

Manea Colony

Investigations



ARCHAEOLOGY

HOUSE
WASHLAND

Excavation Report No. 3



CAMBRIDGE
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HOUSE WASHLAND ARCHAEOLOGY

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(Excavation Report No.3)

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SUMMARY

During September 2016 the Cambridge Archaeological Unit in partnership with Octavia Hill Birthplace House undertook survey and trial excavation of Manea Fen Colony. Established in 1838, this was a Utopian socialist community inspired by the principles of the Owenite movement, most notably fostering a cooperative ethos. Documentary sources illustrate that a substantial built environment was constructed by the Colonists, where only a cottage and barn were previously standing. The Colony - named after its founder, William Hodson, as the Hodsonian Community - was of mixed success and only short duration, disbanding in February 1841, just 25-months beyond its beginnings. Following after this Utopian experiment, the site continued to be occupied until 1961 when the last remaining buildings were demolished and the site returned to arable farmland. The project's aim was to characterise the site's archaeological potential for (i) addressing questions concerning the nature and development of nineteenth century socialism, (ii) mapping the distribution of buildings and other features of the settlement's original and changing outline plan, and (iii) to determine the local legacy of Utopia.

The project was undertaken with a team of volunteers as part of the Ouse Washes Landscape Partnership in the scheme's third and final year of a Heritage Lottery Grant. The project's fieldwork included surface collection of artefacts, magnetic and earth resistance geophysical surveys, test pitting and trial trenching (totalling 522.5m²). A total of 11,553 finds were recorded, weighing 289.459kg.

Four main phases of activity were visible archaeologically, comprising pre-colony (Phase 1), nineteenth century occupation (Phase 2), twentieth century occupation (Phase 3), and the post-occupation landscape (Phase 4). Representing Phase 1 were lines of 'marling' pits excavated as part of a strategy to minimise soil erosion. The original Colony would have emerged with Phase 2. This was identified by two sunken floored structures, lined with un-bonded brick and perhaps set within buildings that formed part of a terrace of cottages. The geophysical data suggests that there may be at least five additional structures in series with those tested. A pit containing smithing waste and layers of occupation debris was located near to one of the structures. Although probably post-dating the Colony, its contents serve as a positive indication of the site's preservation and broader potential. Structural postholes dating to either Phases 2 or 3 were noted within an area of greatest finds return density from the surface collection survey, although there was no sign of brick foundations or foundation cuts for other buildings; nonetheless, trencher lines - marking Phase 4, and being traces of the equipment used to clear the built environment following its demolition - may indicate the general position of buildings. A smaller core of twentieth century occupation was registered in Phase 3, that largely corresponded with a post-First World War smallholding. This was represented by a number of pits containing tablewares and glass storage vessels, with at least two housing pig skeletons.

ACKNOWLEDGEMENTS

The project was made possible through a grant from the Heritage Lottery Fund distributed through the Ouse Washes Landscape Partnership. For their untiring support we offer our thanks to the staff and Project Board of the Ouse Washes Landscape Partnership.

We are grateful to Mr John Heading for permission to carry out the fieldwork and for continued assistance throughout the project.

The Manea Colony investigations have been carried out in partnership with the Octavia Hill Birthplace House, Wisbech, and we thank Peter Clayton in particular for bringing to the project his knowledge and unfiltered energy.

The fieldwork was directed by the author with the management of Chris Evans, and was ably conducted by 29 volunteers through the guidance of Sabrina Salmon and Rosalind Quick of the CAU. Members of FenArch and FEAG assisted throughout the project, and Alex Fisher, Andy Ketley and Garry Monger provided information concerning local archives and an earlier geophysical survey of the site.

The project's Open Day involved a morning event at the William Marshall Centre in Welney, entitled 'The Manea Colony Story', and the event's speakers are warmly thanked for their interesting contributions. The afternoon tours included access to Colony Lake, granted by Peter and Sandra Crout.

Roy Upchurch, Brenda Howe, Joan Bishop and Rene Marshall, the children of Cyril Earnest Upchurch and Florence Kate Upchurch, the final occupants of the last surviving Colony buildings, are warmly thanked for their generous discussions and exchange of photographs.

Additional thanks go to Grahame Appleby (Leicester City Council, formerly of CAU), Robert Bell (Wisbech & Fenland Museum), Nick Edwards (www.nickedwards.tv), Dr. John Langdon (Archives & Special Collections, SOAS Library, London), Mike Petty (independent researcher), David Redhouse (Department of Archaeology and Anthropology, University of Cambridge), Sophie Stewart (National Co-operative Archive, Manchester) and Kasia Gdaniec (Historic Environment Team, Cambridgeshire County Council); the staff at Cambridgeshire Archives, the Cambridgeshire Collection, and at The University of Cambridge Library Rare Books and Manuscripts department; and all of those that have communicated with and offered advice to the team during the project.



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INTRODUCTION

During September-October 2016 the Cambridge Archaeological Unit (CAU) in partnership with Wisbech's Octavia Hill Birthplace House conducted fieldwork in Manea Fen, Cambridgeshire (TL 5122 9178; Figures 1 and 2), on the site of a former settlement originally established in 1838 as an experimental Utopian community (Figure 3). This was undertaken with a team of volunteers as part of the Ouse Washes Landscape Partnership (OWLP) in the scheme's third and final year of a Heritage Lottery Grant.

Many names have been used in reference to the Utopian settlement, which here will be referred to as the Manea Fen Colony or simply as the Colony. Although the subject of a number of important scholarly works (Armytage 1956, 1961; Langdon 2000, 2005, 2012), archaeological investigation of the Colony site - today serving arable use - was only initiated in 2015 when a local archaeology group, FenArch, conducted electrical resistance survey on three occasions in February and September. A number of surface artefacts were also collected during the survey and submitted to the Octavia Hill Birthplace House in Wisbech for temporary display. As part of the current project the geophysical data was processed and examined by David Redhouse at the University of Cambridge in June and August 2016. The results were inconclusive, but some geophysical anomalies were nevertheless registered. The artefacts were also examined by the author, and amongst these were shards of ceramic and glass vessels, both decorative and functional, fragments of clay pipes, a glass marble, window glass and handmade bricks imprinted with the word 'DRAIN', all dating to the nineteenth or early twentieth century. Clearly the site displayed potential for archaeological fieldwork. The programme reported here covers further geophysical survey using magnetic and electrical resistance equipment, an intensive and structured surface artefact collection, and assessment of the site's archaeological character through test pit and trench excavation.

The aim of this report is to present the fieldwork's data as reflective of the site's potential for further analysis. The principle objective is to address its archaeological character and the survival of deposits. For this some background to the historical context of the Utopian settlement is required, along with consideration of the site's subsequent history following the Colony's dissolution in February 1841, only 25 months after it was founded, and through to the demolition of the last remaining buildings in the 1960s with the site's return to arable land. Many primary archival resources have been consulted in the process of researching this background, only the most relevant of which will be called upon here. Nevertheless, there are many gaps in the sequence, and it is anticipated that this may be addressed through further archival research aided by the collection of local oral testimony.

A film documenting the project at Manea Fen will be available via YouTube in early 2017, along with additional films covering the CAU's participation in the OWLP.

