Ecclesiastical Landscapes in Medieval Europe

An archaeological perspective

edited by

José C. Sánchez-Pardo, Emmet H. Marron and Maria Crîngaci Țiplic

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Cover image: Romanesque church in Cincu, southern Transylvania, and the surrounding landscape. Photo: Maria Crîngaci Țiplic, 2010.

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Contents

Introduction: Towards an Archaeological Study of Medieval Ecclesiastical Landscapes in Europe 1
José Carlos Sánchez-Pardo, Emmet H. Marron and Maria Crîngaci Țiplic

FIRST PART: ECCLESIASTICAL TOPOGRAPHIES

1. Lesser Churches, Kin-groups and Communities in the Early Middle Ages: Archaeological Evidence from Corcu Duibne, Ireland 7
Tomás Ó Carragáin

2. By Land and Sea: Medieval Places and Ways of Faith in the Isle of Man 23
Andrew Johnson

3. The Late Antique Ecclesiastical Settlement of Los Hitos and the Rural Landscapes of the Visigoth Capital (Toledo, Spain) 39
Isabel Sánchez Ramos and Jorge Morín de Pablos

4. Landscapes of Christianisation. The Emergence and Evolution of Church Power in the Tuscan Countryside During Late Antiquity and the Early Middle Ages 52
Gabriele Castiglia, Stefano Bertoldi and Cristina Menghini

5. Christianization and Transformation of Religious Landscape in (West) Bohemia 66
Martin Čechura

6. The Rise of the Parish System in Transylvania as Reflected by the Archaeological Discoveries 79
Maria Crîngaci Țiplic

7. Architectural Interferences in Medieval Transylvania (13th–15th Centuries): the Archaeology of Orthodox Churches in a Catholic Landscape 94
Daniela Marcu Istrate

8. The Archaeology of Romanesque Churches in Transylvania (11th–13th Centuries) 107
Ioan Marian Țiplic and Maria Crîngaci Țiplic

SECOND PART: MONASTIC LANDSCAPES

9. Monastic Landscapes in the Isle of Man: Ad 1100 to 1540 123
Peter Davey

10. On the Edge: Excavations at Whitefriars, Perth, 2014-2017 139
Derek Hall

11. Cistercian Rievaulx Abbey and the 'Transformation' of King Henry II's Wasteland 148
Freya Horsfield

12. Evolution, Innovation and Symbolism in Medieval Monastic Gardens 167
James Bond

13. Ecclesiastical Landscapes in early Medieval Galicia: Physical and Symbolic Transformations 182
José Carlos Sánchez-Pardo and Marco V. García Quintela

14. Stone Building in the Alps: Müstair Monastery in its Landscape Context 197
Sophie Hüglin and Patrick Cassitti

15. Rural Monasteries and Wilderness in Carolingian Northern Italy: Forest, Water and Ecclesiastical Landscapes 216
Marco Panato

16. Similarities and Differences of a Benedictine and a Cistercian Abbey as Reflected in the Landscape. Beginnings for a Comparative Approach 230
Ünige Bencze

Cistercian Rievaulx Abbey and the 'Transformation' of King Henry II's Wasteland

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Abstract

Based on interdisciplinary research, the physical transformation of one of the few Cistercian granges in England thought to have been founded entirely on 'waste' land is being reassessed. Rievaulx Abbey's reclamation of the land given to the monastery by King Henry II may have been only one chapter in the exploitation and adaptation of this water-rich land. This investigation suggests complex relationships between cultural factors and land husbandry which go beyond the traditional 'estates and economy' model of monastic landscapes.

Keywords

Cistercian landscape, medieval transformation, reclamation, contextualisation, complexity.

Brief biography

Freya Horsfield is a landscape researcher based in the Department of Archaeology, Durham University.

Introduction

'The impact of medieval monasticism upon the landscape has generally been underestimated'
(Bond 2000:63).

Background

From its beginnings in 11th century Burgundy (France), the Cistercian monastic order flourished across Europe (Burton and Kerr 2011: 43). Cistercianism left a physical imprint on the medieval world in its art, artefacts and the architecture of elite buildings at the monastic nucleus. Yet landscape was vitally important to Cistercian monasteries also. Landholdings were essential sources of material support for all monasteries. Further, Cistercian leaders, such as St Bernard of Clairvaux, emphasised physical endeavour in the natural world as spiritually important (Burton and Kerr 2011; Holdsworth 1973). Contemporaries such as Walter Map satirically commented on the Cistercian reputation for 'transformation' of land from 'waste' (Sinex 2002). This reputation may have been somewhat over-stated (Bond 2004: 71) yet few examples of Cistercian landscape transformation have been empirically investigated.

Landscape investigation beyond the monastic nucleus presents challenges. The research object is extensive, complex, and anachronistically defined by research traditions. The distinction between the activities within and beyond the precinct, whereby the former is typically considered in spiritual terms, and the latter in solely economic, would have made little sense to a 12th century Cistercian monk or a lay patron. Land given to a Christian monastery was managed within a worldview in which intangible factors such as religious beliefs played roles which are challenging for modern research to access. Space within the monastic nucleus is now understood as culturally coded (Cassidy-Welch 2001; Gilchrist 1994). Is it also possible to discern cultural factors other than the economic in monastic land beyond the precinct?

Case study: Rievaulx Abbey and Pickering Marishes

Research is accordingly being conducted on landscape associated with Rievaulx Abbey. Rievaulx was founded in AD 1131-1132 and was the first house in the British Isles founded directly from Clairvaux, and only the third in Britain after Waverley (Surrey, 1128) and Tintern (Monmouthshire, 1131) (Jamroziak 2005). The charismatic buildings at Rievaulx's monastic nucleus have received substantial attention (Fergusson and Harrison 1999) and attract thousands of visitors a year. Yet the extensive land and interests acquired by the abbey across Northern England (Burton 1998) has attracted much less consideration. This is regrettable, as will be shown by the case study reported here of the abbey's estate near Pickering (North Yorkshire) (Figure 1), the relationship between the monastery and its landscape suggest factors which go beyond the well-established 'estates and economy' model.

Rievaulx's Pickering lands are significant for several reasons. In 1157-8, shortly after becoming king of England, Henry II directed the local officials to survey

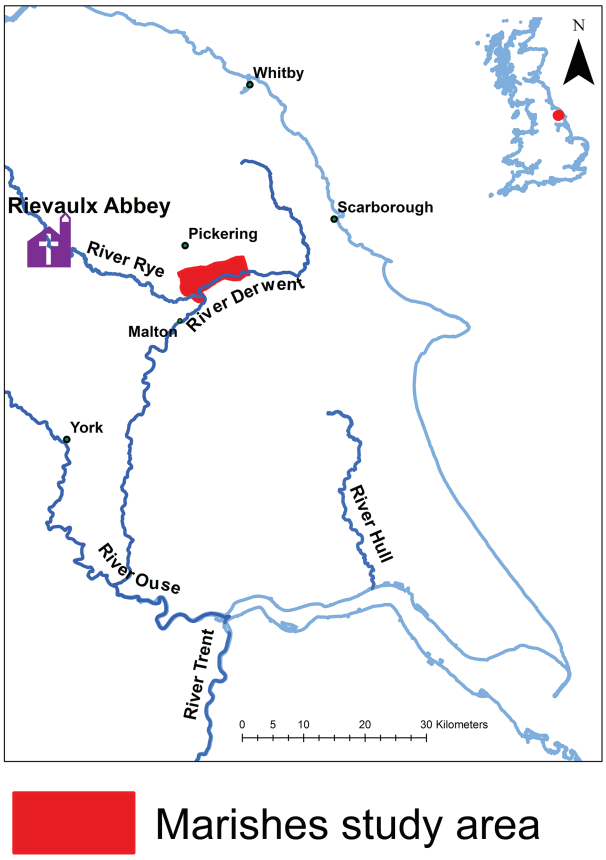

Figure 1. Location of Pickering Marishes. Contains OS data. © Crown copyright and database right 2019.

his land south of Pickering, declared the land 'waste' and gave it to Rievaulx Abbey (Table 1). The Pickering 'waste' thus became the only land gift made to the abbey by an English monarch as recorded in the abbey's 12th-century cartulary. The Pickering land was viewed by Rievaulx itself as significant, the documents being grouped together in this early cartulary. Further, Donkin's seminal study of Cistercian settlement and estates in England and Wales suggested the Pickering estate was one of the few examples of a Cistercian grange (monastic farm) founded entirely on 'new' land, most other Cistercian granges in England and Wales having been established on land which had been previously occupied at least in part (Donkin 1978:58-60).

Methods

Rievaulx's transformation of landscape south of Pickering was investigated using an innovative suite of research methods integrating quantitative and qualitative data. As the focus of research was on the management of water at field-scale, the overall study area was defined by Rievaulx's interactions with the River Derwent catchment. Study areas were nested within this. The catchment of the River Rye, encompassing the monastic nucleus, formed one study area and will be reported separately. The study reported here focussed on the floodplain confluence of the River Derwent and River Rye in the Vale of Pickering. A hydrological model created from lidar (light detection and ranging) elevation and earth science data helped reconstruct the broad geological developments and basin hydrology of the Vale. Nested within this was a study of Pickering Marishes. This study extent enclosed the modern-day routes of the watercourses mentioned in King Henry's donation documents with a buffer area to account for post-12th century shifts in watercourses. Soil data, documents and historic maps helped reconstruct other details.

