concentrated on the Burren Plateau and the Central and Western Lowlands.

### 3.1.2 Soils and glacial geology

As outlined above, turloughs are glacio-karstic phenomena reliant on both the hydrological function of the karstified geology, and suitable over-lying glacial drift/geo-morphological conditions. Thus, as previously identified by Coxon (1986, 120) in her study of 90 individual turlough sites, turloughs occur on only three of the 13 drift-cover categories indicated in the *Atlas of Ireland* (Royal Irish Academy, 1979, 17):

- Little or no drift cover.
- Sands, gravels and gravelly till.
- Till mainly from carboniferous limestone with carboniferous calp limestone, sandstone and shale.

The hydro-geological significance of these sediments is variable and is largely a function of their permeability, thickness and extent. Material of low permeability

(till, clay and peat) protects underlying groundwater, restricts recharge and, where sufficiently thick, may confine groundwater resulting in the dominance of surface flow. High permeability materials (sand and gravels) allow a high level of groundwater recharge and provide additional water-storage to that of the underlying bedrock aquifers.

Karstification is widespread in Ireland but much of the karst landscape is blanketed by Pleistocene and Holocene deposits, so that karstic landforms are largely confined to areas where superficial deposits are thin or absent. The permeability and shallow nature of the above drift-cover categories discourages surface flow of water and allows groundwater circulation to dominate.

Coxon (1986, 115) classified and quantified the topography surrounding the study sample of 90 turloughs >10ha as follows:

<b>Classification</b>	<b>Number of Turloughs</b>	<b>Representative Percentage</b>
Flat to gently undulating	21	23%
Gently undulating	37	41%
Elongate drumlinoid ridges	21	23%
Hummocky	6	7%
Eskers and Kames	3	3%
Limestone Plateau	2	2%

It must be considered that Coxon refined her study sample by rejecting those turloughs that were under 10ha in size, perhaps favouring those which might occur in areas of low relief. However, the majority of turloughs occur in low relief conditions, below 50m OD, with upland turloughs being rare. Coxon also made qualitative observations regarding drift cover, which were determined by exposed lithic out-crop, finding that 61% of turloughs occurred in areas with extensive or at least some out-crop. The remainder occurred in areas without out-crop.

From what is outlined above, it is reasonable to assume that turloughs are more frequent in areas of more permeable till. The majority of turloughs occur in areas where the principal soils are either shallow brown earths and rendzinas or grey-

brown podzolics, but are absent from gleys. There is a tendency towards occurrence in areas of better drained soils on shallower drift, rather than simply permeable drift. On the basis of limited evidence from Irish limestone areas, it is suggested that the absence of turloughs from some areas of suitable karstified limestone may be due to thick or impermeable glacial drift (e.g. the northern drumlin belt) (*ibid.*, 117).

### 3.1.3 Land use, ecological and botanical background

The vegetation of turlough environs is primarily determined by the depth and duration of flooding (Coxon 1986) and the management practices within the basin, such as grazing intensity and eutrophication (Goodwillie 1992). The significance of this vegetation and its implications for turloughs being used as a natural resource is discussed in chapter 3. Modern drainage regimes and other anthropogenic changes to the landscape also influence vegetation and soils. The seasonal sward is directly affected by grazing through the removal of the more palatable species and by physical damage and manuring. Grazing before the vegetation has regenerated, following the hydro-period, causes the soil surface to be broken up, encouraging a proliferation of 'weedy' species (*ibid.*).

High quality pasturage on the turlough edges can often be found on soils that are normally low in nutrients (MacGowran 1985, 154). It is likely that inundation of the turloughs for 5-7 months of the year protects the soil from erosion through over-grazing, and it supplies essential nutrients for growth. Goodwillie (1992) has produced a comprehensive survey of turlough plant communities, identifying 32 vegetation units or zones associated with turloughs. An extensive description of the phytosociological and ecological aspects of turlough environments can also be found in MacGowran (1985). For the purposes of this study, however, it is worth mentioning two taxa; *Cinclidotus Fontinaloides* and *Fontinalis*. *Cinclidotus Fontinaloides* is a moss associated with turloughs. Of great significance is the zoning of its growth, the upper limit forming a clear line which defines the upper limit of normal winter flooding (Sheehy Skeffington *et al.* 2006, 271). Its occurrence is limited in the upper parts of turloughs by competition from higher plants and a lack of water. Coxon (1986, 26) also suggests that the presence of another moss, *Fontinalis*, in the zone below *Cinclidotus Fontinaloides* may bear some relation to the duration of flooding. The occurrence of *Fontinalis* relates to sustained flooding,

with the plant not being able to withstand frequently alternating periods of drought and submergence. Coxon, however, does warn that this is not an exact equation. The relationship between vegetation and ground topography can be partly attributed to the interrelationship between deposits and ground topography, however, the depth and duration of flooding has the greatest influence on vegetation zonation.

Evaluating turlough modern grazing regimes is challenging given the still dynamic, or often undocumented nature of turlough landownership. Turlough land tenure can be commonage, private ownership or a combination of both (Visser *et al.*, 2007; Aughney & Gormally, 1999). Moran (2005) attributes the characteristic patchwork arrangement of land holdings on turlough floodplains as a consequence of a past reliance on turloughs as a water source, particularly before the advent of rural water schemes in Ireland in the 1950s. However, this may be an over-simplification of more complex and long-standing traditions of turlough grazing exploitation.

### **3.2 Hydrology and hydro-geology**

Karst groundwater circulation can only occur if subterranean connections are established between uplands and valley bottoms. If such circulation cannot occur, runoff will flow across the surface. The chemical dissolution of limestone within the study areas of this thesis plays a fundamental role in karst development.

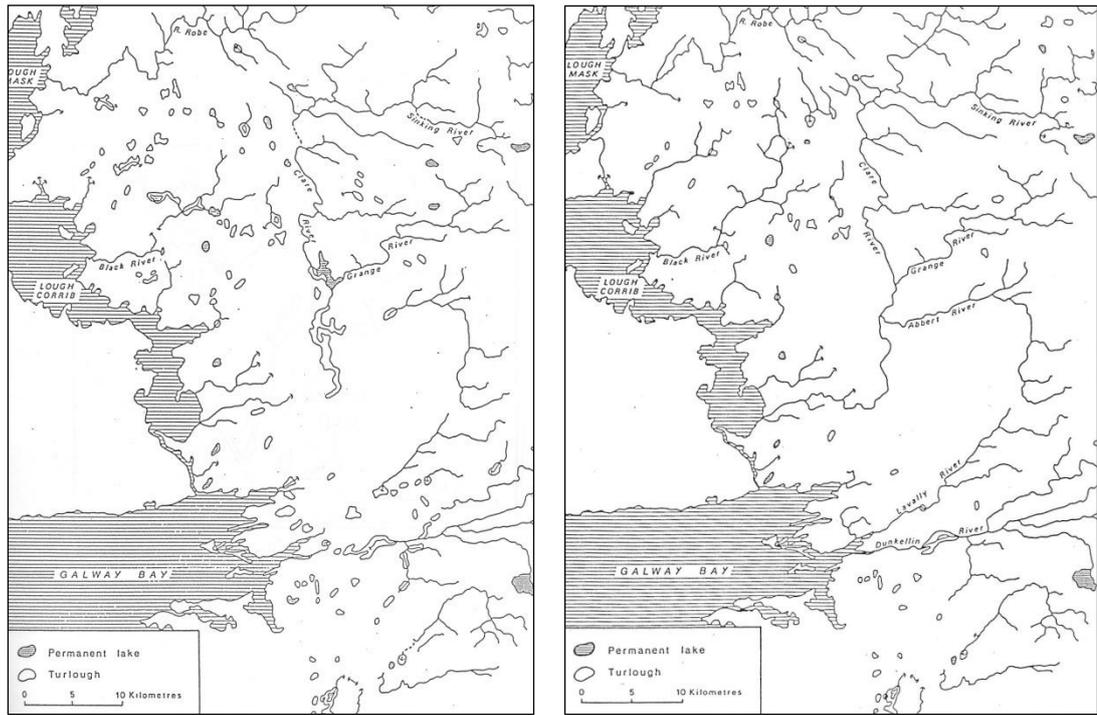
Groundwater circulation causes progressive solution enlargement of void space and a commensurate increase in permeability. Although initial groundwater flow in karst is laminar (in parallel layers), it becomes progressively more turbulent.

A karst groundwater system evolves over time, distinguishing it from other groundwater systems. Although karst rocks may have primary, inter-granular porosity, most water-flow through them is transmitted by conduits developed by solution. Where water moves through these fissures, fractures or joints and along bedding planes, it is called secondary or fissure permeability. These systems receive most of their inputs from point recharge sites at the surface such as enclosed depressions and stream-sinks, which also evolve as a consequence of dissolution (Ford and Williams 2007, 5).

There are thought to be three main flow systems in karstified limestones:

- Shallow or 'epikarstic' systems where groundwater moves rapidly through the dense network of solutionally enlarged conduits in direct response to recharge
- Deeper, discrete conduit flow systems where groundwater moves through major cave/conduit systems thought to have developed under different hydrological conditions than exist today
- Dispersed fissure/joint systems where groundwater moves slowly in smaller joints and fissures outside, but usually linked to the main fissure system

Turloughs usually fill and empty via swallow-holes or estavelles. A swallow-hole is a passage that can be visible, but is often a hollow with stones at the bottom. They can discharge water as a spring or allow water to sink, depending on groundwater conditions. These features are often quite difficult to identify, sometimes obscured by sediment or vegetation. Frequently, turloughs include in their definition 'an area liable to flooding by a groundwater source'. However, a number of turloughs can be shown to flood in winter by surface water inflow. This is the case at sites such as Turloughmore and Dunkellin Turlough in Co. Galway.



**Fig. 3.4** The former extent of surface drainage pre-and post-arterial drainage works, based on the First Edition Ordnance Survey maps (after Coxon 1986, 30).

The potential for significant water yields depends on permeability. Extensive faulting and folding, combined with the effects of karstification, greatly influence the development of secondary permeability. However, the hydro-geology of the principal areas where turloughs occur is extremely complicated. As already mentioned, these areas have generally only a thin covering of glacial deposits and the limestone is often exposed at the surface. Prior to arterial drainage works, none of the rivers in the Western and Central Lowlands maintained an overland course to the sea (Coxon 1986, 30) (Fig. 3.4). Pure limestone has the potential to store large quantities of water. However, the natural capacity of the underground drainage system to allow water to flow to the sea is finite and if high rainfall over an extended period occurs, the water backs up and extensive flooding (i.e. turloughs) occurs.

In the Clare-Corrib GWB (Ground Water Body), water-table levels have high annual variations which indicate that storage is low. Springs in the Clare-Corrib GWB also reflect that storage capacity as many spring flows rise and fall quickly in response to rainfall, with many ceasing to flow in extended periods of drought. Flood response can therefore be rapid. Groundwater velocities in the east-west domain are high,

varying between 100-400m/hr, but are slower in the north-south domain in the order of 6-35m/hr (GSI 2004). Extensive conduit systems exist, as exemplified by the Ballyglunin cave system (Drew and Daly 1993). Overall, flow directions are to the southwest, with all groundwater in the Clare-Corrib GWB discharging into Lough Corrib. Drew (1976) suggests that groundwater flow is concentrated along the axis of shallow synclines with variable and irregular gradients.

The hydro-geology of this area is not always heterogeneous. Within the Corrib catchment there are three sand/gravel deposits that are considered to be a single gravel groundwater body group located in the vicinity of Tuam and Ballyhaunis. These are classified as locally important sand and gravel aquifers of glaciofluvial limestone sand/gravel deposits and alluvial sand/gravel deposits (GSI 2004, 1). Glaciations also effect aquifers and can cause the opening of fissures on isostatic rebound, altering groundwater flows over time. However, these effects are not yet well understood.

A number of distinctions can be drawn between turloughs based on their hydrology. MacGowran (1985) demonstrated a distinction between those turloughs that fill and empty over short intervals of time and those that are more seasonal. Similarly, Drew (1976) recognised two types of turlough on the basis of their hydrological behaviour: one which responds quickly to rainfall, flooding 24-60 hours after heavy rains, the other flooding more slowly on a seasonal basis. The first type is confined to the Burren plateau and not related to a groundwater table. However, the second type is by far the most common. Coxon (1986, 225) commented on Drew's (1976) work:

‘The first type are located close to major zones of groundwater flow, so it is suggested that they may be regarded as overflow reservoirs for excess groundwater discharge, while it is suggested that the second type are a response either to true regional water table conditions or to very restricted inlet and outlet conditions.’

Various degrees of karstification of the underlying and surrounding bedrock lead to different water inputs, water chemistries and different deposits on the turlough floor

(Visser *et al.* 2006 1). However, multivariate analysis shows that turloughs cannot be split into distinct types based on hydro-geology alone.

Regarding the presence of a permanent pool at some turloughs, some information can be extrapolated from the work of Waldron (2016, 581), where in the study of 22 individual turloughs, seven were found to retain water all year round. This is of particular interest when evaluating turloughs as a fishing resource (section 6.2).

### **3.3 Turlough deposits**

The deposition of calcium carbonate on the sward of the turlough floor is one of the distinguishing characteristics of a turlough floodplain. This deposition can be recognised as a whitish coating of calcite crystals on vegetation after the period of flooding. Simplified, the process is explained thus by Coxon (1986, 144):

‘Because of the karstified nature of the underlying geology, carbon dioxide-rich water percolates through the limestone. The water dissolves the limestone and becomes saturated with calcium carbonate ( $\text{CaCO}_3$ ). The solubility of  $\text{CaCO}_3$  is controlled by ambient  $\text{CO}_2$  levels. If water saturated with  $\text{CaCO}_3$ , in equilibrium with  $\text{CO}_2$  levels greater than atmospheric levels, comes into contact with the atmosphere,  $\text{CO}_2$  diffuses out into the atmosphere. A decrease in ambient  $\text{CO}_2$  levels causes the water to become supersaturated with  $\text{CaCO}_3$  and deposition occurs.’

MacGowran (1985, 150) found that many turlough basal sediments were Pleistocene in age. Drew (1976) suggests that deposition began immediately after the final Pleistocene glaciations. Pollen cores taken from Greaghans turlough near Ballinrobe, Co. Mayo suggest deposition of marl begins *c.* 12 500 B.P. (Coxon 1986, 205). The pollen assemblage at 1.5 – 2m depth is thought to date to *c.* 9000 B.P. based on biostratigraphic grounds and the absence of hazel, common after 9000 B.P. Thus, the 6m – 1.5m sediment is deposited over a 3500 year period between 12 500 and 9000 B.P. at a rate of 1.3mm per year. Coxon suggests that turloughs which contain these marl deposits may have been permanent lakes during the period immediately after the last glaciations in Ireland. The presence of mushroom stones at some turlough sites also suggests that the water level has remained at one particular level for long spells (Goodwillie and Reynolds 2003; Dunne and Feehan 2004).

Studies of these deposits are fundamental in understanding past variations in the hydrological regimes of turloughs. Calcite deposits (sometimes consisting of 90-95% CaCO<sub>3</sub>) were identified in c.50% of turloughs studied by Coxon (1986). The presence of large numbers of freshwater snails in these basal deposits suggests an earlier, permanent water-body before the beginning of the modern, ephemeral hydrological regime. These deposits also contain a pollen record which can be correlated with those from permanent lakes elsewhere.

### **3.4 Conclusions**

This chapter has presented a synopsis of the unique geo-physical characteristics and attributes of turlough environments as a necessary basis for understanding how the settlement archaeology of turloughs works. Turloughs are glacio-karstic seasonal lakes that are typically associated with the west of Ireland. The seasonal flooding regime of a turlough is dependent on suitable karstified limestone geology in the area and thin or absent glacial drift cover. Turloughs are typically flooded through a groundwater source, although some examples also have a surface water inflow. Essential elements such as calcium, nitrogen, potassium and phosphorus can be absorbed more efficiently by terrestrial plants from very dilute, flow-replenished solutions than from static solutions of much higher concentrations (MacGowran 1985, 154). In suitable topographical and soil conditions, the seasonality of the flooding regime and the resulting liming of the turlough floor during winter flooding ensures high quality pasturage outside of the hydro-period on soils that are normally low in nutrients. However, in some topographical instances, a prolonged hydro-period results in the formation of peaty deposits and sedge fen which is unsuitable for grazing.

The beneficial effects of the short-term, natural inundation of deltaic and alluvial land are well known. The summer grazing and hay-saving potentials of the *caladh* or 'callows' of the mid and lower River Shannon floodplain were documented by Moland in 1703 (O Dálaigh 1998, 81). Less well known, but also documented, are the summer grazing lands of turloughs in karst areas. Such are the benefits of inundation to land that artificial methods of fertilizing by flooding were employed in the 18<sup>th</sup> and 19<sup>th</sup> centuries. Such areas, flooded for an extended period of time, are referred to as water meadows (Cook 2008; Collins 2008, 350). The process was

known as 'warping' and was recognised by Dutton in Co. Galway in the early 19<sup>th</sup> century:

'Irrigation is manure that is little used in this county. Formerly some ill conducted efforts were made at Marble Hill, St. Cleran's, but have been most unaccountably abandoned by the present proprietors.'

- Dutton 1824, 180

The environmental features of turlough landscapes represent a unique and naturally dynamic environment that has been adapted to, and exploited in the past in Ireland. Although today these landscapes are often viewed as marginal land, the individual topographical features and setting of each site defines its potential as a natural resource through time, in many cases presenting opportunities for extensive summer grazing lands that are naturally clear of other vegetation.

## Chapter 4 – Previous archaeological research within turlough landscapes



**Pl. 4.1** A post excavation photograph of an iron-working hearth or furnace of Iron Age date, located on the northern edge of Caherweelder Turlough, Co. Galway (after Hegarty 2010 (a), 10).

### 4.0 Introduction

The aim of this chapter is to summarise previous archaeological investigations in Ireland that have already contributed evidence and interpretations of human interaction with turloughs in the past, and to use those investigations to identify periods, site types and activities that are associated with human settlement around seasonal lakes. It has already been noted that the extensive bibliography of papers and publications, compiled at TCD in 2007 (Chapter 3), has shown that flood-land research on Ireland has concentrated on the environmental characteristics of turloughs – primarily hydrology, ecology and conservation matters, and that there has been no focus, as yet, on the relationship between human settlement and turlough environments. A single MA thesis by Bunce (2008) that investigated the possible construction of crannogs on turlough floodplains is the only previous investigation specifically dealing with past human interaction with these seasonal lakes. However, there are also some cursory references to human settlement in turlough environments

in other published research, and some excavation has also taken place on and in close proximity to a small number of turloughs.

In Britain, archaeological research on flood-lands has been pioneered by Cook (2008) who, in his study of the water-meadows of Salisbury, emphasises the historical and economic importance of lush riverside pasture-grounds. As with the current body of work on turloughs in Ireland, Cook found little prior research pertaining to the cultural value of the Salisbury water-meadows. Similarly, in examining the influence of waterways on past human settlement in Britain, Edgeworth (2011, 23) notes the disconnection of modern communities from the impact of past hydrological circumstances that have been altered and manipulated by humans through time. This disconnection from the physical landscape and its past is frequently evident in landscape studies and particularly prevalent in circumstances where the natural environment has been altered by human actions.

#### **4.1 Settlement and Land-use studies in turlough environments**

References to human populations and their interaction with turlough floodplains in previous settlement and landscape studies have been primarily concerned with the early modern period in Ireland and take note of early modern farming practices and their impacts on the ecology of turlough floodplains. The impact of recent anthropogenic changes in the form of drainage schemes has also been noted by some authors. It is clear that in almost all cases, the primary concerns of these studies have been the impacts of human populations on a unique landscape and not the impact of these seasonal floodplains on human settlement.

The significance of turlough floodplains as a grazing resource in the past has been indirectly suggested by a number of authors. Regarding the etymology of the word 'turlough', Although not a settlement study, Gunn (2006) has included a brief summary of the meaning of the word in his investigation of tiankengs, doline collapse, and the geology of turlough landscapes. The meanings and interpretations of the term is discussed in section 6.1 of this thesis where it is suggested that turloughs may be distinguished as dry land that was susceptible to flooding just as they are also distinguished as significant water bodies. Gunn (*ibid.*, 1) notes that the

word ‘turlough’ is commonly understood as being derived from the *tuar-loch*, meaning a dry lake. However, he also highlights a possible derivation of the prefix *tur* from the Gaelic word *tuar* which translates as ‘pasture land’. Gunn draws comparisons between the word ‘turlough’ in the Irish language and the Slovenian equivalent *polje* which translates as ‘field’. It is noted by him that both words have a similar etymology and may be associated with the grazing of flood-lands during dry weather. However, Gunn did not expand on this important point and its significance for understanding the past uses of these floodplains is not investigated by him. Importantly, it is shown in chapter 6 of this thesis, that the term *turlach* may have applied to a landscape that was perceived to dry out, rather than to flood, and that these lands were indeed an important grazing resource in the past.

The evolution and significance of the relationship between the rich heritage of the karstic Burren landscape in Co. Clare, and the farming communities of the region has been considered by the scholar of agricultural practises Brendan Dunford. Regarding the early exploitation of turlough floodplains as a grazing resource, Dunford (2001, 235; 2002, 44) has speculated that in early medieval Ireland, and up until recent times, turloughs were important for grazing purposes and to the production of milk and butter, particularly in the Burren uplands. The importance of these products to early medieval populations has been noted by the Celtic scholar Kelly (2000, 326) and the role that summer pastures played in the production of these important goods is shown in chapter 1. In his investigation of the effects of present agricultural practices on the natural heritage of the Burren region, Dunford suggests that the summer pastures of turlough floodplains were an important component of earlier transhumance systems. However, he offers no supporting evidence for this assertion and does not expand beyond this statement. Chapters 6 and 7 of this thesis discuss the evidence for grazing on turlough floodplains from at least as early as the medieval period in Ireland. Importantly, this form of exploitation indicates that farming communities implemented a system of transhumance that incorporated the available summer grazing pastures in low-lying areas as well as exploiting rougher pasture in the hilly surroundings.

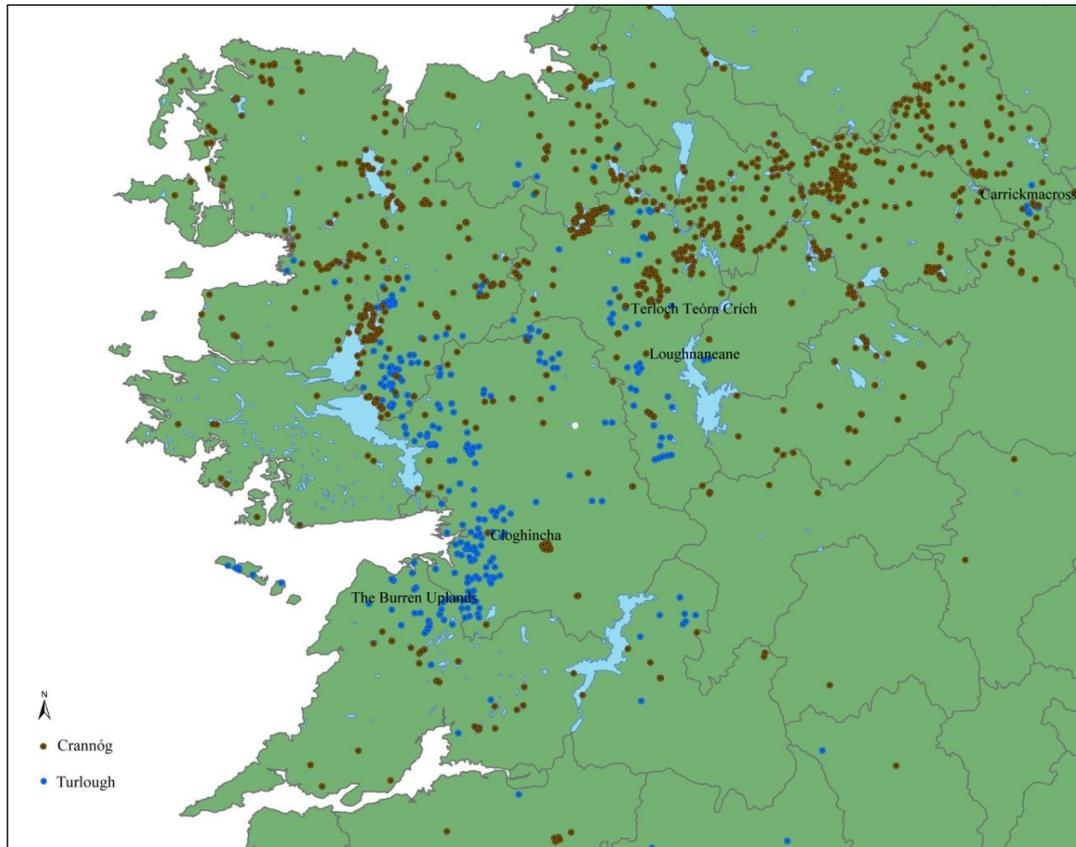
Where turloughs are referred to as an element of the cultural landscape, it is invariably in reference to their environmental significance as a natural habitat or as

an internationally important and unique ecological zone. The botanists Sheehy-Skeffington and Gormally (2006, 219) have been among the first to highlight turlough floodplains as an important element of the cultural landscape in contemporary Ireland. They have suggested that the current system of turlough management, which is largely based on communal grazing rights, has its origins in the 18<sup>th</sup> and 19<sup>th</sup> centuries. Their 2006 report is primarily concerned with the mosaic of biodiversity evident in turlough environments, and the conservation of these unique habitats into the future through symbiotic farming practices. However, beyond observations that are concerned with contemporary grazing rights and the impact of modern farming practices on biodiversity, no attention has been given to the significance of these floodplains for past populations earlier than the 18<sup>th</sup> century, and no investigation into the genesis of the communal grazing regime has been given. Similarly, Tynan *et al.* (2006, 1) also recognise turloughs as forming part of the identity of both the physical and cultural landscape of Ireland today, and acknowledge the significance of these unique landscapes from an environmental perspective. Visser *et al.* (2007) also refer to present systems of turlough management in their investigation of modern farming practices on turlough floodplains. Nonetheless, as with the aforementioned investigations, little or no attention is given to past human interaction with these landscapes as these considerations were beyond the brief of their investigations. Earlier authors, primarily writing from a background in the environmental sciences, have largely been concerned with the impacts of modern farming practices on the physiographic conditions of turlough floodplains today.

The fact that arterial drainage has impacted greatly on the natural drainage regime of many turloughs has been acknowledged by a number of authors (Coxon 1986; Goodwillie 1992; MacGowran 1985; D’Arcy 1983). The historical background and functions of statutory arterial drainage receives a cursory mention from Ní Bhroin (2008, 1) in her EIA report concerning the affects of contemporary drainage activities on turloughs. In examining the effects of land drainage on groundwater resources in karstic regions, Drew and Coxon (1988, 204) outline the agents for, and impacts of, arterial drainage with similar brevity. However, once more, these acknowledgements have been primarily concerned with anthropogenic impacts on the natural environment and no attention has been given to the socio-economic

impacts of this drainage on human settlement in recent centuries as these concerns were beyond the brief of their investigations.

#### 4.2 Previous research on the possible occurrence of crannógs on turlough floodplains



**Fig. 4.1** A distribution map of turloughs and crannógs based on data available from the GSI and the SMR for Ireland. For the purposes of visual presentation of data, a small number of turloughs from east of the River Shannon have been excluded as they have shown no evidence for crannóg settlement.

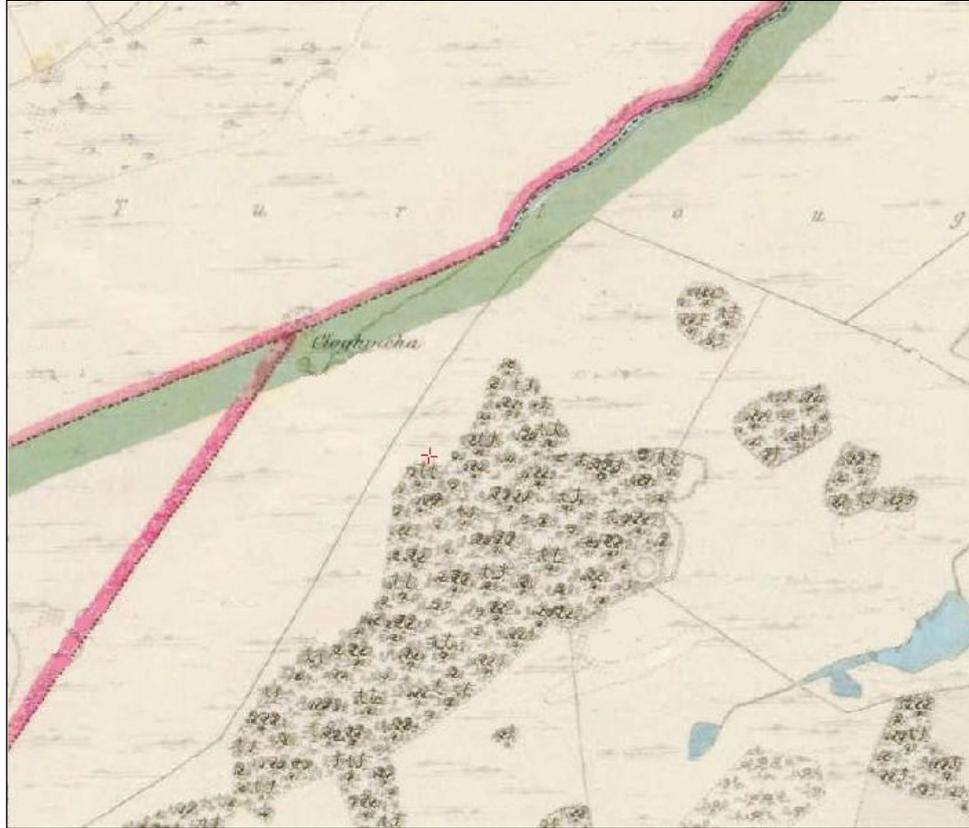
The possible phenomenon of crannógs occurring on the floodplains of seasonal lakes has received a cursory mention in previous lake settlement research by O’Sullivan (1998 (a), 37). More specific to the archaeology of turloughs is O’Sullivan’s observation that in the west of Ireland, crannógs are sometimes constructed on turlough floodplains. However, O’Sullivan does not expand beyond this statement. The siting of this settlement form on turlough floodplains would seem aberrant as this topographical setting seasonally negates the distinguishing characteristic of crannógs as a settlement type associated with off-shore, defensible environments. Emphasising this inappropriate topographical setting is the notable absence of crannógs in regions such as the Burren Uplands where the landscape is almost

entirely dominated by ephemeral, subterranean drainage patterns and where turloughs frequently occur. If turloughs were once considered suitable environments for crannóg construction, then it would be reasonable to expect concentrations not just in the Burren region, but in central and south Co. Galway where turloughs are prevalent. However, the reverse to this is true and few crannógs have been identified in these areas (see Fig. 4.1). Nonetheless, given that a lake settlement has a direct interaction with the waters that surround it, a more in-depth investigation of the possible phenomenon of crannógs occurring on seasonal lakes is undertaken here, to determine whether O'Sullivan's statement can be verified.

Crannógs are a settlement form typically consisting of a partially or entirely artificial island-dwelling, usually constructed in shallow lake waters, rivers and estuarine environments. Frequently, crannógs can also be identified in former lacustrine environments that have subsequently dried up or have been drained, and where raised bog has formed in the basin of the former lake. Crannógs are typically located close to the shore, often with an associated causeway leading to the crannóg platform. They are generally situated on small lakes, avoiding larger and deeper expanses of open water. In Ireland, this settlement form is particularly prevalent along the drumlin belt which stretches from Clew Bay on the west coast, to Strangford Lough in the east. It is evident from Fig. 4.1, that the distribution of turloughs does not correlate with the distribution of crannógs in Ireland with the exception of a narrow interface zone in south Co. Mayo and central Co. Roscommon. This is a reflection of the natural drainage pattern of the central and western lowlands of Ireland where there is a paucity of lacustrine environments. Here, subterranean drainage regimes, unsuitable for the establishment of lake dwellings, were once prevalent, prior to artificial drainage works being carried out.

The possible phenomenon of crannógs being situated on turloughs has undergone a preliminary investigation by Bunce (2008). However, this research relied solely on Co. Galway as a case study area and relying heavily on desk-based research. This study identified a total of 15 crannógs or possible crannógs sited on turloughs in Co. Galway (Bunce 2008, 21). However, closer examination of Bunce's results reveals that only 1 of the 15 cases identified were situated on turloughs as recognised by the GSI. The remaining 14 possible examples were, in fact, sited in peatlands which

may constitute the expanse of former lakes that are still prone to water-logging or, marginally inside the fringes of the floodplains of permanent lacustrine environments that have since been drained.



**Fig. 4.2** The First Edition Ordnance Survey map showing the crannog of *Cloghincha* (GA 104: 244) in the townland of Killeenmore, Co. Galway.

Thus, only a single case identified in Co. Galway by Bunce (2008, 24) can be considered a plausible example of a crannóg being constructed on a true turlough floodplain; Cloghincha crannóg (GA 104: 244) is situated in the townland of Killeenmore on the floodplain of the 264Ha Rahasane Turlough in south Co. Galway. Today, when the turlough is not in flood, the crannóg is sited on a generally dry, low, natural rise in the turlough floor (Pl. 4.2 and Pl. 4.3). However, a modern drainage channel has been cut to the north of the crannóg which has affected the natural drainage regime in the immediate vicinity of the crannóg. A swallow hole lies immediately to the south of the platform of the crannóg and the First Edition Ordnance Survey sheet for the area indicates a permanent pool in this location prior to drainage works being carried out (Fig. 4.2). The near-circular crannóg has an average diameter of 26.3m and the platform has a maximum height of 4.3m above

the surrounding floodplain. It is entirely composed of stone, and is surrounded by a retaining wall of large stones. Redington (1915, 57) noted that at the centre of the artificial island were the foundations of a small rectangular building, with walls 1m thick.



**Pl. 4.2** From the north, Cloghincha Crannóg on the receding waters of Rahasane Turlough, Killeenmore, Co. Galway. An artificial drainage channel is identifiable in the foreground

The siting of this single example from Co. Galway reflects a characteristic common to all eight crannógs in Ireland, identified by the author, that appear to be sited on true turlough floodplains (see table 4.1). Cloghincha is sited close to the lowest point of the turlough floor with a swallow hole located a few metres directly to the south. Despite a drainage channel being cut through the turlough subsequent to the First Edition Ordnance Survey map of the area, this location often retains water all year round and undoubtedly would have done so to a greater extent, prior to the cutting of the drainage channel. Indeed, Bunce (2008, 24) has also taken note of a small permanent pool to the south-west of this crannóg. Thus, although sited on the floodplain of the turlough, the ephemeral nature of the flooding regime is significantly lessened at this location and would have resembled a more permanent lacustrine, or marsh environment, prior to partial drainage of the turlough basin.



**Pl. 4.3** From the north, Cloghincha Crannóg on the flooded Rahasane Turlough, Killeenmore, Co. Galway. (after Bunce 2008, 24)

Using data available from the GSI for turlough distribution and the SMR for Ireland, a desk-based assessment was carried out by the author using ArcGIS, to identify possible occurrences of crannógs on true turlough floodplains throughout the other counties of Ireland. To determine the natural drainage regime, prior to artificial drainage works being carried out, the First Edition Ordnance Survey sheets for each location were consulted. In the case of Loughnaneane, drainage channels were evidently cut, prior to the compilation of the First Edition Ordnance Survey sheet for the area, however, the survival of Nicholas Malby's 1591 plan of Roscommon Town and Castle provides a satisfactory substitute. The results are displayed in table 4.1. A further 7 possible examples could be identified in Ireland, 3 of which occur on a single turlough floodplain at Corbally, Co. Roscommon. Two possible crannógs were also identified at Killaturly, Co. Mayo (MA 062: 108, MA 062: 109) however, extensive drainage works carried out to relieve the surrounding lands of flood risk make determining the natural flooding regime of the now permanent water body difficult. Thus, they are not included below.

<b>Turlough Name</b>	<b>Townland</b>	<b>County</b>	<b>SMR No.</b>	<b>Natural drainage regime</b>
Turloughogurkall <sup>4</sup>	Frenchbrook North	Mayo	MA121: 019	Turlough with permanent water body evident on First Edition Ordnance Survey map
Turlach Ráth Easáin <sup>5</sup>	Killeenmore	Galway	GA104: 244	Turlough with permanent water body evident on First Edition Ordnance Survey map
No name	Carrownaskeagh	Roscommon	RO028: 012	Turlough with permanent surface inflow evident on First Edition Ordnance Survey map
<i>Terloch Teóra Crích</i> <sup>6</sup>	Corbally	Roscommon	RO028: 032 RO028: 033 RO028: 034	Turlough with permanent surface inflow evident on First Edition Ordnance Survey map
No name	Turrock	Roscommon	RO 044: 107	Turlough with permanent water body evident in the First Edition Ordnance Survey map
Loch na nEán <sup>7</sup>	Loughnaneane	Roscommon	RO 039: 042	A former permanent lacustrine environment based on Malby's 1591 map of Roscommon Castle
Loughanncrannoge <sup>8</sup>	Loughanncrannoge	Sligo	SL019: 100	Turlough with permanent water body evident on First Edition Ordnance Survey map
Lehinch <sup>9</sup>	An Leithinse	Galway	GA031: 052	Turlough with permanent water body evident on First Edition Ordnance Survey map

**Table 4.1** Nine sites where a crannóg appears to have been constructed on a turlough floodplain. Each shows evidence for a permanent water body being present prior to modern drainage effort

Although each of these turloughs fill and empty through a groundwater source, prior to drainage works being carried out, the retention of permanent surface water

<sup>4</sup> 1<sup>st</sup> ed OS Sheet

<sup>5</sup> <http://www.logainm.ie/1411010.aspx> 'Turlough of the Rath of Easáin'

<sup>6</sup> *Terloch Teóra Criocha* is referred to in the in the mythological epic *An Táin Bó Cuailgne* (Faraday 1904, 5) and most likely refers to the turlough in the townland of Corbally, Co. Roscommon (see section 4.2.1)

<sup>7</sup> <http://www.logainm.ie/14437.aspx> 'Lough of the birds'

<sup>8</sup> <http://www.logainm.ie/44809.aspx> 'Lough of the Crannóg'

<sup>9</sup> <http://www.logainm.ie/17929.aspx>

throughout the year is evident at all eight sites. In the case of the crannóg identified at Loughnaneane, it would appear from Nicholas Malby's 1591 plan of Roscommon Castle that, prior to extensive drainage efforts, the turlough once resembled a permanent lake with water levels that fluctuated greatly.

#### 4.2.1 *Terloch Teóra Crích*



**Pl. 4.4** A vertical aerial photograph of Terloch Teóra Crích showing the distinctive three streams referred to in the 12<sup>th</sup> century recension of *An Táin Bó Cuailgne* contained in the *Lebor na hUidre* (Image source: Google Earth).

Determining the extent to which crannógs occurred on true turlough floodplains in the past is hampered by the effects of modern drainage efforts. However, the three examples at Corbally, Co. Roscommon (identified here as *Terloch Teóra Crích*) are sited in a turlough environment close to its natural condition or flooding regime. At *Terloch Teóra Crích*, there is little evidence for significant drainage of the floodplain. At this location, the First Edition Ordnance Survey sheet depicts three short rivulets rising from the edge of the turlough and coming to a confluence at the

centre of the turlough basin. A crannóg (RO028: 032) measuring 27m in diameter is located at the centre of this basin where these waters meet (Pl. 4.4). Two further possible crannógs are located to the eastern side of the floodplain. These crannógs are of particular interest as they are sited on a turlough that appears to be referred to in a 12<sup>th</sup>-century recension of the *Táin Bó Cuailgne*.

Direct early medieval references to turloughs are scarce. However, the place-name *Terloch Teóra Crích* (The turlough of three streams/boundaries) appears in the mythological epic *An Táin Bó Cuailgne*. It is noted as the second location along the route of the Connaughtmen on their march out of Connaught, travelling south-east from Cruachán (Faraday 1904, 5). Although this is a tenuous reference, a single turlough is identifiable in the area, located 6 km directly south-east of the royal site, where the townlands of Corbally, Cloonanart Beg and Ardkeenagh meet. According to the 12<sup>th</sup>-century recension, having passed *Terloch Teóra Crích* the Connaghtmen continued to travel south-east by *Túaim Móna* and on to *Cúil Silinne*, a site identified as *Loch Cairrcín* or Ardakillen Lough (O’Rahilly 2003, 128). The site of this lake is a further 4km south-east of *Terloch Teóra Crích* with no turlough floodplains identifiable in the intervening landscape.

The place-name *Terloch Teóra Crích* is preserved in the *Lebor na hUidre*, the oldest surviving manuscript of Irish prose tales dating to c.1100 AD (O’Rahilly 2003, viii). Given the unique topographical characteristics and location of the turlough at the confluence of three short streams which form the boundaries between the townlands of Corbally, Cloonanart Beg and Ardkeenagh, the associated crannógs, and the clear reference to the ‘turlough of three streams/boundaries’, it can be stated with a high degree of confidence that this turlough is the location referred to in the *Táin Bó Cuailgne*. Furthermore, in the immediate vicinity of the turlough, there is archaeological evidence for dense early medieval settlement. Eight ringforts, three further earthworks, three possible house sites and a relict field pattern have been identified within a 500m radius of the turlough basin. Thus, the presence of at least one substantial crannóg at this site suggests that this topographical location was noteworthy, and a settlement site worthy of reference, at least in the 12<sup>th</sup> century, if not earlier.

#### 4.2.2 Resolving the hypothesis that crannógs occur on seasonal lakes

In terms of crannógs occurring on seasonal lakes, the example at *Terloch Teóra Crích* is amongst eight rare examples of crannóg settlement, directly on the turlough floodplain. At *Terloch Teóra Crích*, as with all other cases, the crannóg is situated at a specific point on the floodplain that resembles a lake or marsh environment throughout the year. Thus, the ephemeral nature of the turlough environment appears to be unattractive and unsuited to this settlement type.

It has been shown here, that in Co. Galway there are very few, if any cases of crannógs being constructed on typical, ephemeral turlough floodplains in the past. In Ireland, those that appear to have been constructed in a turlough environment, were reliant on specific topographical conditions whereby the turlough basin did not entirely dry out after the hydro-period and the crannóg was purposefully sited at the lowest point of the turlough basin, normally next to an estavelle or swallow hole. The result is that these locations resemble permanent lacustrine or marsh environments throughout the year and so are suitable for the crannóg settlement form. Thus, it can be confirmed, that a typical turlough floodplain, dry in summer and flooded in winter, was not a suitable environment for crannóg construction. This fact is confirmed by the juxtaposition of turlough distribution to crannóg distribution in Ireland.

It is possible that a lack of attention to specific landscape conditions has resulted in the erroneous hypothesis that crannógs are sometimes sited on turlough floodplains. It is more accurate to state that, in a handful of cases, crannógs are known to have been constructed in turlough environments that are prone to extreme fluctuations in water levels; however the crannóg itself is sited specifically in a location within the turlough basin that remains wet, year-round and is not part of a typical, seasonal floodplain. Marshy land was preferred rather than areas that fully dried out. Sites that are located in these conditions occur predominantly toward the northern extent of the turlough distribution pattern in the zone of interface between typical crannóg siting in small lakes, and the distribution of turloughs. The only exception to this occurs at Cloghincha, south Co. Galway.

It is possible that the palaeo-environment of these turloughs in the past, differed to some extent from that presented on the First Edition Ordnance Survey sheets. However, given the precise selection of the crannóg's topographical locations that have been identified here, it seems unlikely that these differences were substantial. Without precise dating evidence, it is not possible to consider the possible influence of variations in palaeo-climate, although it is possible that wetter conditions in the past may have been reflected in the flooding regime of the turloughs which show evidence for crannóg siting.

### **4.3 Excavated evidence for human settlement in turlough environments**

Examination of the excavations database shows that, to-date, a total of 34 archaeological investigations have been undertaken on, or in the immediate vicinity of turlough floodplains and have produced settlement evidence dating from the Neolithic period, with some residual finds dating from as early as the Mesolithic period. The results of these excavations have been summarised below and are dealt with in chronological sequence commencing with the earliest settlement evidence. The majority of these archaeological investigations represent development-led excavations ahead of the destruction of the site and they have rarely taken the landscape context of the archaeological site into account.

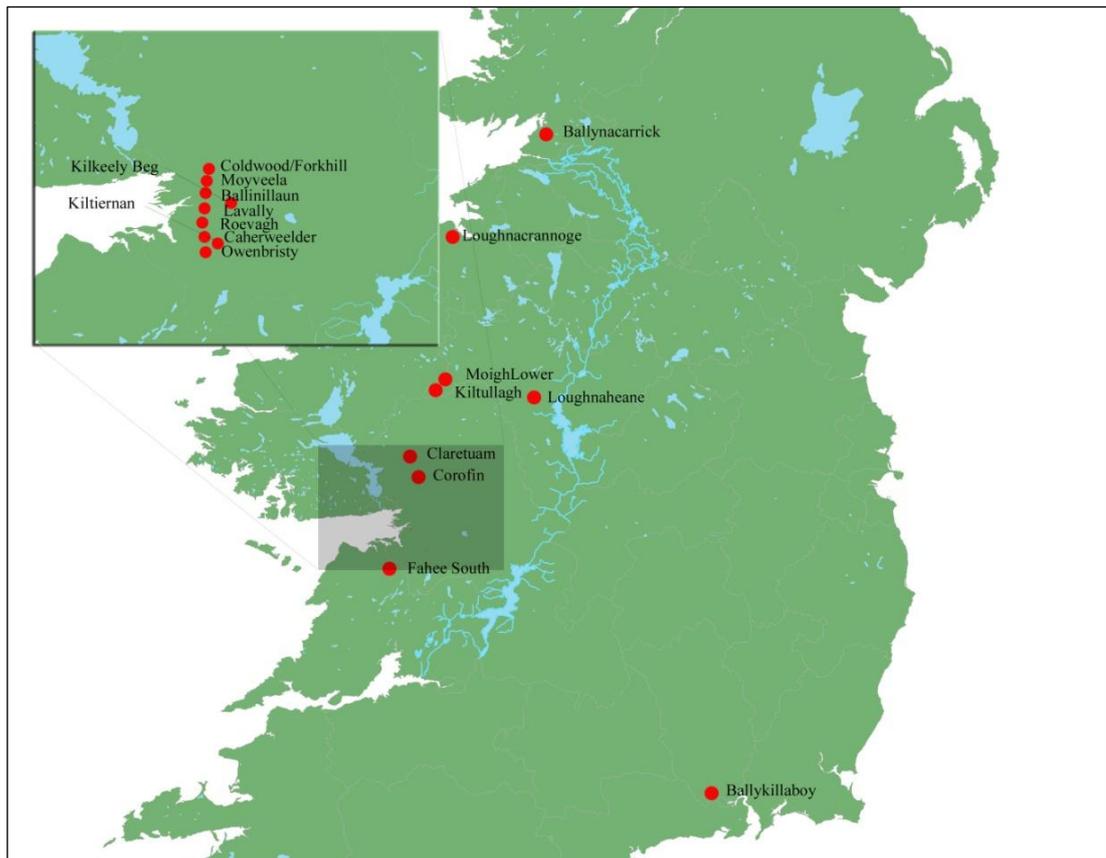
#### **4.3.1 Antiquarian investigations and early archaeological research**

An archaeological excavation of the crannog at Loughnacranogue, Co. Sligo by W.G. Wood-Martin in 1886 is the only antiquarian investigation of an archaeological site on a turlough floodplain (Wood-Martin 1886, 246). Unfortunately, no detailed publication of Wood-Martin's findings resulted from this excavation. Research excavations account for only four of the total excavated sites. At Kiltullagh townland, Co. Roscommon, a raised, rectangular platform extending from beneath the boundary wall of the existing ruins of the Kiltullagh medieval church site was investigated by R.A. Gregory in 2000. The ecclesiastical enclosure and associated structures at Kiltiernan, Co. Galway were investigated by M.V. Duignan during the 1950s and the results were later published by Waddell and Clyne (1995). A programme of geophysical and topographic survey, and limited excavation is ongoing at Ballintober Castle in Co. Roscommon under the guidance of Dr. Niall Brady on behalf of the Castle Studies Trust. Excavations to-date have focused on the

interior of the keepless castle, however, recent geophysical and topographic surveys have begun to identify settlements on the fringes of the adjacent turlough. At Fahee South in Co. Clare, Ó Drisceoil (1988) excavated the site of a burnt mound at the edge of Carron Turlough. It produced faunal remains which Ó Drisceoil interpreted as indicative of a food preparation site. However, the interpretation of the archaeological evidence uncovered in these research excavations did not consider the significance of the proximity of the archaeological remains to a turlough floodplain.

The results of previous archaeological investigations have produced evidence for human interaction with these seasonal lakes dating from the Mesolithic to the early modern period. In many cases, it can be shown that this interaction specifically related to and utilised the local hydrology of the turlough floodplain. The choice of location for some settlement forms may also be indicative of the exploitation of the turlough floodplain for grazing purposes. In a number of locations, continuity of settlement, and exploitation of the turlough floodplain through extended time periods can also be demonstrated. With the exception of crannog settlements (section 4.2) habitation on the turlough floodplain does not occur. The excavated evidence does, however, show that local hydrology was frequently exploited for a variety of purposes, including the manufacturing of metal, as a very and popular suitable location for pyrolithic practices, and that habitation often occurred close to the floodplain in more elevated locations.

Although turloughs are present across much of the Western and Central Lowlands of Ireland, the excavated evidence is geographically concentrated in south Co. Galway. Furthermore, many of the excavations examined here relate to multiple archaeological sites on a single turlough floodplain such as at Caherweelder in Co. Galway where seven separate excavations took place. Details of each excavation are included in Appendix 1, and individual excavated sites are referenced by excavation number throughout the following text.



**Fig. 4.3** The location of excavated archaeological sites referred to in this chapter. The inset shows a concentration of excavations in south Co. Galway, the majority of which were development-led excavations ahead of the construction of the M-18 Galway-Limerick motorway.

#### 4.3.2 Modern excavated evidence for human settlement in turlough environments

To date, there have been 34 excavations on or in the immediate vicinity of turlough floodplains. Some represent multiple archaeological sites at a single turlough location. In total, human settlement at 18 turlough sites have been the subject of archaeological investigation.

##### *Excavated evidence for the Prehistoric Periods*

The earliest excavated evidence for human settlement in turlough environs relates to the Neolithic period in Ireland. At Ballynacarrick, Co. Donegal, (04 E 0015) the remains of a prehistoric settlement, including a circular structure with an associated hearth and a number of pits of Bronze Age or possibly Neolithic date were uncovered. One large pit, 7m in length and widening from 1.2 m at the eastern end to 2.6 m at the western end, was interpreted as a possible butchering pit and yielded a

radiocarbon date of 5160 +/- 40 BP, 4040 cal. BC - 3940 cal. BC (2 sigma) from the basal fill (Doherty 2004, 8-12). The site was located in a low-lying area sheltered by elevated rock outcrops on the northern and western sides, and overlooked a turlough to the south. The circular structure was formed by up to ten stake-holes and two shallow, linear features that may be slots for structural beams. With no major load-bearing post-holes found, it was suggested by Doherty (*ibid.*) that the structure was not very substantial and may have only acted as a temporary hut. It could be suggested that a structure such as this may represent a temporary habitation site associated with a seasonal grazing regime on the turlough floodplain. At Caherweelder 6 in Co. Galway (08 E 3871, excavation revealed the presence of a shallow burnt mound located along the break in slope on the western edge of a former turlough in the townland (Fig. 4.2). Six troughs of varying size and shape were identified below the burnt mound. Two Late Neolithic/Early Bronze Age radiocarbon dates of cal BC 2195–2040 were obtained from samples of the mound, and a basal trough fill (Hegarty and Delaney 2010, 19). An unprovenanced late Mesolithic chert blade was also recovered during the excavation. This site was one of a cluster of burnt mounds located in Caherweelder townland that produced Bronze Age radiocarbon dating evidence, with further examples to the north at turlough sites in Roevehagh and Coldwood townlands. An excavation at Coldwood/Foorkill in Co. Galway (08 E 3887) uncovered the disturbed remains of a burnt mound that was not dated by scientific means, with no other associated archaeological features. Two chert flakes and a barbed-and-tanged flint arrowhead were recovered from possible buried topsoil which survived in places below the burnt mound deposit. The three lithics from the excavation at Coldwood/Foorkill were diagnostic of late Neolithic activity (O'Mahony and Delaney 2010 (a), 18).

By far the greatest body of excavated archaeological evidence for human interaction with turlough floodplains dates to the Bronze Age in Ireland. This evidence comes largely in the form of burnt mounds, often with associated troughs located on, or in close proximity to the turlough floodplain, and exploiting the local groundwater conditions. This excavated evidence is also largely concentrated at the three turlough sites of Coldwood, Roevehagh and Caherweelder in south Co. Galway. In total, 10 excavated burnt mounds returned dating evidence for human activity in the early, middle and late Bronze Age. Burnt mounds are the most common Bronze Age site

type found in Ireland. Estimates suggest that at least 4,500 examples are known (Power *et al.* 1997), with this number continuously increasing as sites continue to be identified during archaeological field work. The characteristic site-type is found in low-lying and damp ground and consists of a mound of charcoal-rich black sediment that is packed with heat-shattered stones and forms a horse-shoe shape around a pit or trough that filled with water. Their common siting on damp ground suggests that these sites are particularly suited to the groundwater conditions prevalent in turlough environments. These sites are associated with the process of roasting stones to heat water.

At Ballinillaun 1 (08 E 3888) the burnt mound was located on slightly raised ground along the western edge of Coldwood turlough in Co. Galway. This site consisted of a poorly preserved, Middle Bronze Age burnt mound with a series of three interconnecting pits containing charcoal-rich fills which returned dating evidence for activity in the 13<sup>th</sup> century BC (McMorrany and Delaney 2010 (a), 14). Nearby, at Ballinillaun 2 (08 E 3886) the site consisted of a poorly preserved, Early Bronze Age, burnt mound. Three pits were excavated and all the fills of the pits contained large amounts of charcoal and heat-shattered limestone. A radiocarbon date of cal BC 1934–1773 was obtained from the basal fill of a trough (McMorrany and Delaney 2010(b), 10). The site was also located on slightly raised ground along the western edge of Coldwood turlough.