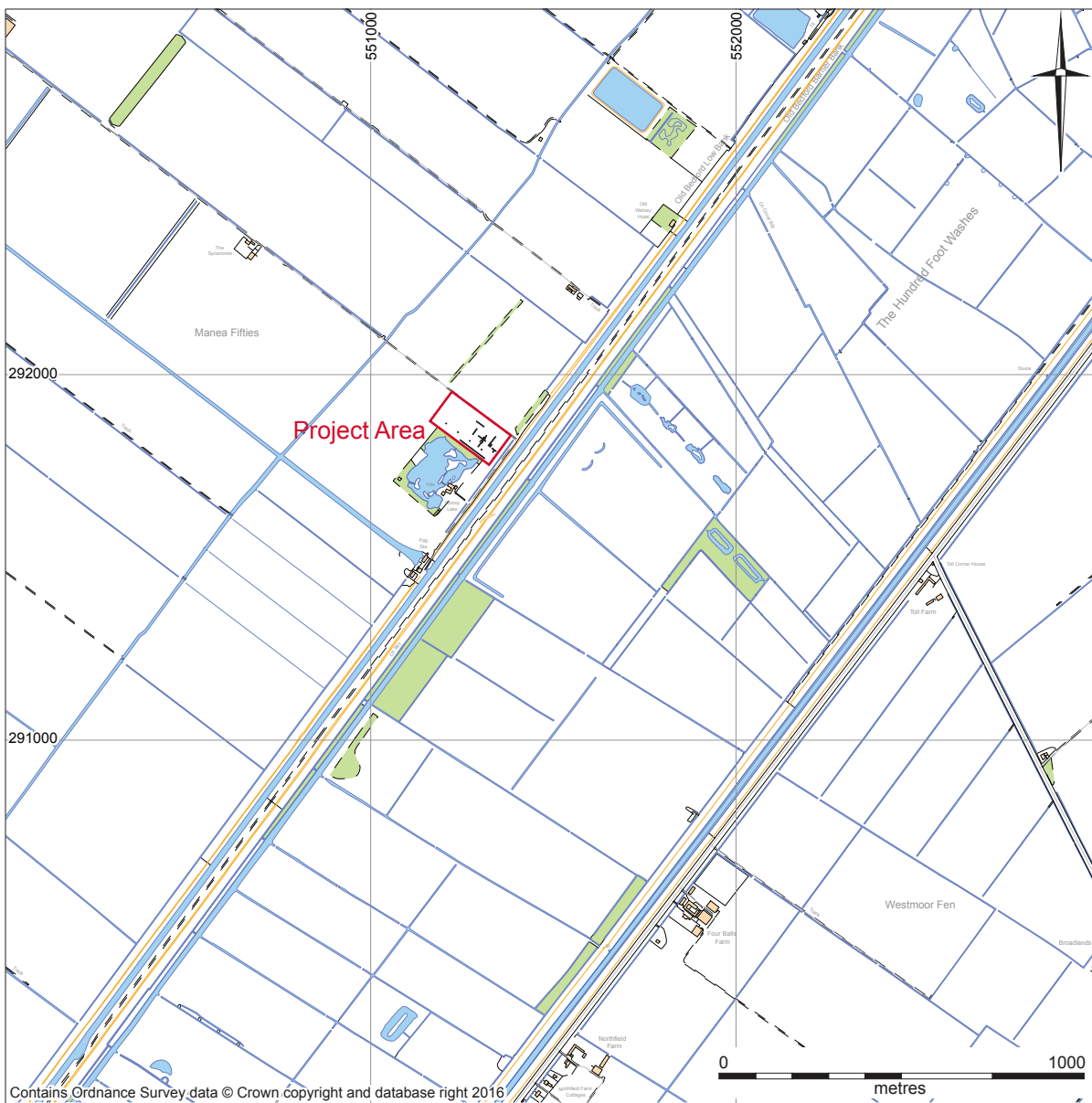
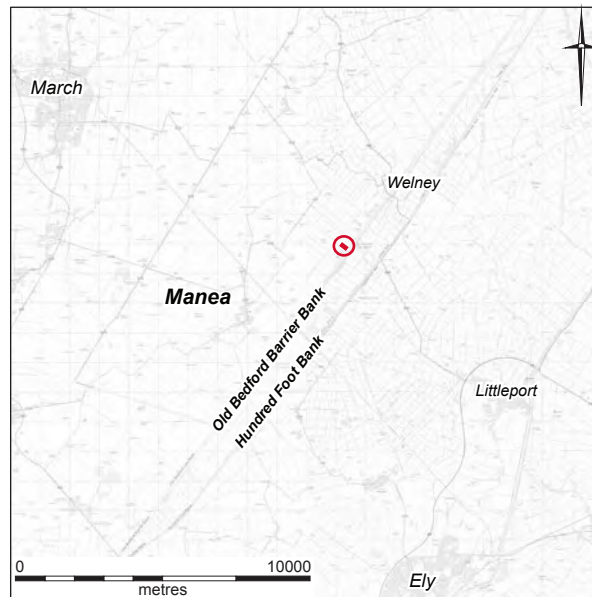
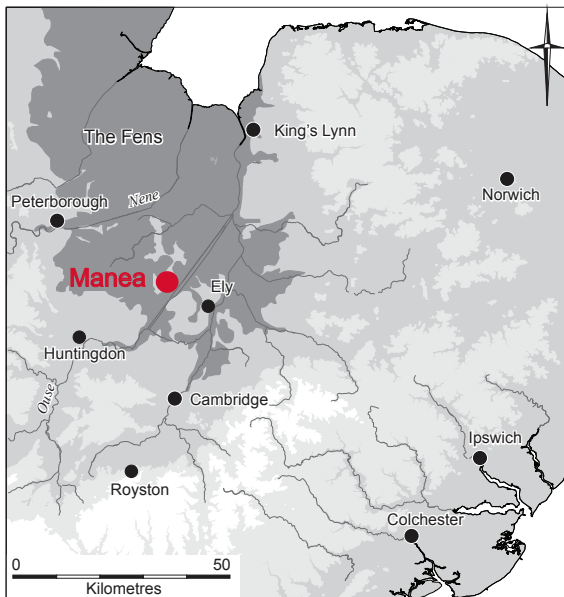


Figure 1. Location Plan



Figure 2. The site before excavation



Figure 3. Area of the colony's land

Archaeology and History of Nineteenth Century Utopias

The principle ambition has of course been to identify traces of the Utopian settlement that has featured considerably in literature on nineteenth century experimental socialist communities, and particularly those influenced by Robert Owen and referred to as Owenite. Sites of former Utopian or 'Ideal' communities have been recognised for their importance to cultural heritage (Fox 1929; Archer 1985; Mansfield 2013), but it is only recently that their potential as a subject for archaeological analysis has been critically outlined (Tarlow 2002, 2007; Van Bueren 2006). Archaeology of Utopian communities may provide alternative entries to the broader context of the societies from which they emerge and, moreover, with an eye to the perfectibility of society they are intrinsically linked to the concerns and assumptions of modernity. Nevertheless, the emphasis of fieldwork has rested upon contexts in North America and empirical contributions to this field from a British perspective are lacking. The current project is the first to address this though fieldwork.

It is of no coincidence that the project was undertaken in the quincentenary of the publication of Thomas More's *Utopia*, the title of which refers to futuristic visions of perfectibility, but combining the paradox of a good place (eu-topia) with an unachievable 'no-place' (u-topia). More's inferred pun of endeavour mixed with futility was undoubtedly deliberate, and yet has been of no barrier to a broad array of visions of the future. It is a defining and constitutive feature of the human condition to measure the standards of life against the possibility of their improvement in the future. 'The urge to transcend,' writes Zygmunt Bauman (2003, 11-12), 'is a nearest to universal, and arguably the least destructible attribute of human existence,' and innumerable projects aspire to an alternative world set apart from the norms of present society. There is a vast amount of utopian literature that could be aligned with this principle, and yet by comparison the attempts to bring this into practical reality are far fewer. Arguably with an awareness that they belonged to a tradition of Utopian thought (Kumar 2003), the most enthusiastic of practical Utopian projects are documented from the nineteenth and twentieth centuries, operating in response to particular social, political and economic circumstances.

Various forms of Utopian ideals emerged in nineteenth century Britain, many through dissatisfaction with developing capitalist industrial society. This was illustrated in protest against working conditions and through revulsion against the quality of social life and a perceived lack in moral conviction. This included expressions of despair with the church's support of individualism, taken to be both a reflection and further catalyst of growing distance in collective relations with higher religious orders. Moulded through the writings of Robert Owen, the Owenite movement was one of a number of responses to these concerns, emerging not in a fully formed capitalist foundation but rather as a means to promote and deliver alternative forms of society that could compete in 'a still-molten situation' (Yeo 1971, 106), and it was articulated through a multitude of interpretations and to varying degrees of extremity. It was upon ideas fermenting within the Owenite movement that a social experiment at Manea Fen was conceived.