Politics and religion in Pickering Marishes in 11th and 12th century Yorkshire

Henry II and the Pickering Marish 'waste'

In editing Rievaulx's cartulary for the Surtees Society, John Atkinson commented that the Pickering waste boundary was 'beset with manifold difficulties and perplexities' (Atkinson 1889: 136). King Henry II's documents (Table 1) state the boundaries of the waste in terms of watercourses, most of which can still be traced on historic maps, including Allerston Beck, River Derwent, River Rye and Costa Beck. The northern extent presents difficulty. The definitional watercourse, known in the cartulary as *Tacriueling* or variants, apparently meets Costa Beck at one location and *fossatum monachorum* at another, but may have vanished from mapping since the 12th century, or been diverted into the complex drainage network of this low-lying land. The broad location of the Pickering waste is however sufficiently clear to permit investigation into the state of the land when it was given to Rievaulx (Figure 2). This land is termed here Pickering Marishes, applied to a somewhat more extensive area than the modern-day settlement of Marishes.

Pickering Marishes: pre-Cistercian state

The physical state of the Pickering lands when these came to Rievaulx is crucial to the question of 'transformation' by the monastery. No archaeological work for periods preceding Rievaulx's occupation at this location had previously been conducted. The complex sequence of pro-and post-glacial lakes and drainage in the Vale of Pickering is poorly understood (Eddey 2018; Lincoln et al 2017). A palaeovalley has been mapped from somewhat problematic geological borehole evidence as extending eastwards from near Kirby Misperton, covered by Quaternary deposits of up to 30m in depth (Eddey 2018: 23, Ford et al 2015). At the eastern and northern edge of this palaeovalley are

Table 1. Pickering 'waste' documentary evidence.

1066-1086-7 AD	Domesday Book. Vill names suggest water-rich land occupied by Anglo-Scandinavians. A patchwork of land held variously by the king, Count of Mortain and Berengar de Tosny in 1086-7. Pickering manor comprised 12 other vills as well as the marsh vills of *Aschelesmersc, Chiluesmesrc, Maxudesmersc, Ouduluesmersc*, which had no occupant named. *Chigomersc* was occupied by a Thorfinnr (1 carucate and 2 bovates). Next to Pickering manor's marsh vills was the manor of *Loft Marishes*, in two holdings: Arneketill (1 ½ carucates, land for 1 plough) and Thorfinnr (1 ½ carucates). The manor of *Little Marish* (land for 1 plough) was given in the 12th century to the Benedictine nunnery of Little Mareis (Yedingham) lay nearby.	Smith 1928:84; Farrer 1914:480-488; Faull & Stinson 1986:f.299-300, 305, 314, 380; Watts 2010; PASE
1100-1135	Reign of Henry I. Afforestation of Pickering possibly *c.* 1100-1110. Royal statements of Church rights in Yorkshire pertinent to Pickering. Henry I known to have visited Pickering c1101-1118 when granting tithe of his venison to the abbot of St Mary's, York. Henry I issued confirmations & immunities in respect of Rievaulx Abbey.	Farrer 1914: 31-3,142,267-9,284,311,333-6,351; Farrer 1919: 53,103; Atkinson 1889: 140-142
1135-1154	Reign of King Stephen. Rise of William of Aumale (1110-1179) 'more truly the king beyond the Humber' than King Stephen.	Dalton 2004b
1154-1189	Reign of King Henry II.	Warren 2000
1155	Henry II visited Yorkshire 1 month after his coronation, compelling Aumale to return various interests to the Crown including Pickering and Scarborough, Aumale retaining Great Driffield. It is thus possible that Henry II visited Pickering earlier than the document sealed there in 1163. In 1155, a 'regard' of all royal forest boundaries and assarts carried out.	Warren 2000:60. Amt 1990: 189-196. Farrer 1914:263; 28: 4-5
1157-1158 to before 1179	King Henry II took Rievaulx into his protection, charged the Sheriff of Yorkshire to secure the survey and recognition by the Wapentake and Forest of Pickering of the royal land south of Pickering as it had been in the time of Henry I, declared the land 'waste' and gave it to Rievaulx, and issued other confirmations and immunities in respect of the monastery including the right to cultivate and to construct bercaries. These rights and boundaries were confirmed by subsequent monarchs. Places and features named therein included *Kiptoft syke*, *Midsyke, Thornton Beck, Theokmarais field*. *Lund* added between 1158 and Henry's later gift of *Theokmarais*, with the latter likely dating to 1163-1179. Other grants and agreements followed, including pasturage at *Eduiemersch* from Malton Priory.	Atkinson 1889: 127-8,135-9,144,147-150, 260,380-1; Farrer 1914:314-318; Delisle & Berger 1916:Suppl.V; XV;XXIX
1158-1190	Pickering 'waste' quitclaims. Aumale's quitclaim is relatively late, dated by Farrer to 1175-1179, by Jamroziak to 1166-1184. *Grenehou* included erroneously in Jamroziak's 'waste' compilation, possibly confused with *Greenhill* near Allerston. De Meinil's rights in Green Howe place this in Bilsdale uplands some distance away from the Vale.	Jamroziak 2005:118-119 Farrer 1914:478
1159-1181 to 1241	Tithes due by Rievaulx on its Vale of Pickering lands including *Kekmarais* and *Loftmarais* became a matter between the monastery and the secular Church. After Papal interventions Rievaulx finally agreed to pay a sum in lieu of tithes.	Jamroziak 2005:177-198
1274-5	Hundred Rolls Edw. I: *Kekemareys grange* - 300 acres of arable and 300 of pasture	Illingworth 1812 Vol 1:107
1369 & 1380	*Inspeximi* under successive monarchs examined the claim by Abbot of Rievaulx to various privileges and freedoms in his manors of *Kekmareys, Lund, Neustede, and Loftmarreys*.	Patent Rolls 43 Edw. III, pt.i. m.33; Patent Rolls, 4 Ric. II. pt. i. m. 35; Atkinson 1889: 415-421
c. 1538	Units referred to in Dissolution-era documents include *Kekmarres, Loftmarees, Dereham, Deerholme, Newstead, Newstead Grange, Lund, Bellyfaxe, Selley Brigge, Newhouse, Calfcoitt, Cowhouse, Yowe Cotte, West Ede*. Intake was still in process at 'a newe place that W[i]lliam Norram latly was dwellyng upon ...and a new clos in the Est more'	Ministers Accounts & Conventual Leases, as published in Atkinson 1889: 310-358
18th -19th cents	18th century Enclosure Acts for Pickering and Newton (1785); Thornton (1796); Allerston (1810). 1846 tithe commutation records for High and Low [Pickering] Marishes identify certain fields as 'tithe free being part of Deerholme Grange'	PRO IR 30/42/236; PRO IR 29/42/236

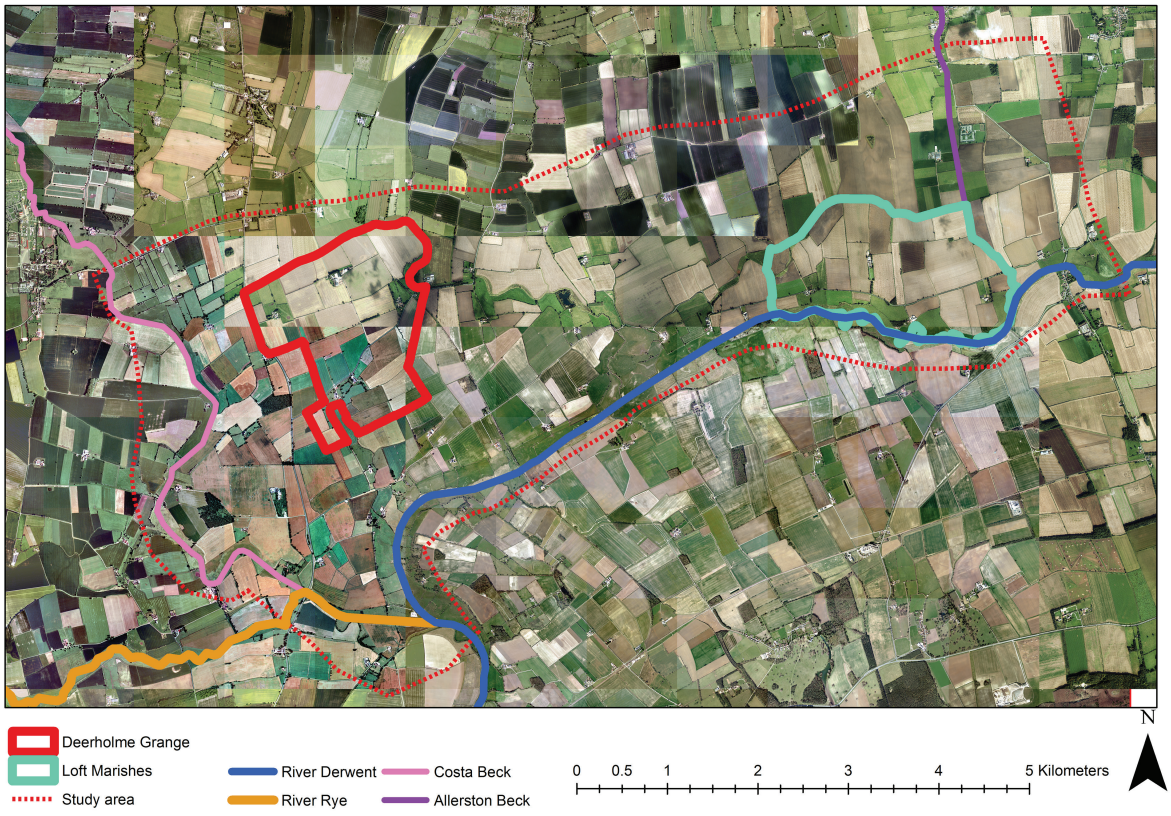

Figure 2. Watercourses defined King Henry's gift. Tithe commutation extent of Deerholme and Loft Marishes shown in relation to modern landscape.25cm Vertical Aerial Imagery (2007-2015) Scale 1:500. © Getmapping 2019. Downloaded: 2018-05-14 using EDINA Aerial Digimap Service http://digimap.edina.ac.uk