As part of the archaeological excavation programme in advance of construction for N18 Gort to Oranmore road scheme during 2008, a concentration of burnt mound sites located within or immediately adjacent to a turlough were identified and excavated in the townland of Caherweelder in south Co. Galway. The turlough is marked on the First Edition 6-inch Ordnance Survey sheet as ‘Toberwoneen Pool’, and the line of inundation recorded shows the turlough to measure 5.1 ha in area. Beyond the turlough in question, the landscape immediately surrounding the turlough includes several named geological features typical of a karst landscape. A well, marked as ‘William Connolly’s well’, is shown to the east of the turlough and to the south another small well is marked ‘Peter’s well’. A small spring and associated floodplain to the south of the townland is marked as ‘Pollbaun’ and the lands surrounding it are marked as *liable to flood*. The First Edition 25-inch Ordnance

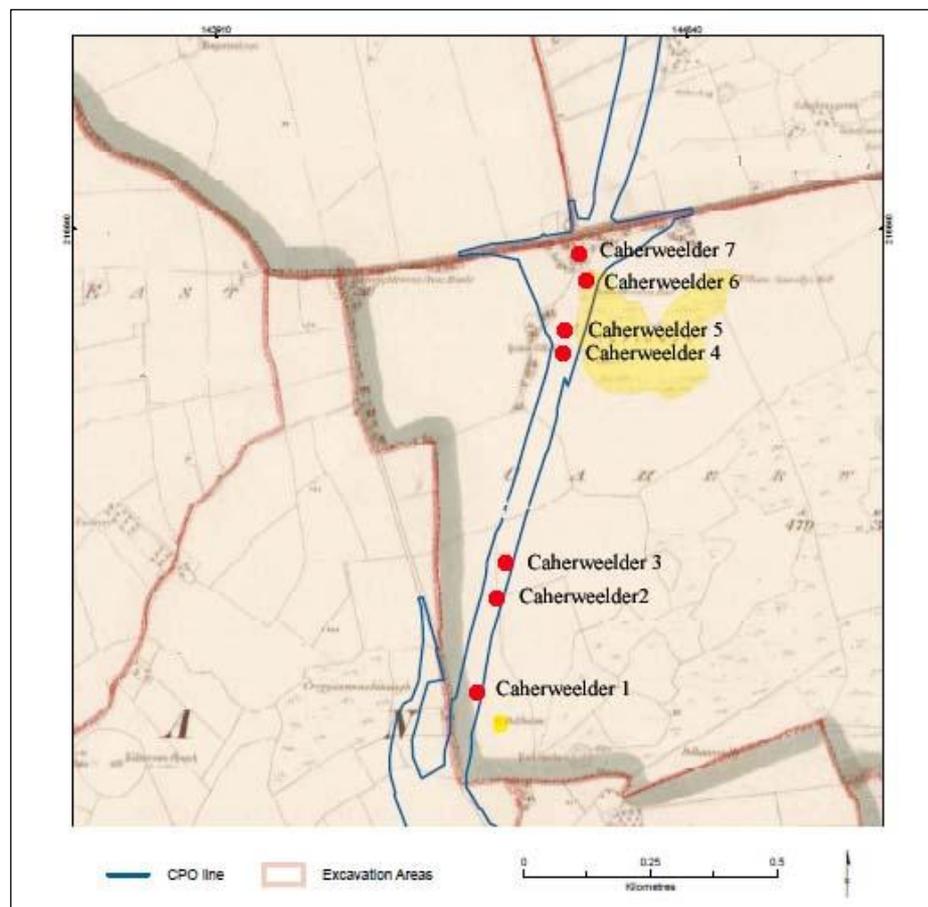
Survey maps shows a large drain running east from the site of ‘Connolly’s Well’. The drain was inserted to drain the turlough and the water originating from ‘Toberawoneen Pool’.

The townland name Caherweelder derives from the Irish *Cathair Mhaoilir*. The first part of the place-name stems from *cathair* or a ‘stone fort’, and the First Edition 6-inch Ordnance Survey map illustrates and names a stone fort (GA103-086001-) as ‘Caherweelder’ at the centre of the townland, c.300 m to the southeast of the turlough. The second part of the place-name *Maoilir* may refer to a family name such as ‘Mulder’ which would translate as ‘Mulder’s stone fort’. *Maoil* in Irish means to overflow and could be related to the turlough at the centre of the townland (Joyce 1913 Vol I, 395).

Caherweelder 5 (08 E 3866) represented a substantial, previously known kidney-shaped burnt mound (GA103:083) measuring 12.1 m north-south, had a maximum width of 9.2 m and was up to 1 m high within the turlough floodplain. A single oval shaped trough was located partially under the mound. Some slag and a chert scraper were recovered from stratified deposits within the mound (O’Mahony and Delaney 2010 (e), 9). Radiocarbon analysis was carried and a Middle Bronze Age date was obtained from one of the upper mound deposits (cal BC 1125–976) (*ibid.*, 20). An Early Bronze Age date was obtained from a peaty deposit towards the base of the mound (cal BC 1944–1865) (*ibid.*, 20).

At Caherweelder 2 (08 E 3890) excavation revealed a central trough and two interconnecting pits which lay just to the north of a burnt mound located to the south-east of a turlough in the townland (O’Mahony and Delaney 2010 (d)). Whilst shallow, the interconnecting pits may have also served as troughs. Both the mound material and the fill of one of the pits contained animal bone fragments. Two, 12<sup>th</sup> - century BC, Middle Bronze Age radiocarbon dates were acquired from two samples, one from the burnt mound material and one from the lower fill of the trough. No artefacts were found. At Caherweelder 3 (08 E 3889) a small disturbed burnt mound was located to the south of the same turlough in Caherweelder townland. Dates were obtained from charcoal fragments from two deposits. A Middle Bronze Age date was obtained from the fill of the central trough and an Early Bronze Age date was

obtained from re-deposited material on the edge of the burnt mound (O'Mahony and Delaney 2010 (b), 14). The excavation at Caherweelder 6 (08 E 3871) revealed the presence of a shallow burnt mound located along the break of slope on the western edge of the turlough. Six troughs of varying size and plan were also identified below the burnt mound. Two Early Bronze Age radiocarbon dates of cal BC 2195–2040 were retrieved from samples from the mound and a basal trough fill. As mentioned above, a late Mesolithic chert blade was also recovered from the burnt mound material during the excavation, suggesting earlier human activity in the area (Hegarty and Delaney 2010, 20).



**Fig. 4.4** The distribution of excavated archaeological sites in the townland of Caherweelder, Co. Galway that have been referred to in this chapter. The turlough floodplains are marked in yellow (after O'Mahony and Delaney 2010 (b)).

Immediately to the south, the burnt mound site Caherweelder 1 (08 E 3880) was located on low ground on the western edge of an area of improved pastureland. A small turlough named ‘Pollbaun’ was located to the south-east. Two Late Bronze Age radiocarbon dates were obtained from basal fill of the associated trough (Hegarty 2010(b), 10).

At Moyveela 1, Co. Galway (10 E 3883) a small, Late Bronze Age, burnt mound was identified at the north-western edge of Coldwood Turlough and consisted of a large sub-rectangular pit which was interpreted as a trough, and a smaller roughly oval-shaped pit which may also have been a trough. A radiocarbon date of 731–406 Cal BC was returned for the site (Mullins and Delaney 2010 (a), 17). The burnt mound site at Moyveela 2 (10 E 3884), a short distance to the north-east of Moyveela 1 was located on slightly raised ground. The excavation revealed the presence of a burnt mound with associated pits and troughs dating to the Late Bronze Age (Mullins and Delaney 2010 (b), 10). At Roevehagh 1 (10 E 3885) a poorly preserved burnt mound was excavated for which a Late Bronze Age date was returned (McMorrany and Delaney 2010 (c), 18). No finds were returned from the excavation. Dunkellin turlough extended to the site providing a reliable groundwater source.



**Pl. 4.5** The later well at Ballyglass West with the surviving steps and enclosing wall (after Kerrigan and Delaney 2010, 1).

At Ballyglass West (08 E 3870) a burnt mound contained up to 16 different deposits consisting of varying amounts of stone, burnt stone and charcoal-rich black silty clay. Eight potential troughs were identified below the burnt mound deposits, one of which appeared to be stone-lined. A natural spring towards the centre of the burnt mound material was later used as a well in the early modern period (Pl. 4.2). The well was contained by an encircling dry-stone wall with entrance steps (Kerrigan and Delaney 2010).

In north-Galway excavations were undertaken in the townland of Keernaun prior to the commencement of construction works associated with the northern part of the N84 Luimnagh Realignment Scheme. A burnt mound was excavated within the floodplain of Turloughcor; a substantial 110 ha turlough that was subject to extensive drainage works during the 20<sup>th</sup> century. The archaeological landscape immediately surrounding the turlough (within 300 m of the line of inundation) includes 12 known enclosure sites, a mound, a hut site of indeterminate date, and a standing stone.

At Keernaun 1 features identified during the excavation consisted of a burnt mound with an underlying peat layer, two pits and a trough. Two radiocarbon dates were returned from a sample of birch charcoal recovered from the fill (010) of the trough and a grain of charred barley from the fill of the second pit (006). These produced Middle Bronze Age dates ranges of 1616–1451 cal. BC and 1499–1390 cal. BC respectively (Hession 2012, 17).

There have been several excavated pyrolithic sites on or adjacent to turlough floodplains outside of Co. Galway;

A burnt mound site excavated by Ó'Drisceoil (1988) at Fahee South townland adjacent to Carron Turlough in Co. Clare produced faunal remains which the author believed to be indicative of the pyrolithic site used for cooking purposes. The site was located at the edge of Carron Turlough in the townland. The faunal remains comprised five cattle teeth, one deer tooth and two deer antlers, one horse mandible and tooth, and 13 teeth and 20 bone fragments unidentifiable to species. No scientific dating evidence was returned from the site. At Moigh Lower, Co. Roscommon (97 E

0024) a burnt mound was situated at the south-western end of a valley occupied by Attishane turlough. Two troughs were revealed, however, no scientific dating evidence was returned from this excavation.

As part of the Mayo County Council Group Water Scheme works in 2007, archaeological monitoring was undertaken in the townland of Ballygarriff. The written scheme of investigation for the project allowed for the diversion of a pipeline to avoid potential archaeological monuments. Along the fringes of an 11.5 ha turlough in the townland, a dense concentration of 11 burnt mound sites, a hut site, and field system, two cairns and two enclosures were noted during monitoring. Full excavation was not undertaken, although several lithic artefacts retrieved from topsoil in this area.

A programme of excavation (12E230) was carried out prior to the development of the N69 Bolane Bends Improvement Scheme in the townland of Glenameade in Co. Limerick in 2012. Similar to Ballygarriff in Co. Mayo and Keernaun in Co. Galway, a rich archaeological landscape comprising 7 enclosure sites, 1 hut site and an medieval ecclesiastical site was identified surrounding *Blind Lough* in the townland. *Blind Lough* is located on Waulsortian Limestone, outside of typical turlough geological conditions and may represent a currently unrecorded turlough landscape. The First Edition Ordnance Survey sheet shows a former 13.6 ha floodplain that has now been drained. During excavations in 2012, (Walsh 2012) two phases of archaeological activity were identified at the site: a burnt mound of probable Bronze Age date and two charcoal production kilns which may date to the medieval period. The burnt mound was positioned on undulating marginal ground and at the very edge of the turlough, the water level of which extended into the site covering part of the levelled burnt mound spread. The archaeological remains at Glenameade 1 comprised 10 earth-cut pits, one of which was directly associated with a gully, a trough central to the burnt mound, and an outlier trough. Two charcoal production kilns were identified at the west of the site. Both kilns were oval, contained charcoal-rich fills and evidence of in situ burning.

At Doogarry townland in Co. Mayo (E004711) a burnt stone spread was identified during testing in 2015 along the route of the N5 Westport to Turlough road project

on the southern fringes of an unnamed *c.*18 ha turlough there. Excavation was undertaken in 2016 (Morohan 2016) and confirmed the presence of a burnt stone spread measuring 4 m x 6 m. Excavation revealed that a number of possible pits/spreads were in fact shallow depressions in the subsoil. There was no evidence of a trough, no finds were recovered, and no dating evidence was produced from the environmental samples that were retrieved from the excavation.

At Park townland in Co. Mayo (17E0324), archaeological testing was required as part of a Request for Further Information by the Local Authority and was necessary due to the location within the site of a fulacht fiadh (MA070-096). The proposed development was located in the north-eastern half of a field of pasture which showed evidence of being reclaimed in the recent past. Present examination of the First Edition 6-inch Ordnance Survey map shows this area to be the northern fringe of an adjacent turlough. The wider landscape shows dense pyrolithic activity with 28 known possible burnt mound sites located within a 1 km radius of the excavated site, and within a landscape subject to karstic flooding regime. A burnt spread was uncovered below peat which extended 8 m x 4.1 m, and consisted of blackened soil with a concentration of heat-shattered small rocks (Crumlish 2017). No dating evidence was retrieved from the excavation.

A total of 13 burnt mound sites of probable Bronze Age date were indentified in reviewing the excavations database. There were few faunal remains identified at the majority of Bronze Age pyrolithic sites located on turlough floodplains. The example at Fahee South produced most of the evidence for the preparation of food at a burnt mound site. At Fahee South, an extensive collection of animal bone was returned including cattle, deer and horse bone. The burnt mound at Ballyglass West yielded just three animal bones, all identified as pig teeth. Just two animal bones were recovered during excavations of Caherweelder 2; a complete molar of an adult cow was recovered from the main layer of heat-shattered stones and the central fill of a pit to the north of the trough contained the fragmented remains of another cow molar. The excavations at Coldwood yielded a total sample of 14 animal bones. The main burnt mound deposit contained a fragmented cow molar and the distal portion of an adult sheep tibia.

Excavated archaeological evidence shows a strong association between pyrolithic sites and turlough floodplains throughout the Bronze Age although there is little or no evidence for human habitation adjacent to the flood-lands during the same period. It is likely that Bronze Age habitation occurred in the surrounding hinterland with the floodplain being exploited seasonally as a suitable location for pyrolithic practices. The absence of significant quantities of animal bone from the majority of these suggests that the function of pyrolithic sites was not always for food preparation.

Previous research on the south Co. Galway lowlands has identified concentrations of Bronze Age settlement evidence in areas where turloughs frequently occur. Barrows are burial monuments of Bronze Age and Iron Age date and usually consist of a circular central area, which may be flat or slightly domed, enclosed by a ditch and occasionally by an external bank. The distribution of recorded prehistoric monuments close to Caherweelder reveals two concentrations of ring barrows with seemingly corresponding concentrations of burnt mounds in close proximity. The Caherweelder barrows form part of the Dunkellin barrow group that has been examined by McCaffrey (1955) with further concentrations around the townland of Derrydonnell North and south of Craughwell. The associated pyrolithic sites would have formed part of the Bronze Age landscape, and their location on the seasonal turlough floodplains was undoubtedly purposeful. These sites suggest a seasonal exploitation of the floodplain, perhaps relating to a central place of gathering site or some significance for Bronze Age communities.

#### *Excavated evidence for the Iron Age*

Excavation evidence for human settlement and interaction with turlough environments in the Iron Age in Ireland is limited to a single excavation in close proximity to Caherweelder Turlough in Co. Galway. At Caherweelder 7 (08 E 3826) the excavation of a charcoal-rich layer atop a gravel ridge revealed an ironworking hearth or furnace which produced two Iron Age dates relating to the 1<sup>st</sup> century BC. A single chert piece, identified as a possible hone stone, was found along with a small but varied animal bone assemblage, including cattle, pig, sheep/goat and red deer (Hegarty 2010(a), 12). The sieve retents from the pit fills at Caherweelder 7 contained a modest quantity of flow slags which would appear to be indicative of iron smelting in a slag-pit furnace. However, it is also possible that this site

represented a smithing-hearth (*ibid.*, 11). There was no Iron Age settlement associated with the site but the richness of the Bronze Age archaeology nearby, and the early medieval sites to the west and north, indicates that there may have been continuous occupation in the Caherweelder area from prehistory into the early historic period.

#### *Excavated evidence for the Medieval Periods*

A total of 12 excavated archaeological sites have returned evidence for settlement in turlough environments during the medieval period. These vary greatly in form and date and include the antiquarian investigation of the crannog site of Loughnacranogue in Co. Sligo. Three sites represent ecclesiastical settlement with a further two sites showing evidence of human burial and possible ecclesiastical associations. The former site of a late medieval tower house at Claretuam is also represented. At Killeely Beg (89 E 0045) Co. Galway, the partial remains of two straight-sided enclosures were revealed, collectively forming part of an impressive series of earthworks radiating from the medieval church of Killeely. A circular depression in the north-west corner may have been the remains of a hut site. None of the finds at the site could be dated, though both enclosures are likely to have been associated with the earliest phases of the nearby medieval church.

The landscape of the townland of Kiltullagh in Co. Roscommon has been subject to a number of archaeological surveys centred on the hill of Kiltullagh. This low rise, which lies to the north of a large turlough, has been the subject of archaeological investigation by both the University of Manchester and the Queen's University of Belfast (QUB). In 1991, human skeletal remains representing four people were found during quarrying close to the summit of the hill. Excavations in 1993 by QUB focused on the site of a standing stone where a shallow cremation pit and a single extended adult inhumation were identified. A nearby ring-barrow also produced the disturbed remains of two adult inhumations. Radiocarbon dates between AD 269 and 480 were obtained for these burials.

Ecclesiastical settlement on the hill of Kiltullagh has been investigated by R.A. Gregory of the University of Manchester in 2000 (00 E 0322). Gregory had

hypothesised that a raised rectangular platform at the site of a medieval church which overlooks the turlough at the foot of the hill, represented the remains of an ecclesiastical structure that pre-dated the extant medieval church building. The site of the raised platform extending from beneath the boundary wall of the existing ruins of Kiltullagh church was excavated, and amongst collapse material relating to the late medieval church building, a considerable quantity of animal bone was recovered, as well as a small assemblage of late medieval pottery. At the base of this fill a floor layer was identified consisting of a layer of yellow clay, which was probably derived from deposits located close to Kiltullagh turlough. The clay floor was found to seal a destruction layer comprising burnt timber and thatch. In the north-western corners of the platform, a substantial post-hole, with packing-stones, was also located beneath the yellow clay/flooring horizon. It was proposed that this feature represented the remains of an earlier wooden structure over which a stone church was erected.

The Early Medieval monastic enclosure and associated structures at Kiltiernan, Co. Galway is situated in a landscape that is clearly influenced by karstic drainage patterns, with a number of turloughs occurring in the immediate vicinity. Excavations were carried out at this site by M.V. Duignan in the 1950s and the results later published by Waddell and Clyne (1995). Duignan conducted a series of research excavations at the site and noted the absence of high or later medieval structures. Although radio-carbon dates were not obtained from this site, based on finds evidence, it is suggested by Waddell and Clyne (1995, 185) that its earliest phases may lie in the 8<sup>th</sup> or 9<sup>th</sup> centuries.

Two excavated enclosed burial grounds in Co. Galway revealed dating evidence for human activity in the medieval period. At Corofin in Co. Galway (04 EO 100) recent excavations by Rogers (2004) have tentatively suggested there was an ecclesiastical site present 60m south of Corofin castle, situated at the edge of the turlough floodplain. This excavation revealed a possible graveyard, with the removal of a minimum of 57 skeletons in varying states of preservation from within the limits of a circular enclosure. The burials were laid supine, with the majority orientated east-west. It was suggested that the burials may have been associated with a graveyard that had a substantial enclosing bank (Rogers 2004). The considerable cross-cutting of the grave-cuts suggested that the graveyard was in use over a period of many

years. The high proportion of adult burials suggested that it was not a children's burial ground. However, no dating evidence has yet been obtained for this site.

An excavated enclosure at Owenbristy in Co. Galway has been categorised as a cemetery settlement, however, it may also have been an early church or minor ecclesiastical site (Lehane and Delaney 2010, 7). Given the location of this site on a low knoll, which projects into the turlough floodplain (Pl. 4.3), it has been discussed in detail here. The site was comparable in form, landscape position and typology to the excavated cemetery site at Corofin. A number of possible pre-enclosure features including a large burnt pit and a number of lithic finds suggest a possible Beaker phase at the site. The partly upstanding, roughly circular stone enclosure was 44m in diameter. The flooded area encompassed the enclosed site with the turlough rising to the east, south and west so that it could only be reached from the northern side. The place-name, Owenbristy (*Abhainn Briste*)<sup>10</sup> derives from this wide seasonal stream which connects turloughs to the east and west. The turlough in the townland of Killeenhugh to the north-west overflows its natural basin and flows as a stream into a neighbouring turlough in the townland of Owenbristy. When the turlough waters recede, the stream is 'broken', giving the townland its name Owenbristy, 'broken river'. The larger of the turloughs floods on both sides of a townland boundary wall, separating the townlands of Owenbristy and Killeenhugh to the north, leaving a knoll of land on the Owenbristy side surrounded on three sides by the turlough and cut off from the rest of Owenbristy townland. The excavated site was located on this low-lying isolated knoll or promontory (Pl. 4.3).

Stout (1997, 99) has shown that a pocket of dense rath and cashel settlement exists on the shallow brown earth soils of the lowlands south of the Dunkellin River. The distribution of early medieval enclosure sites in the surrounding area suggests that the site at Owenbristy was located within a dense network of such sites (Lehane and Delaney 2010, 56). This impression has been validated statistically and the site has been shown to lie within a strong cluster of early medieval enclosures. Topographic Position Index (TPI) analysis was carried out on the location of the enclosures in the vicinity of Owenbristy. The analysis showed that a narrow majority of the sites have

---

<sup>10</sup> <http://www.logainm.ie/19282.aspx> 'Broken River'

positive values, indicating relatively prominent positions, with 56% of the sites located in areas higher than the immediate surrounding terrain. Considering that the surrounding landscape is quite low-lying it is significant that the majority of the sites are located in areas of prominence. The site at Owenbristy has a TPI value of  $-1$  which contrasts with the majority of enclosures in the area (*ibid.*, 57). The TPI indicates the difference between a site elevation value and the average elevation of the landscape around that site. Positive values mean the site is higher than its surroundings while negative values mean it is lower. The site at Owenbristy is then atypically located when compared with nearby early medieval settlement enclosures, which suggests that its position on the low knoll next to the turlough floodplain is significant.



**Pl. 4.6** Looking south-west across the enclosed burial ground at Owenbristy, Co. Galway while the turlough is in flood. (after Lehane and Delaney 2008, 7)

A clearly defined cemetery area was identified in the eastern and south-eastern sector of the enclosure. Skeletons of 95 individuals were identified within the cemetery and one individual was found within the enclosure wall. The cemetery contained 39 simple pit graves and 27 slab-lined graves with or without lintels. The northern half of the cemetery was arranged in two-to-three north-south rows of east-west burials. An extensive programme of radiocarbon dating was undertaken, and based on the

results combined with stratigraphic sequence and the character of the burials, 75 were assigned to an early medieval burial phase ranging from cal AD 548 – 972. The early medieval cemetery was then reused as a place for mainly infant and child burials which date from cal AD 1219 – 1445 (*ibid.*, 39). This second phase of burials was confined to the southern half of the cemetery. The orderly north/south rows of burials were interrupted by a series of pits and postholes which represent a wooden structure or structures. Two radiocarbon dates ranging from cal AD 580 – 687 were obtained from the charcoal-rich fills of two of the postholes, which would have formed the northern wall of a possible timber structure(s). It is suggested by Lehane and Delaney (*ibid.*, v) that the smaller structure may have been a wooden church. No definitive enclosing element was found surrounding the cemetery area at Owenbristy, however, the tightly concentrated cemetery space was located in the south-eastern sector of the enclosure. The term ‘cemetery settlement’ has been coined to describe this arrangement (Ó Carragáin 2009), though some authors prefer ‘secular cemetery’ (Stout and Stout 2008, 75). The Owenbristy burials show a relatively high rate of violent death. Considering the entire buried population at Owenbristy, 22% of the adolescents, 10% of the females and 31% of the males suffered violent deaths.

The finds from the site formed a typical early medieval assemblage and consisted of several bone and metal pins, a bone-handled iron knife, several other iron knife or blade fragments, several possible whetstones, a plain metal ring, two blue glass beads, two fragments of a lignite wristband and several rotary quern fragments. A number of slag residues also point towards onsite metalworking. The small slag assemblage recovered during the excavation contained seven smithing hearth cakes for which the weight could be measured. These were all small and indicated that the represented activity was likely to have been dominated by blacksmithing. The faunal remains indicate that the site was not a large and busy settlement and the economy seems to have been based on cattle and to a lesser extent, sheep and pig. There was a predominance of livestock remains displaying butchering marks and the evidence for cooking through charring and burning suggests some form of occupation of the site, despite the dearth of evidence for domestic buildings within the enclosure. The majority of the bones can be considered as domestic refuse or the remains of animals killed for meat and hide. If the recovered remains can be regarded as reasonably representative of the local economy, they suggest that cattle were the dominant

species and that the animals were valued for more than purely meat. The site at Owenbristly was used as a burial ground and due to its location close to a turlough may have acted as a focus for other community events such as summer fairs and the division of yearling cattle. The swearing of oaths and other legal activities were undertaken at cemeteries in the early medieval period, and following a suggestion by Ó Carragáin (2003 (b), 149), it may be that saints' graves ultimately appropriated legal functions originally performed in ancestral burial grounds.

#### *Excavated evidence for the Late Medieval and Early Modern Periods*

Further excavated archaeological evidence for human activity in the vicinity of turlough floodplains has been revealed for the later medieval and into the early modern period. Not all of these sites show clear evidence for human interaction with nearby turlough floodplains although in some instances, the natural physiography of the turlough environment has been exploited to some extent. At Claretuam, Co. Galway (95 E 0064) the site of Claretuam castle was known and marked on the First Edition Ordnance Survey map as *Castle (in ruins)*. It defended a ford on the pass to Tuam. In 1574 it was the residence of a Redmond McMoyler Burke (Nolan 1901, 118). All that remained of the castle at the time of excavation was a single block of masonry, not *in situ*, which had been incorporated into a field boundary. Finds from the site included a large amount of animal bone (some of it showing evidence of being butchered), modern and post-medieval pottery sherds, clay pipe fragments, a fragment of a rotary quern, the keystone of an arch and a late 18th/early 19th-century pair of burnt rosary beads made from fruit-stones. A radiocarbon date of AD 1396-1440 was procured from a charcoal deposit, located adjacent to the corner of the foundation, at the bottom of the stratigraphic sequence. The tower house was constructed at the northern-most end of the extensive Turloughmore/Cloonkeen Lough karstic flooding regime, and its location is a strategic one, defending a ford on the flood-lands during the hydro-period.

At Ballintober in Co. Roscommon, the upstanding remains and immediate environment of Ballintober Castle has been the subject of a programme of research investigations including limited excavation by Dr. Niall Brady for the Castle Studies Trust since 2012. The keepless castle, comprising four corner towers and a fortified entrance of likely 14<sup>th</sup> century date is situated at the south-eastern limit of a large

floodplain measuring c.150 ha in area. This land had been subject to extensive drainage works prior to the compilation of the First Edition 6-inch Ordnance Survey map, however, the floodplain can be identified from the modern field boundaries and townland boundaries. Excavations to-date have primarily focused on the interior of the castle and revealed the form and nature of collapsed and buried castle structure. Geophysical survey in 2016 included Ground Penetrating Radar and Magnetometer Survey, both within the standing castle interior, and across the adjacent *Garvey's Field* and further east. The results outside the castle extended over a large area and have begun to show clear evidence for the remains of a deserted settlement, complete with a main road and property plots that extend from the roadway at right angles, in a herring-bone pattern. Individual houses and structures are evident, while the data sets indicate subtle narratives suggesting multiple-use episodes. Further east and south, survey on the shores of the turlough reveals a sequence of possible wetland sites.

More direct exploitation the physiographic characteristics of a turlough floodplain, particularly local groundwater conditions, can also be demonstrated. In the townland of Ballykillaboy, Co. Kilkenny (06 E 2502) excavation of 15th-17th century rural smithy site produced evidence of a possible workshop undertaking secondary smithing of both copper and iron (Young 2010, 1). According to the excavation report, the site was situated in gently sloping pastureland beside a turlough, however, this turlough has not been recorded by the GSI.

Three additional archaeological excavations in turlough environs have produced evidence for human settlement near turlough floodplains in the early modern period. Two of these sites have been classified as tenant farms at Roevehagh 2 (08 E 4012) and Lavally (08 E 3869) in south Co. Galway. The excavated sites did not produce evidence to suggest specific exploitation of the nearby turloughs although the likelihood that the nearby floodplains may have been exploited as grazing pastures must be considered. At Caherweelder 4 (08 E 3708) a late medieval/early modern well lay to the south of Turloughtrasna. The well was identified on the 17<sup>th</sup>-century Down Survey map and was in use up to 100 years ago (O'Mahony and Delaney 2010 (c), iii).

#### **4.4 Discussion and conclusions**

Evidence from excavated archaeological sites that directly interacted with the floodplain of a particular turlough, and which were influenced directly by the associated hydrology and topographical setting, has been presented here. Although there have been 34 excavations on or in the immediate vicinity of turlough floodplains, to date, some represent multiple archaeological sites at a single turlough location. In total, human settlement at 18 turlough sites have been the subject of archaeological investigation. Only in the case of Owenbristy, in Co. Galway, was the siting of the archaeological remains in close proximity to a turlough floodplain given significant attention in the interpretation of the archaeological site.

Caherweelder turlough in Co. Galway is the most intensively investigated turlough site. Pre-development excavation ahead of the M-18 roadway identified a total of seven archaeological sites adjacent to the turlough that lay in the route of the development. Six of these sites comprised the remains of previously unrecorded burnt mounds, largely dating to the early and Middle Bronze Age. Similar dates were also returned from the excavated evidence at Roevehagh, Moyveela and Ballinillaunin south Co. Galway. Those burnt mound sites, which have returned Bronze Age dating evidence, lie in close proximity to each other. Thus they may be representative of regional patterns in Bronze Age settlement in the area. It is clear that these locations were purposefully chosen due to the local groundwater conditions. The purposeful siting of these pyrolithic sites in turlough environs demonstrates a degree of human interaction with the turlough floodplain during the Bronze Age.

It is clear from the excavated evidence that turlough lands sometimes became a focus of human activity from the Late Neolithic period with a clear rise in this activity in the early-to-mid Bronze Age. The nature of this activity is uncertain although it is also clear that it is associated with pyrolithic technologies and the local groundwater conditions. It must be considered that the excavated evidence from south Co. Galway may be reflective of similar patterns in the Bronze Age in other areas where turloughs occur. Consideration must be given to the seasonal use of these sites. In most cases, the troughs that are associated with individual burnt mounds are located in close proximity to the limit of winter flooding at the turlough site today. Although

the level of flooding may have varied to some degree since the Bronze Age, it is likely that at many of the sites examined here, use of the site may have been limited to the summer months or to periods of lower rainfall. The seasonal use of burnt mound sites has been suggested in other parts of Co. Galway (Fitzpatrick and Crumlish 2000, 142) in areas that are prone to winter flooding. Power (1990, 18) has also speculated on the seasonal use of these sites, and this theory deserves further consideration in the case of burnt mounds situated on, or near, turlough floodplains. The precise role of these sites and landscapes in Bronze Age society is difficult to determine. It may be speculated that these pyrolithic monuments that were used to heat water and occasionally prepare food, served a ceremonial or symbolic role as a central place or gathering site of some significance for Bronze Age communities. The open and lush green of the summer sward that would have been present at a turlough during the summer months would no doubt have served as a suitable venue for the gathering of Bronze Age communities.

Evidence for metalworking comes from three separate sites dating from the Iron Age to the early modern period. The excavation of a charcoal-rich layer atop a gravel ridge at Caherweelder revealed an ironworking hearth or furnace which produced two Iron Age dates. At Ballykillaboy, excavation of the site produced evidence of a possible workshop undertaking secondary smithing of both copper and iron and dating between the 15<sup>th</sup> and 17<sup>th</sup> century. A number of slag residues points towards onsite metalworking at Owenbristy. The relationship between metalworking and turlough floodplains most likely relates to the necessity for water at a metalworking site.

There appears to be a close association between ecclesiastical sites and turlough floodplains throughout the medieval period. Muhr (1999, 207), in her treatment of water imagery in early Irish literature, notes the importance and symbolism of water to the understanding of the sacrament of baptism as a rite of passage through water. This act was often carried out in a natural pool, an aspect of the closeness to nature attributed to early Irish saints. It is possible that the siting of a number of early ecclesiastical sites in close proximity to seasonal lakes may be reflective of this.

Chapter 1 of this thesis has demonstrated the significance of turlough lands as summer grazing pastures. It is worth noting that at Owenbristy, the nearby townland of Cloghboley (*An Chlochbhuaille*)<sup>11</sup> to the north may allude to the practice of local transhumance, or booleying, in the area. However, the flood-lands in this townland are not particularly extensive and the name may refer to summer grazing on the rough pasture in the townland. Nonetheless, in chapters 1 and 7 of this thesis, it has been shown, through an examination of the collective evidence for the grazing of turlough floodplains, that Dunford's statement is correct and that turlough floodplains were used as a significant summer grazing resource from at least the early medieval period in areas where these seasonal lakes occur.

---

<sup>11</sup> <http://www.logainm.ie/19404.aspx> 'Stony summer grazing, or milking place'

## Chapter 5 - Human experience of turloughs through time; historic, literary and toponymic records



**Pl. 5.1** A view towards Lydacan Castle in the townland of Lydacan, Co. Galway, showing the turlough waters in full flood.

### 5.0 Introduction

This chapter approaches the subject of past human settlement in turlough environments from the perspective of the humanistic geography and phenomenology of these landscapes, in other words, how they were perceived, valued, exploited and understood by past populations. This method of inquiry is based on the premise that landscape is a composite of natural surroundings and human interaction with an environment, as it is perceived or understood in a society or population, and not a construct independent of human consciousness.

An interpretation of the unique topographical, ecological and hydrological features of these environments and their implications for, and impacts on, human settlement in the past from a humanistic geography perspective is presented. A variety of documentary sources are used to shed light on the significance of floodplains through time. Furthermore, aspects of the cognitive landscape are also examined through the proxy record of place-names associated with individual turloughs, which were

gathered by the Ordnance Survey in the first half of the 19<sup>th</sup> century. This evidence is integrated with data available from other written sources that include early medieval law-texts, native chronicles and early modern documents. This approach gives a greater context to the past cognitive landscape in areas where turloughs occur and to the impact and significance of karstic flooding regimes on past human settlement.

The fact that environment has an influence on human activity stresses the environmental attributes of the physical landscape. Cultural activity is viewed in relation to a specific environmental context (Gkiasta 2008, 9). Thus, from a phenomenological and humanistic geography approach, archaeological research is not only concerned with the location of human activity and an understanding of the surrounding environment, but acknowledges the importance of studying past societies in relation to specific geographical, environmental and cultural contexts. Attention must be given to human adaptation strategies in specific environmental situations so that settlement can be explained on the basis of environmental factors and so that cultural behaviour is understood as a response to environmental stimuli.

Places and landscape circumstances may be experienced and conceptualised at a number of levels, from personal space, to community space, to regional space (Tilley 1994, 17). In the physical environment, the question of scale is sometimes defined as being relative to the chosen base of a system, and specifically questions the physical relation of parts to a whole. From a phenomenological perspective, the influence of cultural stimuli must be considered within this physical landscape. With this in mind, contextualising individual archaeological sites in relation to immediate flooding regimes and cultural influences is important. However, of equal importance is the collation of the available data from all turlough sites in Ireland in developing a broader template for settlement in these deltaic topographies. Therefore, unlike chapter 7 which deals with a smaller, more localised study area, this chapter draws on data not only from all 304 turloughs recorded by the GSI, but also from former floodplains that are now decoupled from their natural flooding regime. From this, a better understanding of past-perceptions of the dynamic nature of turlough landscapes can be gained and their direct influence and impacts on aspects of human settlement, economy and land-use in Ireland can be determined.

## 5.1 Human settlement and turlough environs in the native sources

The purpose of this review is to demonstrate an awareness of turlough environments in the broader cultural landscape from an early date in Ireland's historic period, and to determine the possible significance and perceptions of such landscapes, as recorded in the native written record. An awareness of the location and geophysical properties of these seasonal floodplains is clearly noted in particular sources. Events that took place at these locations are also noted in the pseudo-historical narrative of pre-Christian Ireland that was written down from the 7<sup>th</sup> century onwards.

### 5.1.1 Place-name lore and turlough environments

Onomastic, or place-name lore, is among the most significant elements of oral tradition and is one of the primary forms of recording and remembering the landscape (Kilfeather 2010, 167). Sources of onomastic information in Ireland are varied and comprise a number of early written documents relating to mythology, folklore, history and pseudo-history. The *Onomasticon Goedelicum locorum et tribuum Hiberniae et Scotiae* (Hogan 1910) comprises a comprehensive index, (with modern identifications), to the Gaelic names of places and tribes referred to in the corpus of native chronicles. This work is in the process of being updated and validated, and will eventually constitute a comprehensive historical dictionary of Irish place-names. Hogan's index has been consulted and a number of place-names that clearly make reference to turlough environs have been identified. The majority of place-names identified appear to be associated with areas where turloughs occur today, and only one example, Turla Choille Móire, which is referred to in the *Táin Bó Cuailgne*, and identified as being located north of Áth n-Gabla (Altagowlan)<sup>12</sup> in Co. Roscommon, is situated in an area where turloughs do not occur.

The referencing of turlough landscapes and place-names as distinct and identifiable centres of settlement in a number of the native chronicles indicates that these landscape features were recorded as places of note in the cultural landscape through time. Furthermore, their significance as elements of the onomastic landscape shows that these environments remained important reference points and were preserved as such. References to turlough floodplains that appear in early written sources can also

---

<sup>12</sup> <http://www.logainm.ie/1374333.aspx> 'Height of the nook'

be identified with extant archaeological features and with place-names that have survived in the modern toponymic landscape. An investigation of these references outlined below, is presented in a chronological sequence with the earliest references to turloughs placed first.

In the pseudo-historical *Cath Maige Mucrama* (Battle of Mag Mucrama), Turloch-Airt (AFM 195.1) is given as the site where Art Mac Cuinn was slain. An account of the battle is preserved in the 12<sup>th</sup>-century *Book of Leinster* (Stokes 1892). The battle is reputed to have taken place in the late 2<sup>nd</sup> century and it has been suggested by Hennessey (1866, 288) that Turlach-Adhnaigh, referred to in AFM 1067.5, can be identified with the earlier Turloch-Airt, which Daly (1975, 156) notes as being in the area of Crich Óc mhBethra,<sup>13</sup> situated somewhere between the modern townlands of Moyveela and Kilcornan in Co. Galway. This area is on the very northern border of the later territory of the Uí Fhiachrach Aidhne (Fig. 7.1). Daly (*ibid*, 57) notes that according to the 12<sup>th</sup>-century account of the battle, Turloch-Airt is located north-east of Áth Cliath,<sup>14</sup> at a place named as Áth Senbó. A significant number of large turloughs are identifiable in this landscape and the place-name, Áth Senbó, is lost today. The prefix *áth*, meaning a fording point, may suggest that the turlough being referred to is either Rahasane or Dunkellin Turlough, situated on the Dunkellin River, and that the place-name Áth Senbó refers to a fording point on that river. However, given the pseudo-historic nature of the account of this battle, the value of its content is limited. Nonetheless, it does note an awareness of turlough landscapes on the part of the author of the tract, as distinct environments. The location of this floodplain is also accurately recorded at an early point in the historic period.

---

<sup>13</sup> A district in the north of Aidhne (O'Daly 1975, 57)

<sup>14</sup> 'Áth Cliath' has been identified with the area of 'Áth Cliath Meadraige', now Clarenbridge, Co. Galway (Daly 1975, 156)

A reference appears in 1067 to the battle of Turlach-Adhnaigh, which took place in that year, between Aedh Ua Conchobhair, king of Connaught, and Aedh, the son of Art Uallach Ua Ruairc with the men of Bréifne (AFM 1067.5). The precise geographical location of Turlach-Adhnaigh is not known, although the battle took place somewhere within the territory of the Uí Fhiachrach Aidhne in south Co. Galway. This area is coextensive with the later diocese of Kilmacduagh (O'Donovan 1844, 279) and contains a dense distribution of turloughs (Fig. 5.1). In place-name lore, the kingdom of Uí Fhiachrach Aidhne took its name from the mythological Aidhne, one of the ten daughters of Partholón, the arrival of whom is ascribed a date of 2061 BC (AFM 2520.0). The suffix 'Adhnaigh' of Turlach-Adhnaigh may be a reference to a forename of a later personality associated with the turlough, although it is also possible that it is reflective of the geographical location of the turlough, inside the territory of the Uí Fhiachrach Aidhne. As mentioned above, Hennessey (1866, 288) suggests that the battlefield of Turlach-Adhnaigh can be identified with the earlier Turloch-Airt.

Baile-an-Turlaigh is referred to in AFM 1473.10:

‘Rory, son of Hugh, who was son of Torlogh Oge O'Conor, heir presumptive to the government of Connaught, was slain by William, son of Edmond Mac William, at Cill-Bruigh of Baile-an-Turlaigh’ (AFM 1473.10).

O'Donovan (1856, 9) identified this place-name with the modern townland of Ballynacourty in Co. Galway. Archaeological evidence for dense medieval settlement is evident in the immediate vicinity of Ballynacourty turlough. This evidence includes a hall-house with associated medieval secular settlement, three 17<sup>th</sup>-century grave-slabs, an associated burial ground and a medieval church that lie to the south of the turlough floodplain.

O'Donovan (1843, 166) suggested that Turlach-na-mBruigheol is identifiable as the former floodplain in the townland of Kilnamryall<sup>15</sup> in Co. Roscommon. The turlough is noted in the chronicles in relation to a cattle-raid (*creach*) at this location:

---

<sup>15</sup> <http://www.logainm.ie/43061.aspx> ‘Cill na mBruigheól, ‘The church of Bruigheol’

‘A depredation was committed by O’Conor in Hy-Many, at Turlach-na-mBruigheol, upon Rory, the son of Turlough another depredation was committed by O’Conor upon the sons of Rory Boy, at Muine-Fraeachnat, Druim-Turlach, and Cluain-Gamhnach’ (AFM 1490.2).

O’Donovan (1856, 115) also identified Turlach-Mochain with Turloughvohan, Co. Galway. This turlough is located 4km east of Tuam. It is the site of a former castellated settlement of indeterminate date. This landscape is at the centre of the later ‘de Bermingham Demesne’ townland, a place-name which superseded the earlier Cluain na gCarbhad. The annexed list of Galway castles and their owners in 1574 lists Turlaghmoghan as the residence of de Bemingham in that year (Nolan, 1900-01, 117). The 1595 reference suggests that a battle took place at the site:

‘He [O’Donnell] then proceeded to Dunmore-Mic-Feorais, and dispatched marauding parties into Conmaicne, Muintir-Murchadha, to the borders of Machaire-Riabhadh, and to Tuam-da-ghualann. They took Turlach-Mochain, and a great number of the chiefs of the country, together with Richard, the son of Mac Feorais’ (AFM 1595.15).

A number of cursory mentions of turlough place-names appear in the native chronicles in the later medieval period and include the church of Turlagh, Co. Mayo which is referred to in 1236 (AFM 1236.12). It is noted as the place where the Mac Uilliam Uachtair plundered the country of Conor Roe. Turlach in Co. Clare receives a cursory mention in 1599 (AFM 1599.19) as ‘O’Donnell travelled homewards over the chain of rugged-topped mountains of Burren... .. passing by Nuachongbhail , Turlach , the monastery of Corcomroe, and Carcair-na-gCleireach, and arrived at Rubha, in the west of Hy-Fiachrach-Aidhne’ (AFM 1599.19).



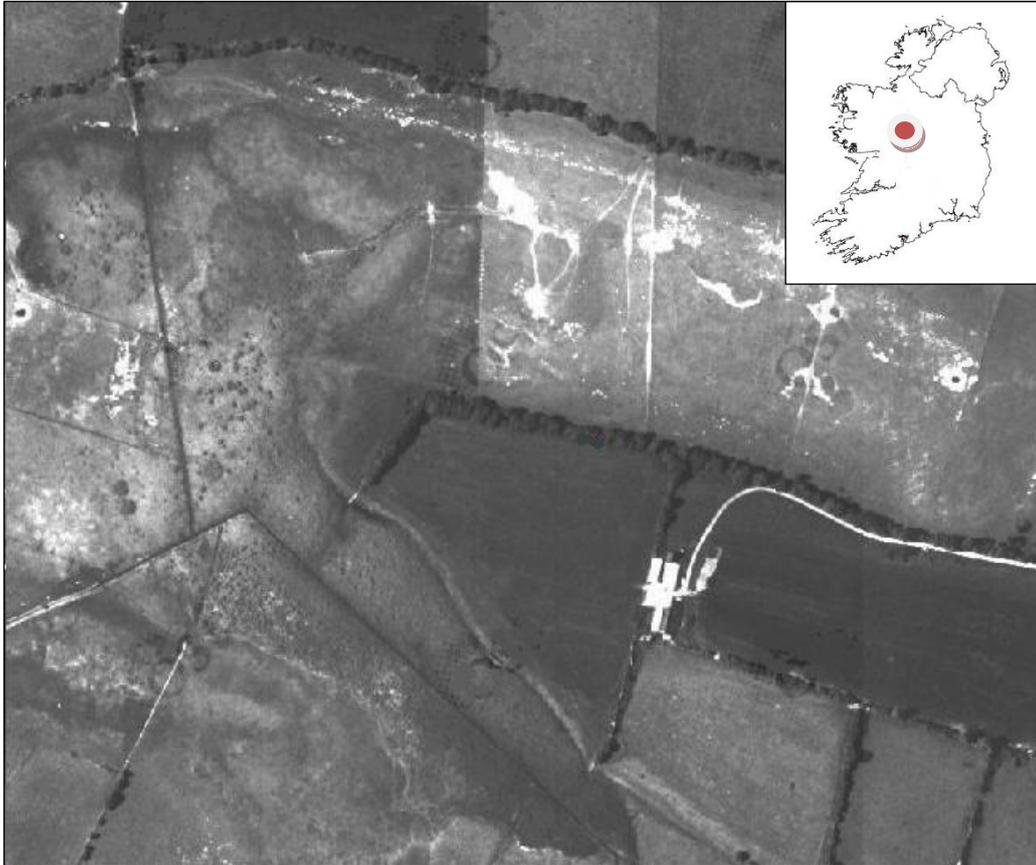
**Fig. 5.1** The dense distribution of turloughs within the early medieval territory of the Uí Fhiachrach Aidhne (after O'Donovan 1843). The locality of Áth Senbó, to the north-east of *Meadraige* is highlighted in red.

Although it would appear that in general, early and high medieval populations exploited the natural flooding regime of turlough lands, an entry in Ann. Tig. (1139.4) for the year 1139 suggests that the manipulation of these landscapes took place under Royal patronage in Gaelic communities:

‘Toirdelbach O’Conchobair dug a channel through Turloch Desceirt in Muighe and Turloch Aeda to bring the Suck into Abaind na hEidhnighe’ (Ann. Tig. 1139.4)

The turloughs referred to in Ann.Tig.1139.4 are associated with the townland Ballinturly (Baile in Turlaigh) in Co. Roscommon. A channel that appears not to be

modern is identifiable entering the turlough floodplain (Pl. 5.2). However, it appears from the chronicle entry that the purpose of this channel was to permanently flood the turlough, rather than to drain the area.



**Pl. 5.2** A vertical aerial photograph of the turlough in the townland of Ballinturly, Co. Roscommon. The artificial channel is evident to the south of the turlough floodplain (Image source: Google Earth).

Native chronicles and mythological cycles sometimes indicate that turlough lands were centres of population and the focus of human activity from an early date. However, the genre of topographical poems or *dindshenchas* (Gwynn 1913), contain some noteworthy accounts of turloughs, among them Turloch Silinde.

### **Turloch Silinde**

Silend's lake-bed was here yesterday;  
today it is a lake whose waters are full:  
Blonac daughter of Tai it was  
who ruined it in planting the stakes of her cattle-  
pen.

Though it is Silend who owned it  
(it is a certain fact, it is common talk),  
yet is Silend deprived of her own,  
because 'a weakling is ever a coward,' men say.

Silend shall suffer under endless toil:  
that is the truth, long is the labour :  
to Blonac shall the warriors' lake belong :  
it shall be Silend that shall perish by the lake-bed.

Silend shall search east and west,  
over every mountain, till she reach its base :  
Silend, who was not . . . shall come to  
a dwelling whose threshold is not dry.

Famous above women were these for grace,  
they plied no business, after the fashion of low-  
born women;  
though their lakes clave to the heroic women,  
Silend had a fatal toil from her lake-bed.

### **Turloch Silinde**

Turloch Silinde seo indé,  
indiu is loch dianid lán lind :  
is si Blonac ingen Tui  
ic sadád a crúí rosmill.

Cid hi Silend rodaselb,  
is gním derb, is cobra gnáth,  
ata Silend cen a seilb  
daig cech meirb is mettu, ar cách.

Cesfaid Silend, sáethar sir,  
is é a fir, is cían in cur :  
biaid ic Blonaic loch na láech :  
bid hí Silend táeth don tur.

Sirfid Silend sair is siar  
dar each slíab co roa a bun :  
tetha Silend, na ba samda,  
adba ná ba tairsech tur.

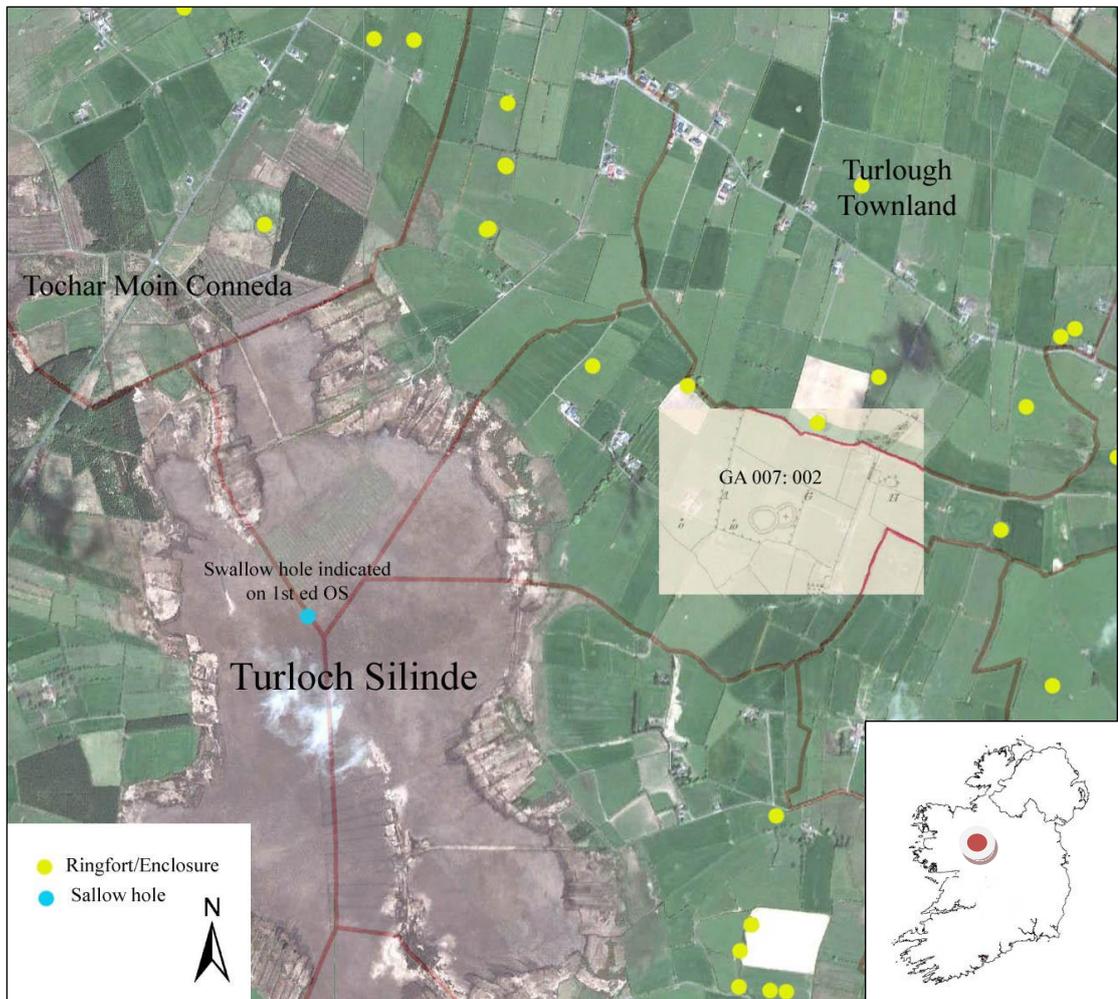
Dar na mnaib fo robblai raith,  
cen gnim daith, fo dóser-ban dul,  
cía rolensat lindi láech- ban,  
ropo sáethar troch dia tur.

(Translated by Gwynn 1913, 376)

Gwynn (1913, 577) suggested that this turlough is situated in the *túath* of Corcaraige Feda Manach which lay between Dunmore and Ballymoe (Bhéal Átha Mó)<sup>16</sup> to the north-east of Tuam, in Co. Galway. A significant number of turloughs are identifiable in this landscape today. However, Ann. Tig. (1177.14) suggests that Corcaraige Feda Manach lies just to the south-west of the modern town of Ballymoe:

‘The Foreigners burnt the Plain [of Connaught] before them, and Ailfind, and Ferta Gegi and Immlech Fordeorach, and Immlech mBroccada, and Dun Imdain. And they came to Ath-moga (Ballymoe) and into Fid Manach and into the causeway of Moin Conneda, and into the high road of Lecc Gnathail, and over Ath fine near Dunmore, and direct to Tuam’ (Ann. Tig.1177.14).

<sup>16</sup> <http://www.logainm.ie/18905.aspx>



**Fig. 5.2** An aerial photograph of the present landscape around the proposed area of Corcaraige Feda Manach and Turloch Silinde (Image source: Google Earth).