Owenite Socialism

In 1800, and at the age of only 29, Robert Owen (1771-1858) followed his uncle to the directorship of the New Lanark Cotton Mills in Scotland, publishing in 1813-14 *A New View of Society* in which he presented a means to an ideal community based upon the proposition that human character is not innate, but is moulded by the environment, both physical and cultural (Figure 4). Rooted in eighteenth century enlightenment thought, 'reason', he argued, was unique to humanity and if properly harnessed could lead to improvement of its circumstances and thereby of the human condition (Hardy 1979, 24-35). Greater productivity would similarly follow as one outcome. Within this path to progress Owen consistently foregrounded cooperation as a foundational theme towards the optimisation and equitable distribution of labour and wealth, along with educational reform, the advancement of women's emancipation, and which included a reformist attitude to marriage. He also advocated the formation of model villages with a spatial design suited to the enablement of cooperative forms of community, and argued that their success would promote the growth of a network of cooperative communities that would eventually radiate to all of society. His first major experiment in community was conducted in 1825 at New Harmony, Indiana, which lasted for two years. Owen returned to New Lanark in 1827 to sell the business, and to devote his energies to socialism. The formation of at least 19 communities was inspired by the Owenite movement (Erasmus 1978: 145), with the majority of these emerging in the United States. None lasted more than four years, but Owen's legacy was influential to the development of the broader labour movement later in the nineteenth century.¹

William Hodson and Manea Fen

The Manea Fen Colony was founded in 1838 by William Hodson (1808-1880), resident in Upwell approximately six miles from Manea and from where his family seems to have originated. He was a local character, known by the name of 'Sailor' on account of having spent six years at sea. Following his voyages, he became a landowner, perhaps having acquired a part of his wealth through inheritance (this may also be the case for another local landowner and relation, John Hodson); and he brought scientific principles to agriculture in the region, notably in soils chemistry. He served as a representative for Upwell on the Wisbech Board of Guardians, standing for his fourth term in March 1838, and was connected with James Hill, a Wisbech banker and proprietor of the radical newspaper, the *Star in the East*, in which Hodson published his views against the Poor Laws, the tithe system and the priesthood. These views were evidently radical, and were invigorated whilst chairing a meeting in the town of March in July 1838 that was addressed by Robert Owen as a part of his lecture tour of eastern England.

¹ Whilst acknowledging the phantasmagorical in Utopian socialism, Frederick Engels wrote in 1880 that, 'Every social movement, every real advance in England on behalf of the workers links itself on to the name of Robert Owen' (Engels 1908: 73).

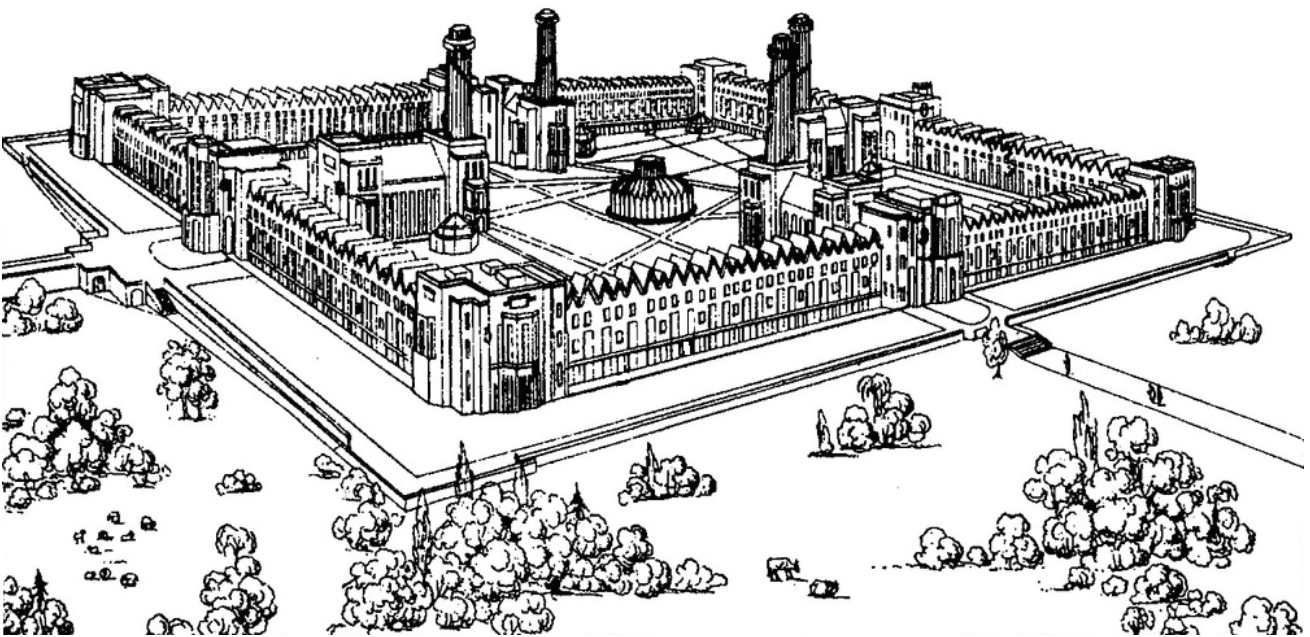


Figure 4. Robert Owen, the New Lanark Mills arts and educational improvement, and New Harmony community model by Stedman Whitwell (1784-1840)

With these ideas Hodson supplemented his own views towards moral and economic reform,² and he wrote to Owen on 15th August to outline a scheme for a cooperative community to which he was invested.³ This entailed the purchase of 150 acres of productive land in Manea Fen where an existing quarry pit could produce enough clay for bricks sufficient 'to build school rooms, Engine House, Workshop, Cottages etc.' The letter was accompanied with a pamphlet titled *Each for All – To the Working Classes, the Real Producers of Wealth*, proposing the foundation of a community in which 'None will spoil their hat in bowing to superiors, all will be equal,' and where 'envy, strife, and all uncharitableness will find but little food under such arrangements.' Eventually, Hodson claimed in his letter, in the success of the experiment 'every capitalist will see this as the best way to invest their capital.'

Hodson's venture at Manea Fen did not gain the full support of the formal Owenite movement. This was, in effect, a structured network of local branches of Owenite followers brought together as a collective in 1835 as The Association of All Classes of All Nations. By 1837 this had become enrolled under the Friendly Societies Acts as the National Community Friendly Society; now shielded by law, these bodies were subsequently amalgamated in May 1839 into the Universal Society of Rational Religionists (Cordery and Monmouth College 2003). This was a structured organization, with a directory and over fifty district boards with departments, officers and travelling missionaries established to fulfill its national representation. With Owen being appointed as Social Father, the organization enrolled over 3000 members. In a way akin to the Friendly Societies, the Rational Religionists offered collective self-help on a moral basis providing benefits in the form of unemployment assistance, pensions and education, as well as entry to a vibrant sub-culture. Membership required subscription, the cumulative value of which was aimed towards the development of experimental communal societies. In spite of the collection of subscriptions there was little sign to its membership that progress towards any form of self-contained community had been achieved. Dissatisfaction within the Rational Religionists created a space for interest directed towards 'unofficial' community ventures, such as that at Manea Fen.