important Mesolithic sites such as at Star and Seamer Carrs (Milner *at al.* 2018). Roman and post-Roman occupation nearby, such as at Heslerton (eg Powlesland et al 1986), suggest areas of dry ground by that date (Figure 3).

Domesday Book

Documentary and place-name evidence from the Domesday Book (DB) survey commissioned by King William offers some insight into the state of Marishes around 70 years prior to Cistercian occupation. The DB survey of much of England reported potentially taxable assets in 1066 and 1086-7 respectively. For the area later known as Pickering Marishes, settlement and occupants named in DB suggest that the area was worked piecemeal from a dispersed set of small vills established by Anglo-Scandinavians long before the foundation of the Cistercian grange. Several of the vills associated with or near to Pickering have a terminal element suggesting marshy or wet land (Table 1). Except for *Loft Marishes*, which can be areally located on historic mapping, the other marsh vills were considered 'lost in Pickering Marishes' (Darby and Versey 1975: 513-540).

'Waste' vills in Domesday Book for 1086-7

Some DB entries for the Pickering marsh vills are recorded as 'waste.' Interpretation of this term depends crucially on context, and on a range of meanings in English documents of the period. These meanings include spiritual or theological, administrative / tenurial, fiscal and physical. The physical devastation caused by a punitive expedition in the winter of 1069-70 by King William's forces, known as the 'Harrying of the North,' is now considered flawed as a universal explanation for 'waste' entries in Domesday (McClain 2017). Instead, Wightman (1975) has suggested that many 'waste' entries in Yorkshire Domesday may have reflected any one of a range of factors, including tenurial change, reorganised land holdings which required a balancing entry in the records, or temporary abandonment. Even had Pickering Marishes been physically devastated in 1086-7, it is unlikely that this land remained long unexploited thereafter, for reasons explored next.

Power, politics and fee-farming as drivers of economic exploitation

After the Norman Conquest, power structures in England and practices such as fee-farming created a hierarchical

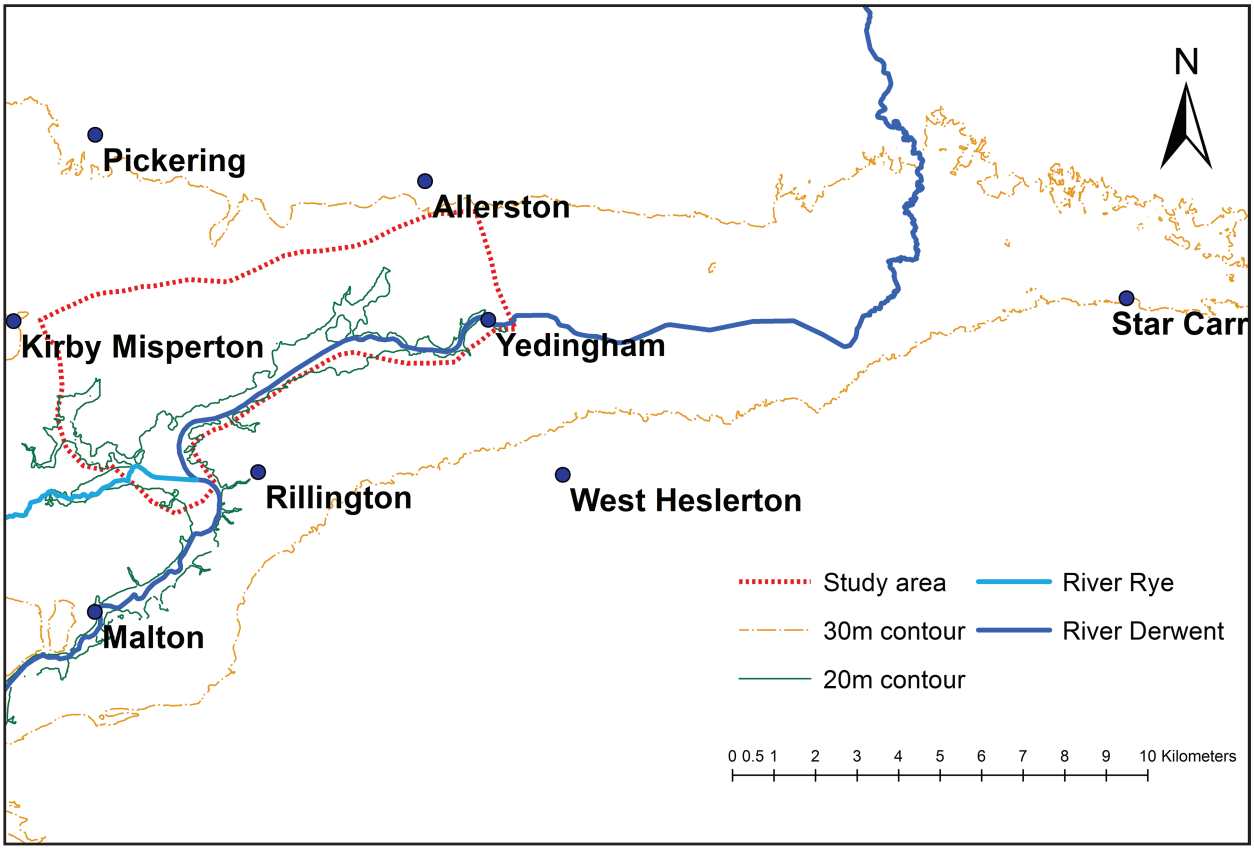

Figure 3. Wider locations mentioned in text. Contains OS data © Crown copyright and database right 2019. Contours generated using Land-Form PROFILE Scale 1:10000 updated: 2009-11-05, using EDINA Digimap Ordnance Survey Service, https://digimap.edina.ac.uk, downloaded 2019-10-04

imperative for land productivity. Land tenure became dependant on the king, with each change in tenant or sovereign necessitating fresh homage and succession payment which was accompanied by a patchwork of dues and obligations (Green 2017: 56-76). Royal agents such as the Sheriff of Yorkshire (Dalton 1994: 103-104) were typically unsalaried, so farmed profits from their office (Green 2017: 63-64). Unproductive land would therefore have placed economic pressure on those liable for the farm of the king's assets.

Under King Henry I (1100-1135) the integration of Yorkshire within royal administration and justice advanced substantially (Dalton 1994: 103-108). The Sheriff of Yorkshire was responsible for payment to the Crown of farm for the demesne royal estates, such as Pickering, Falsgrave and Scarborough in Yorkshire. In most cases, the sheriff of the county answered also for both the royal forest account (the census or 'cess') (Young 1979: 33-59) and the account for the produce of assarts in the royal forest (Amt 1990: 192-193). Forest eyres (court circuits) may have provided up to 20% of royal income (Young 1979: 55,158). The succession to King Henry I was disputed between his daughter Empress Matilda, and his nephew, Stephen, with the latter reigning between 1135-1154. Based on recent archaeological analysis of siegeworks, castles and settlements, the mid-12th century in England has been suggested as an 'age of transition rather than anarchy' (Creighton and Wright 2016: 289).

The disorder under Stephen permitted the income and assets properly due to the Crown at Pickering, namely the royal manor, castle, forest, and associated jurisdictional arrangements, to be held by a powerful baron of established independence. William of Aumale owed his advancement to King Stephen, from sometime Sheriff of Yorkshire to Earl of York by 1140 (Dalton 1990: 158). Aumale gained near-supreme authority in the north of England (Dalton 1994), described as 'more truly the king beyond the Humber' than King Stephen (Table 1). Aumale's jurisdictional power and wealth probably included possession of the royal manor, forest and castle at Pickering, as well as the manor and castle of Scarborough and manor of Falsgrave (Dalton 1990: 160-165). While he held such assets, shrewd operator Aumale would not have permitted them to be economically unproductive for long. Aumale's power, loyalty to King Stephen, and occupation of alienated royal possessions made him a crucial figure with whom

Stephen's successor, King Henry II, needed to come to terms.