The 1177 reference identifies Fid Manach as the area immediately to the south-west of Ballymoe together with a causeway, or togher in the immediate vicinity. There are no turloughs identifiable in the area to the south-west of Ballymoe today. However, a townland named ‘Turlough’ is situated 3.2km to the south-west of the modern town. It would seem that this place-name is somewhat incongruous with the surrounding environment given that there are no turloughs within the townland or in the immediate landscape. However, the townland of Turlough lies to the east of what are now extensive peat-lands and raised bog and a number of swallow-holes are identified within this area on the First Edition Ordnance Survey sheet (Fig. 5.2). It is likely that before the development of peat in this basin, the area of peat-land most likely represented a turlough floodplain, prior to a change in the local hydrology or the gradual development of peat in the basin. Furthermore, there is a narrow ridge of

high land between the former floodplain and another area of peat-land to the north which is possibly the causeway or togher identified as ‘Tochar Moin Conneda’ in Ann. Tig. (1177.14). Therefore, the place-name ‘Turlough’, which is associated with the townland immediately to the east of the peat-lands, probably reflects the nearby defunct turlough flooding regime which referred to in the prose-poem ‘Turloch Silinde’. Gwynn (1913, 376) has offered a translation and interpretation of the prose-poem suggesting that the turlough had once belonged to Silinde (Turlough Silinde) before being superseded by Blonac, who renamed the turlough after herself (Loch Blonac). The first stanza appears to describe a change in the hydrology of the turlough, with the floodplain becoming a permanent water body (Loch Blonac). This event coincides with the arrival of Blonac and the construction of a cattle-pen, perhaps claiming the turlough lands for herself. Although this poem represents the only clear reference to the grazing of cattle on turlough lands dating from the early-medieval period, it can be safely assumed that this practice was more widespread than the written record indicates. The landscape around Turloch Silinde shows significant evidence of human settlement in the early medieval period in the form of significant numbers of ringforts. Furthermore, between the townland of Turlough and the eastern edge of the former floodplain, a bivallate ringfort with a large rectangular annexe is identifiable and it is tempting to suggest that this is the cattle-pen of Blonac, referred to in ‘Turloch Silinde’.

#### 5.1.2 Toponymy, the cognitive landscape, and turlough place-names

Data available from the proxy-record of place-name evidence for settlement in turlough environs in Ireland are examined here. Keller (1997, 89) states that the creation of place-names communicates a mental or cognitive landscape and that place-names are a cultural, immaterial product of an oral tradition. Thus, it must be considered that place-names in Ireland are often reflective of the complicated cultural geographies of language and location and so, by their well-attested genesis in both cultural and physical space, they provide a proxy-record of past phenomenological experiences of landscape. By linking language and geography, place-names are material, metaphorical, substantive and symbolic (Nash 1999, 457). The significance of these cognitive landscapes is emphasised by recent approaches to place-name research in Ireland, which is informed by a very immediate sense of the implications

of their versions of culture and location and their representation of past events and spaces (*ibid.* 475).

Although pioneered in the 19<sup>th</sup> century in Ireland by scholars such as O'Donovan, in recent years, place-name studies have become more integrated with landscape studies. The recent publication *Lough Kinale: studies of an Irish Lake* (Frendengren *et. al.* 2010) has included a chapter dedicated to the examination of the place-names that annotate the landscape around Lough Kinale. Kilfeather (2010, 179) notes that the names given to places by communities who lived around the lough provide a detailed and richly textured picture of the landscape they inhabited, which adds another layer to the scientific description of the archaeological landscape. Place-names reflect the impact of the natural environment on humans and of humans, simply by observation, on the environment (Flanagan and Flanagan 1994, 1). The impact and activities of humans, however, create another category of place-name, those describing the additions and alterations made by humans to this natural environment. Van De Noort and O'Sullivan (2006, 35-6) have noted specific place-names (such as *corach* meaning a marsh, or *cluain* meaning water meadows) associated with wetlands both in Britain and Ireland which frequently provide a more specific indication of the condition of the landscape in these areas. Thus place-names frequently describe the use, experience and perceptions of the landscape by humans.

The term 'hydronym' has been used when specifically referring to place-names which identify water bodies. In his study, King (2008, 33) notes the difficulty in elucidating the relationship between various qualities of hydronyms and the watercourses they represent. This problem is emphasised in the study of the place-names associated with turlough floodplains, given that many of the floodplains have been completely effaced from the landscape or, at the very least, significantly altered. Descriptive, semantic prefixes and suffixes that were clear in meaning in the past, may bear no relevance to the condition of the landscape today.

Place-name evidence draws out thematic associations with these seasonal lakes and demonstrates the humanistic geography and phenomenological significance of these lands through time. The aim here is to use visualisation and descriptive techniques to

show the type of conceptual space the various descriptive elements of turlough place-names occupy.

The landscape of Ireland is divided into approximately 65,000 administrative units within a historical and hierarchical structure, all bearing place-names (Mac Giolla Easpaig 2008, 165). In addition to administrative names, the maps of the Ordnance Survey document thousands of other place-names including those of physical landscape features, man-made features and other minor place-names. These place-names are reflective of a multitude of cultural layers that are often interconnected. The majority of these place-names have their origin in the Irish language and pre-date the 17<sup>th</sup> century (*ibid.* 166). These place-names are today documented in an anglicised form with only a small proportion having been recorded in the Irish language prior to the work of the Ordnance Survey in the 19<sup>th</sup> century.

A number of project databases have been compiled by various authors (Coxon 1986; MacGowran 1985; Tynan *et. al.* 2006) listing turlough sites in Ireland, the most extensive of which to date is that of the GSI which lists 304 sites. Although these databases list individual turloughs, some landscapes contain multiple turloughs such as at Mountpleasant, Co. Mayo, or that within the parish of Beagh, Co. Galway where numerous turlough floodplains are identifiable in close proximity to each other. Nonetheless, frequently, individual turloughs have been given specific feature-names. The list of sites compiled by the GSI is extensive but it is not comprehensive, and a number of former turlough sites may have been overlooked in its compilation. By way of example, a number of place-names give an indication of the presence of former turlough floodplains which have since been drained, such as at Turlagharee, (Thurlach an Fhraoigh)<sup>17</sup> Co. Roscommon. Furthermore, many small-scale turlough sites where the floodplain covers less than a few acres are also absent from the GSI database, such as at Pollaghrevagh (Pollach Ríabach),<sup>18</sup> Co. Galway.

It is beyond the remit of this thesis to undertake an in-depth investigation and identification of undocumented turlough floodplains. Therefore the database of the GSI is used here as the basis for this place-name survey of turloughs. A number of

---

<sup>17</sup> <http://www.logainm.ie/43646.aspx> 'Turlough of the heather'

<sup>18</sup> <http://www.logainm.ie/18583.aspx> 'Place of the grey holes'

place-names such as *Turlough*,<sup>19</sup> in the barony of Moycullen, Co. Galway and Turloughbeg Strand,<sup>20</sup> Emlough, Co. Mayo have been omitted, as these place-names are recorded in areas where the occurrence of a turlough floodplain is geologically impossible. It is clear from their topographical setting, that these place-names are reflective of a tidal flooding regime rather than that of a karstic seasonal lake.

Within townlands, many minor place-names and feature-names are documented averaging *c.* 20-30 per townland (Flanagan and Flanagan 1994, 1). The database of turlough sites compiled by the GSI has identified each turlough by the feature-name associated with it on the First Edition Ordnance Survey sheet. Where an associated feature-name is absent, the turlough has been identified by the name of the townland in which it is situated. Of the 304 turlough sites identified by the GSI, 151 have no associated, distinct feature-name recorded on the corresponding First Edition Ordnance Survey sheet for the area. Thus, the majority of these 151 sites have been omitted from this place-name survey. A number of exceptions to this have been made in cases where the name of the townland, in which the turlough is situated, clearly makes reference to the turlough lands, such as the townland of Turlagh in Co. Roscommon. The remaining list of 153 turlough sites recorded by the GSI, which have specific feature-names, has been further refined and in instances where the feature-name associated with the turlough has been clearly appropriated from the townland or parish, the name has also been omitted. A total of 114 turlough place-names has been used for this study.

Establishing the antiquity of turlough names is difficult as these landscape features are seldom documented in the written records of the medieval period. The relationship between linguistic stratum and a particular name is an essential area of research in toponymy (Nicolaisen 1961, 79). In only a few cases can specific turlough names be firmly proven to have originated prior the 17<sup>th</sup> century. However, as can be seen from Fig. 1.2 the vast majority of turloughs occur in areas where the Irish language had remained dominant and in popular use into the 19<sup>th</sup> century. Thus, it is likely that their documentation at this time was accurate and reflective, for the most part, of long-established Gaelic place-names. Nicolaisen (*ibid.*) suggests that in

---

<sup>19</sup> <http://www.logainm.ie/20940.aspx> 'Turlough'

<sup>20</sup> <http://www.logainm.ie/37145.aspx> 'Strand of the small turlough'

conducting a study of place-names, only those that have been trustworthily registered, documented and properly identified (including lost place-names) should be considered in the interpretation stage of a place-name study. Their interpretation and translation here has relied on a number of sources, principally the Ordnance Survey Name Books, compiled by John O'Donovan in the first half of the 19<sup>th</sup> century, and the place-names database held by Bunachar Logainmneacha na hÉireann. O'Donovan's field notes record Irish language variations of the anglicised versions documented on the First Edition Ordnance Survey sheets and so provide a further insight into the significance of individual place-names. The database held by Bunachar Logainmneacha na hÉireann has utilised these records and sought to validate the Irish language versions of the anglicised names. However, the database is yet incomplete and so, where possible, further sources have been sought for this place-name study.

The analysis of the data gained from the place-name survey is primarily concerned with those turlough names that reveal insights into the significance or use of the turlough floodplain through time. A number of themes and semantic categories can be identified through analysis of the possible inferences of the place-names associated with turloughs environs. A taxonomic approach (King 2008) to semantic groups has been taken here, whereby a given term belongs to a single group within larger sets. Place-names that refer to topographical conditions, local flora and fauna and ecosystems have been grouped together as basic landscape descriptions and examples of the adjectives that have been identified are given. Although it would be possible to further sub-categorise these place-names based on the semantic categories identified by King (*ibid.*, 129) it would not be of benefit to this study. Not all place-names yield specific insights on these seasonal floodplains and a number reveal only basic, non-descriptive information about the turlough or simple, descriptive information about landscape settings and features of the turlough floodplain. Briefly, the most basic place-names associated with turlough environs are those that provide little or no descriptive information relating to their landscape setting, use as a possible resource, or possible significance as part of the cultural landscape. Examples of turlough names that have no significant semantic prefix or suffix include

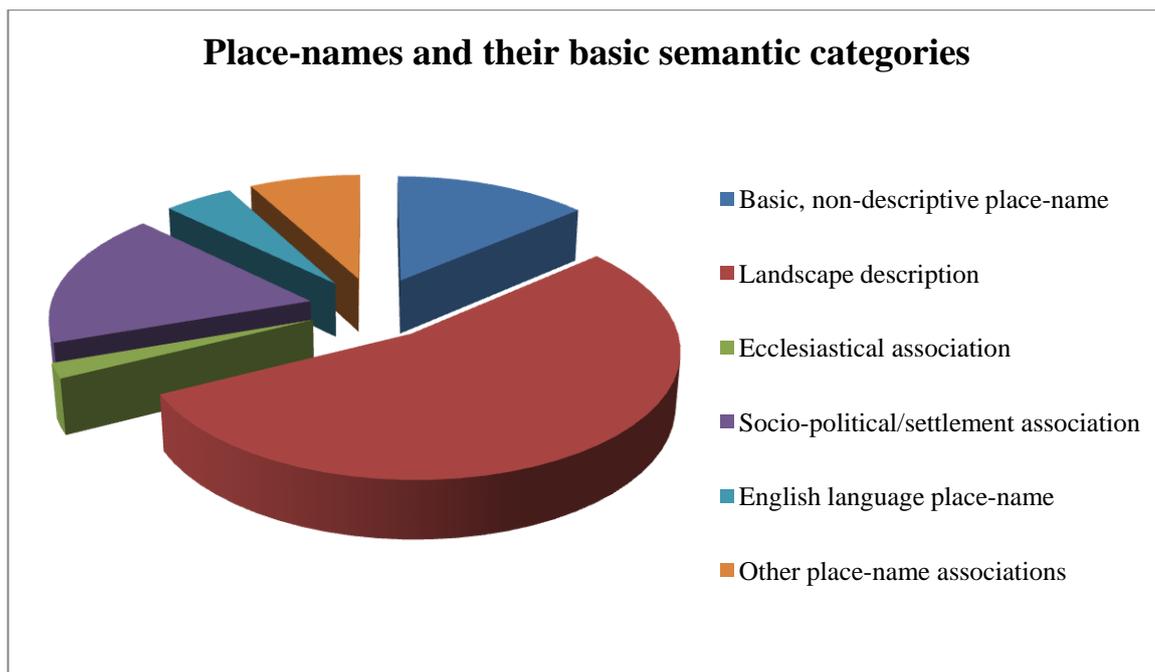
Turloughmore<sup>21</sup> in Co. Sligo and Loughmore Common (*An Loch Mór*),<sup>22</sup> Co. Limerick. However, of the 114 place-names surveyed here, only 13 belong to this category. A discussion of Joyce's (1869, 449) interpretation of the significance and meaning of the word 'turlough' has already been presented in section 6.1, and no further information can be gained from these non-descriptive examples here.

It is noted by Flanagan and Flanagan (1994, 1) that the majority of place-names in Ireland are simple descriptions of natural landscape features or, descriptions of the landscape itself. In this study, some 54 examples make reference to a landscape setting or bear a landscape description in their place-name. Seven examples make reference to the white/pale-grey algal paper deposit which is left behind after the hydro-period. Examples of this include Turloughour (Turlach Odhar) and Turloughreveagh (Turlach Ríabach) in the Turloughmore complex, Co. Galway and Turloughabaun (Turlochán bán), Co. Mayo. Three place-names make reference to the presence of the black moss, *Cinclidotus Fontinaloide*, in their place-name. The zonation of this moss typically indicates the mean annual flooding limit of a turlough. Examples include Turloughnacloghdoo (Turlach na g-cloch dubh) in Co. Galway. Three additional place-names make a distinct reference to rough or moorish lands, such as at Turloughgarve (Turlach garbh), Co. Galway. Occasionally, turloughs are named using the prefix *poll*. A number of turlough names, such as Pollaghard, (Pollach Árd) Co. Mayo, appear to refer to the presence of a swallow-hole or estavelle, a distinguishing feature of turlough floodplains. The remainder of place-names are descriptive of the surrounding landscape with occasional references to vegetation and wildlife such as Turloughnaheltia (Turlach na heilte), Co. Galway.

---

<sup>21</sup> <http://www.logainm.ie/112108.aspx> 'Big turlough'

<sup>22</sup> <http://www.logainm.ie/31194.aspx> 'Big lake'



**Fig. 5.3** A breakdown of place-names associated with turlough environs based on the database compiled for this study.

Two turlough names appear to have a clear ecclesiastical association; Loughnakill (Loch na Cille)<sup>23</sup> in Co. Mayo, and Kiltiernan Turlough (Thurlach Chill Tiarnáin),<sup>24</sup> in Co. Galway. At Loughnakill there is archaeological evidence for ecclesiastical settlement in the area. Moorgagagh Abbey, a Third Order Franciscan house is situated to the north of the turlough and believed by Knoxx, based on information given in the given in Archdall's *Monasticon*, to have been founded in 1428 (Knoxx 1908, 96). Ó Muraíle (1982, 75) equates Moorgagagh Abbey with Cillín Bhréanainn, ‘the little church of Bréanainn’, as identified in the *Obligaciones pro annatis provinciae Tuamensis* in 1492. Knoxx (1904, 172) highlights architectural evidence in the east wall of the building to suggest that the abbey at Moorgagagh was built on the site of a much earlier ecclesiastical settlement. Thus, it is likely that the place-name ‘Loughnakill’ may date to at least the high medieval period. The extensive ecclesiastical enclosure and associated structures at Kiltiernan is situated in a landscape that is clearly influenced by karstic drainage patterns with a number of turloughs occurring in the immediate vicinity. Excavations were carried out at this site by M.V. Duignan in the 1950s and the results later published by Waddell and

<sup>23</sup> <http://www.logainm.ie/1371686.aspx> ‘Lake of the churches’

<sup>24</sup> <http://www.logainm.ie/1411018.aspx> ‘Turlough of the church of Tiarnán’

Clyne (1995). Although radiocarbon dating evidence was not obtained from this site, based on finds evidence, Waddell and Clyne (1995, 185) proposed that the earliest phases of this site may perhaps date to the 8<sup>th</sup> or 9<sup>th</sup> centuries.

It is worth noting that a number of turloughs occur in townlands where place-names have distinct ecclesiastical inferences but the turlough name does not. Most noteworthy of these are Kilcornan (Chill Chornáin),<sup>25</sup> Kilquain (Chill Chuáin),<sup>26</sup> Kilmoran (Chill Ó Móráin),<sup>27</sup> and Kiltullagh (Chill Tulach),<sup>28</sup> in Co. Galway. Determining the significance of ecclesiastical settlement relative to turlough floodplains is difficult. It can be seen here that a number of ecclesiastical settlements are sited in close proximity to turlough lands. Perhaps the most noteworthy possible ecclesiastical site situated in a turlough landscape is at Owenbristy (Uamhain Bhriste),<sup>29</sup> Co. Galway (section 4.3.2). The excavated enclosure at Owenbristy has been categorised as a cemetery settlement, but it may also have been an early church or minor ecclesiastical site. An extensive programme of radiocarbon dating was undertaken, and based on the results of this programme and on the stratigraphic sequence and character of the burials, 75 were assigned to an early medieval burial phase ranging from cal AD 548 – 972 (Lehane and Delaney 2010, 7). The partly upstanding, roughly circular stone enclosure was located on a small promontory projecting into the seasonal lake at Owenbristy. The distinctive landscape setting of this enclosure is clear in Pl. 4.6.

In her treatment of water imagery in early Irish literature, Muhr (1999, 207) notes the importance and symbolism of water in the understanding of the sacrament of baptism as a rite of passage through water. This act was often carried out in a natural pool, an aspect of the closeness to nature attributed to early Irish saints. It is possible that the siting of a number of early ecclesiastical sites in close proximity to seasonal lakes may be reflective of this.

---

<sup>25</sup> <http://www.logainm.ie/19096.aspx> 'The church of Cornan'

<sup>26</sup> <http://www.logainm.ie/1373025.aspx> 'The Church of Cuan'

<sup>27</sup> <http://www.logainm.ie/19259.aspx> 'The Church of O'Moran'

<sup>28</sup> <http://www.logainm.ie/18475.aspx> 'The Church of the hollow'

<sup>29</sup> <http://www.logainm.ie/19282.aspx> 'Broken Cave'

A number of turlough place-names can be distinguished by their reflection of socio-political associations and settlement forms. Some of these are reflective of early medieval settlement forms such as Rahasane Turlough (Turlach Ráth Easáin)<sup>30</sup> in the townland of Faheymactibbot (Fhaiche Mhic Thiobóid),<sup>31</sup> and Caherglassuan (Thurlach Chathair Ghlasáin)<sup>32</sup> Co. Galway. Lough Awock (Loch Dhábhac)<sup>33</sup> in Co. Galway would seem to reflect a division of the turlough floodplain although this is contradictory to the general trend of communal use of turlough resources identified in chapter 8. Place-names that refer to commonage, such as Faheymactibbot, could also be seen to be reflective of socio-economic regimes. The theme of communal exploitation of the turlough floodplain and in particular, the significance of the *faithche* in the medieval period, is discussed in greater detail in chapter 8. In the mid-17<sup>th</sup> century, the tradition of turlough lands being exploited as commonage appears to continue, with the Books of Survey and Distribution frequently recording turlough lands as ‘common’, such as at Rinville Co. Galway where turlough lands are recorded as ‘Turla Comon’.<sup>34</sup>

A number of turlough names clearly have their genesis in the English language and, although earlier place-names may well have been associated with these floodplains, they have never been documented. These place-names appear to occur with a disproportionately greater frequency east of the River Shannon in areas more heavily influenced by the English language from the mid-17<sup>th</sup> century onwards. Most frequently, they are reflective of the changing cultural landscape associated with this period, and in a number of cases the turlough lands form part of the designed landscape of landed estates. Numerous turloughs have been incorporated into landed estates of the 18<sup>th</sup> and 19<sup>th</sup> centuries, such as at the Coole and Ashfield Demesnes, Co. Galway and the landed estates of South Park, Co. Tipperary and Mountpleasant, Co. Mayo. Such processes mask earlier cognitive landscapes, however, they are indicative of a dichotomy which is sometimes evident in the view of turlough landscapes after the 17<sup>th</sup> century. Although these landscapes frequently became the focus of land improvement works, turlough floodplains can be found to have been

---

<sup>30</sup> <http://www.logainm.ie/1411010.aspx> ‘Turlough of the Rath of Easáin’

<sup>31</sup> <http://www.logainm.ie/19384.aspx> ‘The Green of MacTibbott’

<sup>32</sup> <http://www.logainm.ie/1410992.aspx> ‘Turlough of the caher of Gleason’

<sup>33</sup> O’Donovan ‘Lake of the divisions’

<sup>34</sup> MacGiolla Cholille 1962, 242

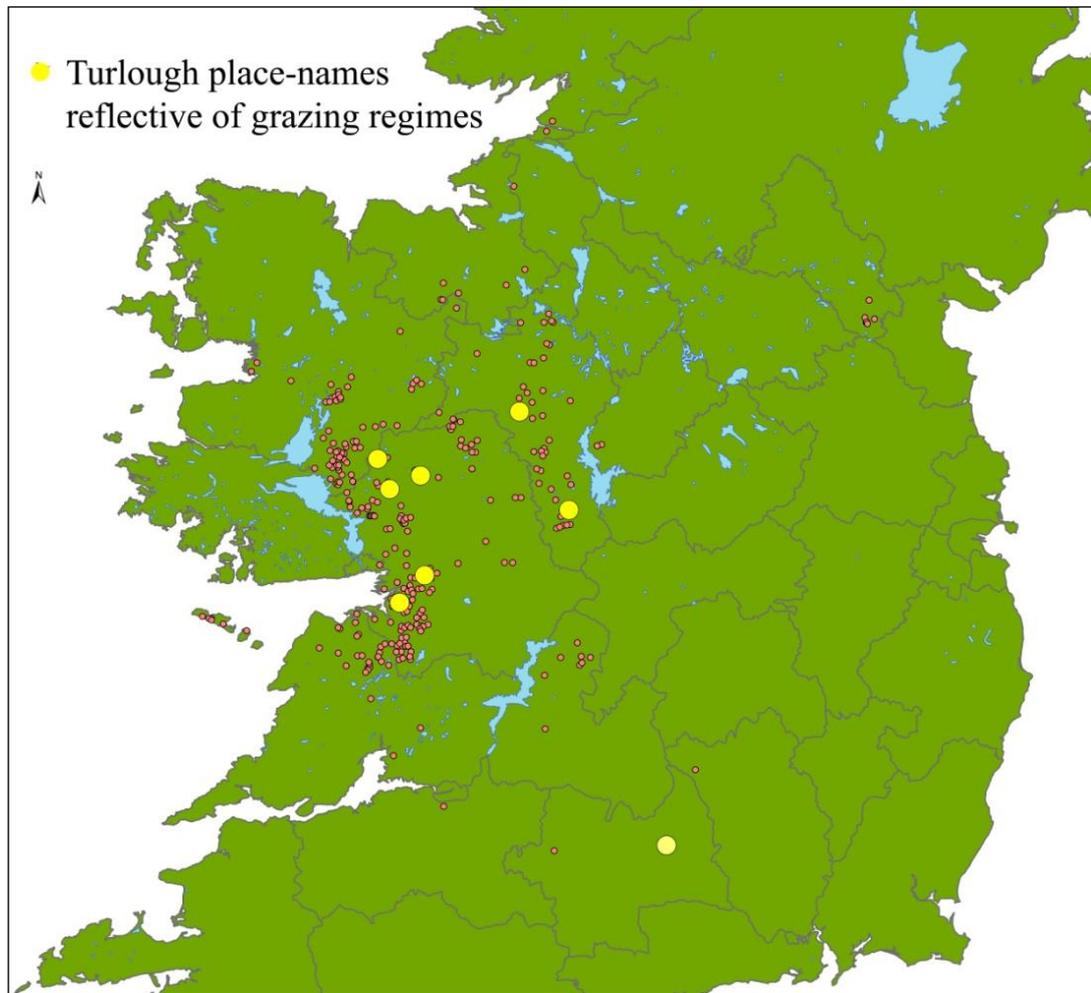
incorporated into the designed landscapes of large estates and demesnes. The most well known of these landscapes is undoubtedly the Coole Estate in south Co. Galway. The waters of Coole Lough and Garryland Turlough, the seasonal lake which was incorporated into the designed landscape at Coole is referred to in Yeat's Wild Swans at Coole:

At sudden thunder of the mounting swan  
I turned about and looked  
where branches break  
The glittering reaches of the flooded lake

-W.B.Yeats, Coole Park and Ballylee, 1931

### 5.1.3 Place-name evidence for the agricultural activity in turlough environments

The most informative category of place-name identified in this study are those place-names that refer to specific agricultural activities that have been associated with, and conducted on, turlough lands. Section 6.1 outlines a number of early medieval law-texts that demonstrate the farming practices that are likely to have been associated with turlough lands and suggests that the temporal origins of these place-names date to the medieval period. Table 5.1 shows the thirteen turlough place-names that suggest a specific use of the turlough lands for agricultural activities. Six of these place-names (Ráth na Loilíoch, Corkip, Mongánach, Turlach a' Cip, Thurlach na Rua, Turloch bó deirg) make reference to, or infer grazing cattle or stock on the turlough lands. At Chnoc an Bhainne, the production of milk and thus the grazing of cows is also inferred. Two place-names make direct reference to milch cows, and in the case of Mongánach Turlough it can be assumed that milk production occurred there.



**Fig. 5.4** The distribution of turloughs whose place-name elements suggest exploitation of the turlough floodplain for grazing purposes.

At Ráth na Loilíoch the possibility of a dedicated milking enclosure may be considered. Evidence from the early medieval law-texts indicates that in summer, milking-cows were sometimes milked away from the farmstead at a temporary milking place identified as the *áirge* (Kelly 1997, 40). A large enclosure is evident 300m to the south of the turlough and although identified as a hilltop enclosure in the RMP for Ireland, this 110m diameter enclosure may have been re-used as a summer milking place.

It would appear from table 5.1 that the exploitation of turlough lands for grazing, once flooding had receded in springtime, was important. The ability of turlough lands to support lactating cattle has already been highlighted in section 6.1.

Furthermore, it is clear from both the archaeological record and written sources that

cattle occupied a position of central importance in early Irish society. Kelly (1997, 27) has noted that nearly half of the domestic bones found in excavations of early medieval archaeological sites are bovine. Although the toponymic evidence shows that in a number of cases, turlough flood-lands are associated with spring and summer grazing, it can be safely assumed that this practice was more widespread than the place-name data indicates. It is likely that the practice of grazing cattle on the spring and summer pastures of turlough floodplains is not dissimilar to that of booleying throughout early medieval Ireland. In both cases, the availability of natural grazing resources largely dictates grazing regimes. However, those place-names that refer to grazing strategies would appear to place emphasis on milk production and the nurture of young cattle. It is likely that the coincidence of the flooding regime with the natural birthing season for cattle was taken advantage of and that natural availability of rich grazing lands, rich in calcium in the spring months, served as suitable lands for young calves and milk production, later in the farming season.

<b>Turlough Name</b>	<b>Townland</b>	<b>County</b>	<b>Translation</b>
<i>Turloch bó deirg</i> <sup>35</sup>	Blindwell	Galway	<i>Turlough of the red cow</i>
Turloughnaroyey ( <i>Thurlach na Rua</i> ) <sup>36</sup>	Turloughnaroyey	Galway	<i>Turlough of the red cow</i>
Pollnakirka ( <i>Poll na Circe</i> ) <sup>37</sup>	Coldwater	Galway	<i>Hole of the hens</i>
Turloughakip ( <i>Turlach a' Cip</i> ) <sup>38</sup>	Chahercrin	Galway	<i>Turlough of the stock</i>
Muggaunagh ( <i>Mongánach</i> ) <sup>39</sup>	Cuילוdoish	Galway	<i>Plain of the milch cows/strippers</i> <sup>40</sup>
Ballynasculloge ( <i>Baile na scológ</i> ) <sup>41</sup>	Higginstown	Tipperary	<i>Town of the Farmers</i>
Corkip <sup>42</sup>	Cornageena/Pollalaher	Roscommon	<i>Round hill of the stock/Plain of the stock</i>
Rathnalulleagh ( <i>Ráth na Loilíoch</i> ) <sup>43</sup>	Rathnalulleagh	Roscommon	<i>Fort of the milch cows</i>
Turloughnamuck <sup>44</sup>	Lissnaboll <sup>45</sup>	Roscommon	<i>Turlough of the pigs</i>
Knockavanny ( <i>Chnoc an Bhainne</i> ) <sup>46</sup>	Knockavanny	Galway	<i>Hill of the milk</i>
Muckinish lough ( <i>Muc-inis</i> ) <sup>47</sup>	Muckinish East	Clare	<i>Lake of the island of the pigs</i>
Ballylee Turlough ( <i>Bhaile Uí Laígh</i> ) <sup>48</sup>	Newhall	Galway	<i>Turlough of the calves</i>
Turlough na Gcapall ( <i>Ghort na gCapall</i> ) <sup>49</sup>	Kilmurvey	Galway	<i>Turlough of the Horses</i>

**Table 5.1** Turlough place-names that are reflective of specific agricultural activities.

<sup>35</sup> O'Donovan (1838) "O'Donovan's field-name books from County Galway

<sup>36</sup> <http://www.logainm.ie/21480.aspx>

<sup>37</sup> O'Donovan (1838) "O'Donovan's field-name books from County Galway

<sup>38</sup> O'Donovan (1838) "O'Donovan's field-name books from County Galway

<sup>39</sup> <http://www.logainm.ie/19397.aspx>

<sup>40</sup> O'Muraile (1985, 76) identifies the place-name *Maigh Ghamhnach*, Co. Mayo as 'plain of the strippers' – cows not in calf but still yielding milk.

<sup>41</sup> <http://www.logainm.ie/24859.aspx>

<sup>42</sup> <http://www.logainm.ie/42417.aspx>

<sup>43</sup> <http://www.logainm.ie/43534.aspx>

<sup>44</sup> First Edition Ordnance Survey Sheet (RN018)

<sup>45</sup> <http://www.logainm.ie/43055.aspx>

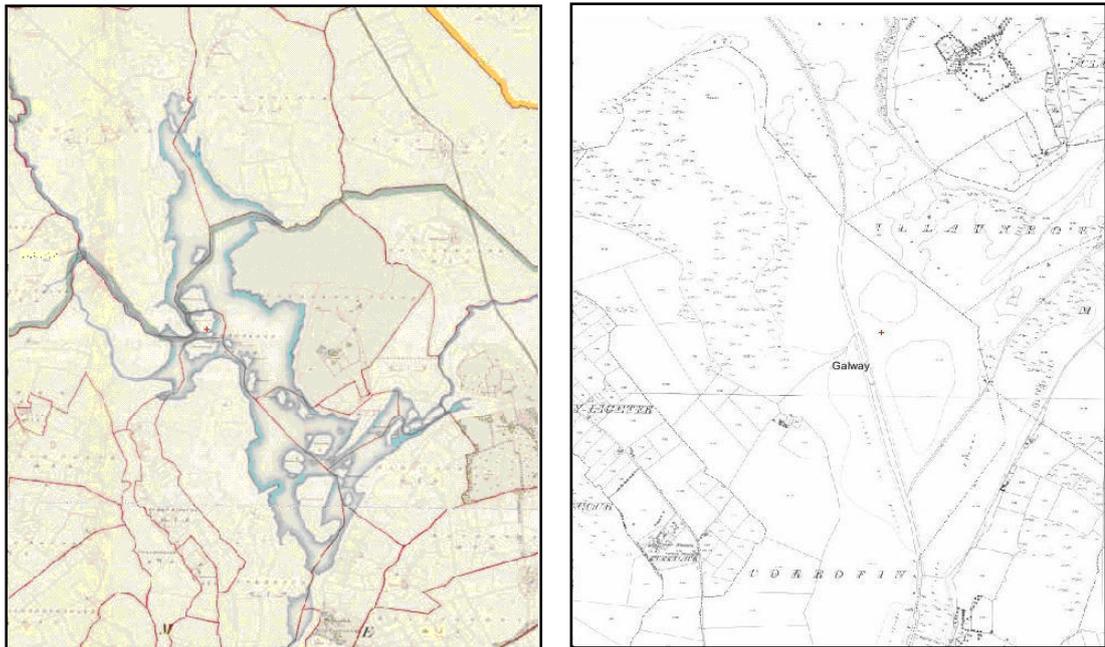
<sup>46</sup> <http://www.logainm.ie/21451.aspx>

<sup>47</sup> <http://www.logainm.ie/6649.aspx>

<sup>48</sup> <http://www.logainm.ie/19468.aspx>

<sup>49</sup> <http://www.logainm.ie/1398690.aspx>

## 5.2 The humanistic geography of turlough environments in the early modern period; drainage and management



**Fig. 5.5** An extract from the First and Second Ordnance Survey maps showing the area of Corofin and Cloonkeen Lough at the northern end of Turloughmore, Co. Galway, and the nature of the drainage regime, pre and post 19<sup>th</sup> century arterial drainage works.

A change in the cognitive experience of turlough environments in Ireland began in the late 17<sup>th</sup> century and resulted in the effacing of many turlough floodplains from the landscape in the late 18<sup>th</sup> and 19<sup>th</sup> centuries. This section highlights some of the driving forces and ideologies behind these changes and presents examples of anthropogenic drainage and improvement of what were termed ‘wastelands’ during this period. As can be seen from the cartographic record of the First Edition Ordnance Survey (Fig. 5.6), the process of land improvement began late in much of Ireland compared to many parts of Europe, and the draining of extensive tracts of bogs, wastelands and turloughs largely post-dates the famine period in the west of Ireland where turlough predominantly occur. Although many early observers noted the economic benefits of the draining of turlough floodplains, very few turloughs can be shown to have been affected by extensive drainage programmes before the mid-19<sup>th</sup> century. Furthermore, there is an identifiable dichotomy in the use of turlough lands in the early modern period. As will be demonstrated, many turlough floodplains continued to be used as places of assembly into the late 19<sup>th</sup> century.

Tarlow (2007, 13) urges the point that reform and improvement was not undertaken by atomised individuals, but happened in complicated social contexts. The few drainage works carried out during the 18<sup>th</sup> and early 19<sup>th</sup> centuries in Ireland were reflective of successful reclamation projects in the vast bogs of northwest Europe at this time and during the preceding centuries (Feehan & O'Donovan 1996, 43). However, the population pressures of the 18<sup>th</sup> and early 19<sup>th</sup> centuries in Ireland and the desire to free up non-profitable lands to facilitate and profit from the rising population were the strongest driving forces in the landscape manipulation of this period. However, Tarlow (*ibid.*, 35) also considers the use of the term 'improvement' to relate not just to efforts made by landowners to improve the productivity of their land and the efficiency of rural management, but also the aesthetic appeal of the estate park for prestige benefit. Thus, as Muir states (2002, 39), the progressive exploitation and manipulation of the environment can be appreciated as part of a broader process of interaction between communities and their settings in which climatic evolution and demographic developments played central roles. However, it must also be considered that although these landscapes frequently became the focus of land improvement works, turlough floodplains can be found to have been incorporated into the designed landscapes of large estates and demesnes, often for aesthetic purposes.

Landscapes and material culture are both the results and instruments of improvement in numerous fields. Muir (2001, 212) suggests that landscapes may be a symbolic representation of a way in which certain classes of people have signified their world through their imagined relationship with nature and through which they have underlined and communicated their role and that of others with respect to the natural environment. Thus, it is important to consider the perceptions and relationships of improving landlords to the landscape, and the social and political structures within which the improvement of wastelands was undertaken. The nature of British governance in Ireland saw the values of capitalism promoted as an avenue of moral redemption for a backward people and the transformation of both the physical and economic landscape (Forsythe 2007, 221). The notion of 'improvement', as it evolved in the 18<sup>th</sup> and 19<sup>th</sup> centuries, was inevitably tied to the emergence of capitalism, and while improvement in Ireland was intended to act primarily as a catalyst for economic transformation, its implications impacted greatly on the natural

landscape. A diversification of farming practices in Ireland brought about by the arrival of the potato in the late 16<sup>th</sup> century displaced traditional foods and thus, consequently the way in which land was used and perceived (Connell 1962, 57). A movement away from traditional pastoral farming and the confiscation and redistribution of lands in the 17<sup>th</sup> century served to alter traditional societal and economic structures as well as the traditional cognitive associations with turlough lands. During the early decades of the 19<sup>th</sup> century, population pressure and steadily increasing prices for animal commodities, as compared with grain and other commercial crops, increased the need for grazing lands (Huttman 1972, 358). As a result, more marginal, unimproved land was removed from tillage and converted to hay production and grazing lands for livestock. Thus, in the first half of the 19<sup>th</sup> century, increasing attention was paid to reclamation.

When Arthur Young made his tour in Ireland between 1776 and 1778 he was able to commend only a few landlords or tenants for their zeal in draining and fertilizing (Connell, 1950, 45). However, the earliest written reference to the potential for draining turlough floodplains, in order to increase the profitability of the seasonal sward, is that of King who, in the late 17<sup>th</sup> century observed that;

‘The natural improvement of loughs [turloughs] is to drain them as low as we can; and then turn the residue of the water into fish-ponds, by planting a few trees about them adorning them thus they may be made both useful and ornamental...  
... if they could be drained [turloughs] would be fit for any use; would make meadow, or bear any grain, but especially rape, which is very profitable’ (King 1685, 958).

King’s late 17<sup>th</sup> -century observation of the potential for the improvement of turlough lands exemplifies a post-renaissance landscape perspective driven by land improvement and a pre-occupation with profitability. Keller (1997, 81) suggests that in understanding landscape, one must take account of past cultural attachments to the environment and the role that a landscape played in a society. Thus, contextualising landscape within a societal structure is of great importance, and it must be considered that past perceptions of turlough landscapes may have had temporal boundaries which were reflective of the medium or social structure within which they were

perceived. On a pan-global scale, Keller (*ibid.*) has highlighted pre-renaissance perceptions of landscape that advocate *pan-psychism*, a perspective that integrates humans with the landscape. Such a perspective has been demonstrated in chapter 8, whereby the natural flooding regime of the turlough floodplain served as a seasonal, communal and symbolic assembly place through the medieval period in Ireland, and where human activity and landscape were firmly integrated in a natural symbiosis. This perception of landscape came to be replaced by a view of the natural environment based on a nature/man dichotomy, in which beauty, as a culturally defined concept, frequently became associated with usefulness (*ibid.* 82). In this context, mountains and wastelands, considered useless to man, were associated with ugliness (*ibid.* 83). Thus, for example, the perceptions of many post-17<sup>th</sup> century commentators of turlough lands as areas with potential for improvement can be contextualised as a product of cultural stimuli and a reflection of the fervour of the ideologies of improvement at this time. Similarly, a past perception of these lands, before this period, can be properly interpreted by correctly contextualising the physical environment within the variety of societal matrices and practices that are evident at various temporal points. Furthermore, any person who acts within a landscape will be in some way influenced by what has happened before in the landscape, with perceptions often being culturally inherited (*ibid.*, 87). Thus, the reclamation of the former grazing pastures and gathering places of early, high and late medieval pastoral populations was symbolic of the firm transition from kin-based rural societal practices to modern perceptions of improvement centred on the dominant figure of the landlord. King's perspective and that of Dutton 140 years later, is no doubt reflective of these post-renaissance perceptions of land value;

‘The expense of draining these turloughs by acreable [sic] assessment would be mere trifle to each individual but it is almost a certainty that this can never be accomplished without an act of parliament as one stubborn booby would render every effort of the other proprietors nugatory’ (Dutton 1824, 51).

Those opposed to agricultural reform were often characterised as belonging to the past and resisting the inevitable (Wilmot 1990, 43). Tarlow (2007, 36) suggests that tradition was perceived as the enemy of progress and that agricultural production

itself became a respectable interest for even the highest born members of society. In Britain from the late 18<sup>th</sup> century, land reform and improvement was increasingly supported by infrastructure and communication organised at state level. Attempts to increase output fell into two broad strategies: either new land, which may previously have been referred to with the loaded term ‘waste’ could be brought under plough, or land already used for crop cultivation could be improved (Tarlow 2007, 51). Although turlough floodplains, like fens and marshes, may have been viewed as wastelands, they represented lands which could be relatively easily improved through drainage. They had the potential to increase income to landlords and to relieve somewhat, the land-hunger of the late 18<sup>th</sup> and early 19<sup>th</sup> century in Ireland:

‘And it has happened that at Christmas the turlough has been completely dry and on the 24<sup>th</sup> of June, a flood as great as usually seen in winter... ..the turloughs of Rohasane [sic] and Turloughmore alone cover many hundreds of acres from September or October, sometimes sooner, until May, often longer. When the water subsides, the greater part is used as a common by the adjoining tenants who are greatly distressed for food for their cattle if the continuance of wet weather keeps the water on longer, which was the case in 1811 and many other years’ (Dutton 1824, 50-1).

The majority of early drainage programmes in Ireland concentrated on freeing up marginal lands on the edges of bogs and callows. The earliest bill to facilitate the undertaking of significant drainage programmes (A Bill to Promote the Draining and Improving of Unprofitable Bogs and Low Ground) was passed in 1716. Numerous acts followed in the years ahead. Through the mid-to-late 18<sup>th</sup> century, the Dublin Society offered new incentives for the reclamation of marginal lands. Under set terms, premiums were on offer for effectually reclaiming great quantities of wet moory ground (not less than 18 acres) not properly coming under the denomination of bog or mountain. The published awards for the years 1774 and 1775 give an indication of the widespread effect of the schemes. In 1774, 923 ‘poor renters of land’ received premiums for reclaiming bog, 211 of these being in Connaught (Feehan & O’Donovan 1996, 43). These incentives led to a new concentration of small farms on the fringes of the bogs. The boundaries, roads and farms which were subsequently positioned upon reclaimed land were distinctive, not conforming to

existing routes or water courses and with regular field patterns. On lowlands, consolidated holdings of the latter part of the 19<sup>th</sup> century were laid out in parallel strips or ladder farms arranged in lines along new roads patterns.



**Pl. 5.3** An aerial photograph of the stripped field patterns, characteristic of the reorganisation of Rundale holdings around Cregmore, Co. Galway at the southern end of Turloughmore (Image source: Google Earth).

It is not apparent that these early drainage efforts impacted on turloughs to any great degree. It would not be until the mid-19<sup>th</sup> century that the landscape would be altered dramatically when an Act ‘to promote the Drainage of Lands and improvement of Navigation and Water power in connexion with such Drainage in Ireland’ received Royal Assent in August 1842. These 19<sup>th</sup>-century arterial drainage schemes resulted in a loss of recharge, lowering groundwater pressure, drying up of turloughs and altering underground flow routes (Drew and Coxon, 1988). The progress of operations and arterial drainage works carried out in the 19<sup>th</sup> century was recorded in a series of annual reports to the Houses of Parliament. By the time of the publication

of a 4<sup>th</sup> Annual report in 1845, proprietors of lands at Islandmore, Turloughmore and Tuam in Co. Galway had contributed deposits to the survey and preliminary expense of canalising 19 miles of the River Clare, including the cutting of an artificial channel through the turlough of Turloughmore.

There are a number of instances of drastic, anthropogenic changes to former callows and bog-lands during this period, with Turloughmore being the largest example of the draining of a turlough floodplain. Localised drainage efforts had been attempted in the area of Turloughmore before 1845 but had been unsuccessful. In 1765, John Bodkin of Lackagh *Esq.* attempted to negate the seasonality of the turloughs grazing potential at Turloughmore by canalising sections of the floodplain at Claregalway and Lackagh. The course of the river was altered at Claregalway creating a deeper channel however, the overall expense proved greater than the benefit. At Lackagh, dense rock was encountered which could not be broken (Dutton 1824, 50). A plaque at the north end of the ‘Nine Arches Bridge’ in Claregalway commemorates the unsuccessful drainage efforts;

This canal was made by  
John Bodkin of Lacka Esq.  
To induce the draining Ye  
Lands and make it navigate from  
Galway to Tuam  
1765’

The estimate of the total cost to the proprietors of the land for drainage works carried out in the vicinity of Turloughmore in 1845 was some £23,000 and the area of land improved was estimated at some 8,853 acres along the new channel of the River Clare. Other, smaller, private projects were also documented during this period which were undertaken by private landowners. The turlough at Oranhill, Co. Galway was, prior to its draining in 1844, held in common by 30 persons occupying the adjoining uplands. They paid in proportion to the number of cattle that each had on it (Harding 1853, 4). Writing in 1850 on the subject of the west of Ireland as a field for investment, Caird, noted that ‘turloughs on low grounds, but good for cattle are all expected to be dry by the arterial drainage operations now going on’ (Caird 1850,

16). A dramatic increase in the profitability of a turlough floodplain is demonstrated with the example below from Co. Clare:

‘Mr. Lysaght has cut through a hill and drained one of these turloughs at the expense of £150 and converted a property of £15 per annum into one of about a hundred’ (Woods, 1809 cited in *Anon.* 1811, 148).

It appears that only minor, localised drainage programmes impacted on the floodplains of turloughs in the years succeeding the initial 1842 Drainage Act. On the karstic geology of the western and central lowlands of Ireland, effective drainage of significant tracts of waste and flood-lands required governmental organisation. In the 19<sup>th</sup> century, under-drainage was utilised in Britain to free-up lands which were frequently waterlogged so that they could be brought under the plough (Tarlow 2007, 60). Such methods, however, were not suitable to a karstic environment where complicated groundwater flows dominated drainage patterns. Although arterial drainage schemes were commenced in 1842, providing drainage loans to facilitate the drainage of land, it was not until the mid-20<sup>th</sup> century and the establishment of the Browne Commission in the period 1938-40, which produced a comprehensive plan to deal with drainage and flooding for Ireland, that the majority of now-defunct turlough floodplains were destroyed.

### **5.3 Conclusions**

Turlough landscapes were significant features of the medieval and early modern cultural landscape and a focus of human settlement. The majority of references to them in the native chronicles and mythological cycles are cursory mentions of centres of settlement near turloughs, or events that took place at a location near a turlough floodplain. Nonetheless, it is clear that those who compiled the manuscripts were aware of the presence of these karstic flooding regimes in the landscape of Ireland and almost always, with the exception of Turla Choille Móire, identified specific turloughs of note in the correct geographical location. Frequently, it can be shown that a variety of settlements can be associated with these landscapes through time. The choice of Turlach-Adhnaigh and Turlach-Mochain as battlefields may well have been intentional and reflective of the suitability of these landscapes as gathering areas. This theme will be discussed further in section 8.2.

The exploitation of turlough lands as grazing pasture, from at least the early medieval period, is shown in the dindshenchas poem ‘Turloch Silinde’. The significance of this has been discussed in greater detail in chapter 6 and it can be shown through analysis of place-name evidence in section 5.1.3 that this practice was frequently an integral part of medieval settlement and economy in areas where turloughs occur. This exploitation of turlough resources is likely to have remained at the centre of settlement strategies in turlough environments throughout the medieval period and is reflective of the lived experience of these landscapes prior to landscape improvement efforts from the 17th century onwards. The poem ‘Turloch Silinde’ also shows that over extended periods of time, turlough flooding regimes were subject to fluctuation. This fact has already been proven by Coxon (1986) and its impact on past human settlement has been shown here.

Analysis of the place-name data is somewhat subjective, as many of the place-names may make reference to the topographical or aesthetic setting, as well as resources available from the topography. A key issue in any phenomenological or human geography approach is the manner in which people experience and understand the world (Tilley 1994, 11). As noted by Flanagan and Flanagan (1994, 1) place-names reflect the impact of the natural environment on humans and of humans, simply by observation, on the environment. Thus, those place-names that make reference to specific resources and farming practices are undoubtedly reflective of the exploitation of turlough lands for those purposes. Although numerically, these place-names represent only a small proportion of turlough names, it is clear, when considering evidence from early medieval law-tracts, that the seasonal exploitation of turlough lands as a grazing resource would have undoubtedly been more widespread than the place-name evidence suggests. Greater insight into the role of these seasonal floodplains in the cultural landscape can be achieved by combining pieces of evidence from a variety of sources.

Analysis of the place-names associated with individual turloughs in Ireland has been presented but an in depth field study may reveal that, in the case of larger turloughs (such as the turlough of Turloughmore), a number of minor place-names can be identified with individual areas of the turlough floodplain. An investigation of all

minor place-names has not been undertaken beyond the two case study areas of this thesis. However, the Turloughmore case-study alone (chapter 7) has revealed 37 individual place-names within the turlough floodplain (Fig. 7.2). A future, more detailed investigation of turlough place-names would undoubtedly give further insights into the significance of turlough floodplains in the cultural landscape. Such an investigation may include a more detailed analysis of the physical features of these seasonal lakes, such as soil conditions, in order to identify patterns in the exploitation of more productive grasslands.

It has been shown here that a combination of cultural and economic stimuli coupled with new political structures in the late 17th century in Ireland were the basis for the progressive exploitation and manipulation of natural environments, including turloughs in the mid-19th century. Population pressures of the 18th and early 19th centuries in Ireland, and the desire to free up non-profitable lands to facilitate and profit from the rising population, were the strongest driving forces in the landscape manipulation of this period. These driving forces can be contextualised and recognised as part of a pan-global shift in the view of environment based on a nature/man dichotomy, in which beauty, as a culturally defined concept, frequently became associated with usefulness. Changing the physical character of the landscape removed pre-existing cognitive landscapes and replaced them with new ones and their new associations and values. Thus, the reclamation of the former grazing pastures and gathering places of early, high and late medieval pastoral populations could be viewed as symbolic of the firm transition from Gaelic to colonial forms of social and economic structure, albeit that Gaelic communities would have been involved in the outcomes of these structures. Nonetheless, it must also be recognised that although many turloughs were permanently drained during this period, many more continued to be used as fair grounds and race-courses into the late 19th century, demonstrating a continuity of the cognitive associations with these landscape features.

## Chapter 6 - Turlough environments as a natural resource through time



**Pl. 6.1** The receding turlough waters of Garryland/Doonowen Turlough, south Co. Galway, beginning to reveal the rich summer grazing lands of the turlough in the background, set in dense scrub-land.

### 6.0 Introduction

This chapter outlines the natural resources that are provided in turlough landscapes by the seasonal flooding regime of the turlough and which have been exploited by the communities who have settled in those environments through time. The unique hydrological and geo-morphological characteristics of turlough lands have been outlined in chapter 1. This section contextualises the physical characteristics, biodiversity and unique natural habitats provided by turloughs as natural resources that have been utilised and exploited by past populations and, therefore, have influenced human settlement and activity in those landscapes in the past. Among the questions posed in this thesis is how the dynamic properties of seasonal flooding have influenced human settlement and how this influence has been expressed over time. Demonstrating that these floodplains can be exploited as a significant natural resource is central to answering that question. This chapter establishes the nature of that exploitation and shows it to include the grazing of the lush turlough floodplain after the hydro-period, the construction of fishing engines in suitable topographical and hydrological locations, and the hunting of wild fowl for which turloughs are a natural habitat. The evidence for the use of turloughs as a grazing resource is particularly strong, and so the value of these lands for food production is greater to pastoral communities.

However, it must be remembered that from an environmental perspective, individual turlough landscapes often offer unique resources for hunting, fishing and grazing and not all floodplains are suited to each form of exploitation and management.

The exploitation of turloughs as a natural resource may be demonstrated from as early as the Mesolithic period. The distribution of evidence for Mesolithic communities west of the River Shannon in the regions where turloughs occur is limited, and consists of a series of widely scattered find-spots with concentrations of lithics on Lough Allen and Lough Gara. However, a complete Bann flake along with a number of pieces of chert were recovered as stray finds at the site of Turloughnaroyey in Co. Galway (Gibbons *et. al.* 2005). These finds were made on a low knoll that projects into the turlough and which Higgins (1988, 134) has suggested may have made an ideal platform from which to hunt wild fowl. The finds at Turloughnaroyey represent some of the earliest known archaeological evidence for human interaction with, and exploitation of turlough environs. Further residual finds dating to the Mesolithic period were recovered from the excavation of an Early Bronze Age burnt mound at Caherweelder Turlough, Co. Galway. From this excavation, a possibly Late Mesolithic chert blade was recovered from deposits spanning the Mesolithic to the modern period (Hegarty and Delaney 2010, 11). These finds indicate early human activity in turlough environments and potential early utilisation of the natural resources and wildlife habitats that are present in turlough landscapes. Chapter 4 of this thesis outlined additional excavated evidence, which demonstrated that turlough floodplains were frequently used as sites for the hunting and the preparation of food, and as popular locations for pyrolithic technologies. It is shown below that this form of exploitation of the environments around seasonal lakes, and other forms of turlough management continued from the earliest periods of human settlement in Ireland, into the modern era.

### **6.1 The grazing of turlough lands through time**

The distribution of turloughs in Ireland is largely concentrated on the central and western lowlands, west of the River Shannon. Despite a wide distribution in this area, they do not occupy a significant percentage of the land area there. The turlough conservation project at TCD have calculated all turlough floodplain areas available from literature or GSI sources, giving an area of 44.7 km<sup>2</sup> for 103 of the 304

turloughs recorded by the GSI. Based on this data, an average area has been calculated for the remaining 201 turloughs. The extrapolated area for the 201 turloughs is 36.9 km<sup>2</sup> giving a total estimated turlough surface area of 81.6 km<sup>2</sup> (Turlough Conservation Project 2009). However, more recent research by Waldren (2016) suggests a total number of karstic flooding regimes in Ireland in excess of 483, giving a total extrapolated area for turlough floodplains of 129.6 km<sup>2</sup>. Coxon (1986) has estimated that approximately one-third of turloughs over 10ha in area have been damaged or destroyed by drainage schemes and when this figure is considered, the total area of turlough floodplains that once existed may have covered approximately 194km<sup>2</sup>. These lands represented a limited but valued resource. Turloughs are not evenly distributed in the west of Ireland, with particular concentrations evident in certain areas (Fig. 2.1). Also noteworthy is the fact that of the 304 recorded turloughs, only 61 are over 10ha in size (Lynn and Waldron 2003, 162). All of these, with the exception of The Loughans, Co. Kilkenny, Liskeenan, Co. Tipperary, Fortwilliam in Co. Longford and Loughmore in Co. Limerick are situated west of the River Shannon. Therefore, turlough floodplains that potentially represent significant grazing resources are primarily concentrated on the central and western lowlands, principally south and central Co. Galway, south Co. Mayo and the Burren plateau.