Before embarking upon the Colony at Manea Fen, Hodson had previously attempted to partner with the Rational Religionists, but instead set forth to the formation of the so-called 'Hodsonian Community'. Subsequently the relationship between the Rational Religionists and Hodson (and by implication the Manea Fen Colony) was fraught with disagreement and only the occasional glimpse of mutual endeavour. Much was at stake: the failure of a social experiment was fuel for its detractors as evidence of the futility of socialism. Moreover, the Rational Religionists were finally devising their own community in Hampshire, Queenwood Colony, which opened in 1839 and was therefore in competition with Manea Fen Colony for its prospective

² Hodson outlined the differences between his and Owen's views in a number of articles, with the most cogent in the *Northern Star* (September 7th 1839) in which Hodson distinguishes his adherence to the truth of Christian doctrine against an advocacy of secularism that, he suggests, may be drawn from Owen's works. Moreover, he makes the rare comparison of the success of religious societies in America to the possibilities held by the community at Manea Fen. Hodson's doctrinal views may not have been entirely favourable, if at all, to some members of the Colony.

³ Correspondence: Hodson to Owen, 15th August 1838. National Co-operative Archive, ROC.68.1

membership. An additional threat to the growth of membership was the formation of a colony in 1840 at Pant Glas in Wales by the Society of United Friends', a group emerging out of the Rational Religionists' Liverpool branch, and groundwork for another colony at Chat Moss, west of Manchester, was announced in 1840. Pant Glas closed the following year, and although land was purchased at Chat Moss its colony never transpired. Nevertheless, cooperation between the Manea Fen and Queenwood Colonies was only little improved, with ideological differences – notably concerning forms of colony governance – unresolved. Nonetheless, and in spite of having shown notable promise in 1840, the Colony at Manea Fen collapsed in early 1841 and was announced as dissolved in February. The duration of Queenwood Colony was only slightly longer, with that too disbanding in 1845.

Documentary and Cartographic Evidence

There are various key historical sources pertaining to the Manea Fen Colony.⁴ Drawing upon a number of these, the most relevant publications by Armytage (1956, 1961) outline the physical and social structure of the community as well as document the variety of response against which it was established and eventually dissolved. In building upon this foundation, Langdon's work (2005, 2012) critically addresses the variegated conceptions of 'community' as expressed during the course of the 25-month venture, and also looks beyond the end of the Colony and into its legacy across the subsequent lives of a number of its former members, many of whom explored new forms of community in the United States. A full overview of the content and sources of these works is far beyond the scope of this report; Armytage (1961) is available through public access online, and Langdon (2000, 2005, 2012) may be accessed via the Cambridgeshire County Council's Historic Environment Record.

⁴ Letters to Robert Owen with regards to the Manea Fen Colony are housed at the National Co-operative Archive in Manchester, with a number of letters, conveyances and oral histories (c. 1914) held within the Wisbech & Fenland Museum. The Cambridgeshire Archives hold personal records of a number of the Colony members, notably the Crump and Cutting families, along with records of the Bedford Level Corporation that includes correspondence with William Hodson, and sales brochures of various tracts of relevant land. The University of Cambridge Library has a copy of the *Rules of the Hodsonian Community Society* (a copy also being available at the National Co-operative Archive), and the Rock County Historical Society in Janesville, Wisconsin, has collated various documentation pertaining to the post-Colony life of William Hodson.



Figure 5. Above: Artist's 1841 Illustration of the Colony as viewed from the bank of the Old Bedford River, published in *The Working Bee* in 1841. Below: W.H. Pyne's 1845 depiction of brickmaking

Essential to the picture held today of Manea Fen Colony is the information that may be drawn from the community's own weekly newsletter, *The Working Bee*.⁵ Priced at one penny, this was produced in 46 issues on the site of the community and included articles and letters written by community members, often in direct response to received criticism, as well as observations, queries and selected condemnation – often reviewed with satirical interest – from outside contributors. Descriptions of the Colony's physical development and aspirations for its future character may be found amongst the pages of *The Working Bee*, though at times with contradiction, and rarely with detail. Often the target of its articles were the views published in the Rational Religionists' own newsletter, *The New Moral World*,⁶ where again may be found the occasioned insight of the Colony's physical appearance and layout. Furthermore, in addition to other serials sympathetic to the Owenite and Chartist movements, James Hill's Wisbech-produced newspaper, *The Star in the East*,⁷ provided further commentary and critique of the Colony's development. The *Working Bee* was first published in July 1839, nearly one year after the Colony's foundation. Its hostility towards a number of commentators external to the community renders no small degree of bias to its pages. In one of its final editions in 1841 is included an artist's depiction of the Colony from its south as viewed from the banks of the Old Bedford River (Figure 5). It is the only known pictorial image of the Colony⁸ and must surely be read with caution and in the context of Victorian landscape or scenic visualisation (e.g. Mcnaughten and Urry 1998).

Although at times contradictory, *The Working Bee* and reports from other sources nonetheless illustrate that a considerable infrastructure was produced at the Colony site. The land upon which the Colony was established was 1.25 by 0.25 miles (200 acres), perpendicular to the Old Bedford River (aligned northwest), with the main settlement occupying c. 30 acres of the southernmost portion. The majority of the buildings were apparently made of brick and slate tile, along with additional timber framed buildings. The sources claim that the majority of the brick was produced on site (Figure 5), using clay extracted from a large quarry pit. According to *The Working Bee* in August 1839 the dimensions of this pit were 40 yards by 12, to 'a bed of beautiful gravel' at a depth of 22 feet, and it was proposed that the pit would be extended to 'several times its present size'. A kiln allowed for the efficient production of approximately 50,000 bricks in a single firing, with the construction of another kiln expected. 'Our bricks are excellent' was the claim, and a line of rail tracks linked the brick ground to the site of building construction. Here, the first buildings were temporary and timber-framed. The bricked buildings were rapidly erected and comprised a terrace of cottages with parapet walls, numbering somewhere to between 12 and 24, and 'finished and furnished in a manner equal to

⁵ A full set of the *The Working Bee* is archived in the Cambridgeshire Collection. The bee and hive were established Socialist symbols by this time (Sippel 2009).

⁶ Copies of *The New Moral World* may be accessed in the University of Cambridge Library.

⁷ Various editions of *The Star in the East* are located at Octavia Hill's Birthplace House museum and Wisbech & Fenland Museum.

⁸ An eyewitness statement from 1914 recounts a visit to the Colony buildings in the 1840s, and that on the parlour wall of Hodson's house was a large watercolour painting 'illustrating what the Colony was expected to be.' The whereabouts of the painting is unknown. Correspondence: Nix to Pearson, May 23rd 1914. Wisbech & Fenland Museum.

many of the most wealthy capitalists.⁹ These were small private dwellings that, with a separate dormitory (with six private sleeping rooms, later taken down and turned into a theatre), separated married and unmarried tenants. Other buildings included a dormitory for hired labourers (c. 10; many of whom were responsible for quarrying the clay pit), two large communal rooms which served at various times as a dining space, library and printing room (these were later conjoined into a single large room, 40 feet by 20, with plastered ceiling and 'tastefully' papered walls), along with a large kitchen (with larder, wash-house and oven) and numerous workshops including a smithy ('well fitted up for necessary purposes'¹⁰) and a barn for the joiners. The intention was that the buildings would be arranged around a quadrant, formed of three sides of buildings with the bank of the Old Bedford River as the fourth side. The construction of a further 72 cottages was anticipated for the completion of the quadrant, from which it was envisaged a series of six to eight appending quadrants would eventually be constructed, the occupancy of which could be classified against 'the time of membership, congeniality of mind, knowledge of our principles, and amiability.'¹¹ Hodson and his family lived between the Colony and his other residences, occupying a large six-roomed cottage on the site. This building, along with a barn, was already on the site prior to the establishment of the Colony, and was previously occupied by labourers of Hodson.

The large communal dining hall was heated by an Arnott stove ventilating system. Introduced in 1838, the stove was presented as the most efficient and economic means to circulate warm air, fed through tubes around a metal and brick boxed stove above a fire pit with a manual ventilation grate (Arnott 1838).¹² It is unclear as to whether other buildings were heated by this or other Arnott (or Arnott-inspired) stoves, or the means by which multiple buildings may have been heat-fed by one or more units.