King Henry II and Pickering Marishes: strategic approach to a complex zone

When he was crowned king of England in 1154, aged 21, Henry of Anjou acquired a turbulent inheritance. His domain was extensive, comprising the interests of his wife, Eleanor of Aquitaine, as well as Anjou and Normandy. The addition of England to these domains increased the challenges of secure administration of the royal interests. England had yet to recover from the instability under King Stephen, the young king's finances were limited, and substantial numbers of the English nobility had supported King Stephen rather than Henry's mother, Empress Matilda. Two early priorities were to thus increase the royal coffers and secure royal dominions (Warren 2000). From the 1155 investigation (a 'regard') of the royal forest boundaries and assarts (Amt 1990: 189-196), Henry II would have had knowledge of the economic value of his gift to Rievaulx. From a purely economic viewpoint, therefore, Henry's gift to Rievaulx of the substantial and potentially valuable tract of land at Marishes appears puzzling. Broader factors than simply economic suggest more complex motivations for Henry's gift.

King Henry II's political strategy

King Henry's political strategy was shrewd. He marched to Yorkshire in 1155 within a month of his coronation (Warren 2000: 60) thus using a rapid and decisive show of force to regain from Aumale royal properties including Pickering (Table 1). Henry's power base was however remote from Yorkshire, and an initial show of force would likely be inadequate to subdue long-term local resistance to the re-imposition of the royal writ. The king directed the Sheriff of Yorkshire to recognise the boundaries of the royal land south of Pickering as they had been in his grandfather's time, and to ensure Rievaulx held the land in peace. Henry also took Rievaulx Abbey into his protection and granted it certain privileges (Table 1). Local resistance to royal authority after this declaration of protection is evidenced by two terse admonitions by Henry II to the Yorkshire authorities to ensure that Rievaulx could enjoy the royal grant in peace (Table 1) and a series of quitclaims between 1158-1190 of the royal gift of Marishes (Jamroziak 2005: 118-119). Clearly, although the wapentake survey confirmed that Marishes was known locally as being owned by the Crown, the land was encroached upon by neighbours of all social degree, from tenantry to nobility. The relatively late date of Aumale's quitclaim suggests that the Earl long resisted this re-imposition of the royal writ in Pickering Marishes.

Marishes as internal boundary and transport route

King Henry's gift planted Cistercian monks on an important internal boundary which may have been a transport route also. The River Derwent had long been an important territorial boundary, dividing the North and East Ridings of Yorkshire, a division which survived into local government reorganisation in 1974. Sections of the rivers Rye and Costa variously formed other boundaries. The profile of the River Derwent has been substantially altered in the post-medieval period, including by 19th century canalisation (Hadfield 1972). Topography however suggests that transport in a shallow-draft vessel may have been possible from near Rievaulx's Pickering land, at Yedingham. The shoals near Malton (Sheppard 1956: 382) may have required transhipment but this route could have connected Marishes to the River Ouse and thus to the trading centre of York, the River Humber and North Sea trade.

King Henry reserved key rights in Pickering land for the Crown

King Henry's gift to Rievaulx was however carefully defined and did not grant full land rights to the abbey. Two 14th-century inquisitions show that the Crown retained certain important forest rights including those of hunting (Table 1). Royal forests were not solely pleasure grounds. During Henry II's reign, forests may also have served as defensive and strategic royal enclaves within which the itinerant court could be safely provisioned (Keefe 1990: 183). Forests could also be vital to the military arsenal, a source of timber for transport and weapons (Langton and Jones 2010: 61).

Piety and memorialisation: Vale of Pickering as spiritually special place

During Henry I's visit to, and afforestation of, Pickering *c.* 1100-1118 (Table 1), the royal court may have been made aware of local traditions of the Vale of Pickering as a special place. Even in the modern day, the Vale of Pickering has an intangible atmosphere. To a medieval observer, before the homogenisation caused by extensive drainage and modern agriculture (Figure 4), landscape elements such as watercourses may have evoked powerful, unseen forces. Drainage in the Vale had been affected when ice dammed the post-Devensian meltwater, preventing drainage direct to the North Sea. Thereafter, surface water instead flowed inland, first westerly then south via the Kirkham gap (Evans et al 2017). To a medieval observer, the River Derwent may have appeared to flow 'backwards' and may thus have been regarded as somewhat special.

The land given to Cistercian Rievaulx Abbey at Marishes lay at the 'meeting of the waters' of the rivers Rye and Derwent (Figure 5). These rivers and their affluents were locations of a remarkable concentration of early

Figure 4a & 4b. Post-medieval canalisation of River Derwent. Copyright Laura Eddey.

medieval monastic houses established by the later 9th century AD. Ian Wood (2008) has argued that these houses, including Lastingham, Kirkdale (Rahtz and Watts 2003), Hovingham, Gilling East and Stonegrave, performed a memorial function for the early medieval Northumbrian royal dynasty. Bede also refers to a monastic house associated with Whitby Abbey, either a nunnery or a double house (Wood 2008), whose stated location places it at the origins of the River Derwent in the high moors at Hackness.

Rievaulx Abbey as mediator of royal memory and national identity

The choice of Rievaulx Abbey as recipient of Henry II's gift may have been an informed one. The campaign to Yorkshire in 1155 and the regaining of Pickering from Aumale may have prompted discussion in the royal court of the afforestation of Pickering by Henry I and the spiritual and royal memorial traditions of the Vale of Pickering. One of Henry II's stated objectives was to restore England to the state it had been in at the time of Henry I (Warren 2000). The opening section of Henry II's donation charter makes clear the overt memorial and spiritual function of the gift for the soul of his grandfather, Henry I (Table 1).

Rievaulx was connected to King Henry II even before his coronation. The abbey's founder, Walter Espec, was a justiciar to Henry I and although he did not attend King Stephen's court after 1138, he may have died just before 1158 (Dalton 2004a; Dalton 1990: 155). Rievaulx became a mediator of royal memory and a narrator of English identity when her abbot wrote *Genealogy of the Kings of the English* some time before 1154. In this, Ailred emphasised the role of young Henry, as-yet uncrowned but the acknowledged heir to the English throne, as 'a new link in the long chain of English monarchs, chosen to carry the Anglo-Saxon past into Anglo-Norman England' (Dutton 2006:183).

Declaration of Pickering land as 'waste'

Henry II had his officials declare the land south of Pickering as 'waste' before giving it to Rievaulx (Table 1). The physical state of England at Henry II's accession, following the contest for the Crown between Stephen and Matilda, is the subject of some debate (Creighton and Wright 2016). Interpretations of the term 'waste' exist which do not necessitate that the land was physically devastated or had previously been unexploited. A 'waste' declaration may have entailed a pardon for geld (tax) payment. Under law and practice at the time, land carried service obligations: military service, maintenance of bridges, roads and fortifications (Lapidge et al 1999) and for monetary payments such as geld when this was levied. Monastic land was exempt from liability only under certain circumstances. If the land had been given 'in free alms' (*in elemosinam*), it was free of obligations of service other than prayer (Schenk 2012: 35). The Crown could excuse payments such as geld, and Henry's pipe rolls for 1157 reflect pardons of geld payment to several monastic houses, including Rievaulx (Amt 1991: 244). The 14th century inquisitions confirm that the grant to Rievaulx was made in free alms, which strengthens the interpretation of 'waste' as geld pardon (Table 1).

Cistercian cultivation of 'new' land less extensive than previously suspected

Later records of tithe liability suggest that the medieval Church recognised possibly only a sub-portion of King Henry's gift as having been newly cultivated by