The term ‘turlough’ is commonly translated as ‘dry lake’ (Flanagan and Flanagan 1994, 159) although due consideration must also be given to it as ‘vanishing field’. MacGowran (1985) has suggested that turloughs could have originally been distinguished for their ability to dry up and not for their status as lakes, and so turloughs could be as much considered vanishing fields as vanishing lakes. Indeed from an etymological perspective, Joyce (1869, 449) has suggested that the stem *lach* at the end of the word is a suffix and not *loch*, a lake, as might be thought. Joyce suggests that a more correct translation of the anglicised word turlough would be ‘a dried up spot’ (which was formerly wet). The evidence for this is gained from an entry in the AFM (M1473.10) where the genitive *turlaigh* is used in which *laigh* is the proper genitive of the postfix *lach*, and not *loch*, which is *locha* in the genitive (*ibid.*). This being the case, it would seem that the term *turlach* may have applied to a landscape that was perceived to dry out, rather than to flood.

Turlough environments are an almost unique phenomena, with the closest comparison from an environmental perspective being the much larger seasonal *poljes* of Slovenia (Sheehy Skeffington 2006, 266). The Slovenian sites support fewer wetland communities than the Irish turloughs due to drier summer conditions (Sheehy Skeffington and Scott, 2008, 291). Importantly however, there are similarities here with the etymology of the words ‘turlough’ and *polje*. The latter is derived from the Slavic languages and is cognate with the English word ‘field’ (Gunn 2006, 1), but it has been used in a different sense by those who study karst environments as a term to identify the *polje* floodplains. It is also interesting that the local name for the only turlough recognised outside of Ireland (*Pant-y-llyn*, in south Wales) has a similar etymology, being translated as ‘field that is a lake’ (*ibid.*). In both these cases, it is clear that these ephemeral landscapes are recognised as agricultural resources and are in fact still used as grazing plains and hay-meadows today.

Today, turloughs are grazed by domestic livestock in the summer months. The sward of the turlough floodplain is enriched through the process of seasonal inundation and the pattern of land-use is primarily a function of the flooding period, with stock being let out onto the turlough once flooding has subsided. The summer-accessible grassland supports relatively low-intensity farming due to its marginal nature and inaccessibility for parts of the year. However, this grazing prevents encroachment of scrub in the upper reaches of the basin, with the seasonal flooding preventing trees from spreading into the floodplain (Goodwillie 2003). The seasonal flooding of turloughs brings the advantage of regular liming of the pasture, and the benefits of this to the substrate of the turlough floor have been discussed in section 2.3. Today, most land-owners graze cattle on turloughs but sheep are also common, along with horses and domestic geese (Feehan 1998; Aughney & Gormally 1999). Early grazing of the turlough after the flood-waters recede, especially the grazing of heavy animals, is avoided, as this causes damage to vegetation.

The present system of turlough grazing and management commonly dates to the 18<sup>th</sup> and 19<sup>th</sup> centuries where field boundaries are visible on the First Edition Ordnance Survey maps. Around turloughs, these field boundaries generally form a pattern radiating from the centre of the turlough basin (Pl. 6.2). In many cases, the central

basin is managed as commonage, with land-owners adjacent to, or near the turlough, having grazing rights (Sheehy Skeffington and Gormally 2007, 219). The theme of communal use of turlough flood-lands is discussed at greater length in Chapter 8, as is its early establishment as a system of turlough management and its continuity through time. It is clear, that the communal exploitation of turlough lands is long established and that this form of land management is associated with specific grazing strategies that utilise the seasonal availability of these lands.



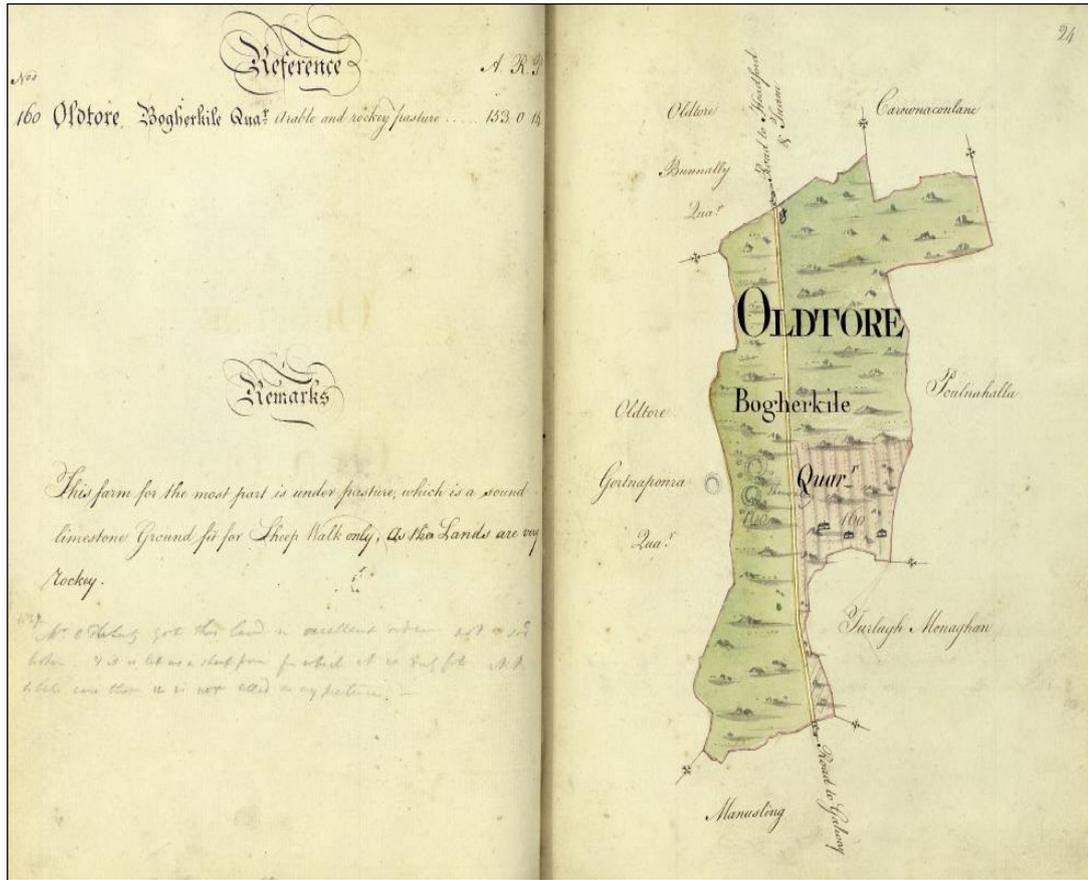
**Pl. 6.2** An aerial image of Caherglassaun Lough in south Co. Galway show field boundaries forming a pattern radiating from the of the turlough basin (Image source: Google Earth).

The evidence for the use of turloughs as a grazing resource is particularly strong, and so the value of these lands for food production is greater to pastoral communities. Turloughs in early medieval Ireland and up to the present day were important for grazing purposes and in the production of milk and butter. Dunford (2002) suggests that they were an important component of a transhumance system, and place-name evidence discussed in section 5.1.3 supports this theory. In many instances, during dry summers, a more lush sward continues to grow in suitable turloughs while other summer pastures may dry up. In early medieval Ireland, the milk and butter produced from cows in the summer months sustained populations over the leaner months of the winter and early spring, and was also used as a form of tax (Kelly 2000, 326). Cattle grazed on the summer sward of the turlough floodplain

could supply these valuable commodities. Through time, turloughs have largely been managed and utilised in this manner, as pasture lands for summer grazing, though there is occasional evidence for former tillage plots around the margins of some turloughs (Pl. 6.3; Fig. 6.1). The presence of tillage plots and smaller field patterns at the edge of turlough floodplains is an indicator of an infield/outfield system of land-use, where elevated ground adjacent to the floodplain could be used for tillage, while the floodplain itself could be utilised as summer grazing pasture adjacent to a settlement. Examples of this system of land management are discussed further in section 8.1.



**Pl. 6.3** Evidence of post-medieval tillage plots in the townland of Ballynacreg South, on the eastern edge of Turloughmore.



**Fig. 6.1** Frizell's 1775 Map of a portion of *Oldtore* on the St. George Estate near Headford in Co. Galway showing settlement and cultivation ridges at the edge of *Turlough Monaghan* (Galway County Council Archives GS01/5).

As mentioned above, Coxon (1986) has estimated that approximately one-third of turloughs over 10ha in area have been irreversibly damaged or destroyed by recent drainage efforts. However, evidence for significant human manipulation of turlough lands before the 19<sup>th</sup> century is sparse and these lands have, for the most part, been exploited by past populations without altering the natural flooding regime. Prior to coordinated drainage works being carried out, the value of these flood-lands and the potential for their improvement was duly noted by a number of authors and governmental surveyors, particularly in the early 19<sup>th</sup> century. The majority of these commentators noted the absence of coordinated drainage programs in most areas into the early 19<sup>th</sup> century:

‘A considerable quantity of pasture is obtained from turloughs, particularly the Turloughmore... ..with many farms, large tracts of moory bottom are attached, which, if judiciously drained, a process as yet but ill understood and little practised, would amply repay the outlay’ – Lewis 1838, 642.

‘A considerable quantity of pasture is obtained from the different turloughs, especially that of Turloughmore, which extends from Claregalway to near Tuam; they feed seven to eight sheep to the acre for about four months’  
-Dutton 1824, 104.

‘The finest grazing lands of Ireland are those which remain covered with water for a greater part of the year along rivers and low grounds covered during winter called turloughs, which are generally left to nature to dry out in summer by evaporation and soakage’ - Lambert 1837, 55.

The absence of drainage and flooding relief works up until this time meant that seasonal variation in the character of turlough landscapes largely dictated land-use capability. Nonetheless, analysis of those lands recorded in the Books of Survey and Distribution for the parishes of Lackagh (Simington 1962, 103), Kilmoylan (*ibid.*, 90) and Cummer (*ibid.*, 115), where a significant portion of the floodplain of Turloughmore once flooded extensive tracts of land in the mid-17<sup>th</sup> century, shows that turlough lands were continuously recorded as being between  $\frac{1}{3}$  and  $\frac{1}{2}$  profitable, despite being susceptible to flooding for a variable part of the year. Such profitability compares favourably with those parcels of land recorded as ‘bog’ and which varied in profitability from  $\frac{1}{30}$  to  $\frac{1}{10}$ . Similarly, those lands recorded as ‘stony pasture’ were also considered inferior, with values of between  $\frac{1}{8}$  and  $\frac{1}{2}$  profitability. Overall, the floodplain of Turloughmore, including Turloughour, and those lands adjacent to Cloonkeen Lough which were also liable to flood (Fig. 7.1) received quite a favourable valuation in the Books of Survey and Distribution. 1,297 acres are recorded as profitable with 1,042 recorded as non-profitable. Table 6.1 shows Turloughmore to be recorded as just over  $\frac{1}{2}$  profitable at 55%.

Parish	Townland/Location	No. of acres profitable	No. of Acres unprofitable	Profitability	Modern Location
Kilmoylan	Annagh	15	Not recorded (15)	(1/2)	Annagh
"	Annagh	102	Not recorded (102)	(1/2)	Tonamace
"	Bullaun	107	Not recorded (107)	(1/2)	Turloughrevagh
"	Ardskea	26	104	(1/2)	Ardskeamore
"	Not Recorded	413	413	Not recorded (1/2)	Corbally North & South, Annbally
Cummer	Not recorded	514	255	(1/8)-(1/3)	Cloonkeen Lough/Turloughour
Lackagh	'Castle of Lackagh'	35	18	(1/3)	Lackaghmore
"	Carnafoone	12	6	(1/3)	Cahernafoone
"	Lackaghbeg	5	5	(1/2)	Lackaghbeg
"	Kiltroque	3	3	(1/2)	Kiltroque
"	Grange	47	24	(1/3)	Grange/Coolarn
<b>Totals</b>		<b>1279</b>	<b>1042</b>		

**Table 6.1** Valuations placed on parcels of turlough at Turloughmore in the Books of Survey and Distribution (Simington 1962).

The importance of these extensive grazing pastures as a natural resource is evident through the valuations placed on turlough lands in the Books of Survey and Distribution. Such valuations in the mid-17<sup>th</sup> century are reflective of a long-standing tradition of the exploitation of turlough lands for grazing. A review of the evidence from early medieval law-texts for grazing strategies, known to have been implemented during that period, is presented below. The beneficial effects of short-term, natural inundation of deltaic and alluvial lands was understood at the time, and although frequently referred to as marginal lands today, a self-fertilising expanse of grassland would undoubtedly have been considered a valuable resource through time. Despite only seasonal availability, turlough floodplains offered a rich sward of summer grazing, ideally suited to pastoral farming and the seasonal rotation of stock. The natural flooding regime maintained these grass-lands without the need for further artificial fertilisation and offered suitable and accessible summer grazing-lands which were of particular importance during the spring and summer months, during and after the calving season.

### 6.1.2 Documentary sources for the past grazing of turlough lands

Although there are no references from the early medieval law-texts that can be shown to relate directly to turlough landscapes, the wealth of information contained in those early law tracts provides an insight into the farming and land management practices for this and later periods in areas that remained under Gaelic control through the later medieval period. It is clear from evidence that is presented throughout this thesis, that turlough floodplains have frequently been the focus of human settlement and other agricultural activities from an early date. It is clear that specific agricultural practices can be associated with these environments during the medieval period, principally seasonal grazing strategies centred on the natural flooding regime of turloughs.

Most frequently in areas where turloughs occur, the topography is one of gently undulating relief with little or no glacial drift cover. These areas are, for the most part, associated with generally poorer soils where lush grazing lands would have been highly prized. These topographies and environmental circumstances are particularly prevalent in the landscapes of south Co. Galway, the plains of south Co. Mayo, central Co. Roscommon and, to a lesser extent, the Burren Plateau where soil cover is especially sparse. Despite the paucity of early medieval written records specifically relating to the regions of most importance for this study, there is a rich collection of early medieval law-texts available which provide much detail on the laws generally pertaining to the condition of, and the interaction between population groups and the natural environment in medieval Ireland. There is solid evidence too, that the majority of law-texts referred to here, were written in the 7<sup>th</sup> or 8<sup>th</sup> centuries (Simms 2009, 91; Warner 1990, 30). However, these records survive as copies of earlier originals that range in date from the 12<sup>th</sup> to the 16<sup>th</sup> centuries AD (Kelly 1997, 6).

It is widely acknowledged that in Ireland during the medieval period, pastoral agriculture was of great importance within a mixed agricultural economy, both as an activity of basic sustenance and as a prestige practice (Kelly 1997; Ó Cróinín, 1995). Kelly (1997, 28) states, based on his studies of 7<sup>th</sup>-and 8<sup>th</sup>-century law-texts, that there is a clear relationship between cattle and people, which has a significance beyond the purely economic one. There is place-name evidence (see section 5.1.3) to

indicate that turlough floodplains have served as an integral part of medieval grazing strategies in areas where turloughs occur, particularly for the grazing of cattle. The importance of summer grass growth is also evident in Britain, where Williamson (2003, 163) suggests that the most productive medieval meadows were to be found on the floodplains of rivers and streams due to the fact that grass growth is most rapid in those areas between mid-May and mid-June. Like the hydrological conditions of a turlough floodplain, the occurrence of productive meadows in these locations was due to the fact that deficiency in precipitation during the summer months could be offset by high water-tables.

The emergence of a significant pastoral economy is evident during the medieval period near Turloughmore in Co. Galway, where studies by Lomas-Clarke and Barber (2004) of the palaeo-ecology at Abbeyknockmoy, 6km east of the floodplain, revealed palynological indicators and taxa indicative of low levels of human activity through the period c.AD 40 – AD 450, with farming being almost exclusively of a pastoral nature. This activity was followed by what is interpreted as a period of scrubby woodland clearance and increased farming activity, again dominated by pastoral farming practices. The 8<sup>th</sup> to 16<sup>th</sup> centuries were marked by continued expansion in pastoral farming activities with the presence of arable agriculture of any significance occurring for the first time at c.700 AD. It is clear that in the vicinity of Turloughmore throughout this period, pastoral farming dominated agricultural practices in the area. With an area of c.2000 acres (809ha or c.8km<sup>2</sup>), the floodplain of Turloughmore would undoubtedly have been incorporated into the grazing strategy of medieval farmers in the locality.

Evidence from the early medieval law-texts indicates that in summer, milking-cows were sometimes milked away from the farmstead at a temporary milking place identified as the *áirge* (Kelly 1997, 44). At other times, milking took place in a milking enclosure (*indes*) (*ibid.*, 40). For cattle, the natural sequence is for lactation to begin in May with the birth of the calves, continuing throughout the summer and drying off with the approach of winter. Cattle and other livestock were frequently driven to hilly pasture or other rough land during the summer when the main spring growth had been consumed. Although there is no direct reference in the early medieval law-texts to turlough floodplains as places of summer pasture, a

*dindshenchas*, or topographical poem of 12<sup>th</sup> century date (Gwynn 1913, 376) does indicate that the practice of grazing cattle on turlough floodplains did occur in the early medieval period (see section 5.1.1). Given the seasonal availability of this environment and the rich sward produced by the natural liming process which resulted from seasonal inundation, it is clear that the plains of these seasonal lakes would have made ideal summer grazing lands. Section 5.1.3 of this thesis clearly demonstrates toponymic evidence for the association of cattle, and in particular, milch cows, with turlough place-names. The antiquity of this association cannot be established without dating evidence for the place-names identified, but it is clear from early medieval records that the practice of rotating stock according to the availability of summer grazing was widespread during this period. The arrangements for common pasturing were well regulated and the law-texts indicate that every effort was made to avoid mishaps, with joint herds being grazed on summer pasture. Given the prevalence and significance of these practices in the early medieval period, the suitability of turlough floodplains to summer grazing, and evidence from later periods indicating that these seasonal lakes were frequently held as common lands (chapter 8), it can be assumed that turlough floodplains were incorporated into medieval seasonal grazing strategies.

The area of grassland available for the grazing of livestock is believed to have been far less extensive in the medieval period than it is now, with woodlands being correspondingly more extensive (Ó'Cróinín 1995, 86). However, the law-texts are explicit about the mixed nature of the agricultural economy and leave no doubt that enclosure was characteristic of the landscape (*ibid.*). Nonetheless, turlough lands were most frequently held as commonage from an early date and unlikely to have been subject to significant land division (chapter 8). Evidence from the First Edition Ordnance Survey maps shows that many large turlough floodplains lacked formal division and enclosure into the 19<sup>th</sup> century. During the early medieval period, qualitative variation in land could be expected to take on quantitative significance, with law-texts paying particular attention to the distribution of land in accordance with quality as well as quantity. However, of the six distinct categories of land value documented in the early medieval period, none make reference to turlough lands. The terms *ached* and *clúain* seem to be used exclusively for grazing fields with the latter being applied to low-lying pasture near water. The most valuable of non-arable

land, *ainmín*, refers to hard land, ferny plain and untilled land (Kelly 1997, 395). Kelly suggests that damp pasture belongs to this category and that it was valued at sixteen dry cows per *cumal*. This valuation is quite favourable compared to a valuation of 24 dry cows for the most valuable of arable lands. From the study of the valuations of Turloughmore contained in the Books of Survey and Distribution and presented earlier, a  $\frac{2}{3}$  valuation of turlough lands continues to be evident into the 17<sup>th</sup> century.

The early medieval law-texts reveal a great deal about field boundaries, with legal references to field-walls and fences noted by Kelly (1997). Of particular interest to this study is the mention of field divisions which are mostly constructed in or near water. These are included in Heptad 46 of the *Bretha Comaithchesa* which has been analysed by Kelly (*ibid.*, 372) and include the shore-fence (*trachtaile*) the stream fence (*scruthaile*) and the lake-fence (*lochaile*). Also mentioned is an example named the *tartaile* or a drought-fence of temporary construction. It is explained as being raised in dry weather and falling in wet weather. Kelly (*ibid.*, 377) suggests that the nature of this field-division is a bank constructed largely of mud, which would collapse in wet weather. However, this explanation seems impractical and it is proposed here that a more logical explanation would be a field division which may be of a simple, temporary construction or, perhaps, one that was more permanent, with its seasonality being explained by the fence being visible in dry weather and disappearing in wet weather under flood-waters.

The features and characteristics of the natural environment, and how these landscapes were understood, manipulated and used by past communities, forms the basis for understanding the archaeology of natural places. Frequently, interplay between the natural landscape, the built cultural landscape, and the cognitive landscape that is superimposed on it, can be demonstrated (Bradley 2000, 147). There is evidence to suggest that ‘park’ (*páirc*) place-names are a common occurrence on, or near the landholdings of Gaelic learned families of the later medieval and early modern period (FitzPatrick 2015). In this context, the term ‘park’ occurs prior to the intensive emparkment associated with the construction of later English-style demesnes in the 17<sup>th</sup> and 18<sup>th</sup> centuries, and refers specifically to landscapes of a wild and mixed character. Observations by FitzPatrick on the

topography of areas where park place-names occur, indicates that in many instances a combination of pasture, waste or marginal land and woods, with accessible watering places were common to all. These water sources occur as ponds, springs, rivers, large and small lakes, and in some cases, turloughs. A watery environment in tandem with a *páirc* place-name is a key indicator of a former livestock park and, in the absence of man-made park boundaries, it is the distribution of water sources in conjunction with particular archaeological features, such as enclosures, that may indicate the extent of the Gaelic *páirc*. The keeping of livestock was integral to the economy of the Gaelic learned family landholding because families who were situated on mensal land were obliged to provision their lords, and as hospitallers and guest-house keepers many of them had obligations to provide food. Only one example of a turlough place-name contains a *páirc* element at Turlough Park, Co. Mayo. In other areas, turloughs may have formed part of the *páirc* environment, with the *páirc* place-name element being evident elsewhere in the landscape. One example has been identified by FitzPatrick (forthcoming) in the townland of Ballyvelaghan, Co. Clare. Parkmore Fort is situated in this townland and the townland is associated with the landholdings of the Ó Dálaigh, bardic poets in the lordship of the Burren. Ballyvelaghan turlough is located to the south-east of this fort with a number of other enclosures being evident in close proximity to the turlough. It is possible that this turlough may have formed part of the *páirc* landscape of the Ó Dálaigh (*ibid.*) Other tentative examples arising from fieldwork by FitzPatrick include a turlough landscape in the townland of Ballyhickey, Co. Clare, lands associated with the Ó hÍceadha, and the townlands of Park East and Park West in Co. Galway, a turlough landscape associated with the Mac Aodhagáin (2015, 176). It is likely that other examples of *páirc* landscapes may be present in turlough environments that have not yet been identified.

In the early medieval period, a void in the documentary records directly relating to turlough lands must be compensated by records relating to general farming practices during this period. As discussed above, it is clear that grazing lands, and in particular, summer pastures were an important resource to early medieval communities in Ireland. Turloughs, being natural expanses of uninterrupted green areas, would undoubtedly have been exploited for summer grazing. The seasonality of these lands coincides with the natural breeding season for cattle in Ireland, and the

calcium-rich substrate of the turlough floor allows for excellent summer grass growth suitable for lactating cows. The seasonal grasslands of the turlough floor are naturally free of vegetation and the flooding regime prevents colonisation by shrubs and large trees. In the context of a landscape that is characterised by shallow soils and with less emphasis on land clearance, drainage and improvement, the true value of naturally occurring expanses of rich pasture is increased.

## **6.2 Turlough fisheries, eel weirs, and winter fowl**

Turloughs provide a natural habit for a variety of animal and fish species through the winter months and they are important winter feeding grounds for wildfowl that benefit from the full vegetation cover under what is frequently shallow water (Sheehy Skeffington *et al.*, 2006). Turloughs are considered favourable habitats for both over-wintering wildfowl and waders, although birds tend to use clusters of sites rather than individual turloughs (Ruttledge 1989). The seasonal migration of these bird species coincides with the hydro-period of turloughs. During flood, turloughs are an important feeding and roosting site for fowl, such as the Icelandic Whooper Swan and the resident Mute Swan along with large numbers of Golden Plover, Wigeon, Greenland White-fronted Goose and Curlew. Species of ducks using turlough habits include Shoveler, Teal, Coot, Tufted, Pintail and Mallard. Evidence for the occurrence of these species in the human archaeological dietary record is discussed below.

The Mesolithic finds at Turloughnaroyey mentioned in the introduction to this chapter (Higgins 1988) represent the earliest known archaeological evidence for the possible hunting of wild fowl on the winter floodplains of turloughs. More recent excavations have revealed further evidence to support the theory that turlough floodplains served as suitable hunting grounds in the prehistoric period. A lithic assemblage from the archaeological excavations at Caherweelder Turlough in Co. Galway returned a retouched, single platform blade point, technologically and typologically diagnostic of the Late Mesolithic period (Hegarty and Delaney 2010, 13). At Coldwood in Co. Galway, a retouched, well-made barbed-and-tanged flint arrowhead was recovered from an excavation at the northern edge of Pollnakirka/Coldwood Turlough. This arrow head is diagnostic of Late Neolithic human activity in the area (O'Mahony and Delaney 2010 (a), 28). However, the

number of archaeological excavations in turlough environs is limited and it can be seen in section 4.2 that the site-types excavated have predominantly been Bronze Age burnt mound sites which utilised the local hydrology of the turlough lands. Furthermore, it is difficult to directly identify exploitation of the hunting resources of turlough floodplains from the archaeological record and only an inference can be made that the lithic assemblages recovered from turlough sites were used to hunt winter fowl during the prehistoric period.

Hamilton-Dyer's report on bird and fish bone recovered from Galway City excavations (Hamilton-Dyer 2004, 609-26) indicates how significant wildfowl was in the medieval diet. A total of at least 24 species of bird were present in the bone assemblage from the Courthouse Lane excavation, including over-wintering species of birds common to turlough environs. The remains of a Greenland white-fronted goose were represented along with a number of other bones that, based on size, were likely to be representative of non-domestic species of geese. These remains showed evidence of butchery and this would suggest that the geese were used as a food resource. Although it is difficult to distinguish between the remains of domestic ducks and their non-domestic counterparts, the remains of Wild Mallard, Tufted Duck, Wigeon, Pochard and Teal were all identified at Courthouse Lane. Although the analysis of the bone assemblage from Courthouse Lane does not demonstrate that those species identified were strictly sourced in turlough environs, these species of wild-fowl are common today in turlough habitats (Ní Bhroin 2008).



**Fig. 6.2** The First Edition Ordnance Survey sheet depicting the eel weir and ‘shoot house’ at Coldwood/Pollnakirka turlough, Co. Galway. Pollnakirka is noted by O’Donovan (1838) ‘as a small lake or pool of water convenient to an eel fishery’.

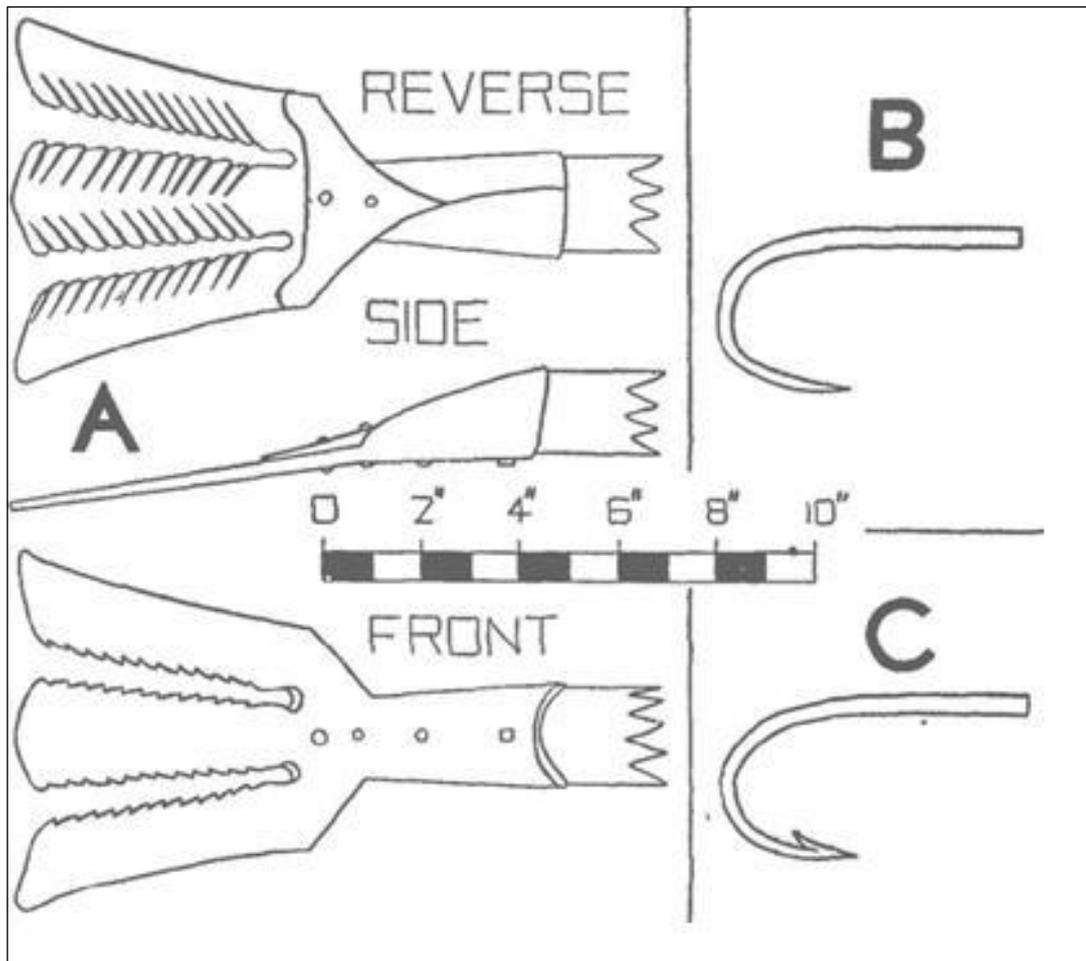
The practice of utilising turlough floodplains as hunting grounds continued into the post-medieval period. At Pollnakirka/Coldwood Turlough, Co. Galway, the First Edition Ordnance Survey sheet shows a ‘Shooting house’ (Fig. 6.2) associated with the nearby Lavally Estate. Similarly, at Ballyvelaghan Turlough in Co. Clare, ‘Scotland Lodge’ is indicated as in ruins at the edge of that turlough and most likely represents a hunting lodge of early modern date. Shooting lodges are a common feature of many landed estates and the choice of location on a turlough floodplain suggests that this site was particularly favourable for the hunting of wild fowl.

The presence of fishing engines on turlough floodplains in the past is indicated at a number of locations on the First Edition Ordnance Survey maps, where both the topographical and hydrological circumstances are suitable and where fish species were present in the turlough waters. Although evidence for the construction of weirs on turlough floodplains comes largely from 17<sup>th</sup> and 19<sup>th</sup>-century cartographic and written sources, it is likely that in many places, such as Corofin, Co. Galway (see section 7.5), this practice reflected a long-standing tradition of the exploitation of turlough waters as a fishery resource.

In their breakdown of turlough typologies, based on the throughput of water and substrate analysis, Jennings and O’Donovan (1997) have identified many turloughs

where fishing engines can be shown to have been constructed, on riverine turloughs with a large throughput of water and significant fluctuations in water levels. These turloughs can be viewed as surge tanks on major karst conduits that carry water from extensive catchment areas that are difficult to define (Johnston and Peach 1998). The distribution of these turloughs that were suitable as fishing resources is largely confined to the Gort Lowlands (Fig. 4.5), although the drainage of turloughs in other regions, such as at Turloughmore in Co. Galway, may have impacted on the distribution of this type of turlough today.

The functioning of these fishing engines is reliant on specific hydrological characteristics, with the majority of weirs occurring on turloughs which have a surface inflow, or whose basin retains a smaller, permanent water body throughout the year. Fish are only occasionally present in turloughs, as they are long-lived, fully aquatic organisms. Where they do occur, populations are small and limited by summer water and prey availability (Reynolds 1982, 184). Some species of fish may occur in turlough waters on a temporary basis, such as *Gasterosteus aculeatus L.* and *Pungitius pungitius L.*, both of which are species of stickleback. These species have been noted in turloughs in Co. Roscommon and Co. Mayo. In Co. Roscommon, there is a seasonal channel between Ballinturly Turlough and the River Suck, which may account for sticklebacks at this site. However, given that watercourses surrounding the turlough have not been in flood in recent history, there is strong evidence that this turlough may act as long-term refugia for these species (Williams *et. al.* 2006, 276).



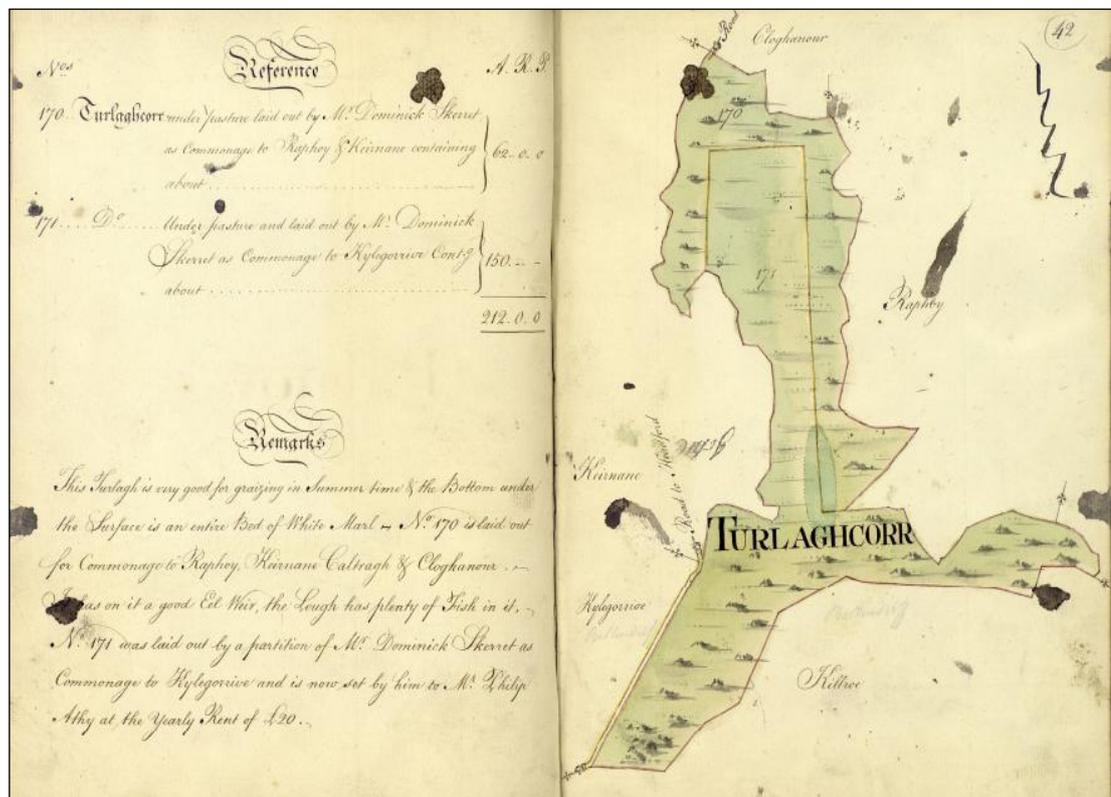
**Fig. 6.3** A simple drawing of a type of eel spear used on River Clare possibly dating to the late medieval period. This sketch was drawn from a specimen obtained at Annaghdown, Co. Galway and is held in the collections of the National Museum (after Went 1943-4, 205).

The populations of fish and eel species in turlough flood-waters have been dramatically affected by the drainage of turlough floodplains. It is believed that eels were once common in a significant number of turloughs. Attesting to past populations of eel in turlough waters, Went (1943-4, 204) notes that in the late 19<sup>th</sup> and early 20<sup>th</sup> century, spears for the capture of eels were used on the River Clare, Kilroe River and on the turloughs in the vicinity of Tuam. Figure 4.3 shows an example of an eel spear used in the vicinity of central Co. Galway and recovered near Annaghdown in that county. However, with disruption to the natural habitat of eels, as well as a national decline in numbers, the occurrence of eels in turlough waters is considerably less common today (Goodwillie 2001). Nonetheless, eel remain abundant in the Dunkellin River catchment, including Rahasane Turlough (Callaghan and McCarthy 1993, 61-9). It is in the vicinity of this turlough, amongst

others, that a high concentration of eel weirs are identifiable on the First Edition Ordnance Survey maps with a significant number of weirs also identifiable on the First Edition Ordnance Survey map for the former floodplain of Turloughmore. In 1791, Coquebert de Montbret made the following note about the nature of fishing on the floodplain of Turloughmore and suggested that the retreat of the floodwaters created natural pools within which fish and eel could be easily caught;

‘When the water retreats, plenty of eels and small trout are caught in marshes where the water lodges’

- Coquebert de Montbret, 1791 (cited in Ní Chinnéide 1952, 14).



**Fig. 6.4** Frizzell’s 1775 map of the townland of Turloughcor in Co. Galway with accompanying rent-rolls and a description of the land quality and natural resources. This description includes a short note referring to a weir which was in operation on the turlough (Galway County Council Archives GS01/5).

Records from landed estates of the 18<sup>th</sup> and 19<sup>th</sup> centuries sometimes provide a source for land-use during that period. Maps with accompanying rent-rolls, and descriptions of the landholdings of Richard St. George Mansergh of the Headford

Estate in Co. Galway, were compiled by Charles Frizell in 1775 (Galway County Council Archives GS01/5) and include the townland of Turloughcor that formed part of the estate at the time. This inventory provides an informative description of the large turlough in the townland of Turloughcor and notes its productivity, both as a summer grazing resource and as a fishery (Fig. 4.4). Frizell (1775, 41-2) notes that the turlough is good for grazing in the summer months and ‘the bottom, under the surface is an entire bed of white marl laid out for commonage to Raphoy, Keenane, Caltragh and Cloughanover. It has a good eel weir and the lough has plenty of fish in it’. The weir which Frizell refers to is not marked on the later First Edition Ordnance Survey map suggesting that by the mid-19<sup>th</sup> century, it may have gone out of use.

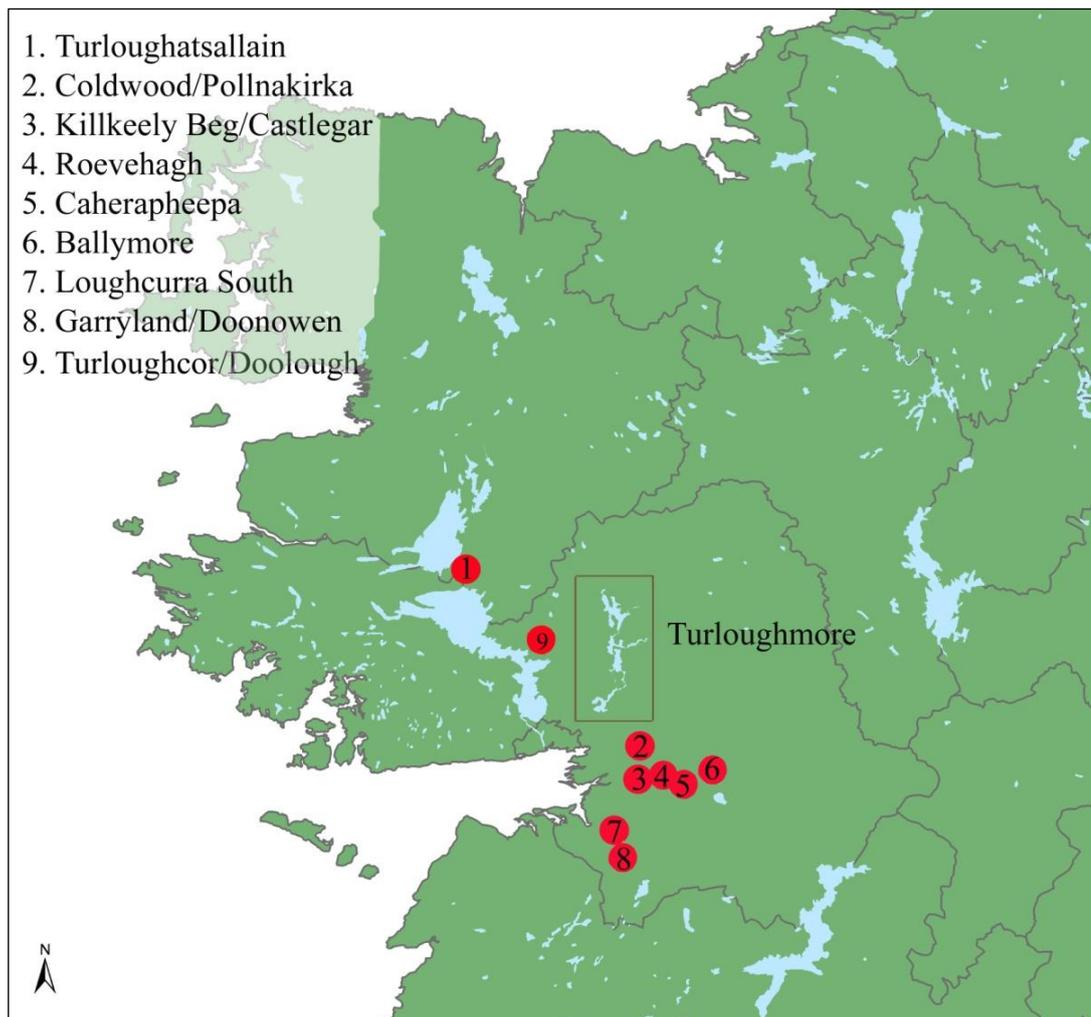
The inclusion in the medieval diet of fish and eel species that are common to turlough waters is confirmed by faunal remains recovered from archaeological excavations. Hamilton-Dyer (2004, 609-626) revealed a high occurrence of marine-based fish species in the recovered bone assemblages from the Galway City excavations, but the assemblage also reveals exploitation of freshwater species. Those species identified as riverine would most likely have been sourced locally from the River Corrib although importation from the surrounding hinterland cannot be ruled out. Regardless, the fish bone assemblage from Courthouse Lane (*ibid.*) is reflective of similar exploitation on the turloughs of the surrounding area. Of greatest interest to this study is the evident exploitation of eel which is represented in the Court House Lane assemblage. As already noted above, eel weirs are known to have operated on a number of turloughs including Turloughmore, Turloughcor, and various other locations in south Co. Galway. Toponymic and cartographic evidence suggests that there was a long-standing tradition of the exploitation of this resource.

Archaeological research on the construction, location and functioning of fishing engines in Ireland has focused largely on maritime weirs and fish traps that were located on intertidal coastal zones and estuaries (O’Sullivan *et. al.* 2008). To date, little research has been conducted on those fishing engines situated in riverine locations, and no study has been undertaken into the construction of fishing weirs on turlough floodplains. This may be partly due to the poor survival rate of these structures which were frequently constructed from materials such as wood. The

canalisation and dredging of many of the natural waterways of Ireland has also had an impact on the survival of many early weirs. The affect of arterial drainage has impacted greatly on the survival of fishing-weirs situated in turlough floodplains, with only one surviving example located at Garryland/Doonowen, in Co. Galway, which is discussed below.

The specific functioning of turlough fishing weirs is difficult to determine given their poor survival rate but it is likely that individual weirs would have functioned in different ways that were specific to their topographical locations and hydrological conditions. Given that they were not riverine weirs proper, they undoubtedly shared some of the characteristics of estuarine and tidal weirs that relied on fluctuating water levels. The earliest dated example of a medieval fish trap is situated on the Fergus estuary, Co. Clare and has been radiocarbon dated to 442-664 AD (*ibid.*, 225). Head weirs were most commonly used in estuarine waters. Usually, the widest opening of the fences faced upstream or towards the shore in order to funnel fish coming down on the ebbing tide into the 'eye' of the weir. At the point or 'eye' of the weir, fish were trapped in a *coghil* net which was suspended from a raised platform (*ibid.*, 1994, 12).

Riverine fish weirs typically consist of two (or more) converging vertical fences or walls, forming a large V-shaped structure. However, medieval fish weirs vary significantly in location, form, size and style of trapping mechanism, depending on the relative size of the catch intended, the foreshore topography and the customs and practices of those who operated them (O'Sullivan 2004, 451). Riverine fish weirs were placed wholly or partially across the span of a river and worked on the basis of a constant flow of water in one direction. Like the other weirs, riverine weirs were typically formed of complex post-and-wattle barriers or stone walls with several box-shaped enclosures or 'cribs' situated along their length. Fish could either be taken from the calm pools within the enclosures or trapped in the *coghil* nets (*ibid.*, 1994, 12).



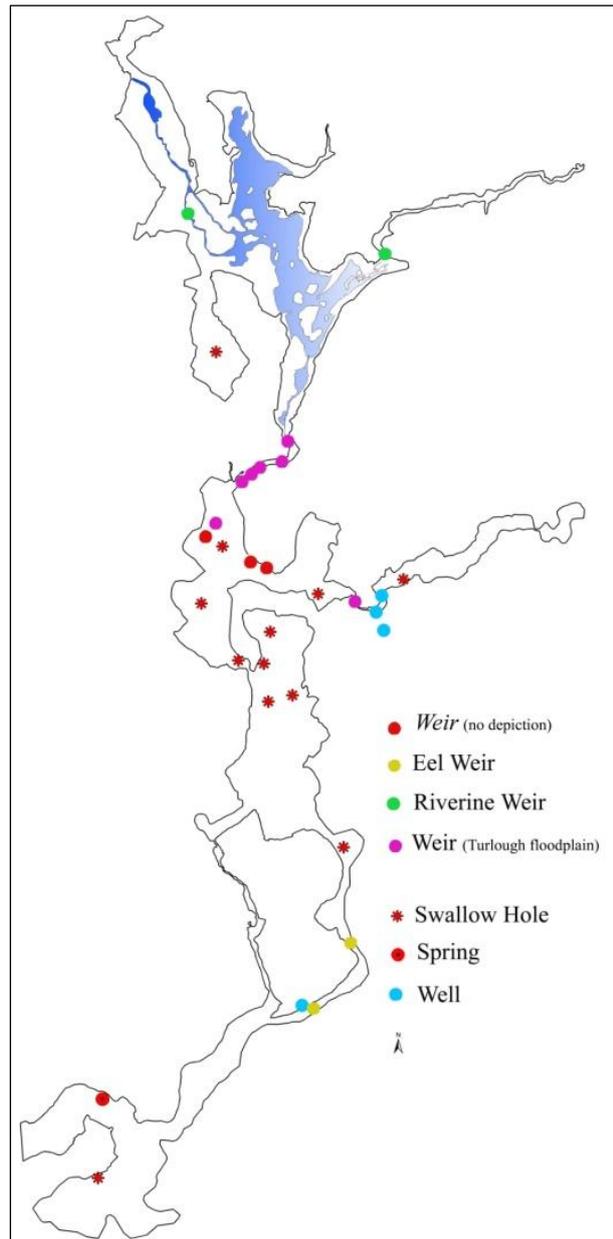
**Fig. 6.5** The distribution of fishing engines on turlough floodplains. It can be seen that these weirs are largely concentrated in south Co. Galway and associated with Jennings’ and O’Donovan’s Type A and B- riverine turloughs, which are most common in that area. See Fig. 6.6 below for the locations of fishing engines located on Turloughmore.

There are no functioning weirs on turlough floodplains today and only one defunct example remains *in situ* at Garryland/Doonowen turlough in Co. Galway. In all other cases, the weir, or the flooding regime on which it relied, has been destroyed.

Nonetheless, the example at Garryland/Doonowen turlough shows that this weir was specifically adapted to its unique topographical setting and constructed to take advantage of the seasonal flooding regime and fluctuating water levels. The weir at Garryland/Doonowen turlough was surveyed as part of the research undertaken for this thesis, and is discussed at greater length below.

Figure 6.5 shows the distribution of fishing engines that could be identified on individual turlough floodplains. It is also important to consider less prominent exploitation of eel and fish on other minor turloughs where weirs are not indicated,

with more discrete fishing methods such as the use of eel spears similar to that shown in Fig. 6.3. It is likely that this is the method referred to by Coquebert de Montbret in 1791. Furthermore, documentary evidence from Britain demonstrates that simple eel traps were in use in small streams and mill-races in the 14<sup>th</sup> century (Peate 1934, 154) and could have easily been adapted to turlough floodplains.



**Fig. 6.6** Distribution of weirs on Cloonkeen Lough and the Turloughmore floodplain, superimposed on karstic geological features identified by the GSI.

The location of weirs on turlough floodplains has been examined through the case-study of Turloughmore where a concentration of 13 weirs is evident on the floodplain of the turlough in the First Edition Ordnance Survey maps for the area (Fig. 4.7). Although the turlough of Turloughmore is now hydrologically defunct, the First Edition Ordnance Survey map shows that this turlough once featured a number of surface-water inflows as well as being fed by groundwater sources. Thus, it may be categorised as a riverine turlough with a large throughput of water and significant fluctuations in water levels. The locations of 13 fishing weirs identifiable on the First Edition Ordnance Survey has been plotted in Fig. 4.7. Eel weirs are evident at the site of Grange Castle and Carrygarve<sup>50</sup> during this period and may be a reflection of a long-standing tradition of the exploitation of such a resource at suitable areas in Turloughmore. At Carrygarve, which can be translated as ‘the rough weir’, Petty’s mid-17<sup>th</sup> century *Hiberniae Delineatio* clearly shows the word ‘curo’ at the site of the later, 19<sup>th</sup>-century eel weirs (Fig. 4.6). This annotation is probably derivative of *cora* meaning ‘weir’ (Flanagan and Flanagan 1994, 60) and indicates an enduring tradition of weir fishing at this location. Place-names discussed in section 5.1.3 show that the fishing engines in the vicinity of Corofin (*CDI* 1252-84, 16) at the northern end of Turloughmore have been in use at that location from at least the first half of the 13<sup>th</sup> century.

To the northern end of Turloughmore, those weirs indicated on the First Edition Ordnance Survey map are simply marked with the annotation ‘weir’, with no depiction of the form of the weir being included on the map. All examples of these weirs occupy topographical locations that are at the lowest point on the turlough floor and so would remain operational for the longest possible period through the year. However, during periods of high flood levels, it is likely that many of these weirs may have become inaccessible. The First Edition Ordnance Survey sheets clearly differentiate between this natural, low-lying channel where the weirs were located, and the surrounding floodplain. The siting of these weirs is strategic with the natural topography of the turlough floor serving to funnel receding and rising flood waters into the weir. It is possible that channels may have been cut to aid this process, although later drainage works in the area have removed any possible

---

<sup>50</sup> <http://places.galwaylibrary.ie/asp/fullresult.asp?id=37583> *Caraidh Garbh* ‘The rough weir’

evidence for this. The cutting of artificial channels which fed floodwaters to the weirs is clearly evident at Garryland/Doonowen where the artificial channel allows the weir to function (Fig. 4.8). However, due to the canalisation of the River Clare during the latter part of the first half of the 19<sup>th</sup> century, all possible evidence for this has been destroyed at Turloughmore.



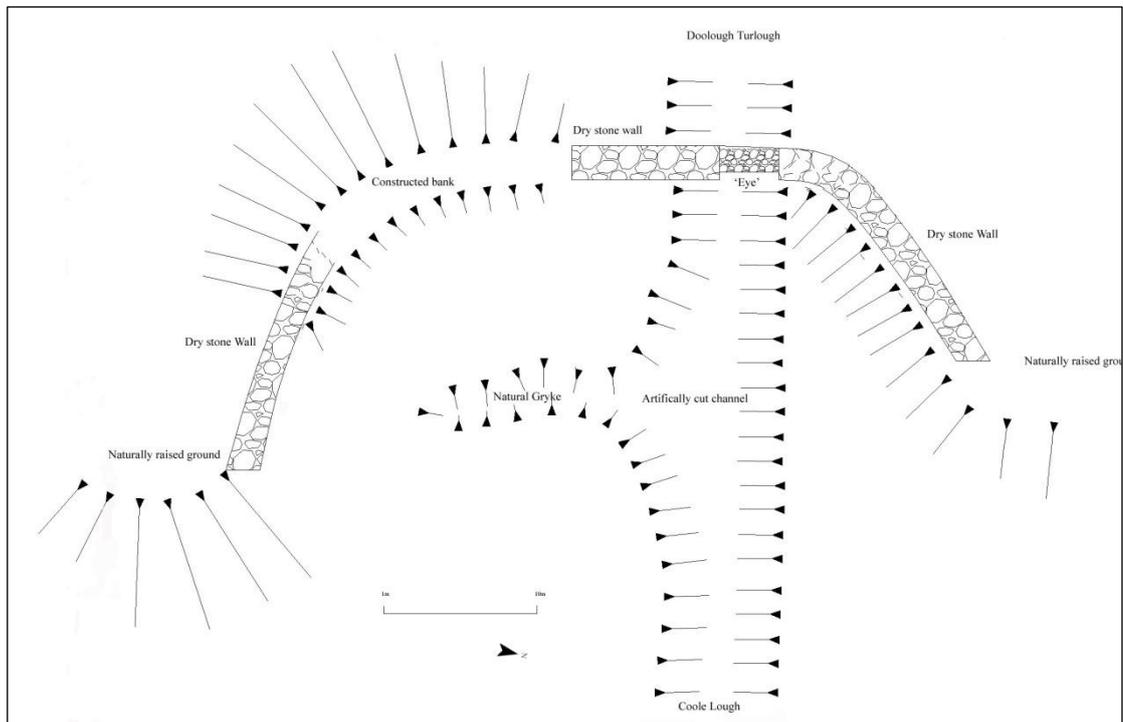
**Fig. 6.7** First Edition Ordnance Survey map showing the floodplain at Turloughmore common with Carrygarve eel weir located to the south.