Other reputedly erected buildings served uses that included a laboratory for experiments, demonstrations and lectures in soils chemistry; a gymnasium; a sailed windmill (given the name of Tidd Pratt)¹³ used to turn an Archimedes screw that would drain the clay pit of rising water, as well as to power a circular saw, lathe and brushes for polishing boots and knives. An area was reserved within the Colony site for archery, with another for cricket and bowls, and plots for gardens were outlined and prepared.

Two of the most extravagant buildings reported either as a future design for the site or as an already established feature of it were a large schoolhouse set upon an island surrounded by a large water-filled moat upon which children could row or sail small vessels, and a 60-foot tower aloft with a tricolour flag raised above the Union Jack, encircled by a 150m diameter ring of trees and with two high viewing platforms, the

⁹ *The Working Bee*, 14th September 1839: 103

¹⁰ *The Working Bee*, 3rd August 1839: 17-19

¹¹ *Ibid.*

¹² Critique of the system countered that the prolonged circulation of warm air reduced the level of oxygen within a room and therefore led to the inhalation of air that was detrimental to health (e.g. *The Monthly Chronicle*, 1838: 220-233).

¹³ Tidd Pratt was the registrar for Friendly Societies and responsible for enrolling the *Rules of the Hodsonian Community Society*.

upper of which could accommodate 40 persons for tea, 16 on the lower. Although five acres of grassed land were prepared for the school it is unclear as to whether this ever became a reality, but the tower seems to have been a prominent feature somewhere within the site, and most likely towards the centre of the anticipated quadrant. There is mention also of a smaller platform from which Hodson would deliver sermons, although its character is uncertain and may simply have been of wooden scaffold.

The scale of the infrastructure as developed by the colonists is clearly impressive and, in theory, should leave some tangible traces. However, following the disbanding of the community in 1841 the site continued in use to varying capacities for another 100 years, during which time additions and demolitions may have substantially changed the physical appearance and spatial dynamics of the site. Having tried unsuccessfully to sell the land in May 1841¹⁴ a second valuation survey was carried out in October 1844 by John Cross, who noted that 'Mr. Hodson has built, and is building, further Cottages, and a large isle shed', upon the completion of which the whole was valued at £8300.¹⁵ The site was advertised for auction again in April 1846, in which was listed a 'commodious Farm-house and Out-buildings, and Nine Brick and Slated Tenements', as well as 'the Brick-yards, Kilns, Drying Sheds, Brew-house, and Farm, and other Buildings.'¹⁶ Duly, the sale was successful and conveyance was passed on 27th March 1846.¹⁷ It is evident that in the time during which Hodson lived at the Colony site between 1841 and 1846 he significantly expanded into the business of brick and tile making. This appears to have been of fair success, although in 1842 Hodson was fined at the Bench of Magistrates for selling by short weights and measures.¹⁸ He advertised for the employment of two experienced 'brick burners' in September 1844¹⁹ and in the following November was marketing 'at reduced prices' bricks and tiles produced from eight working kilns.²⁰ Brickmaking at the site was an attractive sales piece; purchased from Hodson by Matthew Howard, a brickmaker from Daventry, the enterprise employed at least 12 labourers and produced around one million bricks per year.²¹ Brickmaking continued at the site into the 1860s but may have discontinued sometime in the 1870s. The degree of expansion of the clay pit and allied kilns with storage areas is difficult to determine between its initial Colony use and its subsequent businesses, but its impact upon the outline of the original settlement may not be insignificant.

Although unnecessary to expand upon here, further work would be required for clarity of the documentary evidence for ownership and residency at the Colony site from the mid-1850s onwards. It is likely that ownership was broken up into plots of land and across individual cottages for either private or tenancy use. Census records

¹⁴ *Cambridge Independent Press* 8th May 1841: 1.

¹⁵ Correspondence: Cross to Barley & Wise Solicitors, 16th October 1844. Wisbech & Fenland Museum.

¹⁶ *Cambridge Independent Press* 11th April 1846: 1

¹⁷ Conveyance archived in Wisbech & Fenland Museum.

¹⁸ *Cambridge Independent Press* 10th September 1842: 3

¹⁹ *Cambridge Independent Press* 21st September 1844: 2

²⁰ *Cambridge Independent Press* 2nd November 1844: 1

²¹ *Cambridge Independent Press* 4th November 1854: 4

provide snapshots of various and changing occupancy, but challenges arise with the use of differing names that come to refer to the site. These include 'New World Farm' from the mid-1850s to 1860s, which in spite of clear reference to the site's former purpose may be problematized in the literature owing to the same name for a farm west of Doddington, c. 10km from Manea. Confusion is similarly evident in the split between the farm named as 'Colony', that refers to the site of the former Hodsonian Community, and that named 'The Colony' that from the mid-1860s refers to a farmhouse and associated buildings at what today is the site of The Sycamores bungalow, immediately north of the original Colony.

The cartographic evidence largely corresponds with the broad sequence outlined above for the nineteenth century, although the most detailed maps only appear after 1880 via the Ordnance Survey (OS). The 1833 Eau Brink Survey map shows the Manea Fifties as divided into strip plots, each of 50 acres, and in plot number 72 are two buildings broadly in the area of the Colony site. These presumably are the farmhouse and barn referred to in *The Working Bee*, and in which Hodson's family resided upon the establishment of the Colony. A number of additional buildings are depicted for the following decade in the Tithe Map of 1848, although the clay pit is unusually absent (Figure 6). Eight of the buildings appear to be set within the plot that housed the former Colony. Six of these are likely to be associated with the brickyard, with only two in the area of the former Colony dwellings. There is no sense of any quadrangle formation, and the layout of the buildings is near completely different to that seen in the 1880s OS maps, thus opening to question the security of the 1848 depiction. The 1880s OS maps (1st and 2nd edition) provide considerable detail with 'Colony' clearly marked (Figure 7). Here the clay pit is shown as water-filled, with the 'Old Brick Yard' set between this and the Old Bedford River and illustrated by two square and one rectangular buildings. The site of the Colony upon which the project area was situated comprises a terraced row of ten buildings oriented perpendicular to the river, with two additional buildings connecting to the terrace at its northwest side. Totalling to 12 buildings, these presumably are what remained of the cottages. Various sub-divisions lie within the area of the buildings, one marking the southeast (river) side of the settlement, with a double linear boundary setting the northwest side against which the terrace turns northwards. It is unclear as to how these boundaries may have been marked on the ground (ditch, fence, hedge, wall etc.). Against one of the interior divisions and perpendicular to the terrace range are a number of additional buildings seemingly comprising a second terrace, but in a T-formation. An 'Old Windmill' is also marked on the northwest corner of the quarry 'lake', and a square orchard appears to the northwest of the settlement.