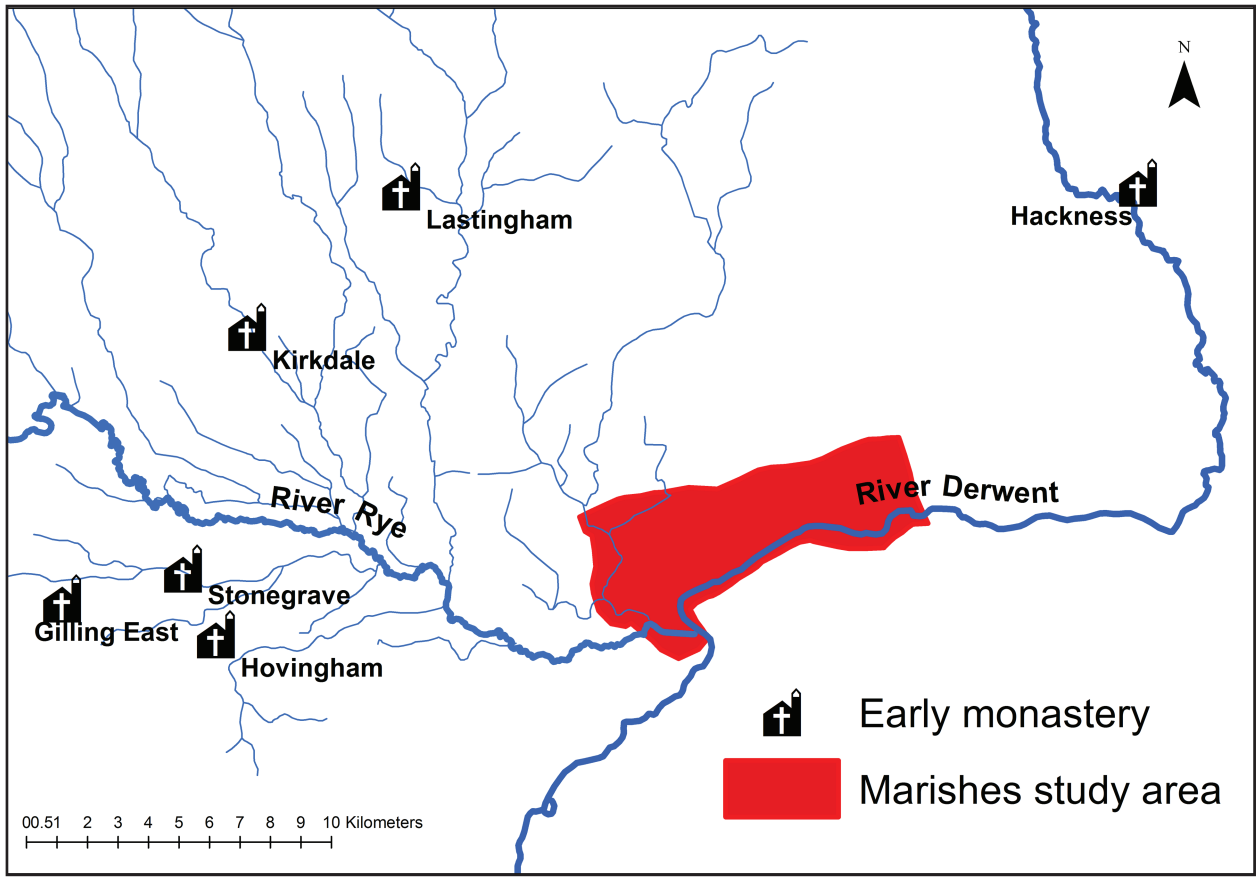

Figure 5. Early monasteries established by Rivers Rye and Derwent and their tributaries. Only relevant watercourses shown. Contains OS data © Crown copyright and database right 2019.

Rievaulx. Tithes (literally, a tenth) were in principle due to the Church on the produce of all land. This was an unpopular exaction in many quarters, but monasteries were liable to pay tithes (as well as to receive tithes, if they owned a church) unless an exemption was in force. Policy on tithe exemption fluctuated and certain monasteries were periodically exempt. Church policy was finally agreed at the 1215 Lateran Council. This ruled that only land which had been newly and directly cultivated by certain monasteries (including, but not exclusively, Cistercian houses) would be tithe-exempt (Constable 1964). This exemption could be passed on in title with the land. In England tithe exemption sometimes survived into the 19th century, when under the Tithe Commutation Act 1836 remaining dues were commuted into a cash payment (Kain and Oliver 2011). Platt (1969) used 19th century tithe commutation records to define tithe-exempt former monastic land in Yorkshire.

Platt's approach when applied at Marishes identified land described in tithe commutation records as 'tithe-exempt as part of Deerholme Grange' (Table 1, Figure 2). The extent of this land was however only part of that likely given to Rievaulx by King Henry II. The area reclaimed by the abbey from primary marsh is therefore possibly much smaller than previously thought. Lidar (light detection and ranging) analysis suggests that Deerholme Grange's extent is set within an extensive network of landscape features. A provisional sequence through which Marishes may have been developed can now tentatively be suggested.

Landscape development within Pickering Marishes: life with water-rich land

Pickering Marishes evolved over a long period. The model of human interactions with marshlands elsewhere has been described as a spectrum, ranging from exploitation, through adaptation to complete transformation (Rippon 2000: 52-53). Integration of evidence suggests that it was through cumulative impact that Marishes was developed, both before Cistercian occupation and thereafter. Much of Marishes' development can therefore be viewed as a 'traditional landscape,' as defined by Antrop (1997), which was subsequently disrupted by the mechanical power made possible by the Industrial Revolution. In the Vale of

Pickering, this took the form of large-scale drainage and agricultural 'rationalisation'.

Early settlement in the western-central Vale may have reflected complex factors. Based on the medieval settlements which have survived in some form into the modern day, a previous study of drainage in the Vale of Pickering argued that settlement there preferentially took place along the margins and springline near the 100-foot (c. 30m) contour, where the limestone and chalk geology meet silt and peat deposits (Sheppard 1956: 362). Key settlements are shown in Figure 3. Other, possibly periodic, forms of occupation in the Western Vale may however have previously eluded consideration. Earlier Domesday Book geography studies have emphasised the influence of geology on settlement of this area (Maxwell 1962: 99) but have not considered in detail factors such as drainage, soil, and aspect. This is regrettable, as such factors offer insight into the sophistication of knowledge held by early occupiers, who may have been better able to cope with different land types than has previously been acknowledged for this location. Terminology around wetlands can serve to create artificial divisions in research (van de Noort and O'Sullivan 2006). The term 'water-rich land' is therefore used here to convey the concept of water as a resource while remaining neutral as to form.

Topography and surface water

To the unaided eye, the land to the north of the Rye / Derwent confluence in the modern day appears topographically highly uniform and somewhat unpromising in archaeological terms. From the settlement ribbon near 30m ASL, broadly followed by the modern A170 road, the land grades downwards before rising again to the margins of the River Derwent. The modern topography is, however, the product of multiple processes which have interacted in complex ways. The Derwent is artificially embanked and canalised along a substantial reach of its former floodplain in the Vale including noteworthy engineering works from the 18th century onwards (Sheppard 1956: 379-408) (Figure 4). Such alterations to hydrology are likely to have significantly affected sediment erosion, deposition and floodplain performance. The 11th and 12th century topography and hydrology may therefore have been significantly different to that of the modern day. That caveat aside, in combination, lidar elevation and soil data suggest that even today the area is not as uniform as first appears. The topography instead may be described as a series of mini marshes interdigitated by spurs of slightly higher and drier ground. Hydrological analysis suggests that surface water at Marishes in the modern day is delivered through multiple routes. Ground water supply was not considered for this analysis.

Exploitation

Van de Noort (2004: 149) has suggested the model of a 'concave landscape' for the diverse opportunities and resources of the Humber Wetlands (East Yorkshire) and a similar model appears apposite also for Marishes. Mesolithic sites at the eastern end of the palaeovalley noted above, including Star Carr (Milner 2018), provide evidence for the exploitation phase of human occupation here. The areas of drier land would have offered access to a mosaic of natural environments. The Domesday Book evidence suggests specific locations in the water-rich lands to the south of Pickering were productively exploited prior to the Norman Conquest. A mixed economy may be theorised which would not have been recorded in the Domesday taxation assessment that focussed on assets such as arable land, meadow, and mills. Hydrological modelling suggests some areas may have been only periodically inundated and others may have been marshy for much of the year.

Fauna such as waterfowl and water-tolerant flora could have colonised their respective ecological niches. Certain species could have tolerated boggy conditions, such as oak, alder, willow, as well as reeds, sedge fen, marsh hay (Cook and Wilkinson 1999: 10). The marsh could have been a valuable local resource for hunting of wild animals, animal pasturage, building material and fuel. Norman afforestation would have placed the land under the watchful eye of the forest officers, tasked with overseeing the resources for provisioning the royal court.

Adaptation

Gradual adaptation of this land could have enabled multiple benefits. Limited, if any, drainage may initially have been needed to enable grazing of certain herbivores. Stable isotope evidence has shown that sheep (*Ovis aries*) and cattle (*Bos taurus*) can graze on waterlogged land with dry islands, as shown at the Flemish coastal plain for AD 1-15th centuries (Müldner et al 2014). Domesday Book entries record meadowland in Pickering manor. King Henry's charters permitted the construction of bercaries (sheep stations) which could have been established on the slightly higher and drier fingers of land.

It is conceivable that seasonal warping may have been practiced. This entailed the trapping of water-borne sediment by brushwood or timber, which would have progressively raised the level of the land (Jecock et al 2011: 2) and improved the fertility of the soil, although examples of this are best known in coastal and estuarine contexts. Water meadows are thought to have been a 17th century development (Cook et al 2003) but knowledge of some of the principles is suggested

at Cistercian monasteries in the 12th century. The description of Clairvaux's hay gathering (Matarosso 1993: 288) suggests flooding from the River Aube of meadows to enhance the hay crop.

The Cistercians of Byland Abbey (North Yorkshire) are known from documentary sources to have constructed banks against the River Derwent, at Rillington Moor (Bond 2004: 82) on the opposite side of the river to Marishes (Figure 3). Such banks were typically formed from local materials such as earth, clay, stones and timber, sometimes with vegetation 'hassocks' for stabilisation (Silvester 1999: 125). At the monastic core of Byland Abbey, banks against flash-flooding have pitched stone sides (Jecock et al 2011: 3). Banks could be accompanied by ditches, located on the landward side in the case of coastal environments (Jecock et al 2011: 3), with ditches between parallel banks as on the (estuarine) Pevensey Levels (Rippon 2000: 187-190). Management of land affected by alluvial flooding is a delicate balance. As land dries it shrinks, thus lowering the land surface and making topsoils more vulnerable to erosion (Taylor 1999: 144). The creation of banks, with the resultant withholding of regular alluvial replenishment could therefore be a source of conflict. In 1346 the villagers of Rillington Moor broke down the banks constructed by Byland Abbey, so that their land could be flooded again (Bond 2004: 82).