It is notable that the two eel weirs identified on Turloughmore in the First Edition Ordnance Survey map are located to the extreme south of the floodplain, furthest away from the surface water inflows to the north and east. Their topographical location leaves these weirs decoupled from a more regular surface water inflow when flood waters recede. It is likely that as a result of this circumstance, the biodiversity of the turlough at this location would have been limited for much of the year and that

eel fishing was perhaps the most reliable species to exploit at this location, as eels are known to survive in some groundwater conditions (Sheehy Skeffington *et al.* 2006). Given that the only two examples of eel weirs present on Turloughmore are located in a hydrologically isolated topography, it would seem likely that these weirs were seasonally restricted in their potential yield. Weirs are most effective in catching migratory species such as salmon and eel, with the main eel run occurring in late autumn during high floods and moonless nights (Kelly, 1997, 296). The availability of eels in turloughs and their ability to survive in hydrological regimes that are reliant on groundwater sources suggests that they were a more reliable food resource in this area of Turloughmore and therefore may also explain the preference for eel weirs at this location on the floodplain.

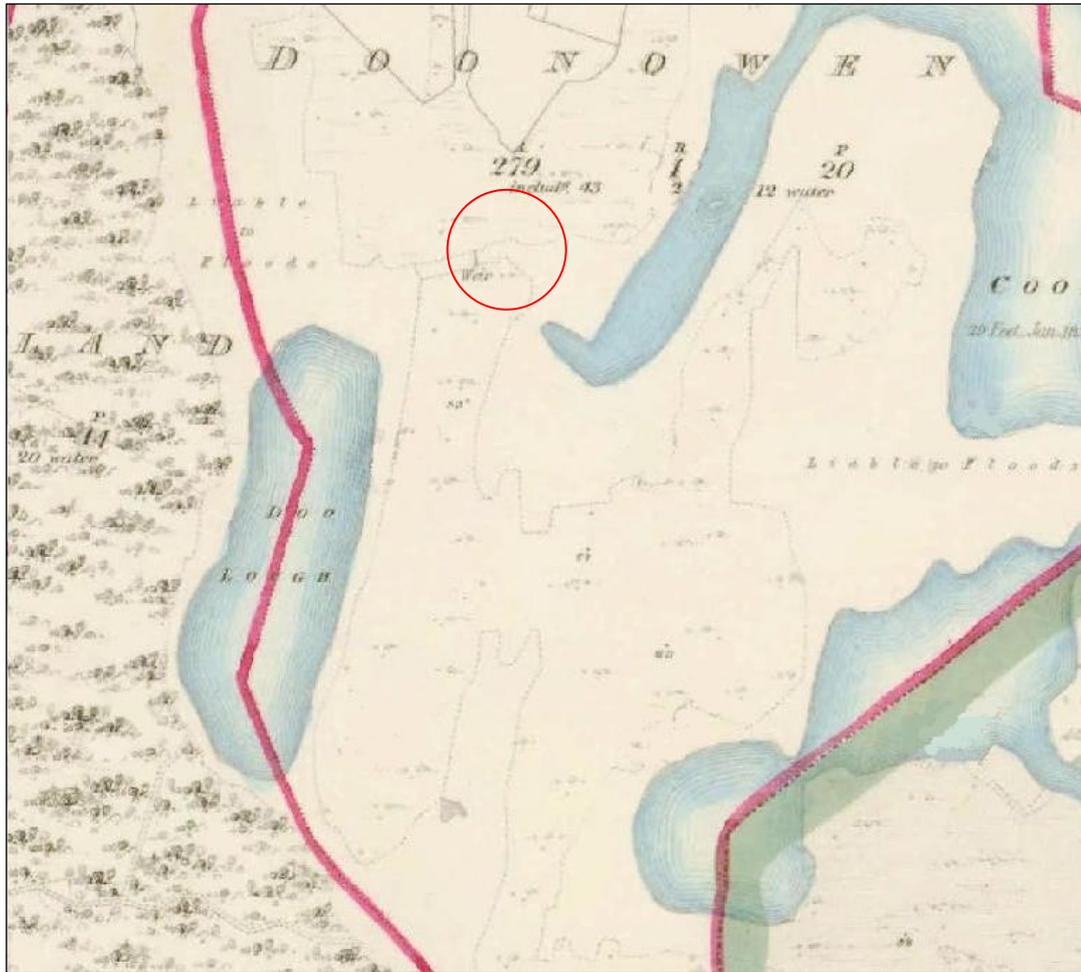
Three additional turlough floodplains show substantial eel weirs recorded on the First Edition Ordnance Survey maps, those at Pollnakirka/Coldwood, Rahasane and Castlegar (Dunkellin Turlough). These depictions represent substantial eel weirs in the 19<sup>th</sup> century. In the case of all three locations, they occur in areas of great archaeological significance throughout the historic period.

As mentioned above, there is only one surviving example of a weir on a turlough floodplain today. This example is located at Garryland/Doonowen townlands in Co. Galway on the Coole-Garryland turlough complex. The Coole-Garryland turlough complex is situated in a low-lying karstic limestone area west of Gort. This landscape contains a series of turloughs that are most commonly fed by estavelles and swallow-holes, although some are fed by partly subterranean rivers which are common in the area.



**Fig. 6.8** A plan completed for this study, of the turlough weir located at Garryland/Doolough Turlough in Co. Galway.

The weir at Garryland/Doonowen is situated on an isthmus between Coole Lough, (fed by the Coole River which rises 2.5km to the north of the lake) and Doolough, a turlough which frequently retains water in its lower basin throughout the year (Fig. 4.9). Both water bodies have water levels which fluctuate greatly and are heavily influenced by groundwater flows. Coole Lough is recorded in the early 19<sup>th</sup>-century OS Name Books for Co. Galway as containing pike, perch and eel (O'Donovan 1838). Perch is known not be native to Ireland and is believed to have been introduced after the 12<sup>th</sup> century (FitzMaurice 1984, 450). However, this species is not usually fished due to their small size and it is likely that eel, being a migratory species, was targeted at this weir.



**Fig. 6.9** The First Edition Ordnance Survey showing the weir between Coole Lough and Garryland/Doonowen Turlough in the townland of Doonowen.

The construction of the dry-stone weir involved the cutting of an artificial channel between the two water bodies of Coole Lough to the east and Doolough Turlough to the west. The weir is constructed on this channel and a plan of its form is shown in Fig. 4.8. It is clear from the topographical location of the weir that the waters of Coole Lough drained through the channel and passed through the eye of the stone weir, where the *coghil* was placed, once flooding at Doolough Turlough had begun to subside. The weir is clearly marked on the First Edition Ordnance Survey map suggesting that it was in operation at least during the early 19<sup>th</sup> century. It is not possible to date the weir based on form, and the antiquity of weir fishing at this location is difficult to ascertain. A dense distribution of medieval ringforts is evident in the surrounding landscape and the weir may be associated with this period. However, given its well preserved condition, the presence of an early modern

vernacular settlement cluster to the north at Doonowen most likely indicates that the weir is early modern in origin.

### **6.3 Discussion and Conclusions**

This chapter has presented significant evidence to show that turlough floodplains were important sources of food and places of food production involving the activities of grazing, fishing and hunting in the past. Thus, the idea that seasonal lakes could be viewed as ‘taskscape’ begins to emerge. This term was coined by Ingold (1993) and focuses on the concept that the manner in which landscapes are experienced and perceived is closely related to the activities or tasks that are undertaken in particular landscapes at particular times (Van De Noort and O’Sullivan 2006, 71). Just as the physical landscape comprises an array of related features, so by analogy, the taskscape represents an array of related activities. The taskscape is a socially constructed space of human activity, understood as having spatial boundaries and delimitations. By considering the actions and lived experiences of past communities in these landscapes, and by approaching them from the perspectives of past populations, new ways of understanding turlough landscapes emerge.

Turloughs offer many of the natural resources that are characteristic of both dry-lands and riverine environments. Turlough floodplains, as ephemeral environments that fluctuate and change seasonally, require a symbiotic relationship with the communities that settled and exploited those landscapes. This symbiosis is especially evident in the seasonal grazing of these lands from an early period. It is clear from this chapter, that these landscapes were particularly suited to the seasonal grazing regimes implemented by Gaelic populations through the medieval period. The rich grazing lands that resulted from the annual liming process were well suited to the farming practices of Gaelic populations in Ireland and particularly suited to the husbandry of livestock in the spring and summer months when the rich grasslands were available. Toponymic evidence presented in Chapter 5 also supports the view that the post hydro-period seasonal sward was considered a valuable resource and that it was utilised by those who settled the landscape. The theme of communal exploitation of the seasonal sward is explored further in chapter 8. It forms an important part of the symbiotic relationship between these ephemeral landscapes and the communities who managed them to their own benefit. Valuations placed on these

lands in the early modern period would suggest that the floodplain continued to be valued as seasonal pasture up to the mid-19<sup>th</sup> century, when artificial drainage programmes sought to free up marginal lands and increase the profitability of those lands.

To a lesser extent, some suitable turlough floodplains were also exploited as fishery resources or as productive hunting grounds for winter fowl. Clear documentary evidence for this dates from the mid-13<sup>th</sup> century, and those fishery resources continued to be exploited into the modern period.

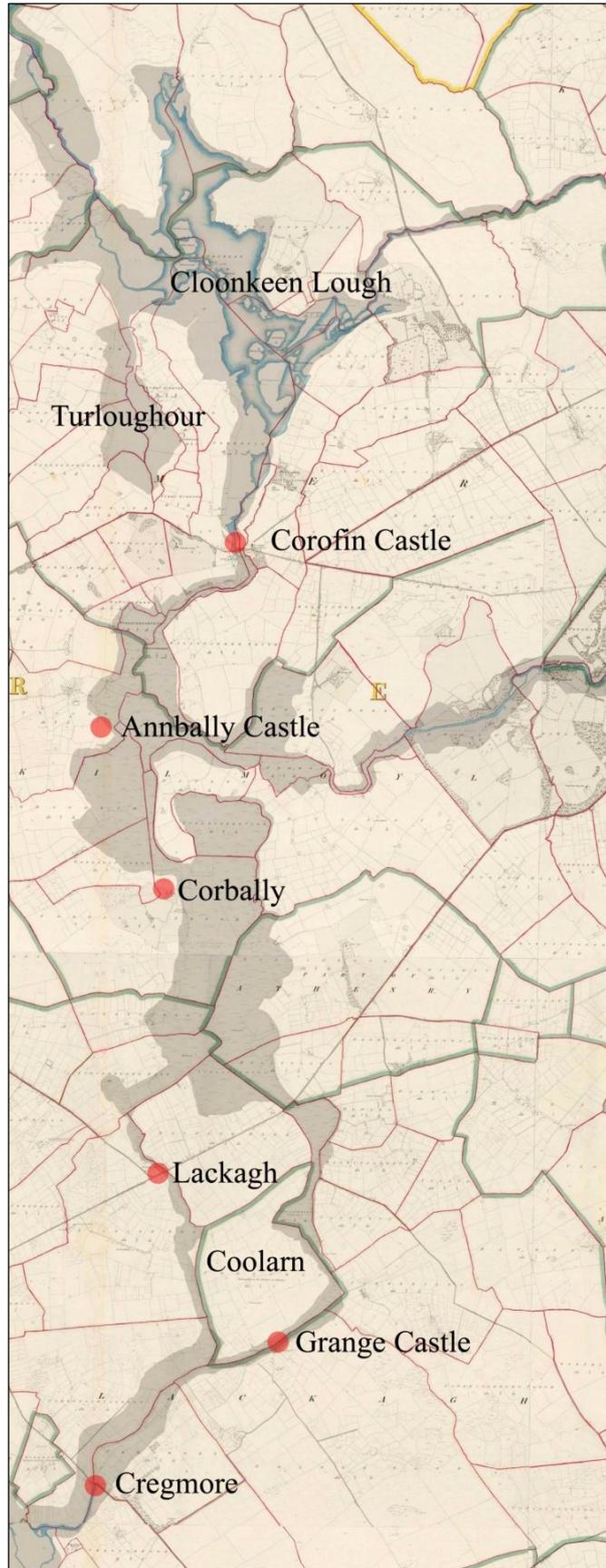
It would be mistaken to assume that landscapes that were places of work were by definition, non-ritual landscapes or, conversely, that ritual and symbolic landscapes had no economic value (*ibid.*, 63). Many turloughs played a role in the cultural landscape both as a subsistence resource, and a place of symbolic significance, a theme discussed in Chapter 8.

## **Chapter 7 – Seasonal flooding and strategic settlement in a dynamic landscape; Turloughmore Co. Galway**

### **7.0 Introduction**

The aim of this chapter is to demonstrate the influence of turloughs on historical settlement and land-use through a landscape study of an expansive turlough at Turloughmore in Co. Galway. It is shown in this chapter that past communities directly engaged with and exploited the natural resources available from the extensive floodplain at Turloughmore, and that settlement forms and strategies were created for, and adapted to, this dynamic landscape. Turloughmore was chosen as a case study because it includes medieval settlements that directly engaged with the unique physiographic features of the formerly large turlough floodplain. Through field-based studies of the medieval archaeology of three major settlement nodes in the Turloughmore floodplain, at Grange, Corofin and a Anbally, it is shown that the natural resources of the turlough , which included fisheries and seasonal grazing pastures, were exploited by those who settled this landscape in the medieval past.

This chapter offers evidence to show that the turlough floodplain presented significant economic resources, and formed an important part of the landscape or medium, within which the activities of past communities were carried out. This assessment of the landscape of Turloughmore supports the view that turlough environments can be viewed as ‘taskscape’. The taskscape is a socially constructed space of human activity, understood as having spatial boundaries and delimitations. By considering the lived experiences of past communities in these landscapes, and by approaching these environments from the perspectives of past communities, new ways of understanding turlough landscapes emerge. It can be shown that past settlement within the landscape at Turloughmore often adopted and exploited an important symbiotic relationship.



**Fig. 7.1** The First Edition Ordnance Survey map with the 19<sup>th</sup> century flooding regime of the former turlough of Turloughmore shaded dark. Cloonkeen Lough is identifiable to the north as permanent lacustrine environment which was prone to swelling during periods of wet weather.

## **7.1 Defining the study area**

When determining the extent of former floodplains prior to their partial or full drainage, Coxon (1986) demonstrates that turlough areas marked on First Edition Ordnance Survey maps as *liable to flood* remain representative of the average extent of winter flooding in modern turloughs when no attempt to drain the area has been made. Therefore, it is possible to reliably determine the former extent of Turloughmore from the First Edition Ordnance Survey maps (Fig. 7.1). These lands were surveyed, and the maps composed in the 1830s, prior to most of the major drainage works being carried out in the area.

A firm spatial definition or limit of the study area is perhaps inappropriate. Human interaction with these floodplains and their influence on settlement and economy were not necessarily limited by physical distance. For example, as a natural resource located within the medieval manor of Corofin during the high-medieval period (section 7.5), Turloughmore may have had an influence on the economy and settlement of the manor, beyond the extents of the turlough floodplain. Though the flooding regime of the turlough would have impacted directly on those who settled in close proximity to the flood waters, the floodplain would have also impacted on the wider economy and cultural landscape. Consequently, this study does not consider it of benefit to tether this landscape study with geographic or spatial restraints. Rather, where interaction with the karstic floodplains can be shown, the evidence must be considered and evaluated from multiple perspectives rather than ruling out archaeological sites and features because they do not fit predetermined proximity criteria for consideration. This is an important element when considering that a study of human interaction with turloughs has not been undertaken before and so, firm margins, beyond which the influence of the flooding would not impact on life-ways has not been set.

## **7.2 Topographical description of Turloughmore**

The former turlough of Turloughmore occupied a low-lying basin on the western lowlands of Co. Galway, and stretched across the parishes of Lackagh, Athenry, Kilmoylan, Cummer and Kilererin in that county (Fig. 7.1). With the exception of the

southernmost portion of the turlough, which lay in the barony of Dunkellin, the entirety of Turloughmore was contained within the barony of Clare.

Prior to arterial drainage works undertaken during the early and mid-19<sup>th</sup> century, Turloughmore represented the largest turlough in Ireland covering an area of *c.*8km<sup>2</sup>. The turlough was fed by both surface water and groundwater sources; during periods of low rainfall, the River Clare sank underground at Corofin to the north of Turloughmore, but resurfaced again at Cregmore, at the southern end of the floodplain. However, during periods of increased rainfall, the maximum capacity of subterranean water storage was exceeded, and the turlough flooded. Today, an artificial channel through Turloughmore's former floodplain accommodates an uninterrupted surface flow for the River Clare, and has negated much of the groundwater flow in the area, effectively draining the floodplain from the landscape. The extent of the former flooding regime, as it existed in the mid-19<sup>th</sup> century was recorded during the compilation of the first edition Ordnance Survey six-inch maps (1833-46) and can be accurately reconstructed from this data (Fig. 7.1).

Many of these areas have toponymic evidence for structured division with individual portions receiving minor place-names (Fig. 7.2). Prior to arterial drainage, the northern part of the flooding system included the permanent lacustrine environment of Cloonkeen Lough with a number of small islands. A swallow-hole at Cloonkeen North, to the west of the lake added a groundwater source to the surface inflow from the River Clare and formed the western area to Cloonkeen Lough known as Turloughour. The lake and its extensive floodplains narrowed towards their southern end forming a north-south channel for approximately 0.5kms. Here, at the site of the medieval borough of Corofin, the karstic flooding system could be forded with relative ease.

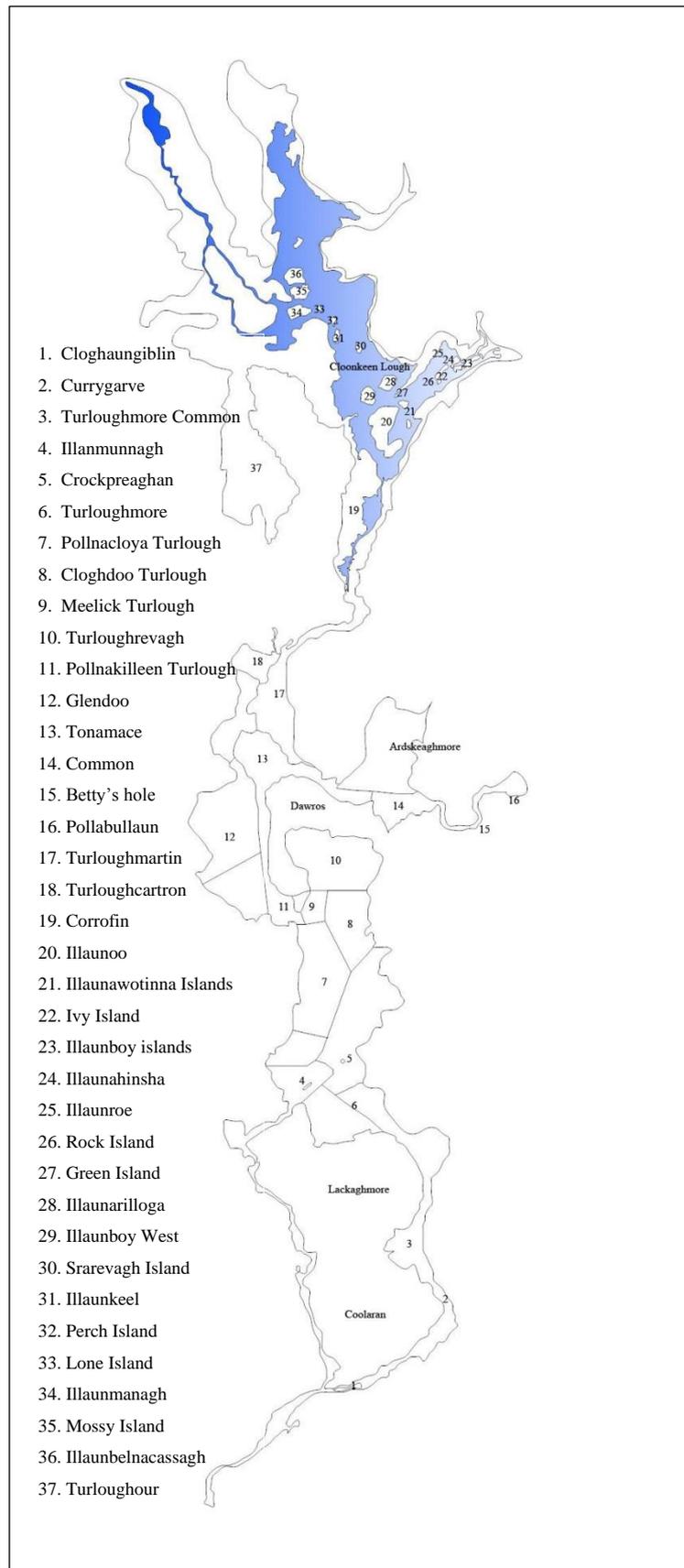
It is at Corofin that the former lake of Cloonkeen largely drained underground in the summer months or during periods of low rainfall. The upper body of water of Turloughmore, south of Cloonkeen Lough represents the overflow of groundwater, which could not be absorbed at Corofin during the higher rainfall common in the winter months. This body of water was also fed by a number of swallow-holes and estavelles at various points before negotiating an area of high ground at

Lackaghbeg/Coolarn, flowing either side of the hillock which, when the turlough was in full flood, would become an island. To the south-west of Coolarn, both channels merged to flow towards Cregmore. Here, the surface flow was joined once more by groundwater lost at other locations in the Clare-Corrib groundwater body and formed the surface flow of the River Clare which flowed westward to empty into Lough Corrib.

Today, the improved farmland is drained by a network of artificial drainage channels. Some of these channels are cut deep into the limestone bedrock. Other sections are dredged and deepened natural river beds. Much of the modern River Clare now flows in the rock-cut channel, draining the former floodplain of Turloughmore (Pl. 7.1). A number of smaller, similar canalised tributaries join the Clare from the east including the Nanny, the Grange and the Abbert. It is this network of modern artificial drainage which masks the natural landscape and the former natural floodplains of the local topography.



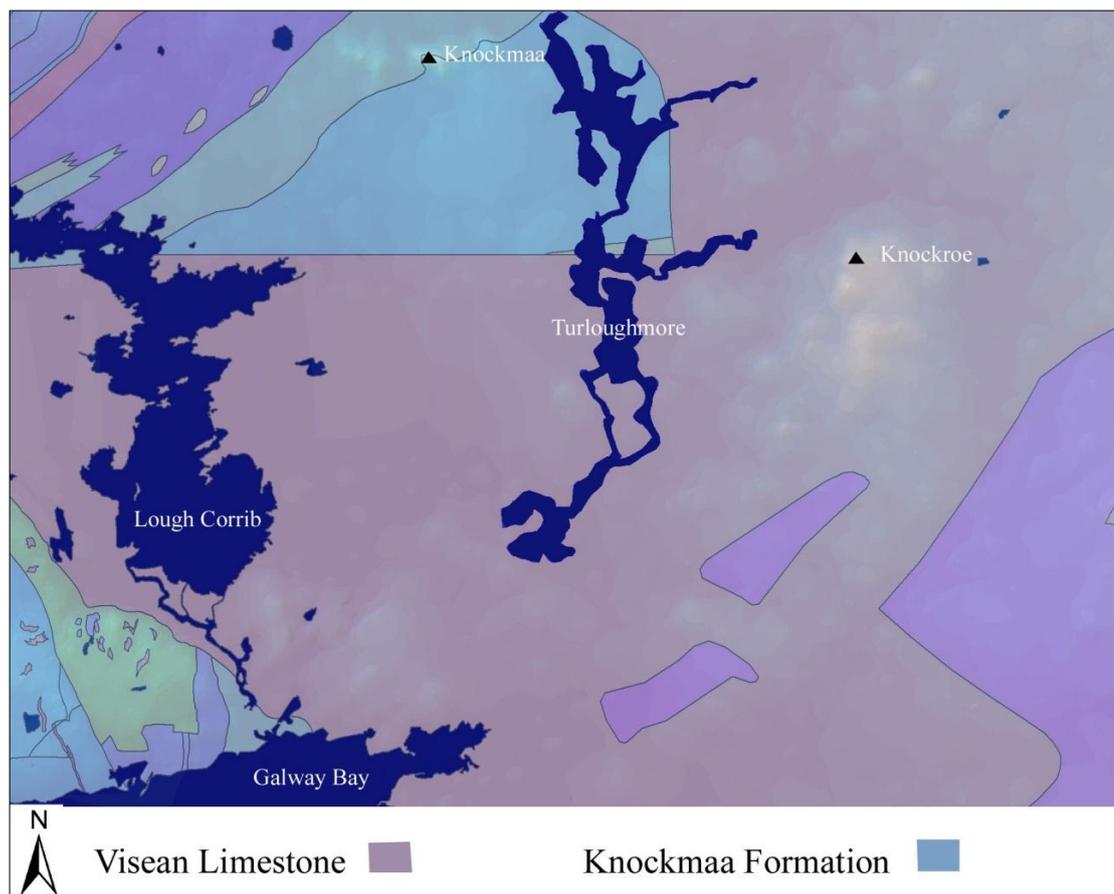
**Pl. 7.1** The rock-cut channel of the modern River Clare at Corofin from the north.



**Fig. 7.2** A topographical representation of the distribution of minor place-names recorded at Turloughmore including place-names relating to the various floodplains and islands of Cloonkeen Lough.

### 7.2.1 Solid geology

The topography surrounding Turloughmore is undulating or gently undulating with an absence of dramatic geological features. With the exception of Knockmaa (167m OD) to the north-west and Knockroe (166m OD) to the east, elevations generally vary between 10m and 40m OD.



**Fig. 7.3** A shaded relief map of the solid geology of the Western Lowlands and Turloughmore showing the area dominated by undifferentiated Visean Limestone. The flooded area or Turloughmore has been inserted in place of the modern, artificial drainage pattern (GSI 2020).

The solid geology surrounding Turloughmore is dominated by undifferentiated Visean limestones lying towards the south of the floodplain, with the pure, thick-bedded limestone of the Knockmaa Formation underlying Cloonkeen Lough and Turloughmore. Both are of the Dinantian pure bedded limestone rock unit. Very limited information is available for Visean limestones north of the Kilcolgan-Kilcreest line in south Co. Galway and so are unhelpfully categorised as ‘undifferentiated’ (Pracht et al. 2004, 29).

### 7.2.2 Soils and Subsoils

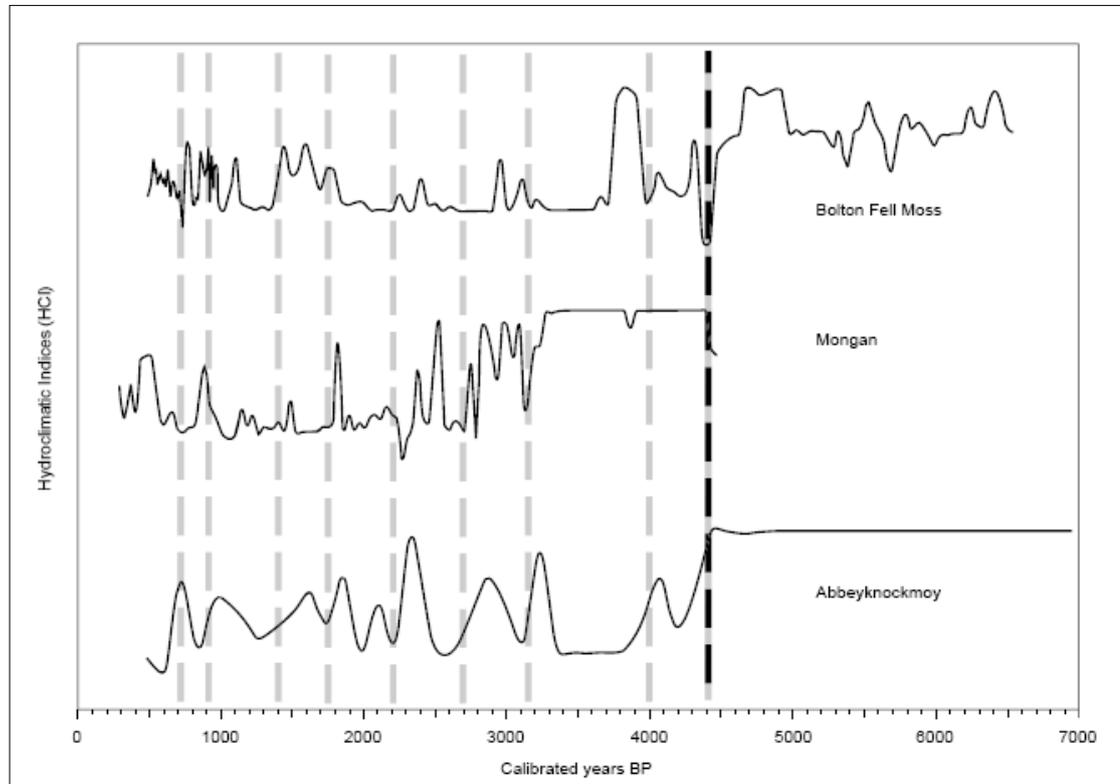
Soil cover is thin across the region and some areas could be described as having little or no drift cover. Where glacial drift is present, it is generally composed of sands, gravels and gravelly till, categories that are characteristic in areas where turloughs occur. The area is generally dominated by grey brown podzolics and brown earths derived mainly from calcareous parent materials. Scattered pockets of shallow, well-drained renzinas and lithosols, also derived from mainly calcareous parent materials, are present in the region.

Subsoils within this lowland area are dominated by Limestone till (Carboniferous) but with areas of karstified limestone bedrock at the surface. Limestone till covers 59.9% of the area of the Clare-Corrib groundwater body (GSI 2004, 9). At Turloughmore Common, there are glacio-lacustrine deposits present derived from undifferentiated lake sediments which imply, as Coxon has suggested in her study (1986) that Turloughmore, like many turloughs may once have represented a permanent lacustrine environment (chapter 3). However, these undifferentiated lake sediments are confined to the area around Turloughmore Common and so it is unlikely that the entirety of the turlough floodplain was once a permanent lake environment, but rather just the area in the immediate vicinity of the common.

### 7.3 The palaeo-environment of Turloughmore

Studies by Barber *et al.* (2003) at Abbeyknockmoy, Co Galway (lying c.6km to the east of the Turloughmore) identified Holocene palaeo-climates from quantified analyses of plant macrofossil remains in peat stratigraphy. This study is important, not just for interpreting the palaeo-environment of the wider Turloughmore area, but informs our understanding of the establishment of a Cistercian grange associated with the abbey of Abbeyknockmoy which is examined in section 7.4. Through the study of peat development, pollen, beetles and tephra, changes in climate, drainage and land-use can be traced. The stratigraphic cross section for Abbeyknockmoy Bog shows that it developed from a single basin containing lake marl deposits (Hughes and Barber 2004, 71). The reconstructed vegetation of each profile is related to changing bog surface wetness, a proxy record of climatic conditions owing to the ombrotrophic nature of bog land. Barber *et al.* identified wet shifts at

Abbeyknockmoy dated by calibrated radiocarbon dating to 700 BP, 1050 BP, 1400 BP, 1750 BP, 2200 BP, 2750 BP, 3150 BP, and 4000 BP. Before 4400 BP, the records at Abbeyknockmoy indicate generally dry conditions.



**Fig. 7.4** HCI (Hydro-Climatic Index) plots for core samples taken at Abbeyknockmoy, Co. Galway. Peaks reflect dry conditions, troughs reflect wetter conditions, and dashed lines emphasise phases of change to wetter/cooler conditions, beginning with the major change around 4400 cal. BP. A rapid deterioration in climate can be identified beginning at 1300A.D. and persisting through to the 16<sup>th</sup> century (The Wolf Minimum). (after Barber *et al.* 2003, 532)

However, the responses of the mire plant communities are not linear in the way that changes in water table are linear and involve threshold changes. The HCI (Hydro-Climatic Index) plot above serves to accentuate phases of change. It does not provide quantitative data but does reveal the relative magnitude of change recorded. This analysis also fails to take into account the potential impact of changes in evapotranspiration caused by anthropogenic forces.

Transition from Fen to Bog at Abbeyknockmoy has been analysed by Hughes and Barber (2004) with raised bog formation at C<sup>14</sup> date 8320-8020 cal. BP being significant since it spans the well-known major climatic cooling at c.8200 BP.

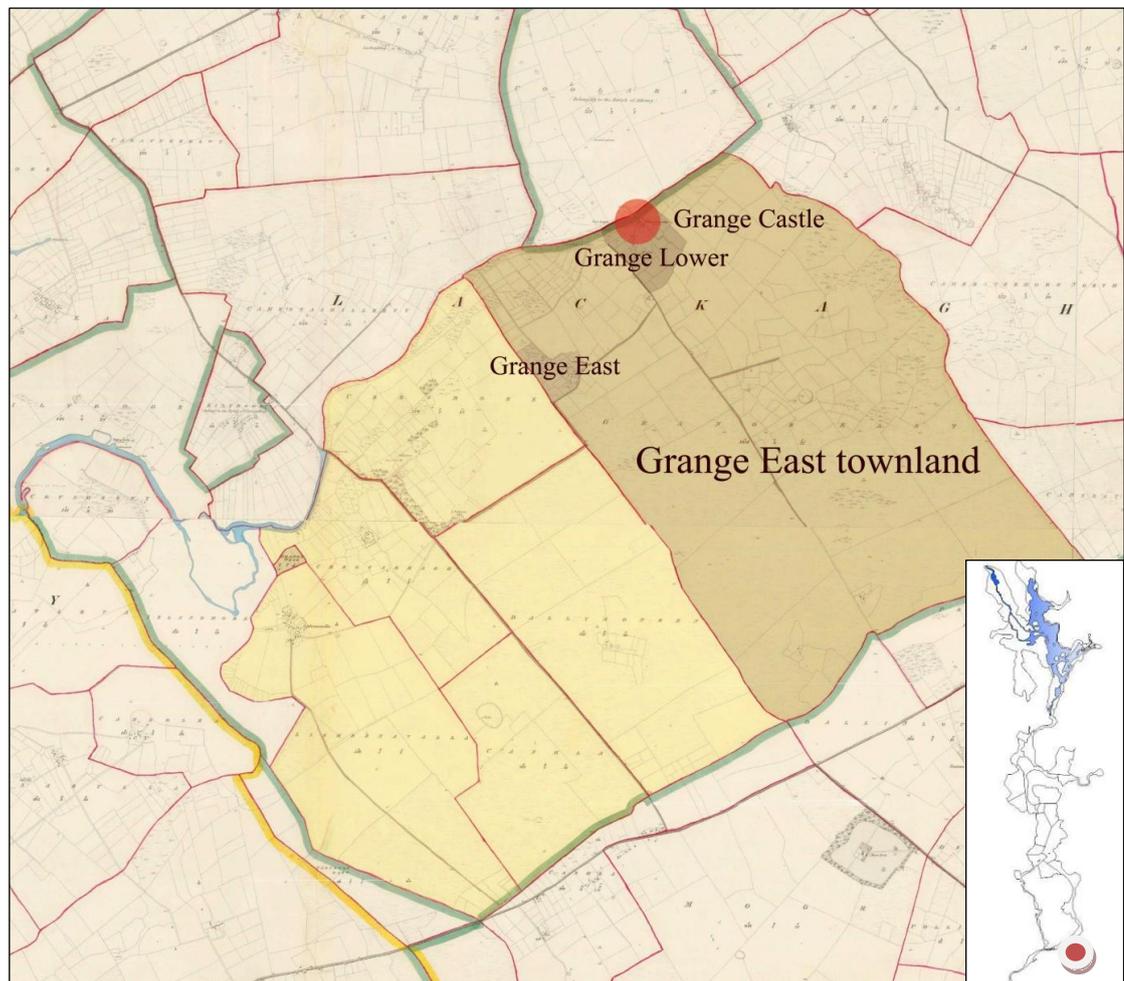
Further studies of the palaeo-ecology at Abbeyknockmoy by Lomas-Clarke and Barber (2004) revealed palynological indicators of anthropogenic influence for the preceding 2000 years. Using an age/depth model based on 6 calibrated radiocarbon dates, pollen analysis for the period dating AD 40 – AD 450 shows taxa indicative of low levels of human activity with farming being subdued and almost of an exclusively pastoral nature through the first half of this period. This is followed by what is interpreted as a period of scrubby woodland clearance and increased farming activity, again dominated by pastoral farming.

The 8<sup>th</sup> to 16<sup>th</sup> century is marked by the continuing expansion in pastoral farming activities and the presence of arable agriculture of any significance for the first time at c700 AD. There is a steady decrease in *Corylus Avellana* (Hazel) from c.500 AD, possibly indicative of further land clearance and rising population.

The landscape of Abbeyknockmoy is dominated by the Cistercian abbey founded there in the late 12<sup>th</sup> century. Therefore, the pollen record for Abbeyknockmoy is greatly affected by the agricultural activities of the abbey. It is likely that at least some intensification in agriculture is attributable to monastic influences, although this agricultural expansion may have been aided by an ameliorating climate in the 13<sup>th</sup> century. Soil derived Silicon (Si) and Titanium (Ti) are indicative of erosion due to deforestation and farming activity and are blown into ombrotrophic bogs by wind and washout. A significant peak in the presence of these elements occurs in the mid 17<sup>th</sup> century and suggests the removal of large tracts of woodland at this point.

The continued decline of *Alnus* (Alder) may be reflective of drainage of wetlands for agricultural use from the 17<sup>th</sup> to the 19<sup>th</sup> century. This is accompanied by substantial increase in pastoral farming indicators in the mid 17<sup>th</sup> century. Cereals appear as dominant cultivars although Hemp (*Cannabis sativa* type) and Flax (*Linum bienne* type) pollen are also registered. Lomas-Thomas and Barber interpret this as a phase of mixed farming with pastoral farming remaining dominant through the 1700s.

## 7.4 Grange Castle: exploiting the natural resources of Turloughmore at a Cistercian grange



**Fig. 7.5** First Edition Ordnance Survey map showing the extent of the former medieval parish of Grange and the modern townland of Grange East. The site of Grange Castle is indicated to the north along with the vernacular settlement clusters of Grange Lower and Grange East.

### 7.4.0 Introduction

This section explores evidence for human settlement immediately adjacent to the floodplain of Turloughmore in the context of a high medieval Cistercian grange, and a continuity of settlement at that same location in a secular context through the late medieval period. This exploration is principally concerned with the strategic siting of the settlement centre in the former medieval parish of Grange in the late 12<sup>th</sup> or early 13<sup>th</sup> century and the development of localised grazing and farming strategies associated with a Cistercian vaccary which resulted from environmental and

landscape stimuli during this period, and which exploited the natural recourses provided by the seasonal flooding regime.

#### 7.4.1 The medieval parish of Grange

The former parish of Grange is located at the southern end of the Turloughmore floodplain and borders the southernmost palaeo-channel of the former seasonal lake. Today the former medieval parish comprises seven modern townlands, the largest and most easterly being Grange East, measuring 1831 arces in area (Fig. 7.5). The settlement complex known today as Grange Castle is located within the townland of Grange East and comprises a late medieval tower house with an associated hall, and the remains of a short section of the surrounding bawn<sup>51</sup> wall.

The area of Grange was formerly part of the territory of the Uí Bríuin Ratha which was controlled by the O'Flaherty's into the late 12<sup>th</sup> century. The townland derives its name from being part of the grange lands of the abbey of Abbeyknockmoy which was situated 10.5km to the north-east. According to Orpen's translation of Cistercian documents (1913, 303-305) dating to between 1219-1224 the Abbey of Knockmoy was founded and endowed by Cathal Crovderg O'Connor in c.1189-1190 to commemorate a victory gained by him on that spot. He and his tributary chieftains endowed the Abbey, not merely with lands lying adjacent to the abbey, but also with a grant of lands situated in the locality (Blake 1900, 67). In 1237 the manors of Corofin and Headford, (see Appendix 2) were formed with the lands at Grange remaining exclusive of these manors.

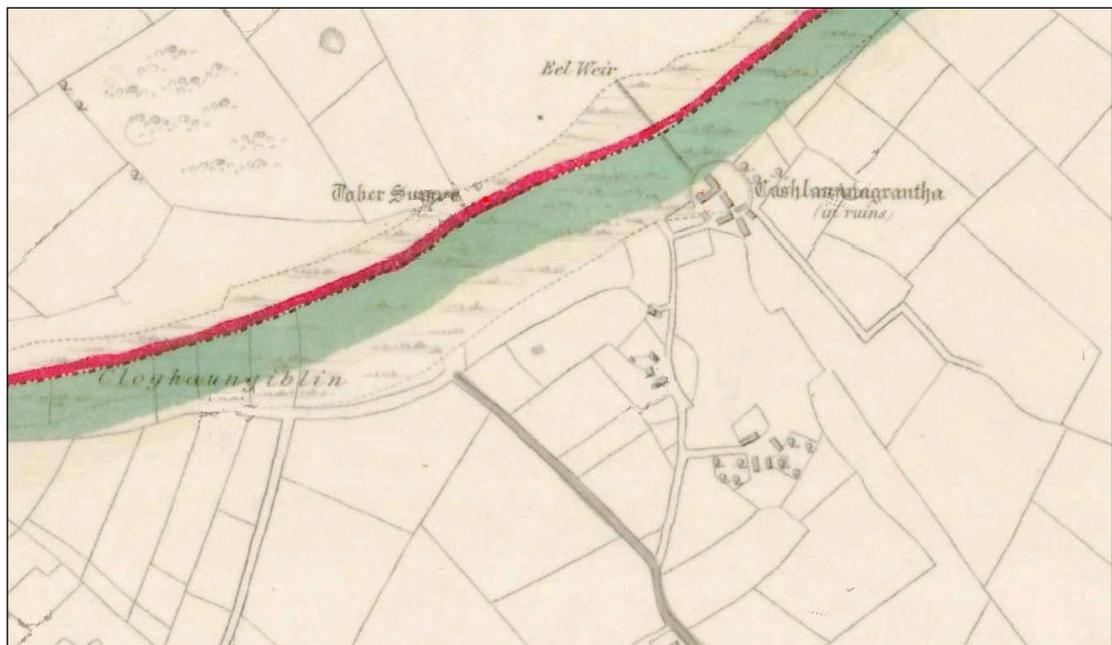
The 17<sup>th</sup>-century Books of Survey and Distribution record the holdings of the abbey of Abbeyknockmoy at Grange as being 6 Quarters and counted as a half-parish with a total area of both profitable and unprofitable lands of 2281 Irish acres (MacGiolla Cholille 1962, 104) or 3694 statute acres (1495 ha). This is considerably larger than the modern townland of Grange East. Petty's *Hiberniae Delieatio* clearly indicates the lands named as 'Grange' to be far more extensive than the modern townland of Grange East (Fig. 7.6). The *Hiberniae Delieatio* indicates that the townlands west of

---

<sup>51</sup> A bawn is the defensive wall surrounding an Irish tower house. It is the anglicised version of the Irish word *bábhún* (sometimes spelt *badhún*), possibly meaning "cattle-stronghold" or "cattle-enclosure" (Domhnaill 1977, 73).



evidence for the formation of a grange farm at Grange during the late 12<sup>th</sup> or early 13<sup>th</sup> century, with evidence for the location and extents of the Cistercian grange coming from the documentary sources outlined in section 7.4.1. The standing buildings at the site are a late medieval tower-house (GA070-067) and associated bawn (GA070-067001). A building located 10 m to the east of the tower may represent a church or chapel at the site (GA070-067002). The dedication of a holy well to St. Suibhne (GA070-043), 180m west of the tower-house complex and marked as an antiquity on the First Edition Ordnance Survey sheet may, represent a relict feature of the earlier ecclesiastical landscape carried into a late-medieval secular setting. With the exception of the holy well, the settlement is confined to a raised, circular area indicated on the First Edition Ordnance Survey map which projects into the floodplain



**Fig. 7.7** The First Edition Ordnance Survey map showing the Grange Castle and 19<sup>th</sup> century vernacular settlement complex constructed on a raised platform at the site.

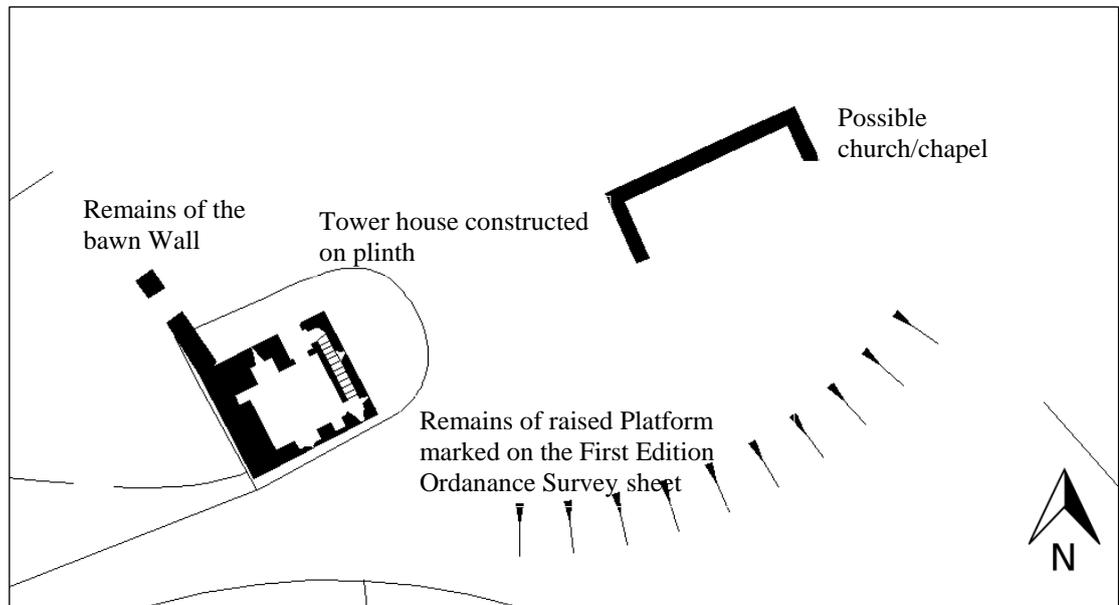
The tower-house is a building of four storeys constructed from mortar and roughly-cut limestone. It comprised a densely overgrown rectangular tower measuring 9.75 m x 8.2 m. The tower walls are battered to a height of 2.45m. The main doorway is in the north-west wall and is largely robbed of its dressed stone however, the remaining stonework is punch-dressed. Due to the partial collapse of the staircase, only the

ground floor and first floor are accessible. Appropriate to its setting in the floodplain of Turloughmore, the tower-house is constructed on a plinth which raises the tower house 0.9m above the surrounding ground level and the threat of flooding from the adjacent turlough (Pl. 7.2).



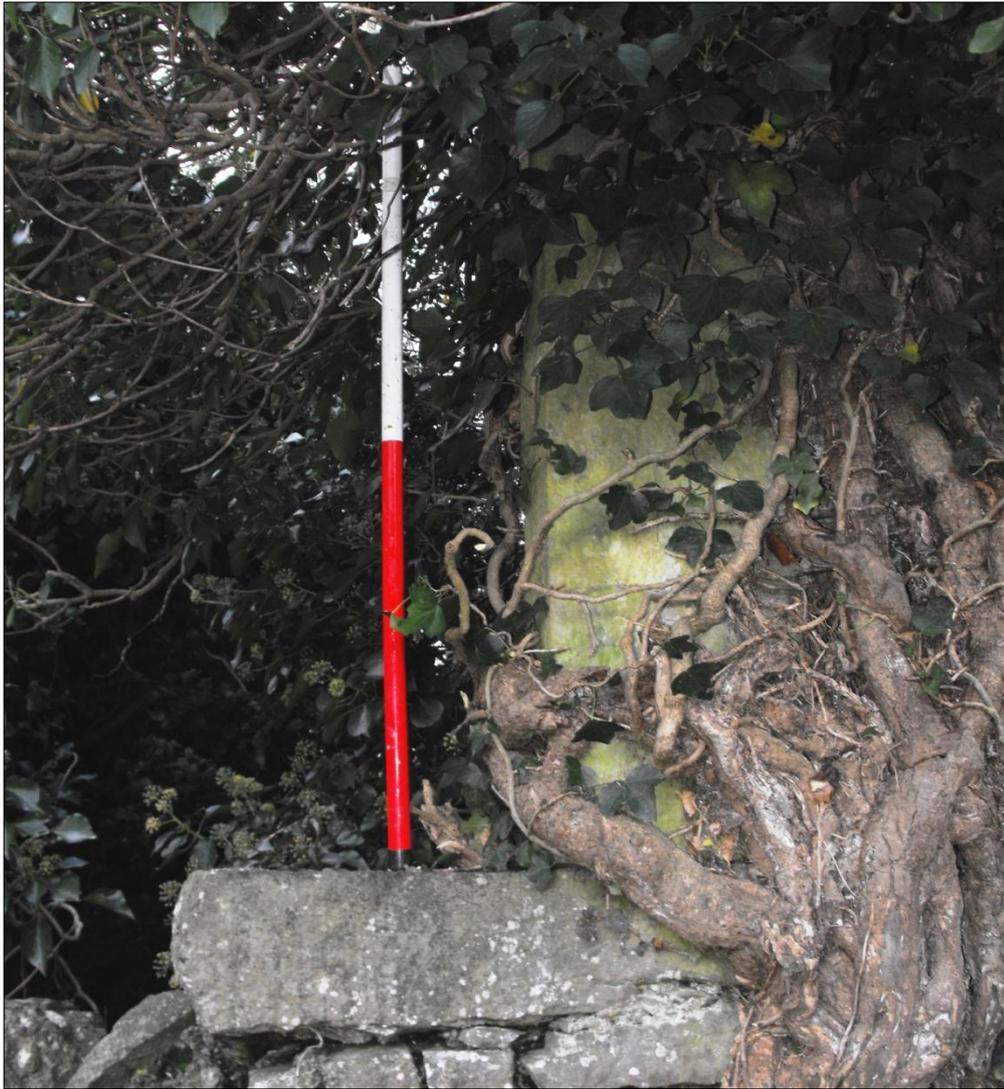
**Pl. 7.2** A view of Grange Castle facing southwest showing the rectangular tower with a partially bricked-up, raised doorway. The surrounding plinth raises the tower c.0.9 m above the surrounding ground level.

The remains of a bawn wall are also identifiable projecting for a length of 8m from the north-western corner of the tower. It includes a now collapsed bawn entrance which was recorded by Nolan (1901, 41) as an arched entrance measuring 9ft (2.74m) in height and 8ft (2.43m) in width.



**Fig. 7.8** A plan completed for this study, of Grange tower house showing the plinth on which the tower is built and, the tower itself, the possible hall which lies to the west and the possible remains of the raised platform on which the complex was built.

Keary (2004, 105) identified the building to the east of the tower as the church at Grange. The poorly-preserved east-southeast - west-northwest aligned rectangular building measures 15.2 m x 5.4 m with the west and north walls surviving to almost original height. Surviving architectural features include the northern half of the east window which is defined by three finely-cut, dressed stones. A chamfered and rebated sill stone measuring 0.16 m in width indicates that was a lancet window (Pl. 7.3). Tooling on the architectural fragment suggests a *terminus post quem* of the 15<sup>th</sup> or 16<sup>th</sup> century for its construction and that it was contemporary with the tower-house. The interior of the church is strewn with densely overgrown boulders - possibly collapsed material from the walls. It is locally believed to be the site of a children's burial ground (GA070-067003-).



**Pl. 7.3** A view of the lancet window located in the church building to the east of the tower-house at Grange.

7.4.3 Human interaction with the landscape of Grange through the medieval period  
By the time the first Cistercian mission was sent to Ireland in 1142, the essential elements of Cistercian life had been established. Self-sufficiency was imperative and land was farmed directly, not for profit, but to serve the direct needs of the community. Furthermore, it had been widely identified that Cistercian communities were prepared to accept land that had not previously been cultivated and that major sacrifices were not required from local rulers in the foundation of a Cistercian abbey. With extensive tracts of waste and forest, Ireland provided adequate potential for land clearance and new agrarian techniques (Stalley 1987, 13).

The pollen record at Abbeyknockmoy (see section 7.3) suggests some intensification in agriculture that is attributable to the establishment of the Cistercian abbey in the 13<sup>th</sup> century. Analysis of the landscape surrounding Grange Castle suggests that structured and strategic grazing practises, which incorporated the flooding regime of the adjacent turlough, had been established in the medieval period and are most likely associated with the formation of the grange in the high medieval period. Comparison with other Cistercian granges in the north of England through the 12<sup>th</sup> and 13<sup>th</sup> centuries suggests that during this period, the lands were farmed directly by the order. Given that much of the lands were of lesser value, pastoral farming almost certainly dominated the farming strategy at Grange and the site potentially operated as a vaccary. The significance of this and the siting of the grange centre adjacent to the turlough floodplain are discussed below.

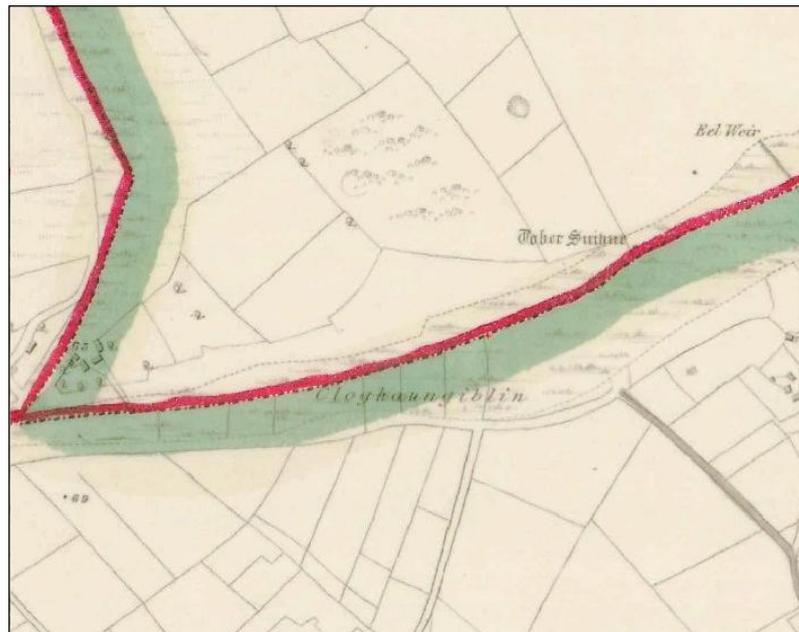


**Pl. 7.4** An aerial photograph of the Grange Castle complex (background) taken from the south-east during a period of severe flooding in 2009. Arterial drainage works had been overwhelmed and the former flooding regime in the locality was resumed.