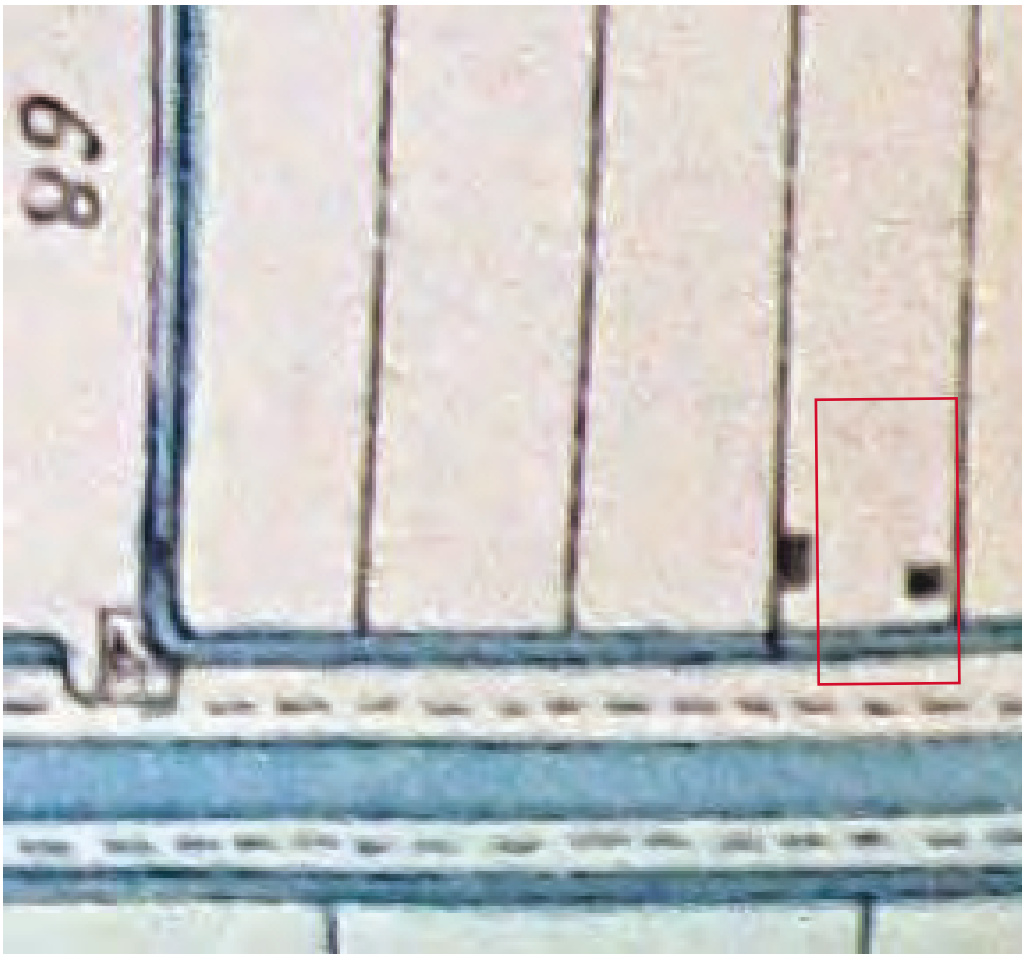
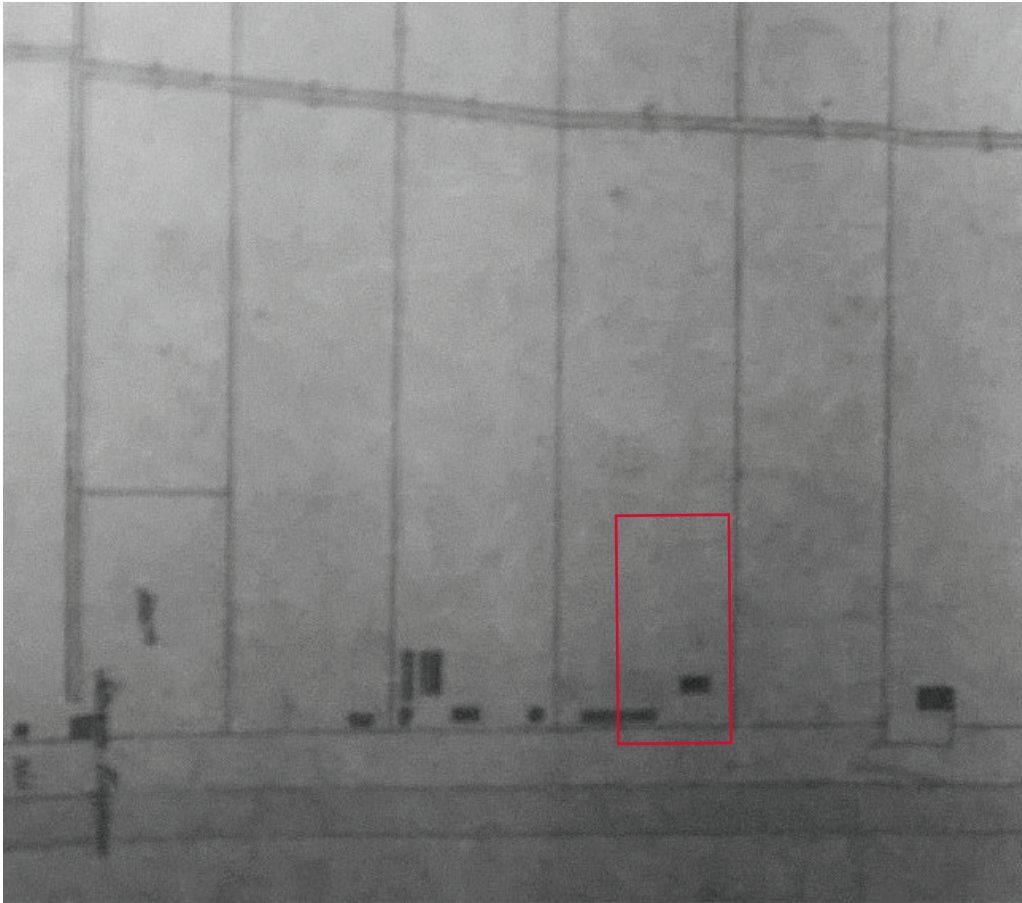