From adaptation to reclamation

Factors such as soil properties, climate, drainage, aspect, groundwater and surface water supply would all have governed the degree of waterlogging at a given point in time. The complex physical processes, including glaciation and post-glacial lakes (Evans et al 2017) in the Vale have led to complex soil patterns. Seven different soils were identified within Henry II's gift and nearby. The agricultural potential of these soils is closely linked to their drainage properties, which in turn influence in-field runoff and field capacity to store water. This potential may to some degree have influenced past settlement and exploitation choices. Within Henry II's gift, only two areal units have evidence which enables their broad spatial definition between the 11th and 13th centuries. Both have south-facing aspects. DB suggests that *Loft Marishes* contained ploughland by the late 11th century (Table 1). Its extent, as defined in later historic mapping, covers three different soil types and is situated downslope from a further two types. Each of these has slightly different natural drainage characteristics and thus are suitable for different forms of exploitation.

Selection of cultivation areas

These differences could have provided some degree of resilience for periodic shifts in surface water or other factors as well as supporting different cultivars. As field water storage reduces, soil becomes differentially suitable for cultivation. *Loft Marishes* was also close to spring water near the line where porous limestone bedrock remains uncovered by the lake deposits which overlie lower land. In contrast, the tithe-exempt status of *Deerholme* recorded in the 19th century suggests that this was noval land enclosed and brought into use later than *Loft Marishes*, at some date after 1157-8. *Deerholme*'s relatively later enclosure may partly be attributed to soil conditions. In contrast to the soil diversity at *Loft Marishes*, *Deerholme's* tithe-mapped extent incorporates only a single soil type, which is known to be heavy and challenging to cultivate (Table 2). The earlier exploitation of *Loft Marishes* than *Deerholme* therefore suggests an understanding of the different agrarian potential of the two areas.

Incremental intake and drainage

Incremental intake and drainage may gradually have extended the areas of dry land at Marishes. Drainage enables reclamation, defined as the creation of new land and the improvement of soils and vegetation (Tayor 1999: 141-2). Given initial impetus by the Fenland Research Committee from the 1930s (Smith 1997), much research into medieval reclamation has focussed on coastal environments and estuaries (Darby 2011; Rippon 2000) with a concomitant focus on salt or brackish environments. In inland contexts, settlement is currently theorised typically to radiate from a central locus of an area of higher ground (Silvester 1999: 125). Drainage and reclamation of the complex type found at Marishes, has however received little archaeological attention. Marishes lies at the floodplain confluence of multiple watercourses, including the Rivers Derwent and Rye, Costa Beck and minor affluents. Such reclamation with multiple foci could have been more intricate than the 'radiating' type considered by Silvester. This may have left fewer traces on the physical landscape than features such as large embankments and walls typically seen in coastal and tidal contexts. Marishes' reclamation must therefore be reconstructed based on a range of evidence.

Ditching and embanking

The creation of drainage ditches and embankments were typical early actions to enclose parcels of land, thus improving surface drainage and reducing field water storage and lowering the water table (Jecock et al 2011). To deal with surface water, the foci of intake at Marishes could have proceeded from two directions.

Table 2. Soil types within Pickering 'waste': Data from NSRI 2018. 1 after Avery 1973 & Avery 1980. 2 classifications after Boorman et al 1995.

Map key	**1**	**2**	**3**	**4**	**5**	**6**	**7**
NSRI classification 1	512b Landbeach (Loftmarishes)	541r Wick1 (Loftmarishes)	712i Foggathorpe (Deerholme)	711p Dunkeswick (Thornton le Dale)	813d Fladbury 3 (River course)	831c Wigton Moor (Rillington)	712b Denchworth (Allerston)
Soil association	Slowly permeable seasonally waterlogged stoneless clayey & fine loamy over clayey soils	Deep well drained coarse loamy and sandy soils locally over gravel	Permeable calcareous coarse loamy soils affected by groundwater over chalky gravel	Slowly permeable seasonally waterlogged fine loamy and fine loamy over clayey soils	Stoneless clayey, fine silty and fine loamy soils affected by groundwater.	Permeable fine and coarse loamy soils variably affected by groundwater, the drier soils being on slightly raised sites	Slowly permeable seasonally waterlogged clayey soils with similar fine loamy over clayey soils
Hydrology of soil type (HOST) 2	7: Free draining permeable soils in unconsolidated sands or gravels with groundwater at less than 2m from the surface	5: Free draining permeable soils in unconsolidated sands or gravels with relatively high permeability and high storage capacity	24: Slowly permeable, seasonally waterlogged soils over slowly permeable substrates with negligible storage capacity	24: Slowly permeable, seasonally waterlogged soils over slowly permeable substrates with negligible storage capacity	9: Soils seasonally waterlogged by fluctuating groundwater and with relatively slow lateral saturated conductivity	9: Soils seasonally waterlogged by fluctuating groundwater and with relatively slow lateral saturated conductivity	25: Slowly permeable, seasonally waterlogged soils over impermeable clay substrates with no storage capacity
Soil parent	95 Glacio-fluvial sand and gravel	92 Glacio-fluvial or river terrace drift	97 Glacio-lacustrine clay	172 Till from Palaeozoic and Mesozoic sandstone and shale	156 River alluvium	159 River terrace and glaciofluvial drift	104 Jurassic & Cretaceous clay
Natural soil fertility	2 Lime-rich	5 Low	10 Moderate	10 Moderate	10 Moderate	5 Low	10 Moderate
Simple topsoil texture	2 Loamy	2 Loamy	2 Loamy	2 Loamy	2 Loamy	2 Loamy	2 Loamy
Typical habitats	10 Herb-rich chalk and limestone pastures; lime-rich deciduous woodlands	13 Neutral and acid pastures and deciduous woodlands	17 Seasonally wet pastures and woodlands	17 Seasonally wet pastures and woodlands	23 Wet flood meadows with wet carr woodlands in old river meanders	20 Wet acid meadows and woodland	17 Seasonally wet pastures and woodlands
Hydro-geological rock type 2	24 gravels	34 sand	21 glacio-lacustrine clays and silts	22 till and compact Head	15 river alluvium	25 loamy drift	10 very soft massive clays

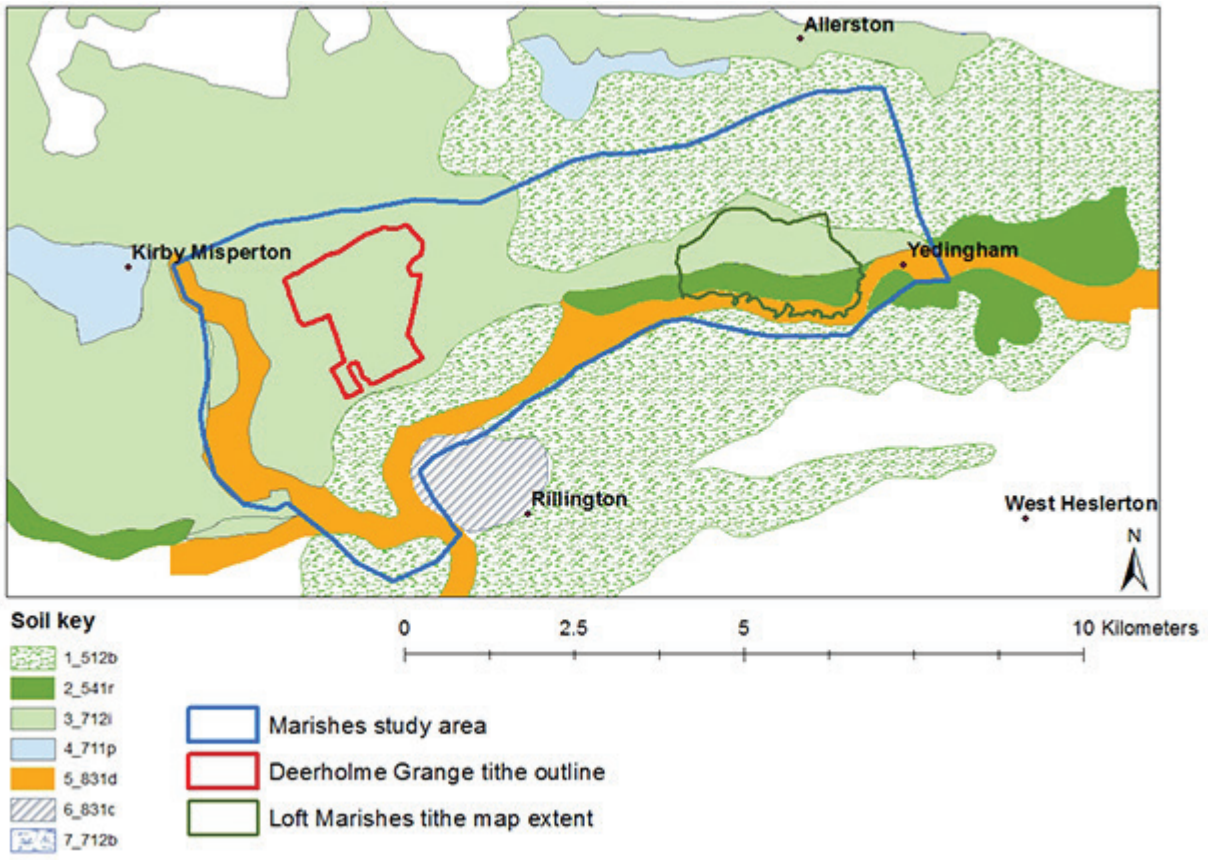

Figure 6. Soil types at Deerholme and Loft Marishes. See Table 2 for details of soil types. Derived from OS data © Crown copyright and database right 2019; Soils Data © Cranfield University (NSRI) 2018