In 12<sup>th</sup> and 13<sup>th</sup> century Britain, Cistercian granges were frequently created from acquisitions of waste land, of newly cleared land outside the open field system, and of strips and cultures in the open fields (Bishop 1938, 200). Examination of the First Edition Ordnance Survey map for the townland of Grange East and the neighbouring townlands to the west reveals a large, co-axial, open-field layout within this area, which appears to have been super-imposed on an earlier field layout, centred around a large ringfort located at the centre on the townland. This large, co-axial open-field pattern appears to have been subsequently sub-divided and is the basis for the modern field layout which exists today. It is clear that at the time of the First Edition Ordnance Survey, the southern portion of the townland, which is dominated by rougher pasture, had remained largely without sub-division and part of the large, co-axial field layout whilst the lands to the north appear to have been heavily sub-divided, most like associated with arable farming practises close to the settlement centre and Grange Castle (Fig. 7.10). Irregular plots, closely adjusted to local topography, generally represent pre-famine settlement expansion (Aalen *et al.* 1997, 140). A number of the field boundaries in the heavily sub-divided area to the north comprise earthen banks and their path is largely dictated by topography

suggesting these fields to be plowlands of possible medieval date. At Cloghaugiblin, 500m west of Grange Castle, the First Edition Ordnance Survey map shows a stretch of the turlough palaeo-channel to be sub-divided into a number of north-south aligned fields. The name Ó Gibealláin is that of a distinguished ecclesiastical family in Connacht through the high and late medieval period (Woulfe 1923, 540) and may reflect some element of the ecclesiastical grange settlement in this area. The purpose of sub-dividing this area of flood land is unclear but given that it would be unavailable in winter months, it must be assumed to be associated with spring and summer grazing.

To the north, the southern-most palaeo-channel of Turloughmore provided superior summer grazing lands, adjacent to the settlement centre. The unusual sub-division of the floodplain at Cloghaugiblin may be reflective of small grazing plots, suitable for young calves born in spring and suggest the operation of a medieval vaccary.



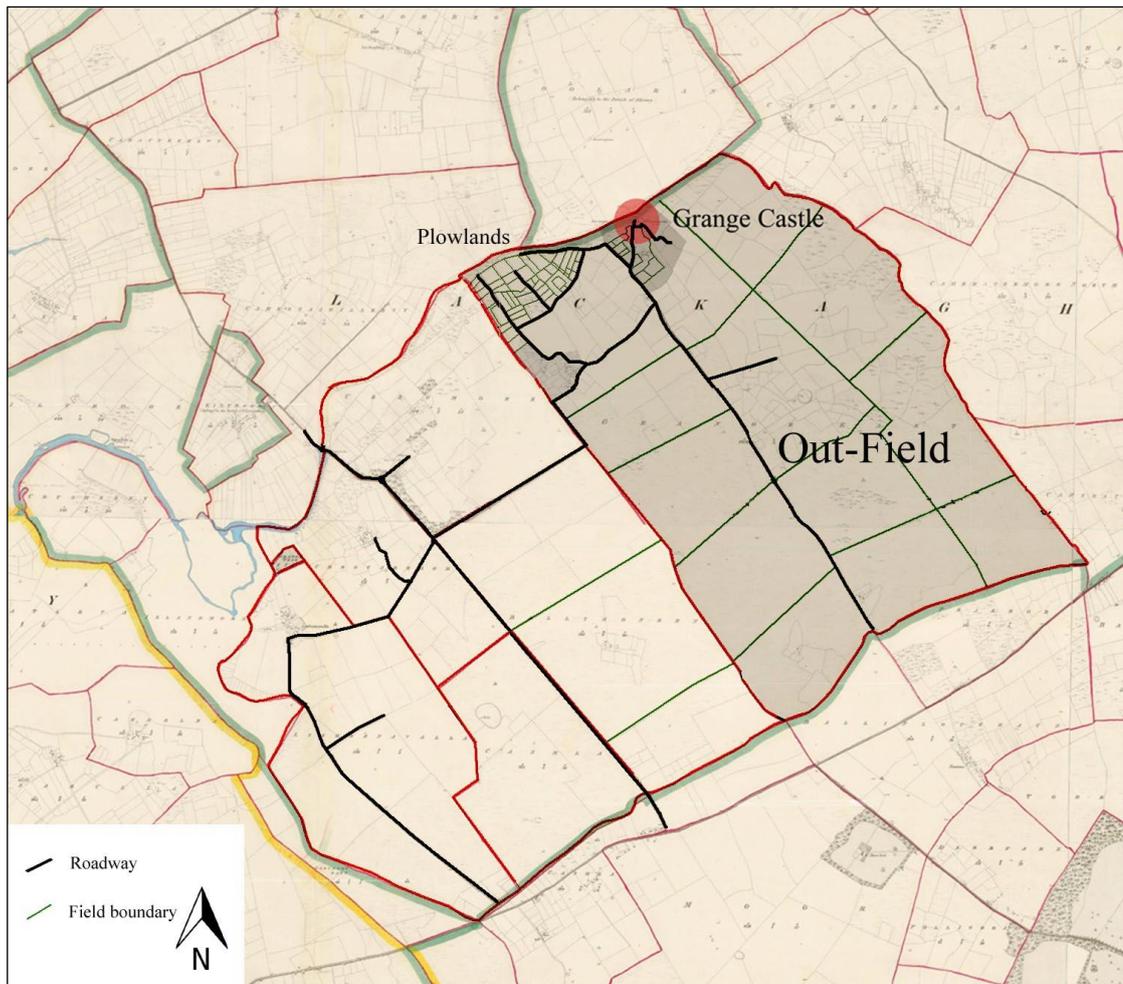
**Fig. 7.9** First Edition Ordnance Survey map showing *Cloghaugiblin* and the sub-division of lands within the turlough channel.

Vaccaries were small-scale commercial cattle farms with large, open tracts of land created by major feudal landowners and monastic orders to graze livestock. They utilised the specific topography of their locations and functioned seasonally. Donkin (1963 (b), 190) reveals documentary evidence for vaccaries at Cistercian houses in

England through the 13<sup>th</sup> and 14<sup>th</sup> centuries with evidence for settlements known as *logias* for cattle and their keepers, as temporary settlements on summer quarters. Vaccaries used a localised form of transhumance or rotation, moving cattle in winter back down the hillside to take advantage of the ‘aftermath’ (the new grass growing after the crop harvest) and in turn to enrich the soil with their manure to benefit the next year’s crops.

The general principle of the vaccary farm was that winter pasture was situated on superior land at the head or side of a valley which in turn led onto summer pasture lying on higher ground. The centre of a vaccary was essentially a hamlet, with several dwellings and associated farm buildings clustered together. The settlement was often in a girdle pattern around the arable area, and footpath and bridleway evidence often points to a long-established focal point, the vaccary centre or headquarters. This is the case at Grange where a dense network of footpaths and roadways are evident in the First Edition Ordnance Survey map, west of the later tower house (Fig. 7.10).

The evidence for a vaccary in operation at Grange during the high medieval period is not based on the remains of building structures, but rather landscape conditions and supporting evidence for similar circumstances which were known to have existed in Britain during the same period. The purposeful siting of the centre of the grange adjacent to the floodplain of Turloughmore suggests that this location was beneficial to the Cistercians who settled there in the late 12<sup>th</sup> or early 13<sup>th</sup> century. The availability of summer grazing both in the scrublands to the south and along the turlough floodplain at the northern end of the townland would undoubtedly have made this site attractive to a population group seeking to exploit lands that may largely have been classed as waste or scrubland



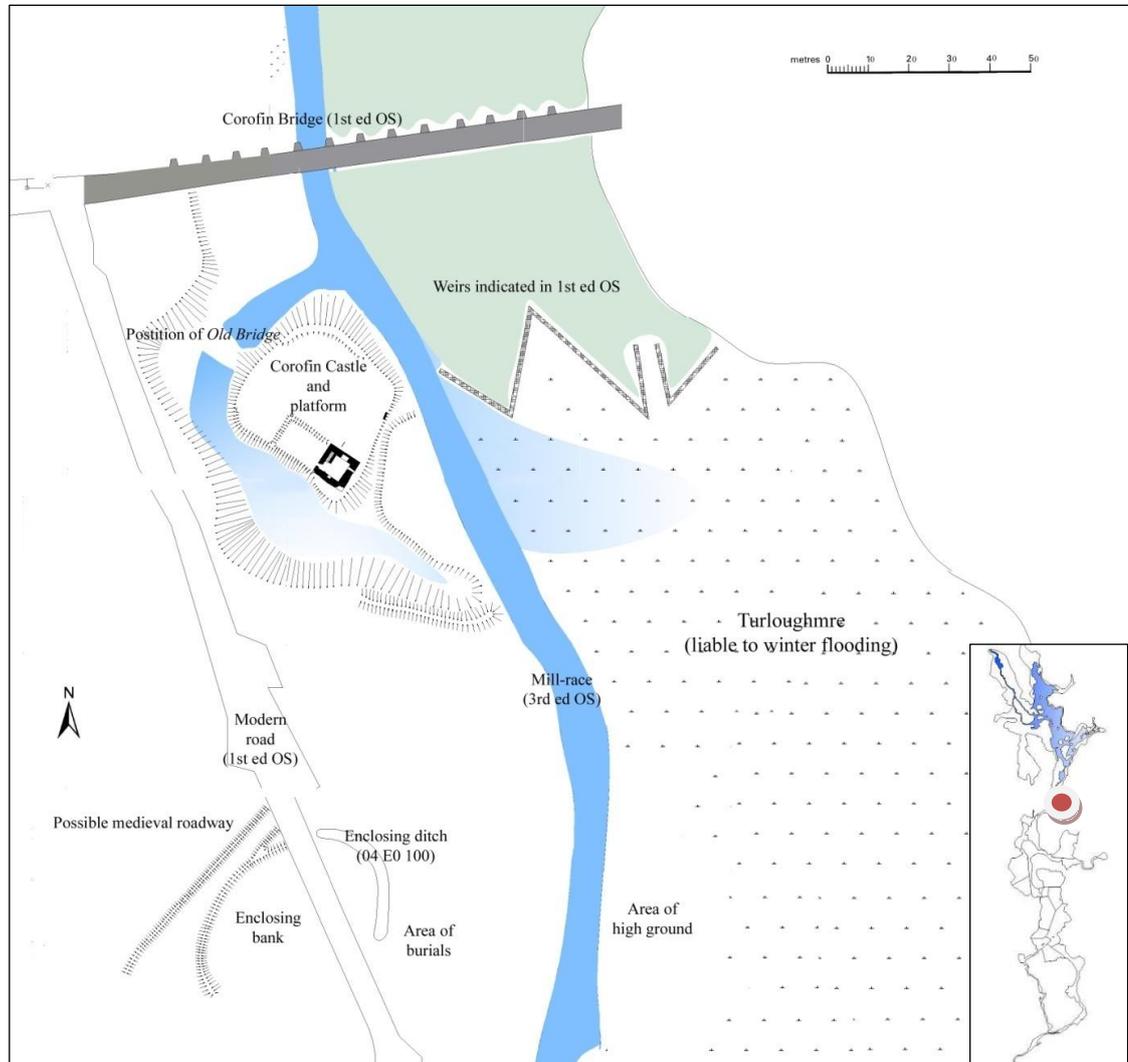
**Fig. 7.10** The First Edition Ordnance Survey sheet showing the field layout and road network for the medieval parish of Grange.

Central to the operation of a vaccary was the management of stock levels. Spring and Summer grazing was provided by the turlough floodplain at Cloghaungiblin which appears to have been sub-divided and young cattle may have been tended in this area, close to the settlement centre. Thus, the area surrounding Grange Castle most likely represents a continuity of settlement adjacent to the turlough floodplain, exploiting the grazing resources which it provided. Furthermore, it is also clear from the First Edition Ordnance Survey sheet that the turlough could also be exploited as a fishery resource during winter months. It was not unusual for religious houses to have fisheries well away from their houses (Went 1955, 29).

During the late medieval period, settlement continued to be focused in this area and the construction of a late medieval tower-house at this location indicates a continuity of settlement in a resourceful environment. The tower-house was constructed within

a raised circular area marked on the First Edition Ordnance survey map, of which only the southern portions can be identified on the ground today within a modern farmyard. This raised enclosure accommodated the church at Grange as well as the later tower-house. Most noteworthy is the fact that the tower was constructed on a purposefully built plinth which raised it well above the floodplain of Turloughmore. Not only does this indicate a knowledge of the flooding regime in the area, but a desire to accommodate the flood waters at this location in order to exploit the grazing and fishery resources that were easily accessible here.

## 7.5 Seasonal flooding in the manorial landscape; strategic settlement and natural resources



**Fig. 7.11** A plan compiled for this study, of the extant and excavated archaeological remains at Corofin super-imposed on the pre - 19<sup>th</sup> century drainage pattern in the area around Corofin Castle.

### 7.5.0 Introduction

The following section examines the significance of the siting of the 13<sup>th</sup> -century manorial centre of Corofin at the northern-most point of the Turloughmore floodplain and evaluates the reasons for the choosing of this location for the caput of the medieval manor. Today, the site is occupied by a late medieval tower house known as Corofin Castle, on the location of a possible earlier moated site. This section seeks to demonstrate that this location was chosen as it offered access to

beneficial natural resources in the landscape that were provided by the unique hydrological regime in this area.

#### 7.5.1 The historical record and borders of the manor of Corofin

Prior to the creation of the manors of Corofin and Headford (which lay to the west), the Corofin district was part of the lands of Muintir Murchadha and under the control of the Uí Flaithbheartaigh. In the subinfeudation of Connacht, Walter de Ridelesford II obtained the northern part of the barony of Clare *c.*1237 (AC 1237), including what became the manors of Headford and Corofin (Knox 1901 (b)). Walter II died *c.*1240 and the Corofin lands passed to his daughter, Emmeline (*b.*1225), countess of Ulster and wife of Stephen Longespée. After their deaths the lands then passed to their daughter, also called Emmeline wife of Sir Maurice Fitz Maurice.

In 1252 Emmeline de Ridelsford and Stephen received hunting rights on their lands in Ireland, including Corofin (CDI 1252-84, 16), and a licence to hold a weekly market. An annual fair at *Corphyn* was also granted. This is the only record that indicates a manorial centre for the manor of Corofin, and character and status of the Corofin settlement is unclear. Holland (1987, 81) suggests that Corofin was a borough like nearby Tuam and, receiving the rights to hold a fair and weekly market, he believes it was therefore a relatively important settlement in the 13<sup>th</sup> century. The details of the grant are:

*Nov. 22. Grants to Stephen Longspée and Emmeline, his wife of free warren in their demesne lands in Ireland, provided those lands to be not within the metes [sic] of the K. 's forests; of a weekly market on Monday at their manor of Corphyn, and of a yearly fair there to last 8 days, namely on the vigil of the octave, and on the octave of the Holy Trinity and 6 following days. (CDI 1252-84, 16)*



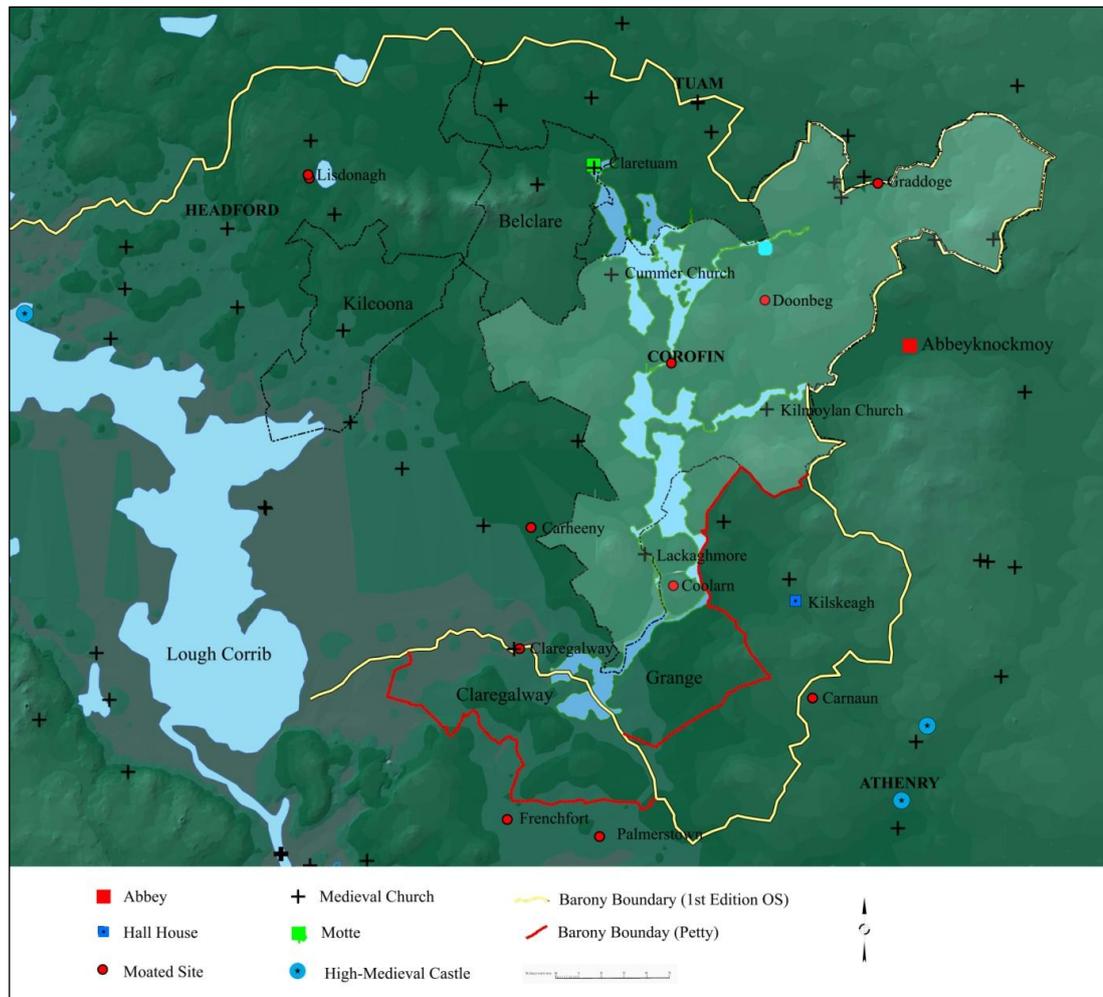
**Pl. 7.5** An aerial photograph taken from the north-east of Corofin village showing the site of Corofin Castle next to the artificial channel of the modern River Clare (CUCAP BDN 77). Earlier earthworks relating to a deep-water channel or mill race are also evident to the north and south of the 17<sup>th</sup>-century bridge. A roadway, thought to be medieval in date is identifiable in the top left of the picture.

It appears that Walter II's other daughter, about whom little is known, married Robert de Marisco and that their daughter, Christiana de Marisco received the manor of Headford which was the western portion of Walter II's lands in the Barony Of Clare. On Christiana's death, the lands appear to have gone to Alan la Zouche, the younger Emmeline's son. Alan also held the manor of Corofin and through him the lands of the de Ridelsfords were once again united.

Records relating to the manor of Corofin are absent for the subsequent 73 years after the 1252 reference. It is recorded that in 1325 Alan de la Zouche III returned the manor of Corofin to Richard de Burgh from whom he had received it in 1304 (Curtis 1940, 291).

Keary (2004) proposes that although manorial documents do not survive for Corofin, it seems likely, based on evidence from other nearby areas, that there were free tenant holdings on this manor and that some of these free tenants occupied moated sites some distance from the proposed caput at Corofin. The remains of three moated sites within Knox's (1901 (b)) vague limits of the manor of Corofin provide archaeological evidence to support Keary's theory (Fig. 7.12). These were located at Doonbeg (GA 057:108), Graddoge (GA 044:062) and Coolarn (GA 070:040).

According to Knox (*ibid.*), although, the manor of Corofin is believed to have included the entirety of the parishes of Cummer, Kilmoylan and Killrerin, there is a degree of ambiguity regarding the extent to which the parishes of Lackagh, Belclare and Kilcoona comprised the manor. The modern parish of Lackagh includes a number of smaller, now defunct parishes. Examination of Petty's *Hiberniae Delieatio* shows us that the area named as *Grange* which today lies in the parish of Lackagh, was formally a parish in its own right and parts of the grange lands of the Abbey of Abbeyknockmoy, founded in 1189 (Blake 1900, 68). It is proposed here that it be excluded as potentially being part of the manor of Corofin. Based on the documentary sources available, a reconstruction of the manorial landscape is presented in Fig. 7.12, showing the location of the manorial centre at Corofin, relative to the former floodplain of Turloughmore and Cloonkeen Lough.



**Fig. 7.12** Highlighted, is the proposed extent of the manor of Corofin in the mid-13<sup>th</sup> century based on Knox (1901 (b)) and Petty's *Hiberniae Delieatio*.(see Appendix 2)

### 7.5.2 The archaeological remains at Corofin

The archaeological remains at Corofin predominantly date to the late medieval period. The landscape is dominated by Corofin Castle, a tower-house situated in the townland of Corofin within the civil parish of Cummer at a narrow fording point between Turloughmore and Cloonkeen Lough. The tower itself is of well dressed and regularly coursed stone and survives fully to three storeys, with only the south-west wall of the fourth storey intact. It is almost square in plan with external measurements of 11.8m x 10.4m. Entrance to the interior of the tower is through a pointed-arch doorway at ground floor level in the north-eastern wall.

It is important to note that the tower-house at is constructed on a substantial, sub-rectangular, platform which, like Grange Castle, (section 7.4) rises 1.4m above the

surrounding terrain and is located at the centre of a narrow stretch of the floodplain of Turloughmore. Hydrologically, this area represents a confluence between the Turloughmore floodwaters and an incoming surface-flow from Cloonkeen Lough, to the north. It is not known to what degree the platform is natural or anthropogenic in origin but it would undoubtedly have undergone some modification prior to the construction of the later tower house. Evidence for this modification is on the south-eastern edge of the platform with a section of a stone revetment visible (Pl. 7.7), similar in form to that at Grange Castle. Holland (1997, 174) tentatively suggests that the platform upon which Corofin Castle is constructed may well have originally been a moated site and is probably associated with the 1252 reference to Corofin. Further evidence for this will be discussed below.



**Pl. 7.6** Corofin Castle from the north-west showing the tower at the platform upon which the tower is built.

The surrounding terrain is heavily disturbed with the up-cast from the cutting of the nearby artificial channel for the River Clare being re-deposited around the castle site. Ground level has risen by as much as 1.7m in some areas. Nonetheless, earthworks surrounding the tower are discernible and suggest the presence of at least one other rectangular structure on the platform. Aerial photography undertaken in 1970 by the Cambridge University Committee for Aerial Photography (CUCAP BDN 77)

indicates that prior to the redistribution of the up-cast, additional earthworks were clearly visible around the platform, most likely relating to the manipulation and management of the complex local hydrology (Pl. 7.5). This appears to be confirmed in the Books of Survey and Distribution by a reference to the location of a mill in the town of Corofin in 1641 (MacGiolla Cholille 1962, 115)

The First Edition Ordnance Survey sheet for the area suggests the presence of an enclosing bawn wall around the tower. Earthworks relating to this feature are visible on the south-western side of the platform. To the north-western side of the platform the location of an *Old Bridge* is also indicated but no trace of this bridge remains today. Nolan (1900, 21) notes that the tower was approached by a causeway and drawbridge at the time of his visit to the castle.

Two weirs are also indicated on this OS sheet, to the east of an artificially cut deep-water channel (most likely used as a mill race) which flowed through the central arch of what is probably a 17<sup>th</sup>-century bridge. This channel may have also allowed access by boat to Cloonkeen Lough to the north.

The name Corofin can be translated as ‘weir of the white one or the weir of brightness’<sup>52</sup> and the documentation of this place-name in c 1252 suggests a long-standing tradition of the operation of fishing engines in this area. The place-name, Cummer translates as ‘confluence’, referring, no doubt, to the local hydrology and the meeting of the waters from the rivers Clare and Grange with those of Cloonkeen Lough and the floodplain of Turloughmore.

---

<sup>52</sup> <http://www.logainm.ie/21530.aspx>



**Pl. 7.7** A section of the mortared stone revetment which is evident on the south-eastern side of the platform upon which Corofin Castle is constructed.

#### 7.5.2.1 The possible moated site at Corofin

As mentioned in section 7.5.1, Holland (1987) has suggested that the tower-house at Corofin may have been preceded by a moated site. A total of 20 moated sites are recorded in the archaeological inventory for north Co. Galway. These range in size from a maximum of 94m x 67m to a minimum of 27m x 26m. Average dimensions for those examples from the inventory are 47.07m x 36.02m with an average internal area of 1,695m<sup>2</sup>. The platform at Corofin has an area of 1583m<sup>2</sup>. This is favourably close to the average enclosed area of 1,695m<sup>2</sup> for moated sites in north Co. Galway and could well represent the enclosed internal space of a moated site (see Appendix 3).

Other evidence regarding site morphology must also be taken into account. Although evidence of internal banks are absent at Corofin, considering the later reuse of the platform, it is likely that traces of those banks would have been destroyed or modified to allow for the construction of a bawn wall evident in the First Edition Ordnance Survey sheet. The shape of the platform at Corofin also collates with data available from Co. Galway regarding the ratio of the external dimensions. With just 3 exceptions that fall outside the following parameters, those sites within Holland's

study had sides of ratios of between 1:1 and 1:2 (Holland 1987, 107). At Corofin, the platform dimensions are 42.75m x 37.05m giving a ratio of 1:1.15. c.55% percent of Holland's examples have a ratio of 1:1.15 or less and this compares quite favourably with Corofin.

The topographical location of the platform at Corofin is also an important consideration. The ditches that surround moated sites are commonly wet although seepage from rainwater is the most frequent source of water within the ditch (Holland 1987, 113). However, there are a number of examples within Co. Galway which are sufficiently close to or adjacent to a river or stream to permit channelling of the waters. Leats or water channels have been noted by Holland (*ibid.*) at 3 sites in Co. Galway with seven other possible cases of the same. Corofin's topographical and hydrological location next to the floodwaters of Turloughmore, and the incoming surface flow of Cloonkeen Lough would ensure that the surrounding ditch would have been almost constantly wet to some degree. There are comparable examples at Curraghmore in Co. Galway where the moated site is isolated by the course of a surrounding river, and at Claregalway where an example identified by Keary (2004) indicates that the moated site is located on a former island at the centre of the River Clare, a similar topographical location to Corofin. At Rooaunmore in Co. Galway a moated site was constructed at the northern edge of the turlough floodplain, utilising the local groundwater conditions and maintaining a wet ditch.

### 7.5.3 Corofin as a manorial centre in a resource-rich landscape

The above evidence suggests that it is highly likely that the high-medieval manorial centre at Corofin comprised a moated site located at the northernmost end of Turloughmore and on which a tower-house was constructed in the late medieval period. Toponymic evidence from the mid-13<sup>th</sup> century reference to Corofin suggests that fishing engines were in operation at the site and were most likely exploited during the high-medieval period. It is evident from the 19<sup>th</sup>-century cartographic record (Fig. 7.1) that the natural drainage pattern at Corofin had been altered substantially prior to the mid-19<sup>th</sup> century arterial drainage works. The First Edition Ordnance Survey sheet indicates two weirs present, east of the tower house. A deep-water channel or perhaps mill-race is also evident north and south of the 17<sup>th</sup>-century

bridge, separating the tower house platform from the weirs to the east. This channel is also evident in the aerial photography undertaken by CUCAP in 1970 showing evidence of earthworks associated with this feature (Pl. 7.5). This channel appears to manipulate the flow of incoming waters from Cloonkeen Lough and most likely powered a corn mill believed to have been located to the south of the bridge<sup>53</sup>.

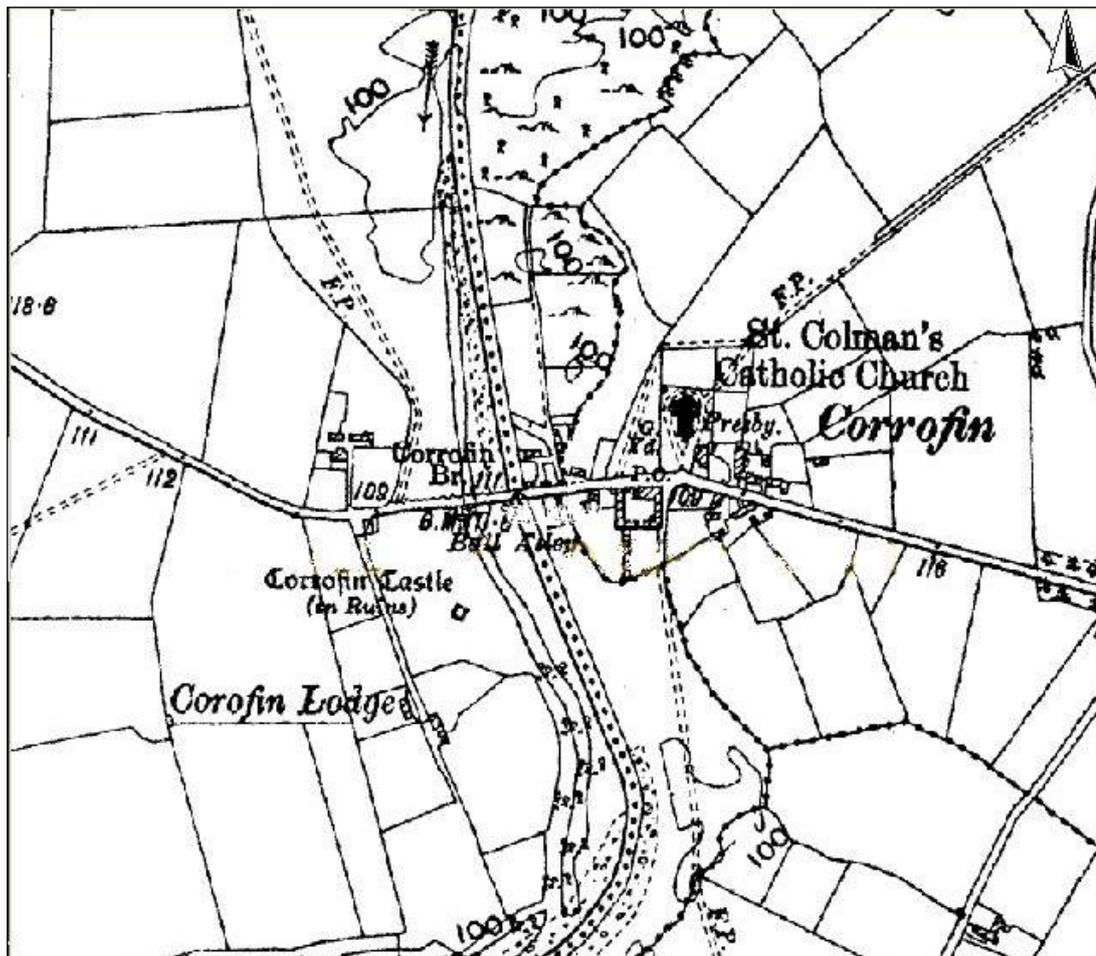


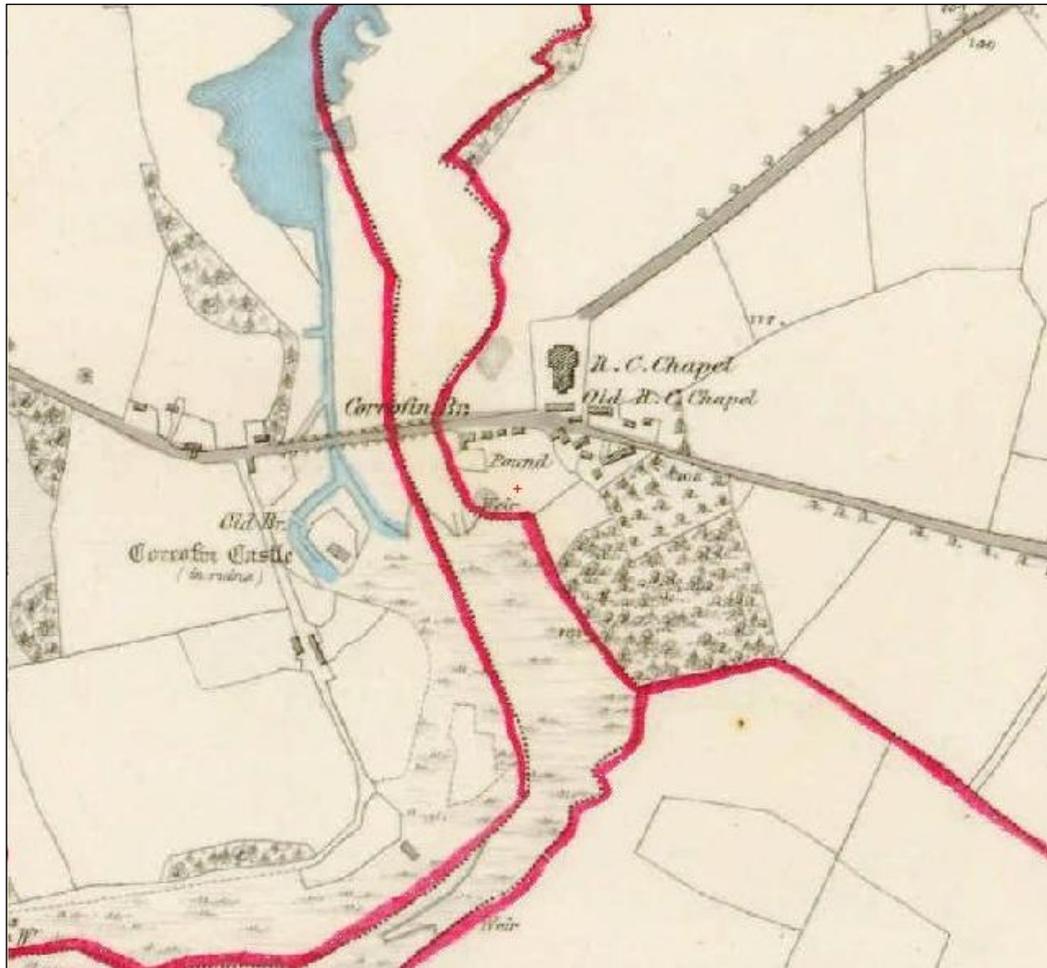
Fig. 7.13 Second Edition (revised) of the Ordnance Survey<sup>54</sup> sheet for Corofin showing a linear feature running north-south on either side of the 17<sup>th</sup> century bridge.

This possible mill-race is also recorded in the 3<sup>rd</sup> revised edition of the OS map and indicates a linear feature in this area, the nature of which is uncertain (Fig. 7.13) but it is presumed to be a depiction of the former mill-race. Dating of such earthworks is however, not possible without excavation. It is possible that they may be associated

<sup>53</sup> Cunningham (2000/01, 69) refers to fragments of a millstone being located in a field-wall directly to the south of Corofin Castle. However, this field-wall has since been destroyed and the author has since deceased. The exact location of the millstone fragments therefore cannot be pin-pointed.

<sup>54</sup> The second edition (revised) Ordnance Survey was compiled between 1940-41, and is a revision of the First Edition 25 inches to one mile Ordnance Survey)

with the construction of the masonry bridge or a mill referred to in the Books of Survey and Distribution in 1641 (MacGiolla Cholille 1962, 115). However, it is also possible that they are associated with the tower house or earlier manorial settlement in the area.



**Fig. 7.14** The First Edition Ordnance Survey sheet depicting the tower house, platform and the village of Corofin.

This choice of location for a manorial centre is important for several reasons. Besides a central location within the manor, there were a number of other benefits to be gained from this siting; control of the only east-west fording point within the manor during periods of flooding, the availability of fishing, wildfowl and grazing resources, and control of the communication potential of Cloonkeen Lough to the north and Turloughmore to the south. It is known from Lewis (1837, 166) that in the 19<sup>th</sup> century the turlough was navigable for lighters in the winter months.

The topographical location of Corofin, and the impediment posed by Cloonkeen Lough and the flood lands of Turloughmore to east-west communication during periods of flood, is worthy of consideration. It has already been shown that Corofin occupied a central position within the manor of Corofin in the 13<sup>th</sup> century and that all east-west traffic within the manor would have had to ford the expansive flood-lands at the manorial centre during times of increased rainfall. A clear understanding of this is evident in the choice of location of the manorial centre although other factors may have been taken into account such as pre-existing settlement and the availability of natural resources.

Archaeological evidence supports the view that Corofin occupied a fording point on a major thoroughfare. About 100m south of the present bridge, a medieval roadway (GA 057:161) has been identified (Gosling 1999, 431). This roadway approaches from the south-west and may indicate the position of an earlier fording point before the construction of the present bridge. The feature, recorded as a medieval roadway, is on a slight natural ridge extending 80m from northeast to southwest. It comprises two low earthen banks which run the length of the ridge diverging at the south-eastern end. Regardless of whether or not this represents a fording point associated with the manorial settlement, it does indicate that Corofin occupied an important location for communications at the northernmost point of the extent of the Turloughmore floodplain during the high and late-medieval periods.



**Pl. 7.8** A possible medieval roadway at Corofin, flanked by two parallel ditches.

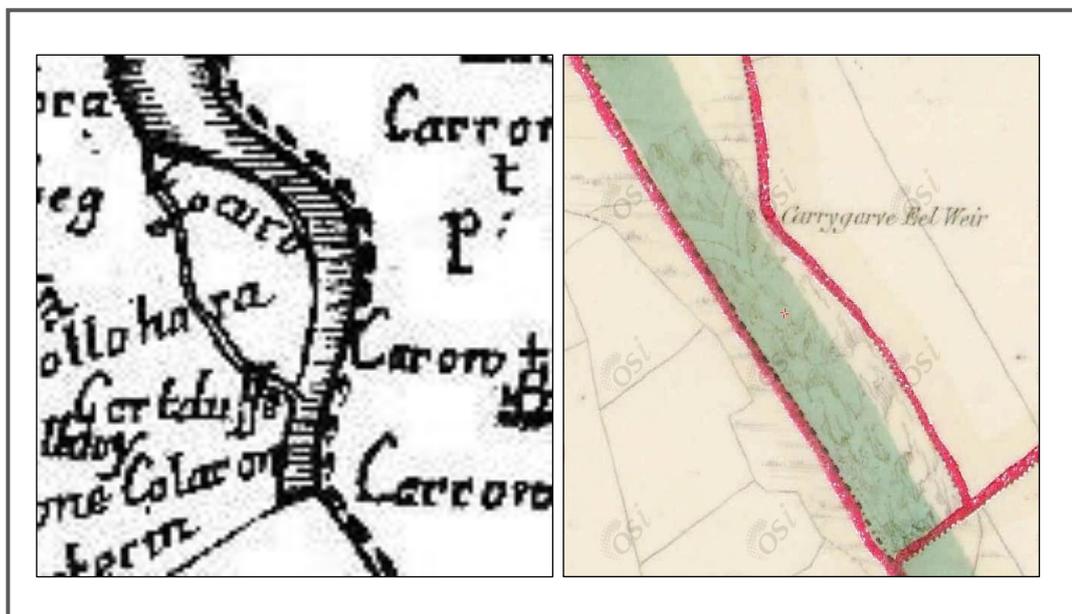
#### 7.5.4 The economic benefits of Corofin's location; A corn-mill and fish weirs at Corofin in the medieval period

The Books of Survey and Distribution make reference to 'A Corne Milne belonging to Ye town of Carefyny', the proprietor being the Earle of Clanrickard in 1641 (MacGiolla Cholille 1962, 115). The earl was also proprietor of lands within the parish at the time and held weirs at Carranamannin, Caranamony and Grane; the locations of which cannot be identified today but must be presumed to have been located south of Corofin. Three more weirs and another mill are listed within the parish being in the proprietorship of Richard Bourke (*ibid.* 115).

The mill-race associated with the 1641 reference is identifiable from the aerial photography of CUCAP and the 3<sup>rd</sup> revised edition of the OS map. It has been discussed above in relation to other archaeological features. Although it is referred to in 1641, it may well be reflective of earlier use of a mill at this site, possibly from the establishment of the manorial centre at Corofin. Given Corofin's grant to hold a weekly market and annual fair in the mid-13<sup>th</sup> century, its central position in the

manorial landscape and its suitable hydrological setting, it is likely that a mill would have been in operation here.

Many mills were erected on the banks in the immediate vicinity of bridges, primarily to allow people to have access from either side of a river (Simington and O’Keeffe 1991, 83). It is likely that the mill was located in the vicinity of the medieval roadway which approached from the west to meet the mill-race. This may suggest that the mill documented in 1641 may have been in use prior to the construction of the 17<sup>th</sup>-century bridge.



**Fig. 7.15** Extracts from Petty’s *Hiberniae Delieatio* and the First Edition Ordnance Survey map depicting the area around Carrigarve. Carrigarve is marked as *Curo* in Petty’s 17<sup>th</sup> century publication with the nearby Lackagh Castle recorded as *Qworanonyn* in the 1574 list of castles and their owners (after Nolan 1901, 39).

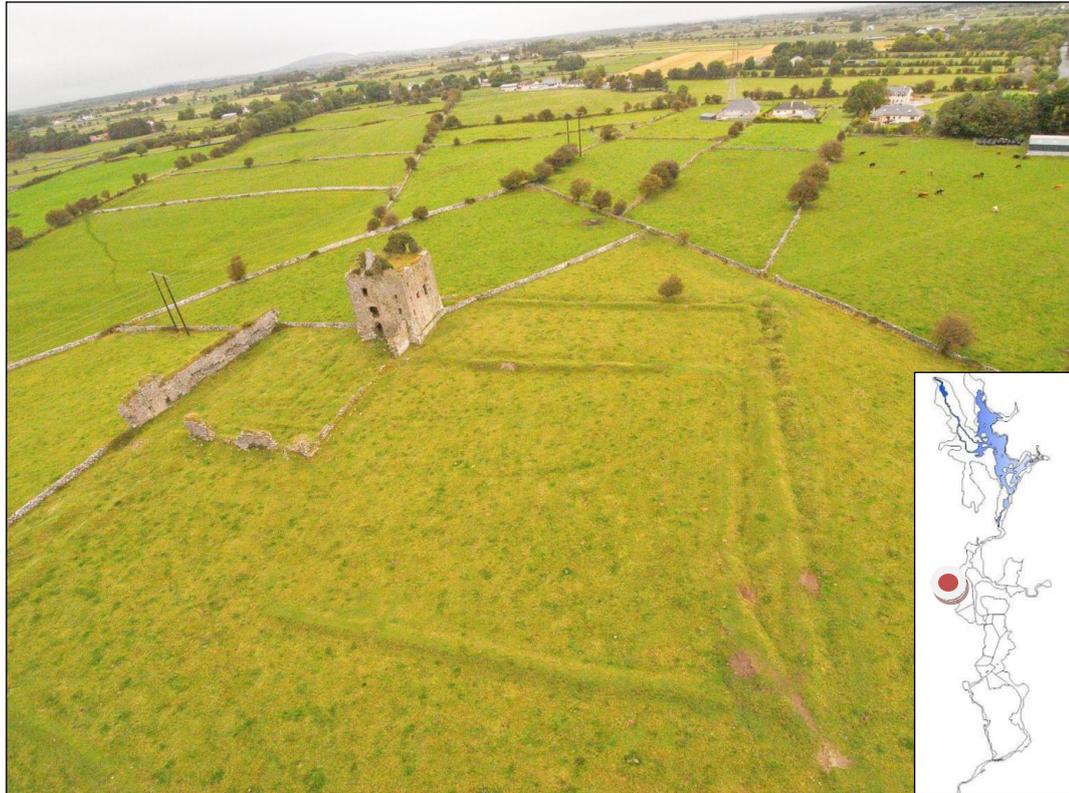
As shown in Fig. 6.5 there are a considerable number of weirs represented on the First Edition Ordnance Survey maps, just south of Corofin village. In total, there are eleven weirs represented on the floodplain of Turloughmore in the First Edition Ordnance Survey map. Two further weirs are indicated on tributaries to Cloonkeen Lough. These may be considered riverine weirs proper. Unfortunately, the work carried out by arterial drainage schemes since the 1840s has destroyed all examples

of the weirs that were once situated on the floodplain of Turloughmore. However, it is clear that the ephemeral nature of the waters upon which these fishing engines relied would have influenced their design and functionality as well as their potential yields.

Those weirs situated immediately to the south of Corofin are depicted as conventional V-shaped or straight weirs, similar, if not identical to those characteristic of riverine settings. Three further weirs situated at Tonamace and Turloughmartin are not depicted as a structure but simply marked *weir*. It may be the case that these weirs were located in areas where the hydrology was deemed too unreliable to warrant the construction of a weir proper, and a more simplistic apparatus may have been used to harvest the more unreliable waters. Documentary evidence from Britain demonstrates that simple eel traps were in use in small streams and mill-races in the 14<sup>th</sup> century (Peate 1934, 154).

Three townlands immediately to the north-west of Corofin (Curry Oughter - *the upper weir*, Currylaur - *the middle weir*, Curry Eighter - *the lower weir*) could suggest the exploitation of the fishery resources of Turloughour (Fig. 7.2). The name Corofin itself is translated as the 'white weir'. As mentioned above, the documentation of this place-name in 1252 implies exploitation of weirs in the area from at least the high medieval period. There is unequivocal evidence for such exploitation from the late medieval period. The Books of Survey Distribution indicate that there were six weirs in operation at Corofin in 1641 (MacGiolla Cholille 1962, 115).

## 7.6 Annbally Castle; Late-medieval settlement on the edge of Turloughmore



**Pl. 7.9** Aerial view of Annbally Castle from the south-west showing the tower, the remains of the bawn wall and the surrounding earthworks.

### 7.6.0 Introduction

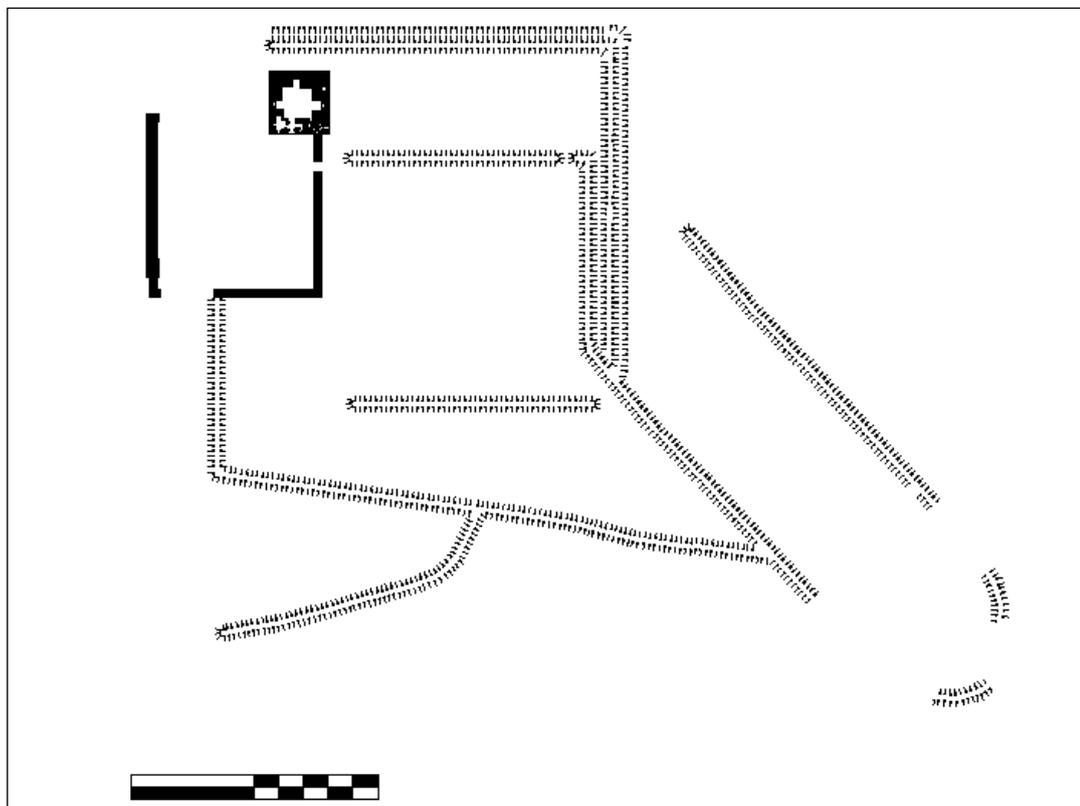
This section seeks to demonstrate the continued engagement of late-medieval populations with the floodplain at Turloughmore, and how that engagement manifested itself in unique architectural features evident at the site of Annbally Castle, immediately adjacent to, and on the western side of the turlough. It is also likely that this location was chosen because it provided access to the expansive floodplain to the east that, in summer months, would have provided an extensive grazing resource.

### 7.6.1 The archaeological remains at Annbally

Annbally Castle (GA057 001) is located to the east of Turloughmore in the townland of Annbally, and comprises a 15<sup>th</sup>-century tower house, with an associated bawn enclosure which, with the exception of the northern section, remains largely intact. It is known to have been in existence in 1461 when it was in the possession of ‘Captain

Burke' (Nolan 1901, 37-9). The complex comprises a rectangular three/four storey tower in fair condition at the north-eastern corner of a substantial walled bawn enclosure. It is important to note that like Corofin and Grange Castle, Annbally Castle is also constructed on a low plinth, raising the building well above the ground level of the surrounding landscape.

The complex includes a series of rectangular earthworks on its southern and eastern sides. These comprise earthen banks which survive in some parts to a height of 1.5 m, immediately adjacent to the limit of the floodplain of Turloughmore as it is recorded on the First Edition Ordnance Survey sheet. The Archaeological Survey of Ireland has previously interpreted these linear banks as the remains of a second bawn enclosure associated with the tower house. However, the enclosed area is located on the floodplain side of the tower house, and it is possible that they may have served as a form of flood defences during periods of flooding. These earthworks were mapped for this study, and are shown in Fig. 7.16.



**Fig. 7.16** A plan compiled for this study, of Annbally towerhouse, bawn and the surrounding earthworks to the southeast which may have formed part of a series of flood defences.

A further field system (GA057-003), can be identified some 200 m to the southwest of the tower house in undulating pastureland. This field system includes several grassed over collapsed field walls and traces of two collapsed houses and covers an area of approximately 12 ha. Further nearby field systems are evident at the edge of the former turlough, to the north at Carheenshowagh (GA 057: 074) and Cloonmore (GA 043: 062). The field systems at Annbally and Cloonmore are sited on elevated ridges which overlook the flood zone.

The site of the settlement complex at Annbally appears to indicate direct and close engagement with the floodplain of Turloughmore. The tower house at Annbally, like Grange Castle, was constructed immediately adjacent to the limit of the floodplain, and incorporates the same plinth feature noted at Grange Castle (Pl. 7.2).



**Pl. 7.10** The northern elevation of Annbally Castle where a plinth upon which the tower house has been constructed is clearly visible.

That Annbally Castle was constructed on a plinth to raise the tower house well above the level of the floodwaters, clearly indicates contemporary knowledge of the limit of flooding at this location, and a preference to remain in close proximity to, and occasionally within, the flood waters. It is possible that the outer earthworks shown in Fig. 7.16 represent further efforts protect this area from floodwaters during times of high rainfall.

The choice of this location may reflect a number of priorities for those who settled here. Annbally Castle offers direct access to the floodplain of Turloughmore and the grazing resources provided by it during the summer months. Like Grange Castle, the presence of a former adjacent field system (GA057-003) with a dense network of smaller fields, may indicate the operation of a localised booleying practise which utilised the floodplain for summer grazing, but maintained livestock away from the floodplain during the winter months.

Annbally Castle is a substantial tower house maintained by the Burkes through the late medieval period. As such, the siting of Annbally Castle can be viewed as a choice location that was valued. Part of this valuation may have been associated with the ease of access to the adjacent grazing resources, and how these resources were utilised to facilitate a localised booleying practise.

## **7.7 Discussion and conclusions**

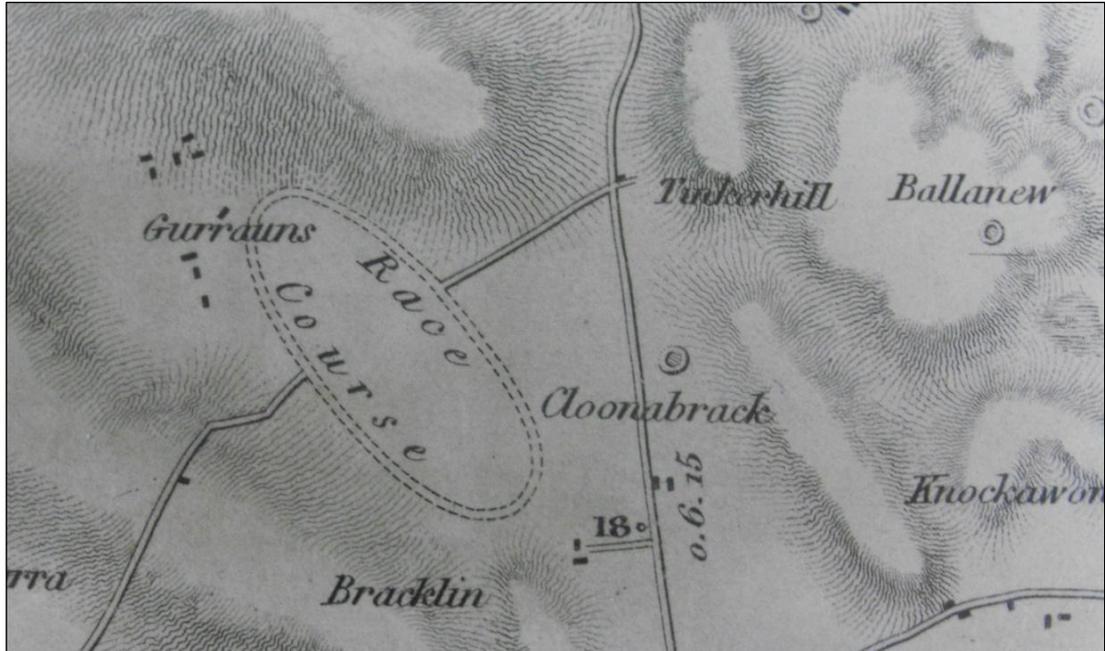
This chapter has sought to demonstrate that population groups during the medieval period had an understanding of the benefits of seasonal flooding, and purposefully engaged with the flooding regime of Turloughmore in a symbiotic way. Settlement in the area was greatly influenced by the turlough, and several instances of adaptation and exploitation have been noted in this chapter.