Figure 6. 1848 Tithe map (top) and 1833 Eau Brink Tax map

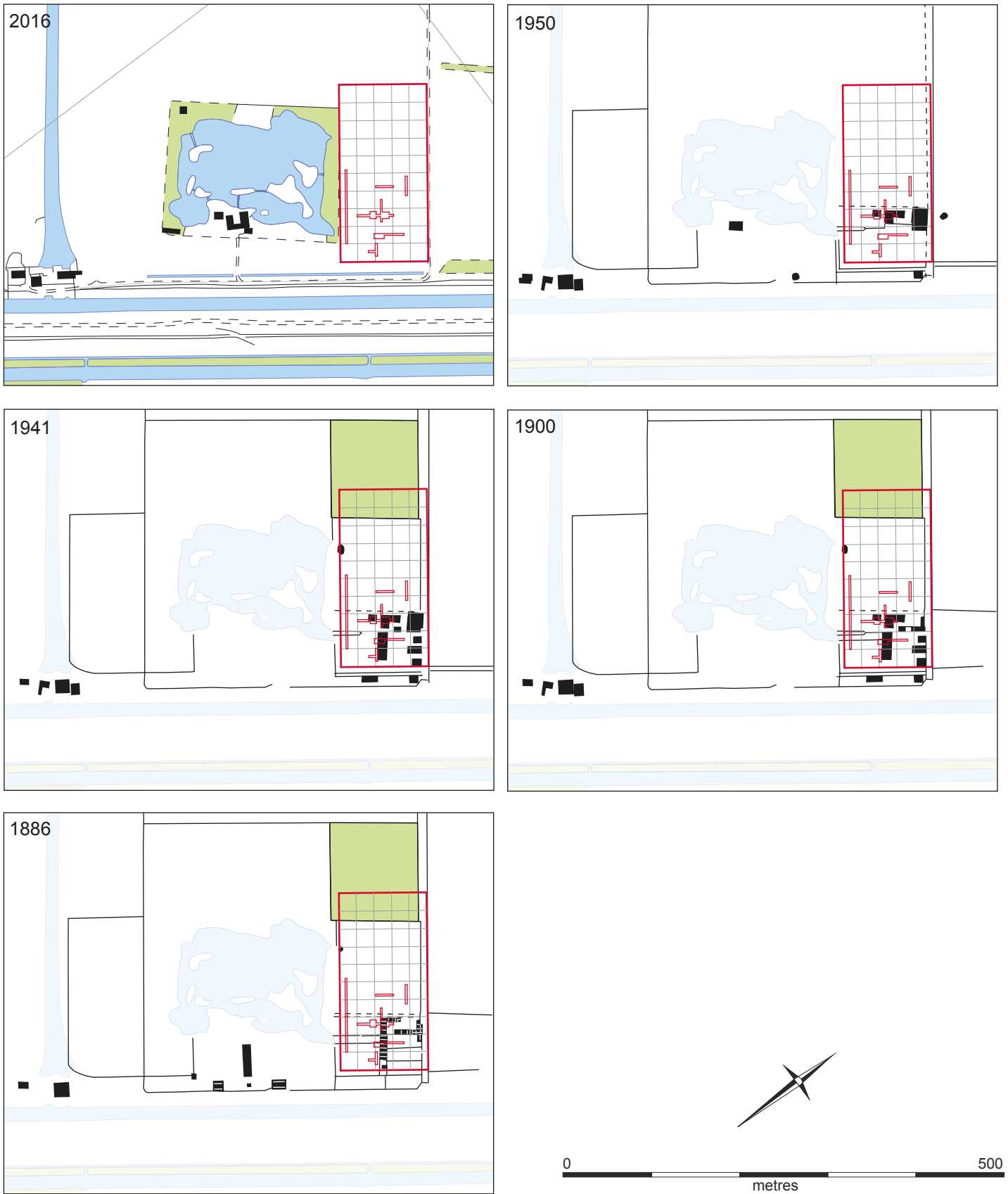


Figure 7. Project area history through Ordnance Survey maps 1886 - present

There is a curious feature of the 1886 and 1906 OS maps that is not replicated on any later editions, and had only limited reference throughout the documentary sources, but has potentially important implications for the site's history. This is the naming of at least one of the buildings (which one is unclear) as St. Peter's Mission Church. By 1851 there were four chapels in the parish of Manea: Chapel of Ease (re-erected in 1791), a Primitive Methodist Chapel (erected in 1834), a Baptist Chapel (built in 1839), and a Wesleyan Chapel (erected in 1844).²² Adding to the curiosity is a note that William Hodson was appointed as one of the Churchwardens for Manea following the Colony's demise in April 1841.²³ It is unclear as to which of the chapels Hodson was affiliated, and whether any of these (excluding the Chapel of Ease) relate to the St. Peter's Mission Church. The Baptist Chapel congregation is noted to have dissolved by the late 1870s (Atkinson 2002: 136-40), although a note in the London Gazette for October 1875 refers to 'a separate building, named the New Wesleyan Chapel' being registered on 9th October 'for solemnizing marriages therein'.²⁴ However, a note from July 1855 states that: 'On Sunday morning and afternoon, sermons were preached in the large room of the Institution, by Mrs. [Elizabeth] Preston, wife of Mr. John Preston, of the New World Farm, in Manea Fen', where funds were collected for the Primitive Methodist Sunday School.²⁵ It is possible that the 'large room' referred to is what was once the Colony's dining hall; either way, the presence of an ecclesiastic building on the site may be important to its overall archaeological potential.

By 1906 the OS maps no longer show buildings associated with the brick yard, and whilst the overall layout of the buildings within the Colony site continue as before, there are notable changes as buildings appear to have been either erected or demolished. Owing to the latter, the range of terraced buildings (no longer shown as individual plots) is reduced and partitioned into two separate ranges, and new buildings are shown along the southern flanks of the access road and between a new interior boundary and the river. One of the boundaries illustrated in 1886 as a single linear feature is by 1906 two parallel linear features that meet and conjoin at the north, and from this point connecting with the terrace range by a single linear feature that defines the limit of the buildings. The site of the windmill and the orchard are again illustrated with reference to St. Peter's Mission Church, although this is curiously absent from the 1900 edition. The 1901 census contains entries for seven different families living at 'Colony' with another at 'Colony Farm', although it is not clear as to how many families occupied the site of the original Manea Colony. However, in July 1904 a notice was published stating that a smallholding in the 'Colony' occupied under tenancy by Thomas Rolfe was sold to S.H. Farrington of March at a 'reduced cost' of £1240. This comprised a 'House, Cottage, Out-buildings' and land at c. 32a 0r 15p with 5a 3r 24p of 'fishing pits'. In separate ownership, The

²² *History, Gazetteer, and Directory of Cambridgeshire* (1851): 498

²³ *Cambridge Chronicle and Journal* 24th April 1841: 3

²⁴ *The London Gazette*, 22nd October 1875: 4977

²⁵ *The Cambridge Independent Press*, 14th July 1855: 7

Colony Farm was withdrawn from sale.²⁶ The census records for 1901 indicate that Thomas Rolfe, aged 50, and who had originated from Welney, was married to Elizabeth (46) who was registered as having been born at the Colony (i.e. c. 1855), and they lived with their four sons (17-21) and four daughters (11-14) with a grandson, Sydney (3), all of whom had also been born there.

During 1910-15 the Inland Revenue Valuation Office conducted the first comprehensive national survey of land and property ownership since the Domesday survey of 1086, the aim being to determine the rateable values of property as a means to appropriate taxation (Short and Reed 1986). Held within the National Archives, the valuers' field notebooks dated 20th November 1913 give some account of the Colony land's physical structure and occupancy.²⁷ Still in Farrington's ownership and the occupancy of the Rolfe family, Colony farm comprised 30a 3r 14p with 'a brick & slate home' that contained '4 bedrooms & 4 lower rooms'. Added to this were two 'B&t' (brick and tile) four-bay sheds and a 't&t' (timber and tile) barn. The whole was valued at £1256, which was a slight rise from its sale price, although a substantial increase when taking into account that the lake now lay in the separate recreational ownership of P. Vandervell from an affluent London family. What is clear from these descriptions is that a great many of the original brick and slate tile buildings had been converted from dwellings into working agricultural spaces prior to the site's sale in 1904, representing a shift from a communal habitat to a single occupancy smallholding.

The status of Colony farm as a smallholding held important implications for its fate immediately before and after the First World War. Since the nineteenth century various acts of Parliament had provisioned for the acquisition of land to be let to the poor and unemployed. Similar campaigns were actioned for smallholdings, and with the 1882 Allotments Extension Act a mechanism for a Compulsory Purchase order was installed for land of between 5 and 50 acres (Martins 2006). Further to this, the 1892 Smallholdings Act allowed for County Councils to buy land for smallholdings rather than allotments. Colony Farm appears to have fallen within this umbrella in 1912 when the Isle of Ely County Council devised a Small Holdings Committee engaged with inspection of farms with the aim towards the sanctioning of their purchase as smallholdings. However, attempts to purchase the land in October were unsuccessful owing to the price being higher than that approved by the Board of Agriculture.²⁸ Following the Inland Revenue's revised valuation in 1913 the land of Colony Farm did eventually come into the possession of the Isle of Ely County Council. Following the First World War, and having been transformed from its cooperative roots and into a combination of business enterprise and private dwellings, the Colony site entered a new phase of socialist cooperative identity. During and following the First World War there was increased realization of the necessity for national food production and in 1915 a Committee was devised with

²⁶ *The Cambridge Independent Press* 10th June 1904: 1; *Stamford Mercury* 1st July 1904: 6. The Colony Farm lot was for 114a 3r 35p of land 'with house, cottages, barn, and other farm buildings' occupied by Samuel Dunhour.

²⁷ Records of the Valuation Office. Manea Assessment No. 401-500. National Archives IR 58/65743.

²⁸ *Peterborough Advertiser* 12th October 1912: 8.

the aim to promote the settlement or employment of military servicemen on land after the war. In 1916 the Sailors and Soldiers (Gifts for Land Settlement) Act was passed along with the Small Holdings Colonies Act that provided a means for the settlement of ex-servicemen into profit-sharing cooperatives, authorizing the acquisition by agreement of 2000 acres of land for the purpose of providing 'experimental small holding colonies'; this was increased to 20,000 through Amendment in 1918, but with no provision for extra funds. This changed with the 1919 Land Settlement (Facilities) Act through which £20 million was provisioned for the purchase and equipment of small holdings for ex-servicemen, combined with increased powers to county councils for the compulsory purchase of suitable land. Upwards of 24,000 ex-servicemen were resettled in England and Wales, although the number of applications far exceeded this (Smith 1946: 110), and in Cambridgeshire some 952 applicants were registered for 15,300 acres of available land (Martins 2006: 313). In June of 1919 at a meeting in Welney interest in 600 acres of land was expressed by 30 applicants with offers of rent at 60-70 shillings per acre, and a unanimous request to the County Council for the land's compulsory purchase (*ibid.*). It appears that the Colony became one of these smallholdings, entering into the possession of Claude C. Loughlin, a former gunner in the Royal Garrison Artillery.²⁹ A national survey of farms in 1941 by the Ministry of Food shows this to have been a successful enterprise.³⁰ With additional tennancy of land elsewhere in Manea, Loughlin's farm employed 19 workers on 138 acres for crops, with 22 cattle, 50 chickens and 17 ducks, and a total of seven horses.