Work down slope from the fingers of marginally higher land could have directed water into a system of channels aligned to the major watercourses while drains cut outwards from the watercourses could have connected such channels to the wider system. Underdrainage, such as bush drainage whereby a channel is cut and filled with free-draining matrix (such as stones and other material) before being covered over, is thought not to have been in widespread usage until the post-medieval period (Williamson 1999: 41-52). Drainage increases soil warmth, aeration and aggregation and the depth of 'freeboard' above the water table. Drainage correspondingly decreases soil profile waterlogging, which is critical to the diffusion of atmospheric oxygen and carbon dioxide. This diffusion governs the ability of the roots of most plants (except water-tolerant species) to respire, and to avoid formation of organic and inorganic substances toxic to plant growth (Cook 1999: 15-18). Documents suggest ditching was underway shortly after 1157-8, such as the boundary ditches recorded round *Lund* and *Theokmarais*. If not a transcription error by the Roman papal court, a reference to *Kilverdemerch* recorded as *Culverthemerch* may imply a pre-Cistercian culvert across the marsh. Boundary dykes such as *Midsyke* and *Kiptoftsyke* were already in place in 1157-8 or shortly thereafter. Incremental intake was still in process at the time of Dissolution of the abbey in 1538 and continued thereafter (Table 1; Figure 8).

Infield drainage and traditional land use

Pickering manor and *Loft Marishes* did have ploughland recorded in Domesday Book, although the location of this ploughland is not precisely recorded (Table 1). Such ploughland implies the creation of infield drainage. Open field ploughing typically created surface furrows and ridges, the alignment of which in relation to surface topography would have affected the efficiency with which water drained. Local topography and drainage are therefore determinants of furrow alignment (Hall 1999: 33). Possible cultivation ridges were identified in lidar and aerial photographs at Marishes, such as at *Sheepfoot Grange*, which suggest pre-modern field drainage (Figure 7). Depending on the configuration of drainage, sluices and outfall works may have been necessary. Timber was commonly used for sluices, gutters and culverts (Silvester 1999: 125). In the 13th century 300 acres of arable and 300 acres of grazing are recorded at *Kekmarishes*. This may have reflected

Figure 7. Flooding over cultivation ridges photographed in winter 2012 at Sheepfoot Grange illustrate a challenge shared by medieval and modern farmers. Diagonal lines are artefacts of image overlay process.

the practice of pasturing animals on arable land in the fallow season. Several units are recorded at Pickering Marishes from 13th century onwards (Table 1).

Wet land might be stabilised through the planting of water-tolerant species. In his lease of Westhorn of Kerse from Coupar Abbey (Cistercian, Perthshire, Scotland) dated 1472, William Clerk undertook to plant 'ashes, osiers, and sauchs[1] ...to gain the land . . . from submersion in water.' (Rogers 1879: xxx-xxxi). Coupar Abbey's tenancies agreed in 1473 included an instruction from the abbey to plant broom. Rogers (1879: xxxi) observes:

> 'the tenant at Aberbothry undertook to plant on each side of his farm-steading a park of broom. His neighbours entered into a similar covenant. Admirably adapted for shelter, and abundantly decorative, broom was especially suited for wet soil, the plants attaining great strength, and becoming useful for domestic purpose. Broom plantations, as forming suitable covers, enclosed the rabbit warrens.'

Oversight of drainage and maintenance

From the later 13th century, several factors may have influenced changes in how Rievaulx's Pickering estates were managed. As changing circumstances prompted monasteries to let out their estates rather than manage them in demesne (in hand), responsibility for maintenance and drainage may have passed to tenants, as is recorded at Coupar Abbey. Coupar had been given inland marsh at Blairgowrie by William the Lion (Rogers 1879: viii) and at Meigle (both in Perth & Kinross), probably in 1249x1285 (Rogers 1879: xviii). In the abbey's rental book (1443x1538), tenants at Coupar whose holdings included a marsh were required to 'labour for the gaining of the marsh' and 'plant timber and drain the marsh'. This labour was directed by the monastery: 'according to the rules given to them by the cellarers' and 'under approval of the cellarer and

[1] Sauch = willow. Old Scots c 1472. 'Sauch *n.*'. *Dictionary of the Scots Language*. 2004. Scottish Language Dictionaries Ltd. Accessed 16 Jun 2018 <http://www.dsl.ac.uk/entry/snd/sauch>]

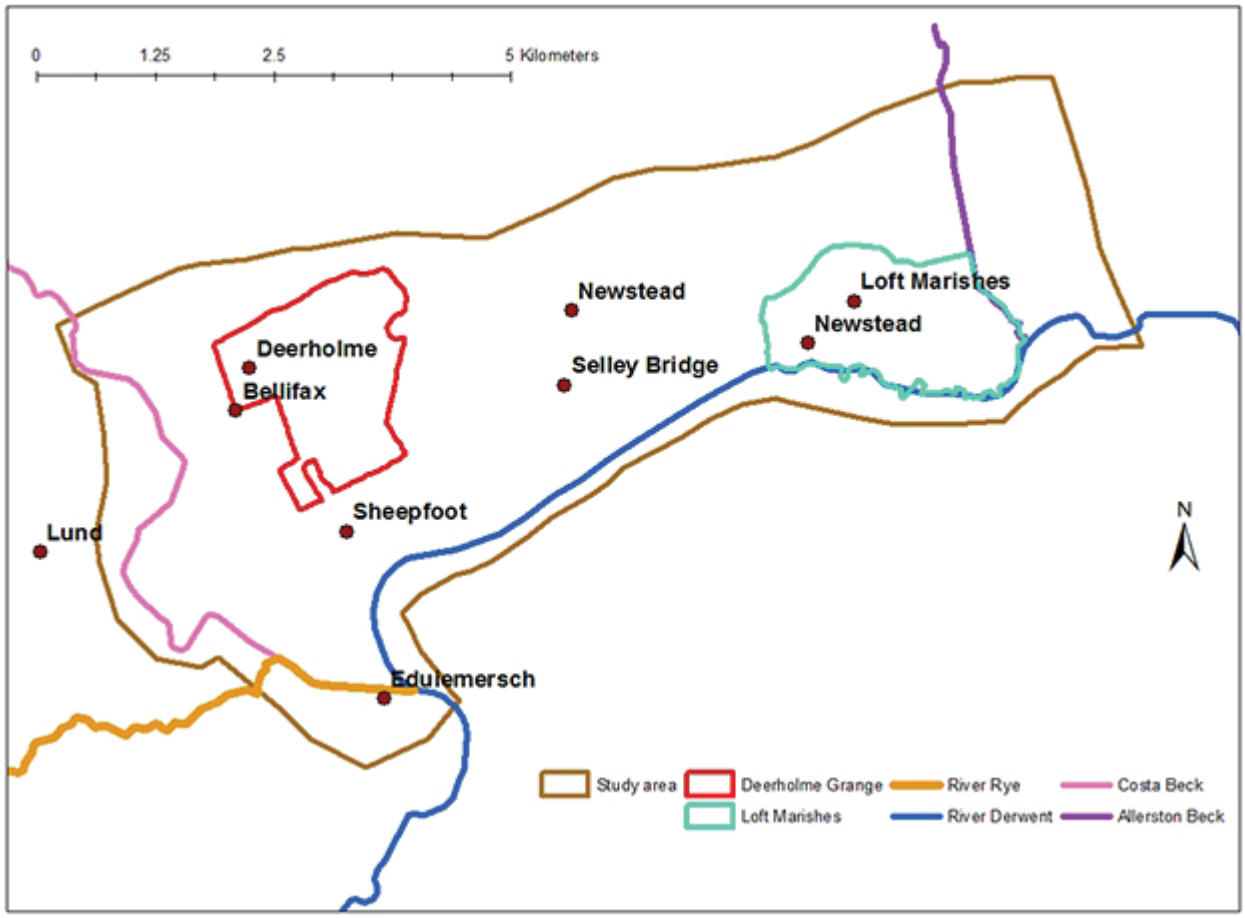

Figure 8. Intake of land was a long-term process. New units were established throughout the history of Marishes. A selection of these are indicated, including multiple termed 'new stead' Contains OS data © Crown copyright and database right 2019.

persons of the monastery, with service.' (Rogers 1879: xxviii, 142-3).

The evidence from Coupar Abbey suggests that in the 15th century the Cistercian monastery retained the direction of maintenance and reclamation when its estates were let to tenants. Non-Cistercian abbeys were also aware of the need for consistent maintenance of drainage and could enforce oversight to ensure that proper work was carried out. Abbatial surveys from Glastonbury Abbey's manor in Brent marsh (Somerset) between the 12-14th centuries set out feudal services expected of tenants including ditching, walling and scouring of drains (Harrison 2012: 59). Brent marsh manor had hundreds of ditches, and failure to scour these was frequently a cause before the manorial court (Harrison 2012: 50-72).