All three settlement sites discussed in this chapter show a willingness, if not a desire, for settlement adjacent to floodwaters. As a consequence, some distinguishing features can be identified at these sites. In the first instance, it is notable that all three castellated settlements included an architectural plinth to raise the castles above the level of inundation from the floodwaters. This is significant as it indicates a desire

for proximity to the turloughs and a willingness to architecturally adapt these settlements, rather than choosing higher ground further away from the turlough basin. There may be several reasons for this. In the case of Grange Castle, the settlement centre appears to have been chosen in order to take advantage of both the fishery and grazing resources available at this location. This too would appear to be the case at Corofin, where the unique hydrographic circumstances were exploited, and the manorial centre was chosen as it represented a resource-rich location. At both these locations and at Annbally Castle, we can see that prior knowledge of the flooding regime was evident, and those who constructed these tower-houses incorporated raised platforms or plinths into their design. It is noteworthy that all three examples include this feature, and that all three settlement sites sought the closest proximity possible to the floodplain.

At Annbally Castle we see the construction of what are likely further flood defences and a continuation of the theme of preference for proximity over practicality. Annbally and Grange Castles may well represent centres of a localised booleying practice (in the case of Grange, a formal Cistercian vaccary), of which the summer grazing of the turlough basin formed an important part.

## Chapter 8 - Turloughs as social environments; Communal spaces and places of assembly



**Fig. 8.1** Gurrauns race-course on Gurrauns Turlough, north-east of Tuam in Co. Galway. The outline of the race course is clearly marked on Larkin's 1812 Grand Jury map of Galway.

### 8.0 Introduction

This chapter examines the past association of some turlough floodplains with the assembly of population groups through time. It is shown here that their significance as venues for communal assembly in the past reflects an encultured *leitmotif* associated with the gathering of communities on the suitable expanse of a dry floodplain. Occasionally, the presence of permanent water pools on the turlough floor can also be shown to have significance at these assembly sites. Many of the traditions and customs associated with the phenomenon of assembly on turlough floodplains overlap or display a continuity of the phenomenological experience of these seasonal floodplains, over an extended time period, and through multiple cultural layers and contexts. There is evidence to indicate that some turlough floodplains served as venues for horse-racing and ball games in both medieval and early modern times. More evidence indicates that the communal green that was available in the summer months was sometimes used for political and military assemblies, as a venue for medieval *óenaigh* and for later commercial activities including fairs in the early modern period, with many turloughs offering an

uninterrupted expanse of sward, or forming a natural grassy amphitheatre suitable for assembly. Some floodplains may also have been associated with the celebration of *Lughnasa*, one of the quarterly feasts of the old Irish year (MacNeill 1962, 1-11). Tribal *óenaigh* of the early medieval period in Ireland are associated with *Lughnasa* and the celebration of harvest.

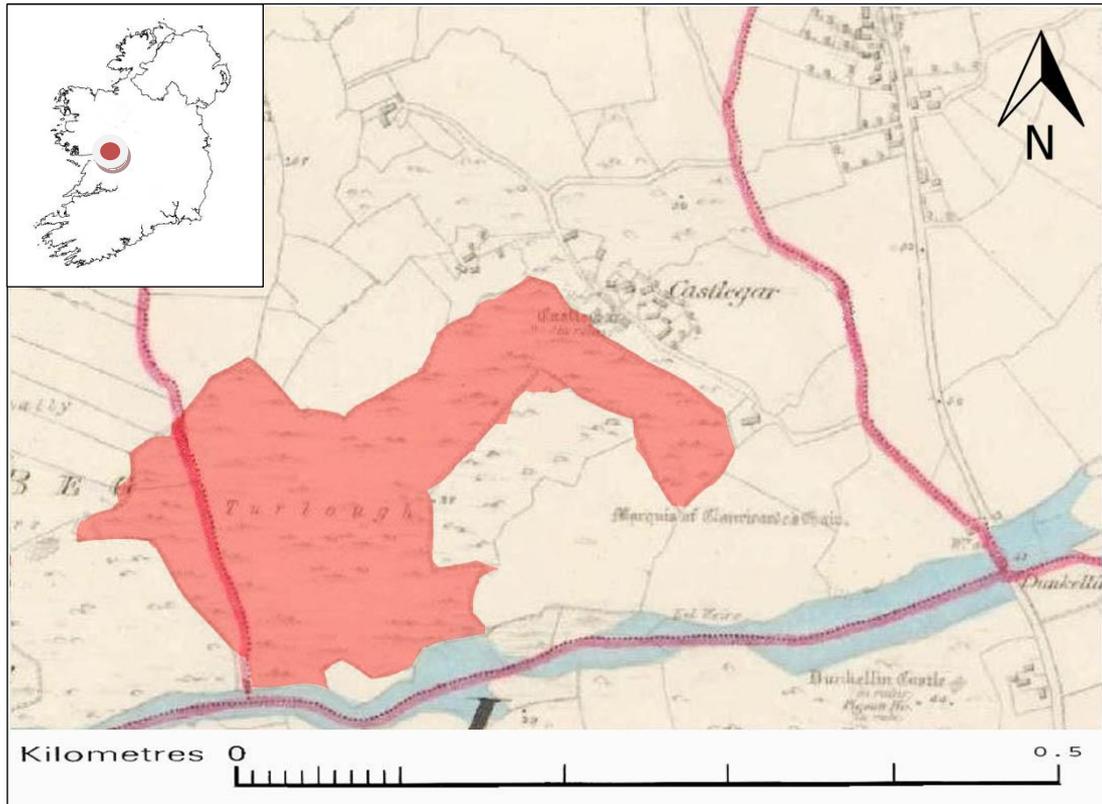


**Pl. 8.1** The receding waters of Rahasane Turlough, Co. Galway. Weatherby's racing calendar for 1828 identifies the 2.57km<sup>2</sup> Rahasane Turlough as a place of sport and venue for horse-racing.

Many forms of material culture are involved in the negotiation of identity and meaning through time, including the physical landscape and space, and both are inherently linked to socially and culturally mediated remembrance of place and its significance (Holtorf and Williams 2006, 235). In recent decades, landscape studies have developed from a functionalist approach to landscape to include a range of social, ideological and symbolic approaches to understanding the experience and significance of the physical world to communities in the past. The recognition of a frequent assignment of meaning to specific places and the designation of space for

specific uses in the past forms an important part of understanding landscape and its significances. To understand the themes of communal assembly on turlough floodplains, the physical landscape, as suggested by Tilley (1994, 10), may be considered a medium or space within which the friction of human activity, such as mass assembly, has created a distinct phenomenological experience. Frequently, the phenomenological understanding of these fluctuating landscapes can be linked to the seasonal rise and fall of the floodwaters and the corresponding arrival of rich summer grazing which can be viewed as symbolic of the cycle of the agricultural year and of the fecundity and celebration of harvest. The distinguishing characteristics of the phenomenology of turlough landscapes are centred on the symbolic seasonal availability of these distinctive, lush spaces that sometimes served as a suitable venue for assembly from an early period and, importantly, were remembered and used as such through time.

The influence of culturally inherited temporal and spatial associations in landscape have been noted by Keller (1997, 87) and the tradition of assembly at specific places is long established and assumed many forms in Ireland. Chapter 4 of this thesis has highlighted archaeological evidence for the association of turlough floodplains with the pyrolithic technologies of the Bronze Age in Ireland and that the seasonal and hydrological suitability of these lands may have influenced the choice of venue for this activity (see section 4.4). Although such ritual activities effectively encultured these areas (Tilley and Bennett 2001, 355-362), their long-term use shows that their importance as places where communities could utilise and interact with the landscape was retained over time. The concerns of this chapter are therefore the continued use and re-use of this suitable and designated, shared, interactive environment and the cultural and symbolic significance of turlough environments as venues for assembly during the historical period.



**Fig. 8.2** The First Edition Ordnance Survey showing the site of Cathair na nIarla, the conjectured royal assembly place of the Uí Fhiachrach Aidhne (FitzPatrick 2004, 168) and possibly the later open-air manorial court of the Clann Uilliam Uachtair (FitzPatrick 2001 (a), 368) in the townland of Castlegar, Co. Galway. The site overlooks a former turlough floodplain to the north-west.

The evidence for communal assembly at some turloughs during the historic period comes from diverse sources and cultural contexts such as the place-name and archaeological evidence for Cathair na nIarla<sup>55</sup>, Co. Galway (Fig. 8.2), the conjectured royal assembly place of the Uí Fhiachrach Aidhne (FitzPatrick 2004, 168) and the later open-air manorial court of the Clann Uilliam Uachtair (FitzPatrick 2001 (a), 368). Although the practice of inauguration disappeared with the gradual collapse of the institutions of Gaelic society in the 17<sup>th</sup> century, the traditions and associations of assembly remained part of the phenomenological experience of some turlough landscapes. Turlough floodplains continued to be exploited as summer fair-greens and venues for horse-racing and ball-games in the 18<sup>th</sup> and 19<sup>th</sup> centuries, reflecting their earlier role as suitable sites of assembly for *óenaigh* and other occasions that frequently involved the coming together of community to conduct

<sup>55</sup> Cathair na nIarla ‘Rock of the Earl’ (FitzPatrick 2001 (a), 368)

business, trade and to observe the practices, traditions and customs of mass assembly.

### **8.1 Turloughs as communal spaces and a shared resource**

In recent times, many drained turlough floodplains that were once held as commonage have been annexed to the holdings of private landowners and subsequently subdivided. Today, turloughs that are in flood can often be distinguished from other bodies of water in the landscape by the presence of modern field boundaries within the floodplain that divides the land after the hydro-period. Frequently, 'strip' field-patterns are prevalent (Aalen 1997, 137) and, in many areas, much of the land division is characterised by limestone dry walling. This characteristic pattern is demonstrated on the reclaimed floodplain of the former turlough of Turloughmore, which was subject to extensive drainage programmes from the mid-19<sup>th</sup> century onwards in order to allow for year-round grazing (Pl. 8.2).

Often, the former extents of many turlough floodplains have been lessened by the effects of local drainage, and modern field boundaries can mask earlier field and settlement patterns that interacted and engaged with more extensive flood-lands. This circumstance is evident at Annbally, Co. Galway, where several grassed-over collapsed field walls and the traces of two collapsed houses are visible on the former western limit of the floodplain of Turloughmore. No dating evidence is available for this defunct field-pattern. However, neither the houses nor the associated field-pattern appear on the First Edition Ordnance Survey map for the area and it is possible that the settlement was associated with the nearby tower house to the north which was a focal point for settlement through the late medieval and early modern period. Similarly, in Turloughgarve townland in Co. Galway, a field-pattern and four associated house sites are evident at the northern limit of the former floodplain in that townland. This settlement cluster is of indeterminate date but also pre-dates the First Edition Ordnance Survey map for the area. At both sites, elevated ground adjacent to the turlough floodplain shows evidence of settlement and infield enclosure, with the floodplain itself remaining an open area into the early modern period.

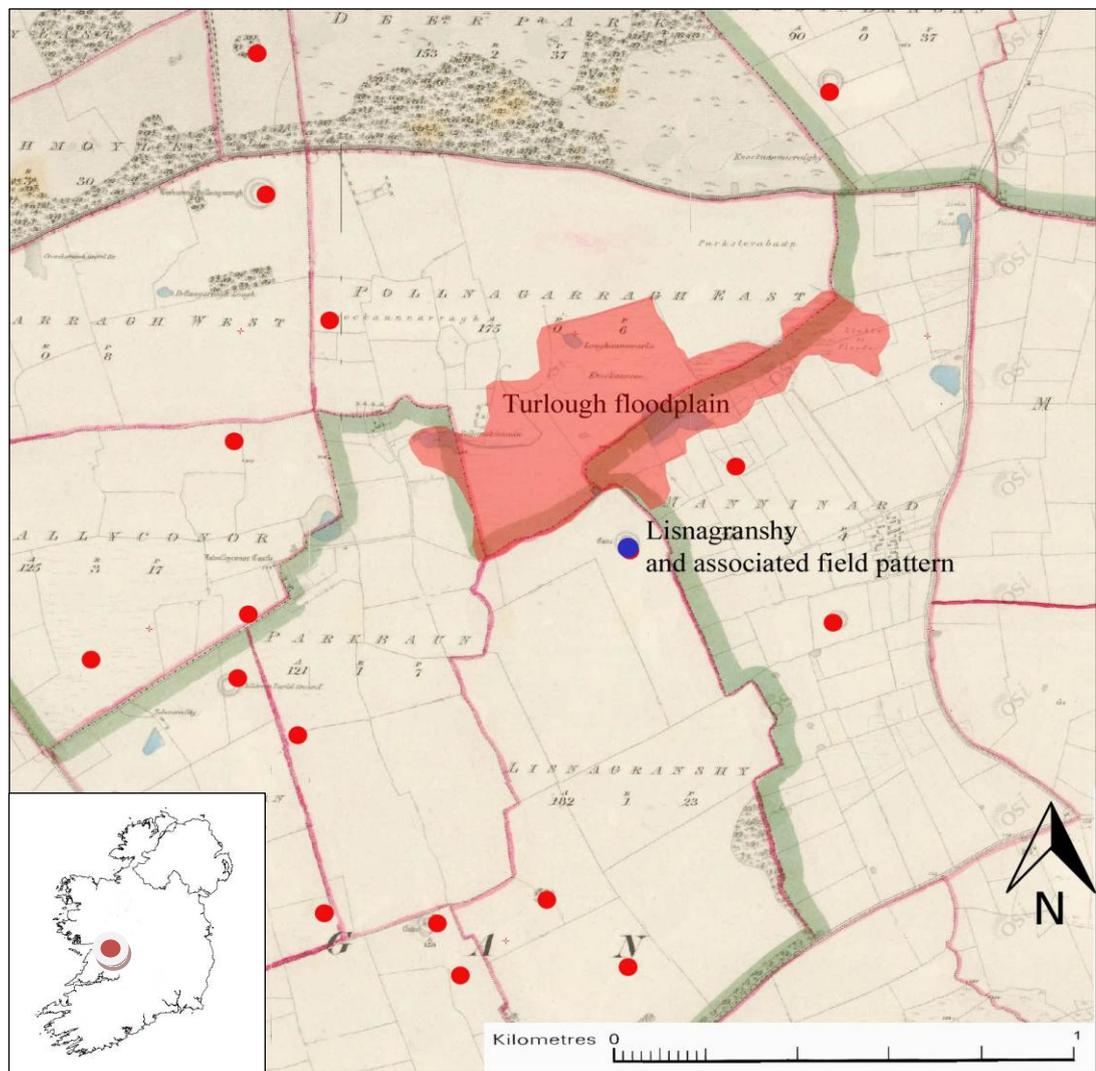


**Pl. 8.2** A vertical aerial photograph of the central part of the former floodplain of Turloughmore with the area of part of the former floodplain shaded dark. The flooding regime of the turlough has been completely negated by an artificial drainage channel and the field patterns within this area reflect the reclamation of these lands (Image source: Google Earth).

This pattern of settlement on suitably elevated ground immediately adjacent to the floodplain appears to be a long-standing phenomenon and can be demonstrated at a number of turlough sites. An extensive turlough landscape, comprising several interconnecting flooding regimes in the townlands of Lisnagranshy, Manninard, Pollnagarragh East and Parkbaun, in south Co. Galway displays archaeological evidence for human settlement in close proximity to the floodplain, and several ringforts and unclassified circular enclosures are sited on higher ground close to the turlough. This cluster of enclosures is likely to be early medieval in origin, and indicates a possible preference for settlement in close proximity to the floodplain. This phenomenon is discussed in section 4.3 with reference to this locality, south of the Dunkellin River, where a TPI analysis of the locations of circular enclosures suggests they are atypically located on low-lying positions in the landscape (Lehane and Delaney 2010, 56). A grassed-over field-pattern is identifiable on elevated

ground immediately adjacent to the southern limit of the floodplain. This field-pattern adjoins a large enclosure named as Lisnagranshy. Assuming that the use of these enclosures is exclusively early medieval, the distribution of ringforts in this area relative to the floodplain, Lisnagranshy and its associated field-pattern may represent what Stout (1997, 111-130) has identified as the inter-relationship of settlement between ringfort-dwelling freemen and the *rí túaithe*, *aire árd* or *aire forgill*- the noble classes within the early medieval Gaelic *túath* with the larger ringfort and infield of the nobility situated above the floodplain, adjacent to the natural resources available from the flooding regime (Fig. 8.3) and settlements of lesser importance located at a greater distance from the turlough. This pattern of early hierarchical medieval settlement has been identified by Blair Gibson (2008), adjacent to the floodplain of Carron Turlough.

The nature of the engagement of communities with the floodplain and exploitation of the resources offered by the flooding regime is often reflective of the specific physiographic conditions of individual turloughs, with some larger examples of extensive expanses of meadow containing calcium rich herbage offering important grazing opportunities in the summer months. Moran *et al.* (2007, 13) note that the biodiversity at individual turlough sites is linked to the heterogeneity in physical environment, with hydrology, soils and grazing management all playing influential roles. The main factors controlling the composition of the plant communities are the hydrological regime and grazing, which combine to affect soil properties such as organic content. In the case of the Annbally field-pattern referred to above, the settlement cluster was situated on the limestone till to the east of the floodplain, with the silty alluvium of the turlough floor remaining undivided into the 19<sup>th</sup> century and available for summer grazing.



**Fig. 8.3** The distribution of enclosures and ringforts in the vicinity of the townlands of Lisnagranshy, Manninard, Pollnagarragh East and Parkbaun in south Co. Galway compiled for this study.

Today, landowners frequently graze the areas with mineral soils at higher stocking levels than the areas with peat soils, reflecting the different grazing potential of these areas. The plant communities documented on turlough floodplains are similar to those that occur on Lammas meadows (discussed below), fen meadow habitats in Britain and on riparian floodplains on the Shannon callows in Ireland (*ibid.* 20). It is significant that archaeological evidence for infield is present at Annbally, Turloughgrave and Lisnagranshy, adjacent to the rich outfield summer grazing pastures provided by the silty alluvium deposits of the turlough flooding regime.

However, it must be remembered that individual topographical settings and turlough conditions such as depth and frequency of flooding, floodplain area and soil

conditions, dictated the nature of the exploitation of the floodplain. For example, Goodwillie (1992) recorded the mowing of hay during the 1990s at three suitable turlough sites - Doocastle in Co. Mayo, Carrowreagh in Co. Roscommon and the Loughans in Co. Kilkenny. Comparison may be drawn here between this form of exploitation of the turlough floodplain and a similar system of exploitation of floodlands, or Lammas meadows in Britain. Lammas meadows are a rare form of meadow in Britain, preserved for the saving of hay between Candlemas (February 2) and Lammas (August 1). The meadow was divided into strips and marked for individual share-holders by dole stones. Only 20 Lammas meadows survive in Britain today, with one of the best documented examples being the Lugg meadows in Herefordshire.<sup>56</sup> During winter rainfall the River Lugg floods the meadow which temporarily becomes a lake and so it is the value of hay from the meadows as winter forage for plough oxen, horses and other livestock that conferred the value of the meadow to Herefordian communities (Brian and Thompson 2002). The meadows are listed in the Domesday Book of 1086, a census of land instigated to increase tax revenue for William the Conqueror. The meadow's historical links to Hereford Cathedral are well documented, with the Bishop of Hereford and cathedral dignitaries owning large tracts of the flood lands in the parishes of Tupsley and Holmer at the time of the Domesday, constituting a valuable source of revenue for the church.

The Lugg Meadow is the largest remaining example of a Lammas meadow in Britain and it is a remnant of an early medieval open field system (*ibid.*). In this system, small settlements had enclosed paddocks surrounding them and additional land was often farmed in common. Some land was considered waste or rough and too poor to grow crops, thus being used for communal livestock grazing throughout the year. This system was not an egalitarian one and land management was governed by a manorial court, controlled by the manorial lord or the Church. The Lammas title is derived from this system whereby the hay would be mown by Lammas day, after which share-holders would have rights to graze the aftermath until Candlemas of the following year.

---

<sup>56</sup> Bannister (1891, 123) suggests the River Lugg to be derived from the Celtic god Lug, which may indicate an association of this floodplain with the celebration of *Lughnasa* (see section 8.4)

The relative absence of field divisions, particularly within some larger floodplains prior to the early modern period, indicates that larger turloughs are likely to have been held as commonage from an early time. Evidence from early medieval Irish law-texts translated and interpreted by Kelly (1997; 1988), suggests that ownership of rough land, including commonage, was vested in the *túath*. The surviving law-texts make no reference to restrictions on summer grazing in the unshared lands (mountainous waste, marsh or remote forest) of the territory (Kelly 1988, 108). Co-operative farming had an important role in Gaelic society although great importance was also clearly attached to the principle of private ownership (Kelly *ibid.*, 105). It is likely that smaller, more manageable turloughs may have come under the tenure of individuals or families, with larger turloughs being grazed by the *túath* in a similar manner to systems in place on Lammas meadows.

### **8.1.2 *Páirc* lands and turlough tenure**

With reference to the tenure of individual turloughs, consideration may be given to the occurrence of *páirc* lands or ‘park’ place-names referred to in section 3.1. These landscapes have been identified by FitzPatrick (2015) on or near the landholdings of Gaelic learned families and on the lands of ruling lords in the later medieval and early modern period<sup>57</sup>. She distinguishes them as private livestock parks that may have lacked formal enclosure or man-made boundaries, being indicated instead by topographical features delimiting their extent. However, townland boundaries may also have delimited park areas. Her observations on the topography of landscapes associated with these place-names suggests that in many instances, a combination of pasture, waste or marginal land and woods, with accessible watering places were common to all. These water sources occur as ponds, springs, rivers, large and small lakes and in some cases turloughs. FitzPatrick points out that a watery environment in tandem with a ‘park’ place-name is a key indicator of a former livestock *páirc* and, in the absence of any obvious man-made park boundaries, it is the distribution of water sources in conjunction with particular archaeological features, such as circular enclosures, that may indicate the extent of the Gaelic *páirc*. The implication

---

<sup>57</sup> In the late medieval period, professional learned families served the households of Gaelic and English-Irish lords in law, medicine, history, poetry, music and high-level crafts. Several of them conducted schools in the Gaelic arts on their landholdings as well as farming and providing hospitality. The land-holdings of learned families could be located on mensal lands (*lucht tighé*), termon lands, or on the sept lands of a lordship (FitzPatrick 2015, 167).

of FitzPatrick's findings is that it may be possible to identify some turlough floodplains with the landholdings of Gaelic learned families who maintained a *páirc* on the mensal lands of their lords and, similarly, with those lords who kept *páirc* landscapes as part of their personal demesneland. On mensal lands, the ruling lord granted immunity from tribute to vassals who performed hereditary arts, but claimed at least a portion of their *landholdings* for the direct support of the ruling household (Hayes-McCoy 1963, 45-61). These vassals may indeed have maintained and exploited individual turlough floodplains as part of a *páirc* landscape. A fuller description of the nature of *páirc*-lands and probable examples of turlough-*páirc* landscapes has already been included in section 3.1.

Where the turlough basin was held as commonage in the 19<sup>th</sup> century, Sheehy Skeffington and Gormally (2007, 219) suggest a system of turlough management whereby land divisions generally formed a pattern radiating out from the centre of the turlough basin, with land-owners adjacent to, or near, the turlough having grazing rights. Co-operative farming played an important role in the life-ways of early modern rural society in Ireland and this use of space is a functional adaptation to specific social and ecological conditions that are generally characterised by Rundale-type settlement in early modern Ireland (Slater and O'Flaherty 2009, 4).

Academic writing that has been concerned with turlough management and land use today, frequently focuses on strategically improving the grazing practices of individual landholders to accommodate and preserve the natural biodiversity of a shared, unique landscape. Naturally, when the floodplain is no longer held as commonage, a co-ordinated, communal effort is required between landowners to ensure the homogenised protection of these environments. In relation to turlough floodplains, the theme of commonage and communal space is a recurring one through time; only recently being masked by the frequent subdivision of this resource. McCourt (1947, 1) suggests that to fully understand a communal, open-field system, it is best not to think of a homogeneous population at a given time, but of a population exhibiting manifold features of variation inside a framework of broad similarity. The similarity in the case of turlough environs is a unique topographical and environmental setting suited to both seasonal grazing and communal assembly. Regardless of external environmental and cultural influences, it appears that turlough

landscapes frequently served as communal spaces beyond that of a subsistence resource. Therefore, the role of turloughs in the cultural landscape can be expanded to show these environments as symbolic and representing not just a useful natural resource, but a communal space, often experienced by a variety of social groups with a seasonal association. The importance of turlough floodplains as a grazing resource, and their significance as ‘tasksapes’ from at least the early medieval period in Ireland has been demonstrated in chapter 6 of this thesis. What is shown in this chapter is that the expanse of uninterrupted space that many turlough floodplains offer has long been important beyond that of a subsistence resource and that this communal space would have played an important role in both the cultural and physical landscape of past communities. The concept of communal space may be manifested in a number of forms and the tradition of communal use of turloughs requires exploration in the context of shared communal interaction with turlough environs. It is shown below that turlough lands were utilised as communal spaces from at least the early medieval period and that this communal exploitation manifested itself, not just in the form of communal grazing, but also in the form of a shared, communal space for assembly. Where turlough flooding regimes have remained undisturbed by drainage efforts, this system of shared usage has sometimes remained in place into the present day in the form of shared grazing rights.

## **8.2 Occasions of communal gathering on turlough floodplains**

Just as turlough grasslands were exploited during dry weather for grazing, there is also evidence to indicate that floodplains were exploited as suitable venues for the gathering or assembly of communities. Therefore, the significance of turlough landscapes as symbolic places in the landscape or as places of ritual importance arises for consideration. It is noted by Van De Noort and O’Sullivan (2006, 63) that it would be mistaken to assume that landscapes that were places of work were by definition, non-ritual landscapes or, conversely, to assume that ritual and symbolic landscapes had no economic value. It must be considered that many turloughs played a role in the cultural landscape both as a subsistence resource and as a symbolic place of assembly.

The symbolic nature of turloughs can be seen to rest in their seasonal availability as grasslands and open areas. Through the winter months, these lands were unavailable

as a grazing resource. However, during the summer months, the rich open sward that was naturally clear of trees and shrubs could be viewed as symbolic of the fecundity of harvest time.

References in the native chronicles noted in chapter 5 that identify a number of turlough sites as battlefields reflect the suitability of the topography of turloughs to mass-assembly, and the choice of those sites for battle may well have been intentional. Such references, predominantly written down in the later medieval period, span a broad chronological time-frame and identify turlough battle fields dating from the pre-patrician, pseudo-historic period onward. The earliest reference is to Turloch-Airt (AFM 195.1), now in Co. Galway- a place-name that commemorates the site where Art Mac Cuinn was slain, in the pseudo-historical text *Cath Maige Mucrama* (Battle of Mag Mucrama). Similar references continue to appear in the later medieval period, such as the battle of Turlach-Adhnaigh which took place in 1067 between Aedh Ua Conchobhair, King of Connaught, and Aedh, the son of Art Uallach Ua Ruairc with the men of Bréifne (AFM 1067.5). Turlach-na-mBruigheol, referred to in AFM 1490.2 can be identified with the townland of Kilnamryallin in Co. Roscommon where branches of the Uí Chonchobhair family were engaged in a battle in 1490. Turlach-Mochain, referred to in AFM 1595.15 can be identified with Turloughvohan in Co. Galway. This turlough was the site of a depredation by O'Donnell during his march into Connaught in 1595. Baile-an-Turlaigh is referred to in AFM 1473.10 as the site where Rory, son of Hugh, who was son of Toirdhealbhadh Óg Ó Chonchobhair was slain by William, son of Edmond Mac William in 1473. O'Donovan (1856, 9) has identified this place-name with the modern townland of Ballynacourty in Co. Galway and the turlough situated there.

These references demonstrate a continuity of use of turlough lands as battlefields over an extended time period. The significance of battle at these sites may be entwined with the symbolic significance of these environments as venues of *óenaigh*. The *óenach* was an important event in the calendar of medieval society. It encompassed political assembly, a market-fair and an occasion for festivities that were presided over by the territorial lord on royal *land* (*mruig rí*g). The sites of many *óenaigh* were frequently also sites of battle due to the association of these areas with

kingship. Disturbances to fairs were often made by those who wished to gain ascendancy over a reigning king (Binchy 1958, 118-121).

The celebrated assembly, Óenach Tailtiu, was associated with the festival of *Lughnasa* and presided over by the King of Tara (Carey 2005, 43-4). However, several entries in the AFM indicate that disturbance was a common feature of the celebrations there;

The fair of Tailtiu was celebrated by Fearghal, son of Maelduin; and Fogartach Ua Cearnaigh disturbed the fair, for he killed Maelrubha, and the son of Dubhsleibhe. – AFM 715.2

The prevention of the celebration of the fair of Tailtin, so that neither horse nor chariot was run, by Aedh, son of Niall; the family of Tamhlacht prevented it, in consequence of the violation of Termon of Tamhlacht Maelruain. Aedh Oirdnidhe afterwards gave their full demand to the family of Tamhlacht, together with many gifts. – AFM 806.5

The destruction of the fair of Tailtin, against the Gaileanga, by Conchobhar, son of Donnchadh, on which occasion many were slain. – AFM 825.11

The fair of Tailtin was prevented by Muircheartach, son of Niall, against Donnchadh Ua Maeleachlainn, in consequence of a challenge of battle which was between them; but God separated them, without slaughter or bloodshed on either side. – AFM 925.12

Aristocratic hospitality was best displayed in front of an enthusiastic audience at the *óenach*, traditionally associated with the festival of *Lughnasa*. The *óenach* was frequently held on an area of land identified as a *faithche* (O'Sullivan 2004, 80). Swift (2000, 28) suggests that parallels can be drawn between the *faithche* and the phenomenon of *mruig rí*g, lands set aside for a king's use during his reign. Swift (*ibid.* 28-29) goes on to suggest that in the area of Teltown in Co. Meath where Óenach Tailtiu was held annually, the lands which surrounded the enclosure named Ráth Airthir could be regarded as *mruig rí*g which the king utilised as a communal *faithche* for the *óenach*. Regarding communal space in early medieval Ireland, Kelly (1997, 369) has noted the *faithche* as a place of sport and a space where horse-racing and other communal activities took place, but goes on to state that the term *faithche*,

which is conventionally translated as ‘green’, is difficult to identify with a particular holding. Kelly (*ibid.*) cites several references to the *faithche* in native law-texts of the 7<sup>th</sup> and 8<sup>th</sup> centuries. These references have identified the *faithche* as the green of a prosperous farmer (*ibid.*, 68), from which sheep would be removed at night to the *lías cáirech* or sheep-pen. The *faithche* can also be associated with horse-racing (*ibid.*, 99) and it is identified in the *Immram Curaig Maíle Dúin*, composed in the 8<sup>th</sup> century, as the green where racing took place. There may also be a sacred tree (*bile*) associated with this green (*ibid.*, 370). References in literary sources for the royal residences of Temair, Emain and Crúachain identify such greens as venues for horse-racing and the playing of ball games (*ibid.*, 369-70) and the space is once more recognisable as a place of sport. The term is also often associated with monastic settlements too. The *faithche* could be described as an area either adjacent to or outside of a settlement which could be used for communal activities, an area for grazing and tillage, or communal expanses often associated with fairs, festivals and other related activities. On the western coastline of Aughris headland in Co. Sligo FitzPatrick (2011, 359; 2001, 85-91) has identified a level tract of land locally known as ‘Ruball Sionnaigh’ as part of the *óenach* or tribal assembly landscape of the Uí Fhiachrach dynasty. This tract of land, south of the great mound known as ‘Healy’s round hill’ was used as late as the 20<sup>th</sup> century for horse-racing and is perhaps best described as a *faithche* in this context.

References in the native chronicles indicate that games and horse-racing formed an important element of the occasion of assembly at Óenach Tailtiu. One such reference, an obituary written for the *árd rí* Aedh Finnlaith in AD 876, described him as ‘master of the horse races of fair hilled Tailtiu’ (cited in Swan and Stout 1998, 6). Close comparisons can be drawn between the landscape of assembly at Tailtiu and assembly at turlough floodplains. O’Donovan (1836) conducted an extensive survey of the landscape surrounding the site of Tailtiu near the modern Teltown during his visit there and noted distinctive landscape features that are no longer present. These include ‘a hollow called Lag an Aonaigh, the hollow of the fair... where a well springs at the centre ...an artificial lough, just dried up ... and a blind lough [a term sometimes used to describe the hydrology of a turlough] lying two fields east of the great Rath of Tailteann’ (*ibid.*). An entry in the AFM for the year 1138 indicates that

the plains that surround Óenach Tailtiu would have provided a suitable topography for horse racing associated with the *óenach*:

On this occasion the fair of Tailtin was celebrated by the King of Ireland and the people of Leath-Chuinn, and their horses and cavalry were spread out on the space extending from Mullach-Aiti to, Mullach-Tailten. – AFM 1168.13

The presence of a *faithche* landscape that also displayed many of the symbolic features of turlough landscapes, including a natural amphitheatre and groundwater-sources, is implied in O'Donovan's notes. What is clear from this evidence is that the *faithche* at Tailtiu was differentiated from the *dírann* (wilderness) as a productive area of land that was often a place of sport and assembly.

The *óenach* was also a celebration of harvest and a symbol of the rewards for the hard work of the preceding months, bringing together the tribal group in an inclusive occasion. Simms (1987, 60) defines the *óenach* as the most general gathering of the inhabitants of a *túath* for athletic, commercial and legal activities and for the proclaiming of special ordinances by the king. This festival invariably took place towards the end of summer when turlough lands were dry and available as a *faithche* and represented a lavish display of a *mórtúath* king's generosity and hospitality, with the diverse celebrations (which included feasting, horse-racing, games such as hurling and music) being as much a part of the occasion as business transactions and rites of ceremony.

In her analysis of a variety of early medieval sources, O'Sullivan (2004) suggests that normally, *óenaigh* were held on royal lands and on occasion neighbouring farmlands were availed of, should it be necessary (*ibid.*, 81). It is clear that communal gatherings such as *óenach* would have required a large arena, not least for horse-racing which was frequently associated with this event. It is suggested by Simms (1987, 63) that the survival of the word *áonach*, meaning 'a fair' in modern Irish, reflects the medieval significance of the *óenach*. Thus it may be conjectured that some early modern fairs may have had their origin in the medieval period as *óenaigh* that often took place on the *faithche*. This was certainly the case at Teltown where many of the traditions associated with the earlier *óenach* survived into the 18<sup>th</sup>

century and were recorded locally by O'Donovan (1836). Place-name evidence indicates that a number of turloughs were utilised as *faithche* in the medieval period, either as grazing plains or as venues for fairs, horse-racing and ball games. The townland of Fahee North<sup>58</sup> in Co. Clare includes the northern portion of Carron Turlough which represents a suitable topography in this hilly landscape for mass assembly. The townland of Fahymactibbott<sup>59</sup> in Co. Galway contains Kiltiernan Turlough which is situated in close proximity to the early ecclesiastical site there.

A number of fair greens are documented on turlough floodplains throughout the early modern period. The race-course at Turloughmore, Co. Clare also shows a fair green situated adjacent to the course on the First Edition Ordnance Survey map. In Ballinillaun townland, Co. Galway, the First Edition Ordnance Survey sheet shows Knockangarraunbaun<sup>60</sup> fair green within that townland with the place-name element '*garrán*', meaning a work-horse, inferring an equestrian association. The fair at Castleplunkett, Co. Roscommon was documented by Lewis (1838, 305)<sup>61</sup> and although there is no fair green indicated on the First Edition Ordnance Survey map, a large floodplain, where the fair most likely took place, is shown adjacent to the small village there. A patent for the fair at Turloughmore in Co. Galway was granted to Sir John Burke of nearby DerryMcloughny between 1600 and 1625<sup>62</sup>, with fair days held on 1 August and 18 September. Dutton (1824, 50) made the noteworthy comment concerning Turloughmore in the early 19<sup>th</sup> century that 'horse and boat races are held on the same ground, but at different season'.

Although there are no direct references to *óenaigh* being held on turlough floodplains during the medieval period, it can be seen from place-name evidence and traditions of assembly on the seasonal sward in the early modern period, that these lands were frequently used as assembly places for occasions that reflect the traditions and customs of the *óenaigh*.

---

<sup>58</sup> <http://www.logainm.ie/5700.aspx> 'Faithídhe, greens, not Faithche, a green'

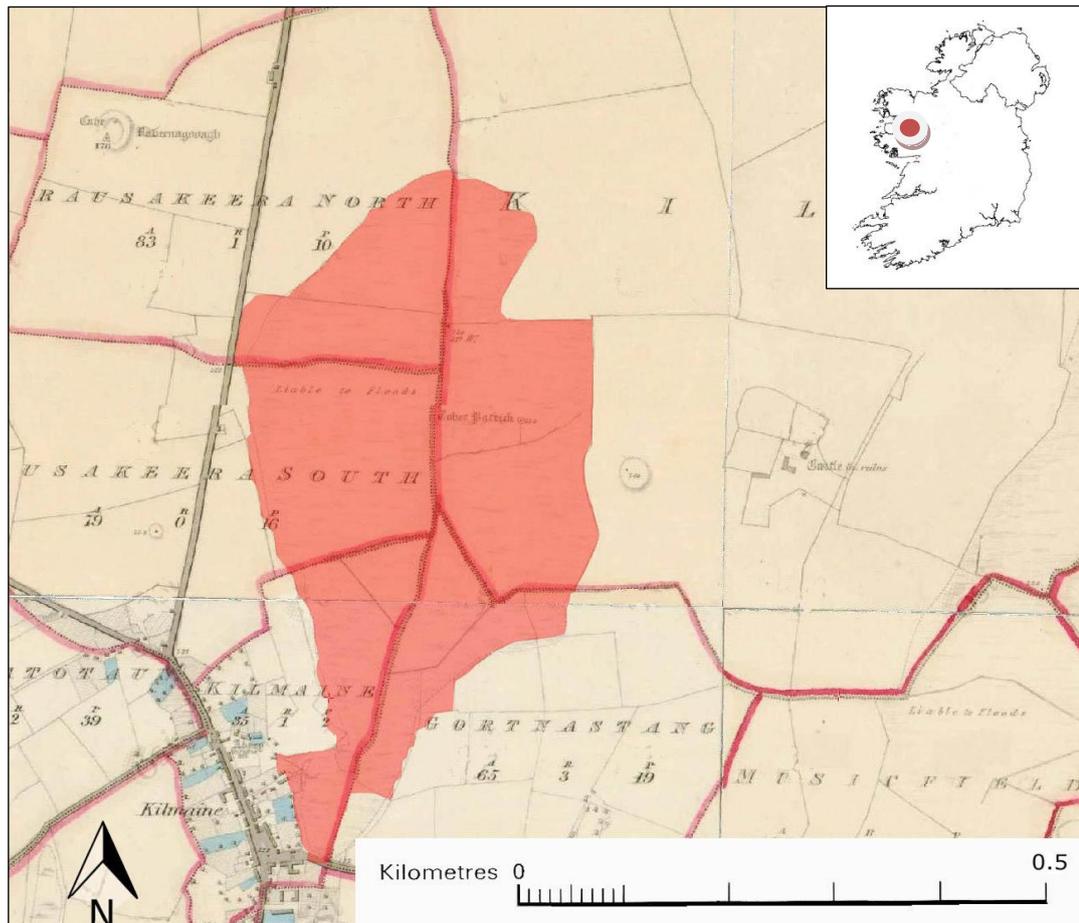
<sup>59</sup> <http://www.logainm.ie/19384.aspx> 'Green of the son of Theobold'

<sup>60</sup> <http://places.galwaylibrary.ie/asp/fullresult.asp?id=26022> 'Hill of the white horses'

<sup>61</sup> A village... .situated on the road from Strokestown to Castlerea and comprises about 40 cabins... . where the woods extend down a gentle slope to a turlough of near 200 acres and have a rich appearance. Fairs are held here on the 1st Thursday in May, Aug. 13th, and Oct 11th (Lewis 1838, 305)

<sup>62</sup> *Report of the commissioners appointed to enquire into the state of fairs and markets in Ireland*, Parliamentary Papers XLI 1852–3

The association of royal lands with these events is also of significance. This thesis has uncovered evidence to suggest that turlough floodplains may occasionally have been incorporated into the landscape of royal inauguration associated with the Gaelic aristocracy of the medieval period. FitzPatrick (2004, 35) cautions that inauguration sites lack homogeneity, albeit that they are generally associated with antique landscapes of sepulchral and ritual significance. Many of the categories of possible inauguration sites noted by her are identified on the basis of being historically recorded as assembly places for parleys and musters through place-name evidence and folk traditions of assembly, largely documented in the 19<sup>th</sup> century (*ibid.*, 34). There is no doubt that individual landscape characteristics within political borders would have influenced the selection of an inauguration site and so these sites were a product of the cognitive and physical landscape, drawing on the physical aspects as well as long-standing attachments to specific spaces. Convenient access and commanding views are among the quintessential features of royal assembly places (FitzPatrick *ibid.*). Generally, inauguration sites offered extensive views of the surrounding kingdom, taking in the core of the territory. However, dramatic views of the surrounding kingdom were not always a priority feature. This thesis shows that in some instances proximity to a floodplain as a suitable expansive area for assembly was also an important factor. Cathair na nIarla, (Fig. 8.2) located at the eastern end of Dunkellin Turlough in the townland of Castlegar, Co. Galway, has been identified by FitzPatrick (2001, 365) as the likely inauguration site of the Uí Fhiachrach Aidhne and later the Meic Uilliam Uachtair or Clanricarde Burkes of Anglo-Norman ancestry, during the late medieval period. This site is discussed at length by her, and the Marquis of Clanrickard's Chair, formerly located atop a low mound within the site of an enclosure is suggested as an inauguration and open-air court venue. This landscape contains dense archaeological evidence for human settlement during the medieval period and was undoubtedly a place of great importance in the early medieval kingdom of the Uí Fhiachrach Aidhne over whom the Mac Uilliam Uachtair were overlords. The site overlooks the former floodplain of Dunkellin Turlough situated 100m to the north-west of the low hill and would undoubtedly have served as a suitable venue for the mass assembly associated with royal inauguration.



**Fig. 8.4** The First Edition Ordnance Survey sheet showing Raith Eassa Caoide in the townland of Raussakeera North, Co. Mayo. This ringfort has been identified as the inauguration site of Mac Uilliam Íochtair and is situated to the north-west of a 45 ha floodplain.

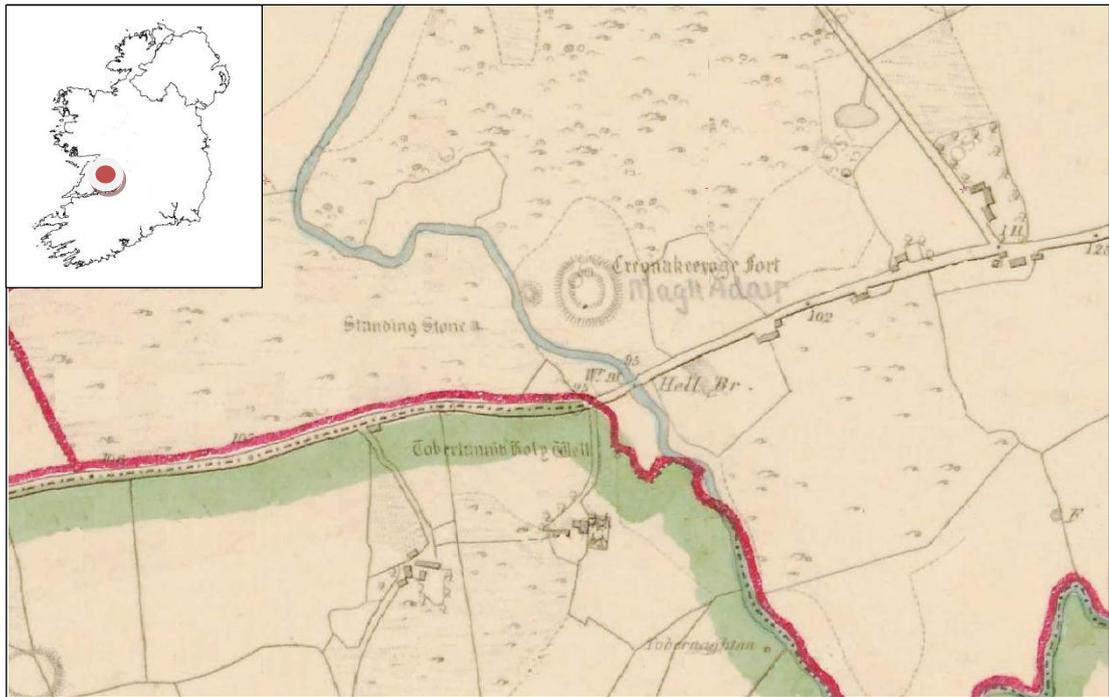
Raith Eassa Caoide in the townland of Raussakeera North, Co. Mayo is situated to the north-west of a 45 ha floodplain (Fig. 8.4). The large, bivallate enclosure is sited on a low rise and offers a sweeping prospect of the surrounding landscape including the floodplain to the south-east. This enclosure has been identified as the inauguration site of the Meic Uilliam Íochtair or Mayo Burkes documented in 1589 and 1595 (FitzPatrick 2001 (a), 228) but the original adoption of the ringfort for this purpose can be narrowed down to c.1333-40 (*ibid.*, 364). FitzPatrick (*ibid.*, 360) has suggested that Meic Uilliam Íochtair selected this site in the absence of any long-established traditional gathering place in the area and that the significance of the enclosure itself is not known. The ringfort itself could not be considered an antique or sepulchral monument and is atypical of the type frequently associated with inauguration sites. Mounds rather than ringforts were most frequently preferred for the performance of inauguration. However, the expansive open area available on the

nearby floodplain presented an attractive facility for mass assembly. Although perhaps written with imaginative license, a retrospective account of the inauguration of a new Mac Uilliam Íochtair in 1595, documented by Lugaidh Ó Clérigh in *Beatha Aodha Ruaidh Uí Dhomhnaill*, describes a scene where ‘eighteen hundred of Ó Dochartaigh’s soldiers and mercenaries surrounded the royal rath... ..with the infantry of Tír Conaill outside them and the three MacSuibhnes with their galloglasses outside them and the men of Connaught outside them all (Walsh 1948, 116-117). This account indicates that a sizeable venue was required for political mass-assembly. Thus, it can be conjectured that the landscape setting of Raith Eassa Caoide may have been an important factor in the selection of this site for inauguration. The floodplain provided a suitable expanse of open ground with commanding views of both the territory, and those assembled for the ceremony of inauguration.

The mound of Madh Adhair in the townland of Toonagh in Co. Clare (Pl. 8.3) represents the historically attested inauguration site of the Uí Bhríain, descendants of the Dál Cais (FitzPatrick 2004, 52). It is possible that the Dál Cais established this site as their assembly ground as early as the mid-8<sup>th</sup> century (*ibid.*, 196) with further documentary evidence to suggest that it continued to be used as such by the Uí Bhríain until the end of the 16<sup>th</sup> century (*ibid.*, 59). The re-use of later prehistoric complexes as inauguration sites in the medieval period reflects the ideological value of a royal association with an earlier, antique or mythic past. The place-name Magh Adhair means ‘‘Adhar’s plain’ which is mentioned in connection with the hero Adar in the legend of Carn Conaill. The site comprises a suite of archaeological monuments including the large mound, a basin stone, a number of *fulachta fia*, a nearby standing stone and evidence for a number of earthworks in close proximity to the mound. References in the native chronicles also indicate the former presence of a sacred tree, or *bile* at the site (AFM 982; AFM 1052).



**Pl. 8.3** A view from the south of the mound of Magh Adhair, the historically attested inauguration site of the Uí Bhríain, descendants of the Dál Cais. The limestone escarpment to the east forms a natural amphitheatre with the Hell River lying to the west.



**Fig. 8.5** The First Edition Ordnance Survey map showing the site of Magh Adhair marked as Cregnaakeeroge Fort and the limestone outcrop on the northern, eastern, and south-eastern sides.

The sub-triangular mound is surrounded by an impressive fosse and a substantial external bank. A stone-faced causeway on the western side of the monument allows access to the summit of the mound. The mound is circumscribed by a limestone outcrop on the northern, eastern, and south-eastern sides which forms an impressive

amphitheatre with the mound at its focal point (FitzPatrick 2004, 52-7). A narrow, now canalised river named the Hell River lies to the west of the mound. The setting for the inauguration site of Magh Adhair appears to have been carefully selected giving the impression of an amphitheatre in low-lying ground on the east bank of the Hell River (Fig. 8.5). This amphitheatre served as a suitable venue for inauguration affording all in attendance a good vantage point from which to view the ceremony.

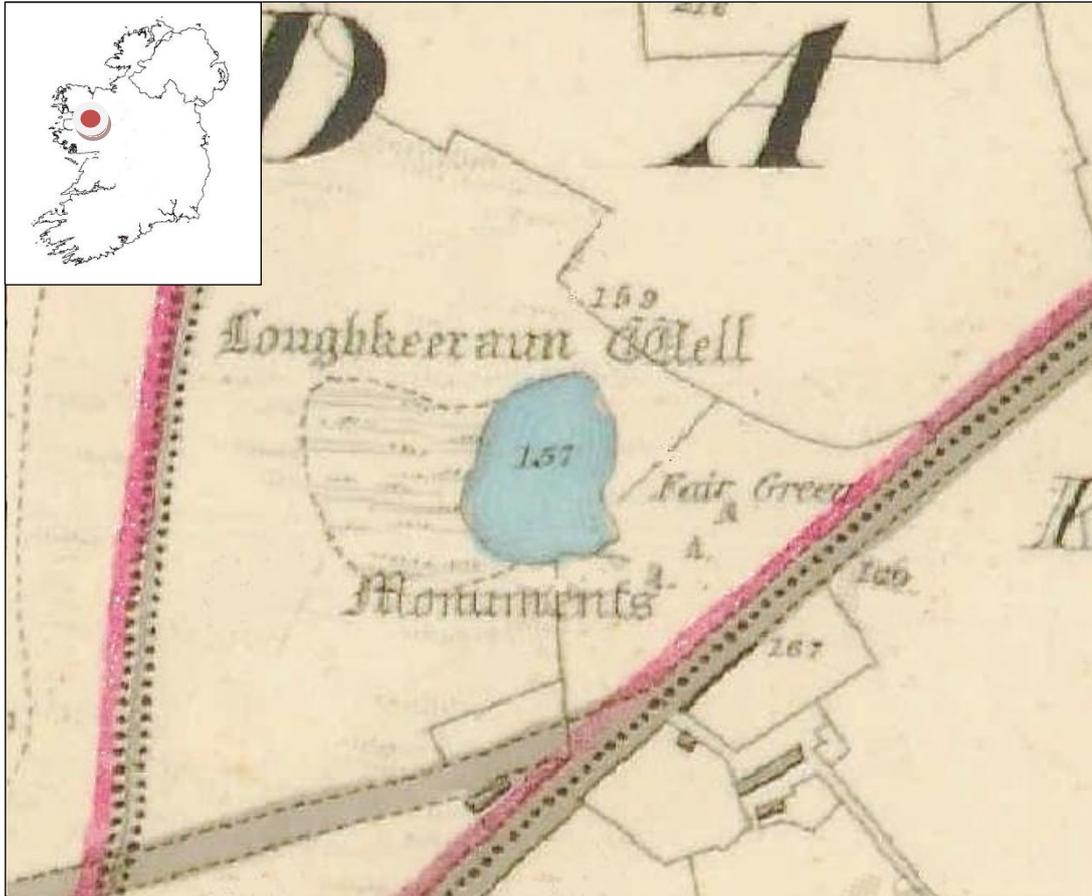
During periods of high rainfall, the floor of the Hell River overflows its banks and floods the floor of the amphitheatre. Prior to the canalisation of this river, it is conceivable that these episodes of flooding were more frequent and formed part of the seasonal fluctuation of the landscape. This phenomenon does not represent flooding from a groundwater source and its significance, if any, may be symbolic in another way. Two small turloughs that have not been recorded by the GSI are located immediately to the east and south of the amphitheatre. Unlike the examples at Raith Eassa Caoide and Cathair na nIarla, these floodplains do not represent extensive areas suitable for mass assemblies since they cover an area of less than 5ha combined, and they do not afford a suitable vantage point for the inauguration mound. However, they may be significant in another way. The turlough to the east of the mound is the site of two *fulachta fia*. Although these pyrolithic sites are most frequently associated with the Bronze Age, examples of similar medieval cooking spots are known on turlough floodplains (see section 4.3). The accounts of royal inauguration detailed by Giraldus Cambrensis in his *Topographia Hiberniae* show that feasting and bathing rituals formed an important part of rites of inauguration in some parts of Ireland into the 12<sup>th</sup> century (O'Meara 1982, 110) and it may be suggested that the presence of these monuments could be linked to the holding of inauguration ceremonies at this location. Thus, the selection of Madh Adhair as a suitable venue for inauguration involved not just a suitable amphitheatre and sepulchral monument, but incorporated the wider landscape including the flooding regime. The mound was approached from the west via the causeway, and from the summit the en-kinging ceremony could be viewed by a large crowd in attendance. The dry floodplain with a high groundwater table would have served as an excellent location for all of the practices associated with kinship ritual at Magh Adhair.

Throughout this section, there has been a clear association of seasonal assembly on turlough floodplains with late summer and in particular, the festival of *Lughnasa*. The association of assembly at elevated places, springs and larger water-sides, with the bounteous festival of *Lughnasa* traditionally celebrated in August, is well documented (MacNeill 1962). It is during this time of year that turlough floodplains most frequently offered a suitable venue for assembly. The rich sward of growth after the hydro-period is symbolic of the fecundity of harvest. Frequently, the swimming of cattle and horses occurred at these assemblies (*ibid.*, 243), with the practice being documented by Piers (1682, 121) at Lough Owel in Co. Westmeath in the late 17<sup>th</sup> century. The practice of swimming livestock was believed to render the animals healthy during the remainder of the year, with the tradition being documented at other locations including Lough Bane<sup>63</sup> and Glen Lake (also in Co. Westmeath), Lough Chill Eascragh in Co. Galway, and Loughkeeran in Co. Mayo (MacNeill 1962).

Some turlough sites often retain water year round, and so they may be considered suitable sites for the swimming of animals. At the small turlough of Loughkeeran (Fig. 8.6) where animals swam on ‘Garland Sunday’ (*ibid.*, 252), the last Sunday in July, the First Edition Ordnance Survey map shows a fair-green marked to the south-west of the site. It is known that a fair was often held in close association with height-assemblies, either on the Saturday before the assembly or on some nearby day (*ibid.*) and it can be conjectured that a similar custom could be associated with watery sites. MacNeill (*ibid.*, 67) notes that on the Connacht plain where many low-lying assembly sites are found, there is a paucity of heights and this may account for the break-away from the traditional association of assembly at sites with commanding views. These celebrations were a scene of much excitement and celebration which MacNeill (*ibid.*, 69) suggests was stimulated by the prospect of attaining and consuming the fecundity of the harvest during popular assembly at a traditional site.

---

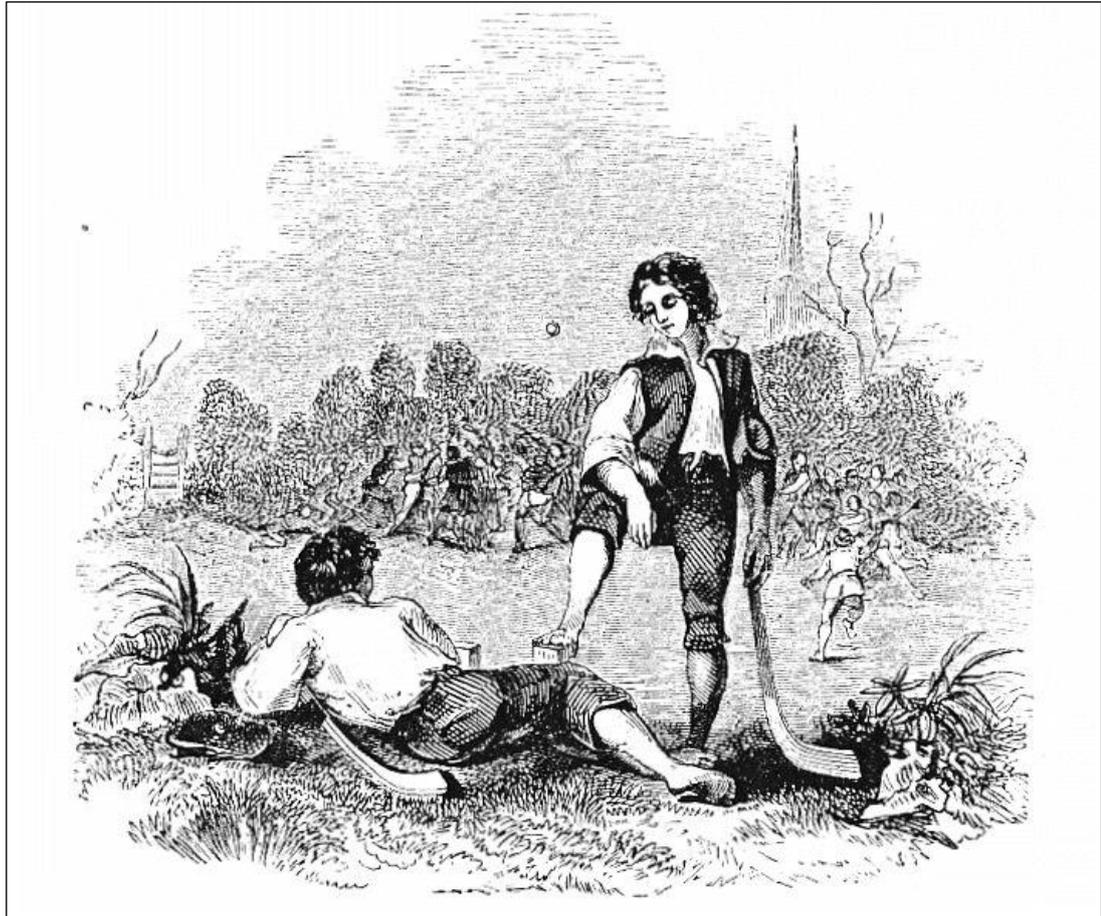
<sup>63</sup> Piers (1682) has included a tentative note that this lake was remarkable in that it was at its lowest during the winter months when other waters were at their fullest, and rose to its highest at midsummer when it attained an extra 18ft. in depth until about Michaelmas.



**Fig. 8.6** The First Edition Ordnance Survey sheet showing Loughkeeraun, Co. Mayo, a pond with a small floodplain beside an associated fair-green. The floodplain may represent a small, unrecorded turlough. Patrons' or 'patterns', were held here on 'Garland Sunday' (the last Sunday in July), 'Lady Day' (August 15<sup>th</sup>), and on the feast day of St. Ciarán on the 9<sup>th</sup> of September.

### 8.3 Sports, ball games and horse-racing on turlough floodplains

The traditions and associations of communal assembly in these spaces remained part of the phenomenological experience of turlough environs for rural communities long after the collapse of Gaelic formal institutions in the 17<sup>th</sup> century. Apart from the use of turloughs as fair greens, the principal manifestation of this continuity takes the form of horse-racing and ball-games on their floodplains. Not surprisingly, these practices can sometimes be shown to have been associated with fairs and the fair-green. This is no doubt a reflection of the encultured understanding and experience of these seasonal spaces and the resulting fair-green that appeared in summer months which served as a natural amphitheatre for various communal activities in the past.



**Fig. 8.7** A depiction of a game of hurling in Connemara, Co. Galway in the mid-19<sup>th</sup> century (after Hall 1853, 77)

The earliest legal reference to hurling in the *Senchas Mór* refers to a playing area, the *faithche* or *cluiche-mhá* (sports-field). The 12<sup>th</sup>-century recension of the *Táin Bó Cuailgne* contained in *Lebor na hUidre* describes hurling matches in the vicinity of Emhain Macha. O’Sullivan (1998 (b), 33) has suggested that such arenas may well have been an integral element of the royal landscape as part of the annual *óenach* or tribal assembly. Before 1200, there is evidence for particular emphasis on participation in the sport known as *camán*, in literature of a Leinster background, and a particular association of these games with the festival of *Lughnasa* in that area (Ó Maolfabhail 1973, ix). Consistently, hurling took place on the *cluiche-mhá* or the *faithche* adjacent to an important dwelling and in view of the resident king (*ibid.*, 10). Ó Maolfabhail (*ibid.*, 7) notes that in *Leabhar Gabhála Éireann*, Lugh is credited with being the first to bring the chess game, the ball, the horse whip and the fair to Ireland, with Lugh being clearly associated with games and sport. The sport

continued to be associated with communality as attested in this later 17<sup>th</sup> century reference;

‘The Irish... . . . common sort meet often times in great numbers in plain, meadows or ground to recreate themselves at a play called Bandy, with balls and crooked sticks’ - *anon.* (1673 cited in Ó Maolfabhail 1973, 21)

The game of *horlinge* is referred to in the Statutes of Kilkenny in 1366 and the laws made against it may have been intended, not just for those of Gaelic Irish descent, but also those of Anglo-Norman stock (*ibid.*, 12). Similarly, in 1527 a statute issued by the Mayor and corporation of Galway decreed that the playing of hurling was to be discouraged by a fine of 8d. (*ibid.*, 14). Seventeenth-and-18<sup>th</sup> century accounts of hurling mention, or imply, public grounds such as fair grounds or commons as venues of play. Ó Maolfabhail (*ibid.*, 121) suggests that the location of these grounds within a territory was important, being situated in relatively neutral locations between two neighbouring territories. We find comparative evidence for this from the location of Gurraun’s race-course, north-east of Tuam in Co. Galway where horse-racing took place from at least the mid-18<sup>th</sup> century. This place of sport was located on the commonage of a turlough floodplain situated on the border between the baronies of Clare and Dunmore. Eighteenth-century newspaper notices make reference to hurling matches taking place on ‘commons’ throughout Leinster (O’Sullivan 1998 (b), 32). However, the importance of a neutral location or venue for play is once again evident, with an account by an English commentator in 1698 describing a game on the Dublin/Kildare border. It is mentioned that matches here were played between parishes or baronies with teams of 10, 12 or 20 men, on a level plain between two goals set 200-300 yards apart (Dunton 1698, 91-2). It is clear that a large open field was needed for these games, with seashores frequently being utilised as places of sport, along with clear, grassy plains. However, although hurling was popular in many parts of Ireland, contemporary accounts of the sport in the early modern period suggest the game lacked formal rules and that there were significant regional variations in play. In the mid-19<sup>th</sup> century Hall, (1853, 77-8) observed a game in Connemara and noted it as the ‘game *par excellence* of the peasantry... . . . the object is for each party to endeavour to drive the ball through the wicket of his opponent; parties sometimes numbering 50 or 60 a side’. Hall’s depiction of the

game (Fig. 8.7) shows a level playing pitch with a significant number of players in attendance. Once again it is clear that participation in the game was popular amongst the community and that large open areas were required for the sport. Dunton (1698, 92) notes a playing field in Kildare as 'a very large plain, the barer of grass, the better'. One late 18<sup>th</sup>-century traveller to Ireland noted a game of hurling on a turlough in Co. Galway. De Montbret observed that the games began in August, the time of year traditionally associated with the *óenach*, *Lughnasa* and the assembly of communities, and throughout the account there is a clear association with festivity and merriment:

In August hurling begins to be played. Each team is divided into three divisions. *l'arriere*, or 'back', guards the goal and seeks to stop the ball from passing through; another group is in front to prevent the enemy's ball from coming back from that end, that is the middle; the third, called the 'whip' is *sur le terrain*. The game of hurling 'Behare'; the place where they play 'turlagh'. The ball is of cow's hair very compact and covered with leather. The spectators are on the ground round about, the majority dancing. 'Drunk as a piper' is a saying here. The sides are distinguished by the colour of their caps. It is terrifying to see the way they rush against each other to force the ball to pass under the goal. - Coquebert de Montbret 1791 (cited in Ní Chinnéide 1952, 11).

Closely linked to the playing of hurling and mass assemblies on turlough floodplains is the practice of horse-racing on the summer sward of seasonal lakes. The practice is well documented in the early modern period and has a definite identifiable continuity in a landscape setting. To date, a study of the physical landscape of horse-racing in Ireland has not been undertaken. Feehan (2002, 7) notes that in Irish lore, no forest or furze or heather should grow on this place of assembly and that the area was invariably clear of vegetation. These conditions are typical of turlough floodplains with turlough basins being generally flat or bowl-shaped, clear of vegetation, with larger floodplains being well suited to horse-racing. Comparisons may be drawn between the sites and landscapes of horse-racing in Scotland before 1860 as examined by Burnett (1998), and those in Ireland that may mirror the Scottish examples. In Scotland, much of the horse-racing was in the form of parish or burgh races which leave little trace in the historical record, partly because they were incidental to the main purpose of the day on which they were held; an annual fair

which had its origins in a religious feast (*ibid.*, 57). These local meetings took place in many areas of lowland Scotland. In the 18<sup>th</sup> and early 19<sup>th</sup> century, parish horse-races were quite common, with evidence pointing to the race being added to a pre-reformation fair. Thus, the Lammas Fair at Inverkeithing in Fife had its race, as did St. Patrick's Fair at Kirkpatrick-Durham in Dumfriesshire (*ibid.*, 61). During this period, the most important horse races in Scotland were on Leith sands, two miles from Edinburgh. The fact that the races were held on the sands is itself significant. The beach was often the only large area of flat ground which was available to a village or parish and it was a recognised place for communal activity.

### 8.3.1 Horse racing on turlough floodplains

Horse-racing was an essential part of early medieval *óenaigh*. MacNeill (1962, 344) relates a poem attributed to the poet *Guair*, which celebrates Óenach Life and details horse races run on the Green of Muiridh's sons at the Festival of *Lughnasa*. MacNeill (*ibid.*, 348) suggests that most of the *óenaigh* mentioned in early literature were *Lughnasa* assemblies although the time of year at which they were held is rarely mentioned. Ball-games and horse-racing are frequently referred to in this literature. O'Curry (1873, 343-5) provides a translation of a now lost text which notes the king of Connaught holding the games of *Lughnasa* at Cruachan, the traditional capital of that province. A vivid description of early Irish horse-racing is found in *Immram Curaig Maíle Dúin*, (Stokes 1889, 452-92) a text that survives in 10<sup>th</sup> -century fragments of *Lebor na hUidre* and the *Yellow Book of Lecan*. This text identifies the horse-racing venue as a green:

When the voyagers had gone a short distance from land they saw many people by the island shore who held a horse-race after reaching the green.

Toponymic evidence alone indicates that turlough lands were occasionally associated with horse-racing. Turlough na gCapall (Ghort na gCapall)<sup>64</sup> in the townland of Kilmurvey, Co. Galway has a clear equestrian association, although there is no record of horse-racing taking place at this turlough. The minor place-name of Turlough Cappul is also noted on the First Edition Ordnance Survey map in the

---

<sup>64</sup> <http://www.logainm.ie/1398690.aspx> 'Turlough of the Horses'

townland of Eskeromullacaun, Co. Galway. At a turlough in the townland of Carrowneany (Ceathramhadh an aonaigh)<sup>65</sup> there is clear association between the *áonach*, a fair, (or possibly an earlier *óenach*) and by inference, horse-racing.

In addition, cartographic evidence shows that turlough lands were often favoured as places of sport, particularly horse-racing, with the majority of this evidence dating to the 18<sup>th</sup> and 19<sup>th</sup> century. Fig. 8.1 shows the aforementioned Gurrauns race-course on Gurrauns Turlough, north-east of Tuam in Co. Galway. The outline of the race track is clearly marked on Larkin's 1812 Grand Jury map of Galway (Fig. 8.1) and the course is likely to have been in existence from at least the early 18<sup>th</sup> century (Hyland 2008, 39). The place-name element *garrán* can be associated with the keeping of horses and the townland name Garrauns which appears on Petty's 1685 *Hiberniae Delineatio* suggests that this area had a long-standing equestrian association. Another townland named 'Garraun' is situated at the south-western end of Rahasane Turlough in Co. Galway, the site recorded in the racing calendar of 1828 (Weatherby 1829) for the Rahasane horse-races.

In 1727, the first racing calendar was issued by John Cheny of Arundel. However, it was not until 1741 that Irish race meetings were included in these annual racing calendars which documented the preceding and forthcoming year's events including places of sport. These calendars provide a valuable documentary source for the location of many race-meetings in Ireland in the 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup> centuries.

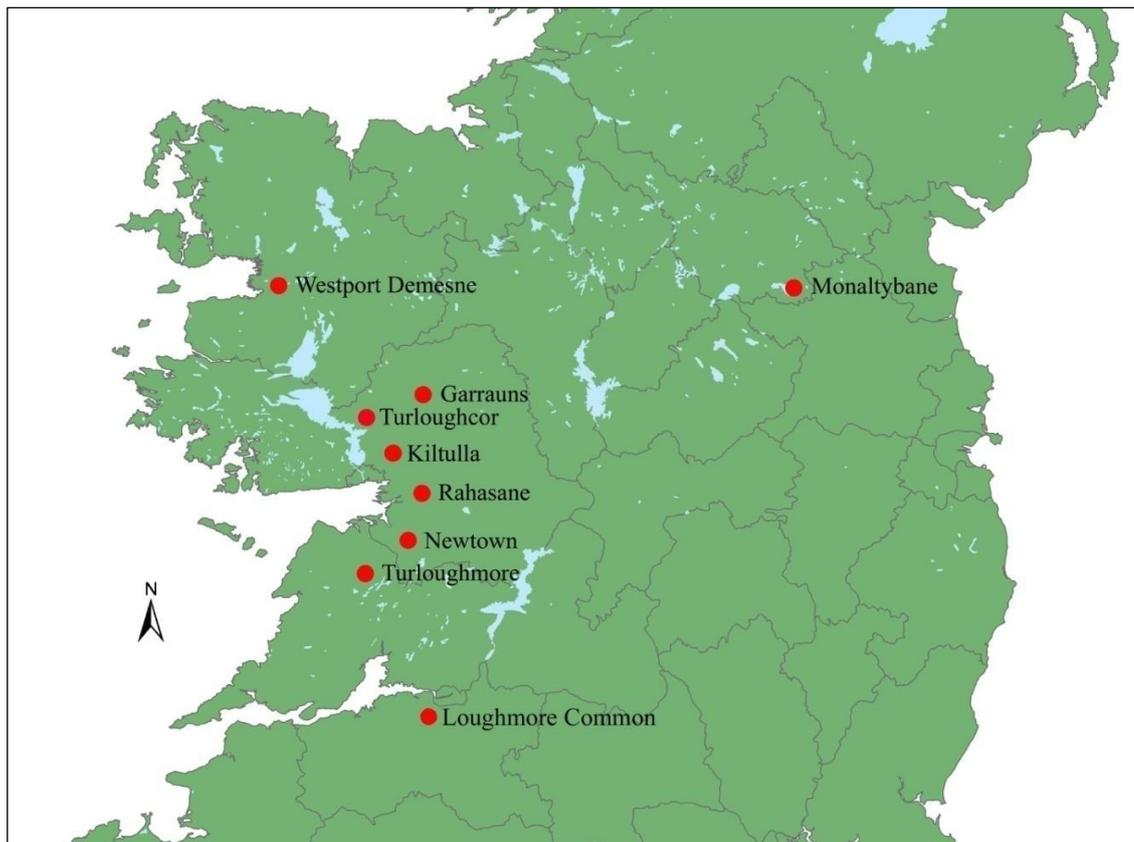
Sweeney *et al.* (2002) have compiled a comprehensive guide to the Irish turf for the years 1501 to 2001, with much of the information pertaining to horse-racing from the 18<sup>th</sup> century onwards, gleaned from these racing calendars. This guide notes the location of the majority of popular race-courses in Ireland through the early modern period. The guide may be considered largely comprehensive in listing large or popular race-meetings. However, like the parish or burgh races held in Scotland during the same period, many local races in Ireland remained unrecorded through these years. Smaller, less prestigious meetings, such as the Headford Races<sup>66</sup> and

---

<sup>65</sup> <http://www.logainm.ie/19109.aspx> 'Quarter of the fair or market'

<sup>66</sup> *The Tuam Herald*, dated June 25<sup>th</sup>, 1842 contains a notice for a two-day race meeting in Headford, Co. Galway

Kinvara Races<sup>67</sup> in Co. Galway, were only advertised locally, if at all, and often did not attract the attention of the racing calendar. The precise site of many of these race-courses is not known outside of folk memory. At Turloughcor in Co. Galway, the race-course that existed there is not documented and is only known from local memory, with races being held on this site into the 1950s. However, although many local races may have gone unrecorded through these years, a total of 9 examples of turlough horse-racing courses can be identified from both documentary and cartographic sources (Fig. 8.8). It is possible that this figure may be augmented in the future through historical research at a local level.



**Fig. 8.8** A distribution compiled for this study, of documented horse-racing courses that occurred on turlough floodplains in the 18<sup>th</sup> and 19<sup>th</sup> centuries.

The annual racing calendar for 1741 named 11 race courses in Ireland including 3 on turlough floodplains - Tuam,<sup>68</sup> Co. Galway, Turloughmore in Co. Clare, and

<sup>67</sup> A one-day race-meeting is advertised in the *Loughrea Illustrated Journal* for July 1873 in Kinvara, Co. Galway

<sup>68</sup> Lewis (1838,646) makes the following note regarding Gurrauns Race-Course; *The principal sources of recreation are... ..races are held annually about the 1st of September on an excellent*

Limerick Race-course<sup>69</sup> (Sweeney *et al.* 2002). Between the years 1751 and 1869, some 21 documented race-courses held races in Co. Galway with 5 of these courses being situated on floodplains. Spellissy (1999, 248) notes that the earliest Galway races were held until 1867 at Kiltulla, east of Galway. The site of this race-course was almost certainly the large, 40.5 ha turlough in this townland (Pl. 8.4), as Spellissy notes that the races were not run here in 1868 because of flooding.



**Pl. 8.4** A vertical aerial photo of the turlough at Kiltulla, Co. Galway, the original site of the Galway races in the early 19<sup>th</sup> century (Image source: Google Earth).

The popularity of these meetings is attested in contemporary records for the first racing festival held at Ballybrit in August 1869, with some 40,000 spectators in attendance. To cater for the crowds who arrived into the city in the lead up to the

---

*course about a mile from the town [Tuam], called Gurrans Turlogh, which is in winter overflowed with water, forming a considerable lake*

<sup>69</sup> Lewis' Topographical Dictionary (1837, 417) contains the following entry for Loughmore, Co. Limerick; *Near the church is a turlough of about 42 acres, called Loughmore, which in winter is an entire sheet of water, and in summer a fine common.* The OS sheet for the area marks the line of a horse-racing course in this townland at the time (see Appendix 4).

festival, the public park area in Eyre Square was set up as a campsite (*ibid.*, 139). As a response to the popularity of these assemblies, many smaller race-courses were temporarily marked out for summer events on suitable commonage, estate-lands or other open areas, such as strands. According to the published racing calendars (Sweeney 2002), race-courses on turlough floodplains in Co. Galway included; Rahasane Turlough (races held in 1828), Bermingham Hunt (1861), Gurrauns race-course near Tuam (c.1754-1973), Newtown Race Course near Gort (1751-1916), and Kiltulla (before 1867). Outside of Galway, turlough race-courses included Westport Demesne, Co. Mayo (1809-1900), Turloughmore, Co. Clare (1864-1882) and Loughmore Common, Co. Limerick (1751). Although not documented in the racing calendars, references dating from the mid-19<sup>th</sup> century identify the Carrickmacross Races in Co. Monaghan with the site of a floodplain in the townland of Monaltybane (Hunter 1869, 214). Many local fairs that were often held in late summer also included associated horse-racing such as at Turloughmore in Co. Galway (Dutton 1824, 50).

Beyond their use as race courses, Lewis (1837, 166) noted that in the parish of Cummer in Co. Galway, ‘there are numerous turloughs, which are navigable for lighters in the winter months, but are dry in summer, when they afford excellent pasture and good training ground for race-horses’. The tradition of smaller race-meets continues today although there are no known race-courses still in existence on turlough floodplains. This reflects the effects of extensive drainage programmes in recent centuries and the subsequent subdivision of almost all examples of large turlough floodplains.

#### **8.4 Summary and conclusions**

This chapter has demonstrated the association of turlough floodplains with the seasonal, communal and symbolic assembly of population groups through time at particular locations in the Irish landscape. The association is largely thematic and many of its manifestations reflect continuity in ritual and social practices through multiple cultural layers and contexts, although the choice of landscape setting for these practices displays continuity in many instances. It has been shown here that the seasonal element of this association is frequently linked with celebration, harvest and the festival of *Lughnasa* as a symbol of the rewards of the hard work of the

preceding months, and that the turlough floodplain as a choice of venue for the celebration of that time of year was fitting. Not only did these floodplains serve as excellent assembly places for the wider community, the seasonal sward of the turlough floodplain also reflected the bounty and fecundity of the harvest. Many of the traditions and customs associated with the phenomenon of assembly on turlough floodplains overlap, or display a continuity of the phenomenological experience of these seasonal floodplains over an extended time period and through multiple cultural layers and contexts. Thus, the distinguishing characteristic of this experience is centred on the seasonal availability of these distinctive expanses of space which served as a suitable venue or natural amphitheatre for assembly, being both environmentally and symbolically apt. It can be seen that many of the elements of the early *óenach* celebrated during the medieval period, such as the racing of horses or the playing of field-games on the turlough floodplain, continued to be associated with these seasonal spaces into the early modern period. Similarly, the holding of fairs on the summer grasslands in the early modern period reflects the association of shared space and the gathering of populations on what were often communal grounds. Regardless of the purposes of these gatherings, it is the use and re-use of a specific, shared, interactive space and environment that is significant to the understanding of the phenomenological experience of turlough environments.

The evidence for communal assembly on turlough floodplains shows that a floodplain landscape-setting in conjunction with other archaeological, documentary and place-name evidence can be indicators of an *óenach* or inauguration site that has not been historically documented. It is proposed that these spaces are symbolic of kinship or territorial unity, often serving as meeting places and places of exchange and social interaction through time. As suggested by Van De Noort and O'Sullivan (2006, 63), it is important not to separate ritual and non-ritual aspects of landscapes. It has been demonstrated here that turlough landscapes were understood and used both as a subsistence resource and as a symbolic place of assembly.

## **Chapter 9 – The cognitive landscape, management and natural symbiosis; human engagement with turlough landscapes in the past**

### **9.0 Introduction**

This chapter discusses the evidence presented in this study, for human engagement with turlough landscapes in historical Ireland. It has been shown in this thesis, that in areas where turloughs occur, past communities engaged directly with seasonal flooding regimes in order to exploit the natural resources that they presented, both in activities of basic sustenance, and as landscapes of social importance with a specific social role. This engagement was most often symbiotic in form, with settlement strategies and forms reflecting a preference for natural symbiotic engagement with the flooding regimes, over intense management and manipulation of these dynamic landscapes.

This chapter will discuss the evidence presented for the selection of turlough floodplains as desirable areas for settlement and exploitation, and the nature of that settlement and exploitation. This chapter will also discuss the position of turlough floodplains in the cognitive landscape of past populations.

The primary aim of this thesis has been to investigate human interaction with the dynamic flooding regimes of turloughs through archaeological, historical, toponymic and folklore sources, and to identify evidence for their management and manipulation by communities in Ireland. Among the aims and objectives of this research was the determination of the importance of these environments as valued and significant resources over time. A multi-disciplinary approach was used to identify the important relationship between physical environment and society in the context of a pulsing hydrological regime. Both the physical and cognitive landscapes were explored using archaeological landscape theory, the theories of humanistic geographies, and the theoretical models associated with historical archaeology, which seek to combine traditional archaeological methodologies with the information gained from recorded contemporary human narratives. This approach allowed for a fuller understanding of turlough landscapes, peopling those landscapes and

interpreting their past significance to communities as places of both subsistence value, and as landscapes that accumulated significance and meaning through time. It has been shown that turloughs and their unique physiographic features have been used as a significant natural resource from an early time, and have frequently served as a focal point for human activity. Fisheries and seasonal grazing pastures, the main natural resources of turloughs were exploited by communities in the past. Other evidence shows that these floodplains were also exploited as suitable venues for a variety of ritual and social practices in multiple time periods. The recognition of turlough floodplains as important settings for seasonal, communal, and symbolic assembly of population groups through time has been a particularly important finding of this research and identifies them as places for ritual activity as well as a resourceful and valued natural habitat.

The data and findings of this research can now be explored in a broader international context, under the themes of taskscapes, symbiotic settlement, and cognitive landscapes, as a contribution to the wetland studies. Chapter 2 has outlined the theoretical approaches used in this thesis to interpret the data presented throughout. These include the theoretical models associated with archaeological landscape theory, human geography, and historical archaeology. Those theoretical models associated with archaeological landscape theory and human geography frequently emphasise the fact that environment has an influence on human activity, and stress the environmental attributes of the physical landscape, with cultural activity being viewed in relation to a specific environmental context (Gkiasta 2008, 9). This study has used these models to show that evidence for human settlement in turlough environments frequently reflected a symbiotic relationship with the turlough landscape without intense manipulation of flood lands. This low-impact engagement between the turlough landscape and those who settled there provided the conditions necessary for the continued existence of both a agriculturally productive settlement strategy, and the natural flooding regime. This symbiotic settlement strategy was prevalent in turlough landscapes, in most cases, until the 19<sup>th</sup> century in Ireland, and differs from the intense management strategies that were more common in Britain and many parts of Europe particularly from the 12<sup>th</sup> century onward. While in Britain and Europe, intense and extensive reclamation and management projects were undertaken on floodplains, marginal, and unproductive

lands, no such land management or reclamation projects can be identified on turlough floodplains in Ireland until the early modern period.

### **9.1 Turloughs as Taskscapes**

In Chapter 6 of this thesis, the past use of turloughs as a natural resource, and the concept of turloughs as taskscapes were explored. The turlough as a ‘taskscape’ is defined as a landscape of related activities that had significant economic uses and benefits, and formed part of the landscape or medium, within which the routine activities of past communities were carried out. Defined in this manner, the direct engagement of past communities with the landscape can be identified through the physical archaeological evidence for past activity in the landscape. These included the grazing of the lush turlough floodplain, the construction of fishing engines in suitable topographical and hydrological locations, and the hunting of wild fowl for which turloughs are a natural habitat.

Previous views of these landscapes as physically marginal lands are challenged by identifying the turlough floodplain as a resourceful taskscape. The concept of margin can be conceived in an ecological, spatial, social, economical, political or cultural way. When it is applied to the rural landscape, it is in a reductive sense: lands of low agricultural output and the periphery (Burri 2014, 8). Through the historic period there is evidence from a variety of sources to indicate that these landscapes played an important and versatile role in the lifeways of local communities. Turloughs offer many of the natural resources that are characteristic of both dry-lands and riverine environments. Turlough floodplains, as ephemeral environments that fluctuate and change seasonally, require a symbiotic relationship with the communities that settled and exploited those landscapes. Under the broad theme of taskscapes, clear evidence can be found for the purposeful, informed, and symbiotic exploitation of the natural resources presented by these landscapes. This focused view and valuation of landscape from the metric of productivity has also been prevalent elsewhere; mainstream literature on prehistoric farming in Britain has, until more recently, focused on arable productivity (Fowler 1983; Mercer 1981) and neglects the circumstance that Britain, like Ireland, has a climate and landscape traditionally much better suited to animal husbandry (Pryor 2001, 415).

Evidence is presented here to show that turloughs were important as areas for fishing and fowling, and as a strategic grazing resource.

Turloughs provide a natural habitat for a variety of animal and fish species through the winter months and they are important winterfeeding grounds for wildfowl that benefit from the full vegetation cover under what is frequently shallow water. Identifying specific instances of turloughs being used as hunting grounds is difficult, and the evidence for this comes largely from the faunal remains identified from excavations, and the occurrence of those species on turlough environments (Chapter 6). Later cartographic evidence supports this hypothesis, with numerous ‘shooting lodges’ identifiable on turloughs marked on the first edition Ordnance Survey maps. However, there are many instances of fishing engines (weirs) occurring on turlough floodplains where the hydrological situation was suitable. The earliest documented evidence for this comes, from toponymic sources at Corofin in the mid-13<sup>th</sup> century, with further documentary sources to show the continuity of this practice into the mid-19<sup>th</sup> century (section 7.5).

Importantly, the example at Corofin is one of thirteen weirs that can be identified from toponymic and cartographic sources for Turloughmore alone, and the practice was certainly widespread.

Not all turloughs provided suitable hydrological conditions for fishing engines to operate. The presence of a permanent pool or surface inflow was required. Nonetheless, nine further fishing engines could be identified from cartographic sources being located on turlough floodplains, largely concentrated in south Co. Galway where surface inflow into turloughs most frequently occurred. One surviving example could be identified and was surveyed at Garryland/Doolough Turlough in Co. Galway, where the weir utilised a narrow channel and the rising and falling levels of the turlough.

Ultimately, the presence of fishing engines on a turlough floodplain was reliant on suitable hydrological conditions, and evidence for 22 examples could be found for this study. There is great potential for many more to have existed at other locations, but for which the archaeological, cartographic, and toponymic evidence has not been

yet identified. Nonetheless, it is clear that fishing engines formed a part of the turlough landscape in some areas, and were undoubtedly an important resource. It is noteworthy that the 13<sup>th</sup> century manorial centre of Corofin was located at this important resource-rich riverine location, as was the broadly contemporary settlement centre of Grange, a Cistercian grange of the Abbey of Abbeyknockmoy.

The exploitation of turlough lands as grazing pasture, from at least the 12<sup>th</sup> century, is reflected in the *dindshenchas* poem ‘Turloch Silinde’ where the enclosure and management of the turlough for grazing is briefly described. The variety of sources that show evidence for the exploitation of turloughs as a grazing resource through the historic period have been presented in chapters 5 and 6. The ability of turlough lands to support lactating cattle has already been highlighted in section 6.1. and it is clear from both the archaeological record and written sources that cattle occupied a position of central importance during the early and high medieval periods in Ireland (Kelly 1997, 27). Although the toponymic evidence shows that in a number of cases, turlough flood-lands are associated with spring and summer grazing, it can be safely assumed that this practice was more widespread than the place-name data indicates. It is likely that the practice of grazing cattle on the spring and summer pastures of turlough floodplains is not dissimilar to that of booleying throughout post-medieval Ireland. In both cases, the availability of natural grazing resources largely dictates grazing regimes. However, place-names that refer to grazing strategies would appear to place emphasis on milk production and the nurture of young cattle (section 5.1). It is likely that the coincidence of the flooding regime with the natural birthing season for cattle was taken advantage of and that the natural availability of rich grazing lands, rich in calcium in the spring months, served as suitable lands for young calves and milk production later in the farming season (Sheehy Skeffington and Gormally 2001, 15). It is clear that these landscapes were particularly suited to the seasonal grazing regimes implemented by Gaelic populations through the medieval period. The rich grazing lands which resulted from the annual liming process were well suited to the farming practices of Gaelic populations in Ireland and particularly suited to the husbandry of livestock in the spring and summer months when the rich grasslands were available.

Chapter 7 presented evidence for seasonal grazing in the landscape of Turloughmore in Co. Galway. It is a landscape that was heavily resettled during the high and late medieval period, with the introduction of new settlers of Anglo-Norman background during the late 12<sup>th</sup> and early 13<sup>th</sup> centuries. It is during this period that new settlement forms are introduced into the Irish landscape, with a proliferation of tower houses across much of the Irish landscape, including the area of Turloughmore. It is also during this period that the reforming orders arrive and begin to settle the landscape. In both cases, we find evidence for both the monastic and Anglo-Norman communities engaging with the seasonal turlough flooding regime and utilising it as a natural resource.

At Grange, on the southern limit of Turloughmore, we find evidence for a Cistercian vaccary in operation during the high medieval period, for which the great turlough of Turloughmore played a central role. The purposeful siting of the centre of the grange adjacent to the floodplain of Turloughmore suggests that this location was beneficial to the Cistercians who settled there in the late 12<sup>th</sup> or early 13<sup>th</sup> century. The availability of summer grazing both in the scrublands to the south and along the turlough floodplain at the northern end of the townland would undoubtedly have made this site attractive to a population group seeking to exploit lands that may largely have been classed as waste or scrubland.

By the time the first Cistercian mission was sent to Ireland in 1142, the essential elements of Cistercian life had been established. Self-sufficiency was imperative and land was farmed directly, not for profit, but to serve the direct needs of the community (Stalley 1987, 13). Furthermore, it has been widely identified that Cistercian communities were prepared to accept land that had not previously been cultivated and that major sacrifices were not required from local rulers in the foundation of a Cistercian abbey. With extensive tracts of waste and forest, Ireland provided adequate potential for land clearance and new agrarian techniques (*ibid.*). The willingness of the Cistercians to accept grants of lands of lesser value was not only important in 12<sup>th</sup> century Ireland. Donkin (1963 (b), 184-6) emphasises the willingness of early generations of the order to exploit rough, undeveloped lands in Britain in the 12<sup>th</sup> century; a trait which endeared the order to many founders when it came to the important matter of endowments. Donkin (*ibid.*, 186) suggests, however,

that there was little evidence for entire granges being carved out of primeval waste. It is worth considering that 44% of all known 12<sup>th</sup>-century Cistercian granges in Yorkshire lay in territories described as 'waste' or 'largely waste' or were of relatively low value in 1086 (*ibid.*, 187). Although the grange itself invariably represented an arable holding in Britain, much of the area of the granges west of the Pennines and in Wales were bulked up by large grants of pasture and waste. These may often have represented the grazing resources of 12<sup>th</sup> and 13<sup>th</sup> century cattle stations or *vaccaries*. However, Donkin shows that both cattle and sheep were represented on these monastic pasture lands (*ibid.*, 186-9).

In the case of the grange established at Turloughmore there is no evidence for the undertaking of water management or the manipulation of the natural flooding regime there. Elsewhere in Europe, the Cistercians made strenuous efforts to modify their landscape and improve their situation (Aston 1993; Blair 2007). Meadow irrigation was certainly known by the Cistercians in Medieval France; the description of Clairvaux, written in the 12<sup>th</sup> century includes an account of how water was extracted from the River Aube to supply the monastic complex and irrigate both vegetable plots and grass (Cook *et. al.* 2003, 159). At Bolton Priory in Yorkshire in 1311, payments were made for the diverting of the waters of the Aire for the purposes of creating a water meadow there (*ibid.* 161), while at Fountains Abbey, records show the partial destruction of Cistercian water meadows by flood in 1456-7 (*ibid.*). Donkin has identified further references to pastoral water meadows associated with the Cistercian monasteries of Beaulieu, Byland, Jervaulx, Warden, St. Mary Graces, Combermere, Furness, Quarr, Holm, Cultram, Bruern, Rufford, Kingswood and Bordesley (Donkin 1978, 120). However at Grange, there was no reclamation or intense modification of the landscape, and a symbiotic, sympathetic settlement was maintained, relying on the productivity of the natural floodplain and its associated natural liming process (see chapter 3). This fact would suggest that the Cistercian community at Grange were satisfied with the natural productivity of the turlough landscape at a time when Cistercians elsewhere were establishing complex methods for improving productivity from their holdings. It may also suggest that the Cistercians of Abbeyknockmoy who controlled the grange had acquired the local traditional knowledge of the seasonality of the turlough and adapted to it.

At Annbally, to the north of Grange, a late-medieval tower house was constructed immediately adjacent to the floodplain. It is likely that portions of the settlement could be inundated by the floodwaters, as evidenced by significant earthworks that are likely to have served as flood defenses. At Annbally Castle we see the construction of what may be further flood defenses and a continuation of the theme of preference for proximity over practicality where the unique hydrographic circumstances were exploited, and the settlement site was chosen as it represented a resource-rich location.

It is known that from at least the medieval period, meadows were sometimes deliberately flooded with river water, to promote grass growth by warming the soil and enriching the ground with silt. Elaborate examples of bedworks to facilitate this inundation are known from Britain, at Alderbury and the Harnham water meadows on the River Avon (Cook, Cowan, and Tatton-Brown, 2008), the Lugg Meadow (Brian and Thompson 2002) and Salisbury (Cook 2008). However, at Turloughmore this process occurred naturally. The medieval settlements located on the periphery of the turlough do not present any evidence for large scale manipulation of the flooding regime, with preference being shown symbiotic settlement that exploited the natural productivity of the landscape - instead, communities adapted their settlements and farming activities to the natural hydrological cycle of the turlough becoming part of its seasonal fluctuation.

Through the early-modern period, and indeed, to the present day, turlough landscapes continued to be exploited as seasonal grazing resources, although many were subjected to extensive drainage programmes, particularly during the 19<sup>th</sup> and 20<sup>th</sup> centuries. Nonetheless, analysis of those turloughs recorded in the Books of Survey and Distribution in the mid-17<sup>th</sup> century, shows that turlough lands were continuously recorded as being between  $\frac{1}{3}$  and  $\frac{1}{2}$  profitable, despite being susceptible to flooding for a variable part of the year, a profitability which compares favourably with those parcels of land recorded as Bog and which varied in profitability from  $\frac{1}{30}$  to  $\frac{1}{10}$ .

## 9.2 Turloughs, adaptation and settlement

The establishment of the Manor of Corofin and the grange of Abbeyknockmoy at Turloughmore in the 13<sup>th</sup> century were investigated in Chapter 7. The fishing engines and grazing regimes established there represent sympathetic exploitation of the unique hydrological circumstances at their locations, and there is little evidence for contemporary, large scale manipulation of the wider landscape or flooding regime. Both settlements represent periods significant landscape and political reordering in Ireland with the arrival of the Anglo-Normans, and the firm establishment of the Cistercians at Abbeyknockmoy and Grange. However, an overarching theme of sympathetic adaptation in settlement forms on turlough floodplains can be identified with this period.

These themes are noteworthy when turlough landscapes are contrasted with broadly contemporary settlement of similar fenland environments at this time in Britain and approaches to settlement there. At Romney Marsh in Kent (one of the three largest areas of marshland in England), large-scale permanent settlement becomes apparent after a period of systematic reclamation and consolidation in the early 12<sup>th</sup> century (Barber 1999, 18). At the Gwent Levels (Rippon 1996), reclamation of 112 km<sup>2</sup> of estuarine alluvium began in the Roman period, with an intensification of the process under the Norman Marcher lords. Monastic houses, notably a priory on the Levels at Goldcliff, and the nearby Cistercian Tintern Abbey also played an important part (*ibid.*, xii). At the Somerset Levels (Rippon 2000) landlords such as Glastonbury Abbey viewed a potential increase in the pastoral productivity of their Brent estate from large-scale reclamation projects, to justify the costs and risks of these undertakings. However, as discussed in section 9.1, no evidence for contemporary reclamation projects of comparable scale can be found in turlough environments, and a preference for symbiotic settlement which adapted to the natural flooding regime is clear despite comparable farming being undertaken; a preliminary assessment of the assemblage of excavated bones at Romney Marsh showed a dominance of pastoral farming including cattle and sheep/goat, with animals being slaughtered mainly when mature. The slaughter of mature rather than juvenile animals is to be expected if commodities such as milk, butter, cheese and wool were important sources of income (Barber 1999, 19). These commodities also formed an important part of the turlough landscape economy, although reclamation of the turlough lands was not pursued.

This may suggest that the lush floodplains of the turlough were viewed as sufficiently productive at this time, and so symbiotic settlement and adaptation to the natural landscape was pursued.

Settlement adjacent to turlough floodplains required consideration of the ephemeral nature of these environments that fluctuate and change seasonally. Thus, settlers in these landscapes would be required to either manage or manipulated the flooding regime to some extent, or to adapt settlement forms which could accommodate the fluctuating environment. As discussed above, communities during the 12<sup>th</sup> and 13<sup>th</sup> centuries in Britain on similar, fluctuating landscapes engaged in large scale reclamation works, often to improve the productivity of holdings. However, the karstic phenomenon of turlough flooding does not occur in Britain, and so the specific productivity levels and characteristics of the turlough landscape does not have a direct comparison there. Comparisons can be made between different approaches to the settlement of a fluctuating, watery landscape were undertaken, often by the same communities such as the Anglo Normans and the Cistercian monasteries. In the case of settlement on turlough floodplains, symbiotic settlement which accommodated the natural, already productive flooding regime was preferred. This symbiosis is especially evident in the seasonal grazing of turlough lands from an early period.

Clear examples of the symbiotic relationship between people and turloughs are seen in instances of architectural adaptation to flooding regimes, particularly at the case study area of Turloughmore. Here, three individual settlements at Grange, Corofin, and Annbally, immediately adjacent to the Turloughmore floodplain, and most likely within the line of inundation. The settlement centre at Corofin most likely represents the location of a high-medieval manorial centre, with settlement at this site continuing into the late-medieval period in the form of the late-medieval tower-house. Settlement at Grange dates to the 13<sup>th</sup> century, with the tower-house there likely dating to the 15<sup>th</sup> century. Again, at Annbally we find a tower-house of likely 15<sup>th</sup> century or earlier construction. All three tower-houses are constructed in locations that were within the line of inundation for the great turlough of Turloughmore, and all three sites include a platform/plinth upon which the tower-houses are constructed. This is significant as it indicates a desire for proximity to the

turloughs and a willingness to architecturally adapt these settlements, rather than choosing higher ground further away from the turlough basin. There may be several reasons for this. In the case of Grange Castle, the settlement centre appears to have been chosen in order to take advantage of both the fishery and grazing resources available at this location. This too would appear to be the case at Corofin, where the unique hydrographic circumstances were exploited, and the manorial centre was chosen as it represented a resource-rich location. At both locations and at Annbally Castle, prior knowledge of the flooding regime is evident, and those who constructed these tower-houses incorporated raised platforms or plinths into their design. It is noteworthy that all three examples include this feature, and that all three settlement sites sought the closest proximity possible to the floodplain.

The closest comparable landscapes outside of Ireland to turloughs are the *poljes* (section 6.1) common in the Balkan states of Slovenia, Croatia and Bosnia; large, flat-floored depressions within the karst limestone that are prone to seasonal flooding, but which often retain a permanent water body. Limited settlement studies in these landscapes have primarily focused on the prehistoric periods there. Balbo *et al.* (2006) have noted two major examples of late medieval settlements at Kožljak and Kršan, Croatia erected upon protohistoric hillforts (*castellieri*) on the periphery of *Polje Čepi* floodplain (*ibid*, 2006, 117). As with turlough landscapes in Ireland, the Balkan *poljes* had remained largely unaltered by large reclamation schemes until the 20<sup>th</sup> century, being used as grazing and hay meadows, exploiting a similar natural liming process.

### **9.3 Turloughs and the cognitive landscape**

Chapter 8 of this thesis shows the association of turlough floodplains with the seasonal, communal and symbolic assembly of population groups through time. The association is largely thematic, and many of its manifestations reflect continuity in ritual and social practices through multiple cultural layers and contexts, with the choice of landscape setting for these practices also displaying continuity in many instances. It has been shown that the seasonal element of this association is frequently linked with celebration, harvest and the historical festival of *Lughnasa*, which was one of the quarterly feasts of the old Irish year (discussed in section 8.2). The association of assembly at elevated places, springs and larger water-sides, with

the bounteous festival of *Lughnasa* traditionally celebrated in August, is well documented (MacNeill 1962). It is during this time of year that turlough floodplains most frequently offered a suitable venue for assembly. Seasonal celebration of the harvest was a reward for the hard work of the preceding months, and turlough floodplains were a fitting choice of venue for the celebration of that time of year. Not only did floodplains serve as excellent assembly places for the wider community, the seasonal sward of the turlough floodplain also reflected the bounty and fecundity of the harvest.

Frequently, the swimming of cattle and horses occurred at these *Lughnasa* assemblies (*ibid.*, 243). Some turlough sites often retained water year round, and so they may be considered suitable sites for the swimming of animals. At the small turlough of Loughkeeran in Co. Mayo where animals swam on ‘Garland Sunday’ (*ibid.*, 252), the First Edition Ordnance Survey map also shows a fair-green marked to the south-west of the site. It is known that a fair was often held in close association with height-assemblies, either on the Saturday before the assembly or on some nearby day (*ibid.*) and it can be conjectured that a similar custom could be associated with watery sites (chapter 8).

The *óenach* (a seasonal assembly of a tuath or larger territory presided over by a king) was an important event in the calendar of medieval society. It encompassed political assembly, a market-fair and an occasion for festivities that were presided over by the territorial lord on royal *land* (*mruig rí*). These *óenach* venues were themselves, intrinsically tied to the cognitive landscape of Gaelic society, and the *óenach* was frequently held on an area of land identified as a *faithche* (O’Sullivan 2004, 80). The *faithche* could be described as an area either adjacent to or outside of a settlement which could be used for communal activities, an area for grazing and tillage, or communal expanses often associated with fairs, festivals and other related activities. Place-name evidence identifies some turloughs as *faithche*. The townland of Fahee North in Co. Clare includes the northern portion of Carron Turlough which represents a suitable topography in this hilly landscape for mass assembly. The townland of Fahymactibbott in Co. Galway contains Kiltiernan Turlough which is situated in close proximity to the early ecclesiastical site there.

There is further evidence to point to turloughs forming part of the landscape of assembly and inauguration in Gaelic Ireland. *Cathair na nIarla*, located at the eastern end of Dunkellin Turlough in the townland of Castlegar, Co. Galway, has been identified by FitzPatrick (2001, 365) as the likely inauguration site of the Uí Fhiachrach Aidhne and later the Meic Uilliam Uachtair or Clanricarde Burkes of Anglo-Norman. The site overlooks the former floodplain of Dunkellin turlough situated 100m to the north-west of the low hill. *Raith Eassa Caoide* in Co. Mayo is situated to the north-west of a 45 ha floodplain, and has been identified as the inauguration site of the Meic Uilliam Íochtair or Mayo Burkes documented in 1589 and 1595 (FitzPatrick 2001 (a), 228). At *Madh Adhair* in Co. Clare, the historically attested inauguration site of the Dál Cais is first noted in 982 AD when Máel Sechnaill plundered the site. *The Madh Adhair* complex comprised an inauguration mound and other notable archaeological monuments within a floodplain of the Hell River and several turlough estvelles and groundwater springs.

Many of the traditions and customs associated with the phenomenon of assembly on turlough floodplains overlap, or display a continuity of the phenomenological experience of these seasonal floodplains over an extended time period and through multiple cultural layers and contexts. Thus, the distinguishing characteristic of this experience is centered on the seasonal availability of these distinctive expanses of space that served as a suitable venue or natural amphitheatre for assembly, being both environmentally and symbolically apt. It can be seen that many of the elements of the early *óenach* or seasonal assembly at Lughnasa celebrated during the medieval period, such as the racing of horses or the playing of field-games on the turlough floodplain, continued to be associated with these seasonal spaces into the early modern period (section 8.3). Similarly, the holding of fairs on the summer grasslands in the early modern period reflects the association of shared space and the gathering of populations on what were often communal grounds. Regardless of the purposes of these gatherings, it is the use and re-use of a specific, shared, interactive space and environment that is significant to the understanding of the phenomenological experience of turlough environments.

The combination of themes of seasonal assembly, social occasion, and landscape are not unique to Ireland, and we find close comparisons between the landscape

associations of the Norse *Ping* and those of *óenach* or *airecht*, sites. In Gaelic Ireland, assembly places could be located in rocky pasture in terrain where the geology is broken (Quin 1983, 82), a topography that can be compared to of Fahee (*faithche*) North in Co. Clare. Like the setting of many *óenach* sites, *Ping* sites were also sited in topographically prominent locations that usually included megaliths, large trees or, most noteworthy, springs (Dölemeyer 2005, 260). The association of the *Ping* with markets and fairs (Mehler 2015, 70) was also possibly a feature of the *óenach* gathering. The significance of the spring or water at the *Ping* has been discussed broadly by Dölemeyer (2005), though her conclusions are speculative, suggesting that the spring serves an allegorical role for the flow of time. A precise interpretation is not possible, nonetheless, the similarity between the landscape settings of the *óenach* and *Ping* are noted, and the presence of ephemeral watery environments are acknowledged in locations such as Cathair na nIarla (Co. Galway), Raith Eassa Caoide (Co. Mayo) and Magh Adhair (Co. Clare) (see chapter 8).

There is also an association between ecclesiastical sites and turlough floodplains throughout the medieval period (see chapter 6). Muhr (1999, 207), in her treatment of water imagery in early Irish literature, notes the importance and symbolism of water to the understanding of the sacrament of baptism as a rite of passage through water. This act was often carried out in a natural pool, an aspect of the closeness to nature attributed to early Irish saints. It is possible that the siting of a number of early ecclesiastical sites in close proximity to seasonal lakes may be reflective of this. However, another view is that early ecclesiastical settlement may provide tentative evidence that these sites are further reflective of traditions of gathering at these locations. Comparisons of medieval centres can be noted in Scandinavia, at Nidaros in Norway, Gamla Uppsala in Sweden and at Lund for the coronation of Danish medieval kings (Foote and Wilson 1970, 137; Ljungkvist *et al.* 2011, 580–1). These centres incorporated important medieval cathedral churches and were connected to venues for royal gatherings and outdoor acclamation ceremonies. Shared elements include a church and an associated setting for formal presentational and law-making assemblies. Place-name evidence for traditional gathering places is present at Fahee North in Co. Clare and Fahymactibbott in Co. Galway, where early ecclesiastical settlements are also located. Eight further examples of early ecclesiastical settlements

on turlough floodplains are noted, but without any further evidence for an associated assembly place.

It can be argued that the evidence for modern communal assembly on turlough floodplains is an attenuated tradition of earlier seasonal assemblies. A floodplain landscape-setting in conjunction with other archaeological, documentary and place-name evidence can be indicators of an *óenach* or inauguration site that has not been historically documented. It is proposed that these spaces are symbolic of kinship or territorial unity, often serving as meeting places and places of exchange and social interaction through time. As suggested by Van De Noort and O'Sullivan (2006, 63), it is important not to separate ritual and non-ritual aspects of landscapes. It has been demonstrated here that turlough landscapes were understood and used both as a subsistence resource and as a symbolic place of assembly.

## Chapter 10 - Conclusions and future research

The primary aim is to investigate human interaction with the dynamic flooding regimes of turloughs through archaeological, historical, toponymic and folklore sources, and to identify evidence for their management and manipulation by communities in Ireland. Among the aims and objectives of this research is to determine the importance of these environments as valued and significant resources over time, and their role in the cognitive landscape of past communities.

This thesis demonstrates that turloughs, and their unique physiographic features, have been used as a significant natural resource from an early time, and have frequently served as a focal point for human activity. The natural resources available in these environments, which include fisheries and seasonal grazing pastures, have been exploited by those who settled these landscapes. Other evidence shows that these floodplains were also exploited as suitable venues for a variety of ritual and social practices, through multiple cultural layers and contexts. The recognition of turlough floodplains as important venues for seasonal, communal, and symbolic assembly of population groups through time has been a particularly important finding of this research and identifies these landscapes as places for ritual activity as well as a resourceful and valued natural habitat. It has been shown that sympathetic settlement and adaptation of the natural flooding regime was preferred by communities until the early modern period. A combination of cultural and economic stimuli coupled with new political structures in the late 17th century in Ireland were the basis for the progressive exploitation and manipulation of natural environments, including turloughs in the mid-19th century. Population pressures of the 18th and early 19th centuries in Ireland, and the desire to free up non-profitable lands to facilitate and profit from the rising population, were the strongest driving forces in the landscape manipulation of this period. These driving forces can be contextualised and recognised as part of a pan-global shift in the view of environment based on a nature/man dichotomy, in which beauty, as a culturally defined concept, frequently became associated with usefulness. Changing the physical character of the landscape removed pre-existing cognitive landscapes and replaced them with new ones and their new associations and values. Thus, the reclamation of the former grazing

pastures and gathering places of early, high and late medieval pastoral populations could be viewed as symbolic of the firm transition from Gaelic to colonial forms of social and economic structure, albeit that Gaelic communities would have been involved in the outcomes of these structures. Nonetheless, it must also be recognised that although many turloughs were permanently drained during this period, many more continued to be used as fair grounds and race-courses into the late 19th century, demonstrating a continuity of the cognitive associations with these landscape features.

Future research may explore the themes of sympathetic and symbiotic settlement internationally in other flood plain settings landscape contexts to develop a template for the phenomenon. These themes may also be explored in other landscape contexts to identify and develop a greater understanding of complimentary settlement of the historical landscape.