Failures of drainage from shifts in weather and maintenance

Even if Rievaulx had adopted similar oversight of drainage maintenance in the Vale of Pickering, maintenance practices may have changed when let to tenants whose interests may have been less long-term than that of the abbey. Given the subtle topography at Marishes, the land here could have been sensitive to relatively small shifts in weather and alterations to local drainage and management practices. A period of different or minimal management, such as might accompany even short-term abandonment, may have caused field drainage to be overwhelmed by seasonal flooding and sediment deposits. Such a scenario may be envisaged also for any drainage carried out by earlier occupants, such as the Anglo-Scandinavians affected by Norman settlement. The features created by medieval actors in draining Marishes may thus slowly have been obscured, although some names of certain field features there appear preserved in mapping, such as *Friar's Ditch*.

Transformation: 'New' land?

The documentary and place-name evidence suggest that the narrative of Rievaulx's Pickering estate was more complex than previously suggested. Bringing into grange usage may have been a gradual process, with a mixed pattern of exploitation. Constance Berman suggests tests which may be applied to documentary

evidence to assess previous cultivation of Cistercian land. These tests are the 1) existence of established tithes; 2) evidence for peasant occupation; 3) the use of traditional terminology; 4) the size of sums paid by monks; 5) fragmentation of land parcels; and 6) references to 'development' (Berman 1986: 12).

Using Berman's tests, 1) DB suggests some land at *Loft Marishes* was plough land by the mid-11th century so the claim by the Dean and Chapter of York in the 13th century for tithes on *Loft Marishes* (Table 1) may have had some justification. The use of that name as an areal descriptor in the 19th-century tithe commutation mapping also argues for a degree of occupational continuity. The noval nature of *Kekmarishes* has proved more elusive to establish, confused further by references to a *Theokmarais.* Only the extent known later as *Deerholme* was both recognised by the Church as noval and whose tithe exemption survived into the 19th century. 2) The multiple encroachments on the king's gift reflected in the quitclaims suggest that some of this land was being productively exploited including by peasant tenants in the mid-12th century. 3) The use of traditional terminology may be suggested by the survival of Anglo-Scandinavian place-names, such as *Dereham*, in 16th century documents. 4) No record of a monetary transaction between Rievaulx and the royal exchequer has been found in respect of Henry II's gift, but a reference in the 12th century memorial of benefactions to Rievaulx suggests that the vill of Steinton was exchanged (Table 1). As Steinton has not been securely identified, with several potential candidates, the value of this exchange is unclear. 5) The land south of Pickering estate was highly fragmented in terms of tithe liability, as reflected in the patchwork of tithe mapping in the 19th century. 6) No references to development were identified.

Waste, journeys and spiritual landscapes

A question remains as to whether such monastic land was perceived as qualitatively different, perhaps even spiritually different to non-monastic land. Is it possible to see connections other than economic between land outside the monastery and the monastic core? Medieval worldviews would have been informed by a succession of tropes embedded in wisdom literature and perpetuated through Christian proselytization. The development of the conceptions of spiritual journey and withdrawal is too complex to do justice to here. Briefly, therefore, in St Anthony of Padua's asceticism, which was to become a monastic paradigm, there was a *telos,* a final (locational) goal (Goehring 1999: 92). In arid-zone monasticism this goal was the desert, but as monasticism diffused from the Levant into Europe the goal adapted to that of forest and waste (Goehring 2003: 445-448). From the 11th century, the concept of a penitential journey received fresh theological emphasis and expression in the form of pilgrimage, and monastic focus, not least in Cistercian tradition (Bruun et al 2014). Cistercian teaching embedded Deuteronomy 32:10 (McGuire 1991: 285-6), a paradigm for a spiritual journey '*in a desert land, and in the waste howling wilderness'* into the Cistercian 12th century *Exordium Cistercii* and thus created a 'metaphorical condition' to be sought by Cistercians (Newman 1996: 69, 94-6).

Cistercian grange as spiritual location

There is documentary evidence for medieval perception of certain monastic land as special in some way. James France has identified multiple Cistercian *exempla* which portray *conversi* (lay brothers) undergoing spiritual experiences in their countryside domain (France 2012: 199-230). If a 'spatialisation of [religious] charisma' (Ó Carragáin and O'Sullivan 2008) extended from the monastic core to certain monastic granges, this may have offered the potential for even the lowliest to achieve spiritual progression. This is hinted at by McCrank's documentary work on Cistercian Poblet in post-Reconquista Cataluña. There, grange tenants or *mercenarios*, namely people with whom the monastery had a business relationship, including hired servants, could apply later to become a lay brother (McCrank 1976: 152-159).

Physical journey between grange and monastic telos

A journey from spiritually inflected countryside to theological *telos* could have been graduated. Countryside sanctuaries are noted variously at a mile and a mile-and-a-half beyond the churches of Hexham and Beverley (Hamilton and Spicer 2005: 7). Close links are suggested between space and theology at the monastic core. In Cistercian *exempla* tales 'the stone walls that marked the end of the precinct ... also miraculously functioned as spiritual guardians and instruments of deterrence' (Cassidy-Welch 2001: 197). Once within the precinct, further physical barriers would be sequentially encountered before arrival at the most holy area, the high altar. Gilchrist and Sloane (2005) have suggested that willow and hazel wands found in monastic graves in England may be an allusion to having made a spiritual journey. *Regula Benedicti* mandated that a monk be permitted only the basic needs for human sustenance. Lightly equipped, therefore, a monk battled at the *telos* of the monastic core. Powicke's evocative translation of Walter Daniel's description of Rievaulx's foundation termed that monastery a 'monastic wrestling ground' (Powicke 1994: 98). Only choir monks would carry out this most challenging of God's work, but if a spiritual pathway between grange and *telos* existed this could have offered a connection for the ordinary country dweller to such endeavours.

Conclusions

Ecclesiastical land in context

This research has illustrated the value of contextual and interdisciplinary investigation of land associated with a religious institution. The contextual relativity of terms such as 'waste' has been exemplified, as having a range of meanings including physical, fiscal and spiritual. This case study has highlighted situational factors such as hierarchical economic imperatives, political circumstances, and the long-term development of physical and ecological contexts. The motivations of a key donor in giving land to a religious institution have been illustrated as complex. King Henry II's activities in supporting religious houses of multiple orders is well-attested (Chibnall 2006). In respect of Marishes, Henry's motivations could have reflected a blend of political strategy, piety, memorialisation and pragmatism. Through donation of royal land to Rievaulx, Henry re-stated the royal writ in a politically vulnerable region using only an initial show of force; reduced the scope for use of the land by a potentially problematic baron in a region remote from the royal power base; and retained the key forest resources of timber and game for the Crown. Through establishment of a religious order of Norman origins on a valuable internal frontier, royal forest and possible trade corridor, Henry conceivably also co-opted existing spiritual and memorial traditions in support of his legitimacy as heir to previous rulers. Religious foundation, including of Cistercian and other monasteries, on royal territorial boundaries was a practice known elsewhere in Europe at the time, such as Southern Transylvania (Țiplic and Țiplic 2016).

Cistercian 'transformation'

Combination of evidence suggests that the history of Pickering Marishes and Rievaulx Abbey could increase nuance of interpretations of the 'transformation' of Cistercian land. Donkin termed Marishes 'primeval waste,' a pristine and uniform marsh wholly 'transformed' by Rievaulx (Donkin 1978: 58-60). Rievaulx's reclamation of water-rich land near Pickering has instead been provisionally suggested above as more limited, and such reclamation more incremental and indebted to previous occupiers, than previously suggested. Areas within these water-rich lands may have been selectively exploited since at least Anglo-Scandinavian times. The pre-Cistercian state of this land has been inferred based on solely documentary and place-name evidence, however. None of the possible interpretations of the descriptions of Marishes as 'waste' discussed here can be considered unambiguous evidence for the physical state of Marishes in 1157. Ground investigations will be necessary to evaluate the hypothesised development sequence.

Only after empirical investigation will it be possible to assess the full significance of this case study in terms of the wider body of evidence for stewardship of water-rich land by medieval actors, and for historic assertions of Cistercian exceptionalism in land management. Gasper has emphasised (2016:51-65) that monastic orders operated within two economies: material and spiritual. The foregoing study illustrates that a Cistercian grange enabled the grant of material goods, such as land and its appurtenances, to be translated into the spiritual economy. In the medieval worldview, therefore, Cistercian monasteries might truly be considered to transform landscape.

This work contributes to the growing body of revisionist studies of monastic landscapes, such as that of Marron (2012), and to understanding of the entwinement of medieval religious and secular power, such as articulated by contributors to Sanchez-Pardo and Shapland (2015). It is also consonant with a long-term entwinement of agricultural production and ritualised / religious practices from the middle Bronze Age to the early medieval period (c.1500 BC–AD 1086) found by the *English Landscape and Identities* project (Harkel et al 2017). Such results suggest the value of holistic interpretations of landscape and cultural factors such as belief. Medieval worldviews may have been rich and complex, although very different to those of modern industrialised societies (Gerrard and Petley 2013). Such complexity is possibly poorly reflected in the atomisation of space and spirituality by much post-medieval scholarship.

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