The Colony site was sold in 1941 upon Loughlin's retirement, and a drawn map of the site is included in the sales brochure, dated 1st October.³¹ There is little by way of distinction between this and the 1906 OS map, save for the possible addition of one building in the north corner of the settlement, and the removal of one in the east corner. The sales brochure describes the buildings on the site as a seven-room dwelling house (one room less than in 1913), brick built and slated, with 'a range of boarded and tiled piggeries, 5-bay brick and tiled open bullock hovel to crew yard, and brick and tiled barn.' The site was purchased by Lewis Upchurch and was run and occupied by the family³² as a smallholding until 1961 when it was sold to Alfred Heading and the entirety of the land returned to agriculture. The map in the 1941 brochure indicates a range of buildings situated along the line of the original main central terrace, although these are likely to have been part of the later arrangement of timber structures rather than survivals of the original brick terrace. This is subsequently absent from the 1950s OS map, along with removal of a number of roadside buildings, leaving only a small cluster of buildings in the north corner surviving from the previous settlement depictions. These buildings are visible in photographs from the 1950s which also show the eastward expansion of the smallholding with the erection of a line of wooden poultry sheds and the replacement or repair of timber sheds on the north side of the smallholding (Figure

²⁹ Regiment no.156676. Medal card, National Archives reference WO 372/23/61238.

³⁰ Ministry of Food: National Farm Survey, Individual Farm Records 1941-43. National Archives MAF 32/769/17

³¹ Cambridgeshire Archives 515/SP/1726.

³² Cyril and Florence Upchurch, with their children Roy, Brenda, Joan and Rene.

8). The main dwelling appears to be the western end of the original brick terrace. Although the building comprised a ground room store with seven other habitable rooms (as outlined in the 1941 sales brochure), this was actually formed of two small cottages each with two ground floor and two first floor rooms. Each end of the building was capped by a chimney, and fireplaces were located in at least two of the first floor bedrooms; each room included a wooden framed window, except for the north-facing ground floor room through which the main access was located. Two or three large brick-made eaves buttresses fronted onto each side of the building to provide extra stability to its walls, and a single-storey brick-made lean-to abutted the main building on its west side where a brick and tiled barn formed the smallholding's western edge. This description of the two cottages turned into one is of particular interest in that it does not smoothly correlate with the 1840 artist's impression of the Colony from *The Working Bee*, in which the doorways to the terraced cottages face to the south and left of a ground floor window, and the chimneys follow an irregular pattern, there being more chimneys than cottages. Of further interest is that the site of the windmill appears to be marked on the 1941 map, though is absent from 1950 onwards. This is still visible as an earthwork today, but inhabited by badgers.

A new building appears on the southeast side of the water-filled quarry pit (now called Colony Lake) in the 1950 OS map. Then still in the ownership of the Vandervell family, this comprised a single bungalow with three converted railway carriages, all today replaced by a large house.³³ Although not a feature of the OS maps, remains of three or four beehive shaped brick kilns may still at this time have stood on the eastern boundary of the land between the lake and the Old Bedford River (*pers. comm.* Roy Upchurch).

The remaining Colony buildings were demolished soon after their sale in 1961, then being returned to arable land, with all previous boundaries having been removed, as is illustrated in the OS maps of the 1980s onwards.

³³ The unusual recent history behind Colony Lake may be further explored at: <http://www.ousewashes.info/places/colony/colony-or-vandervells-lake.htm>

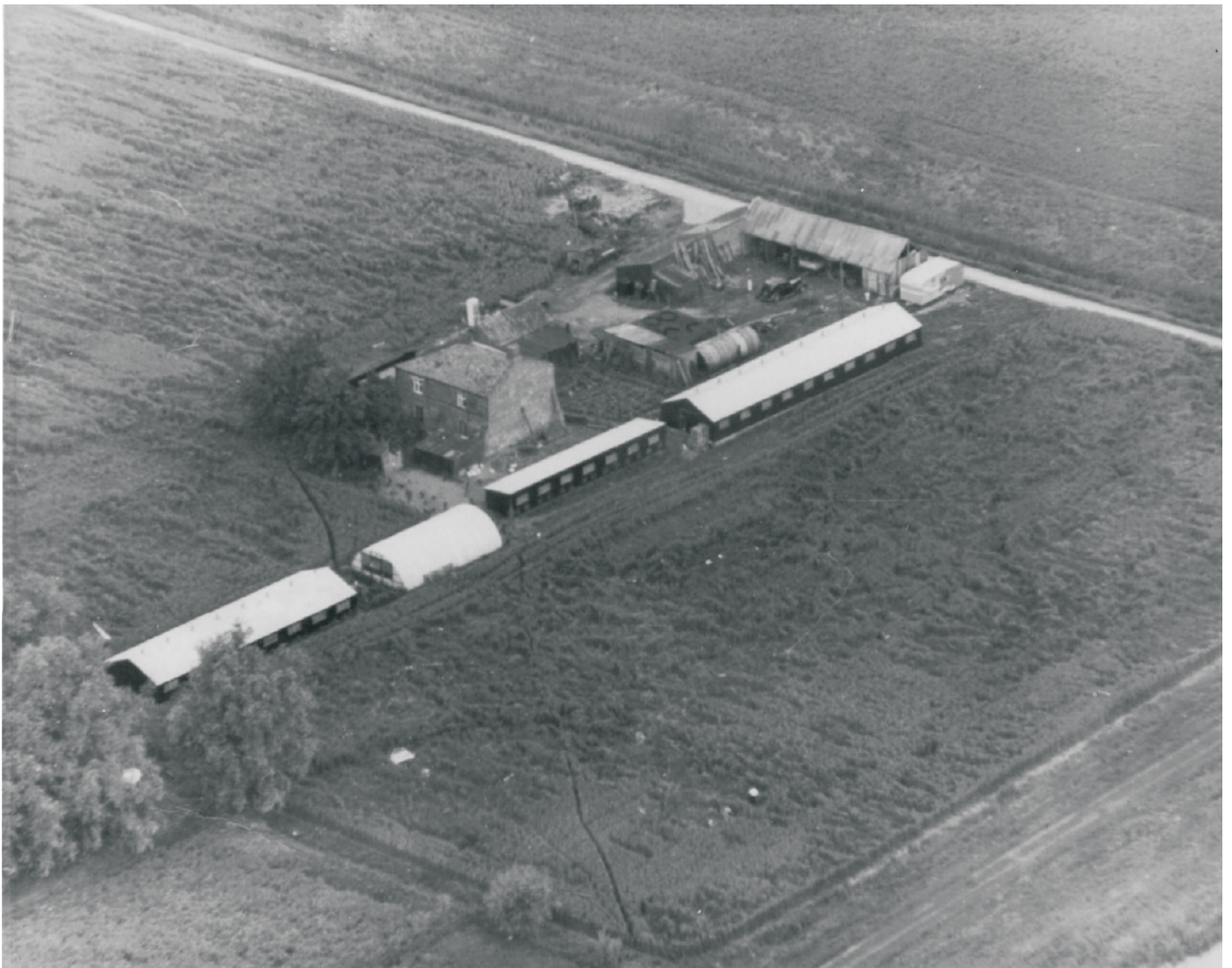


Figure 8. Photographs of the Colony in the 1950s. Above: 1951 view from east (C.F. Tebbutt); Below: 1958 aerial view from southeast (courtesy of Roy Upchurch)

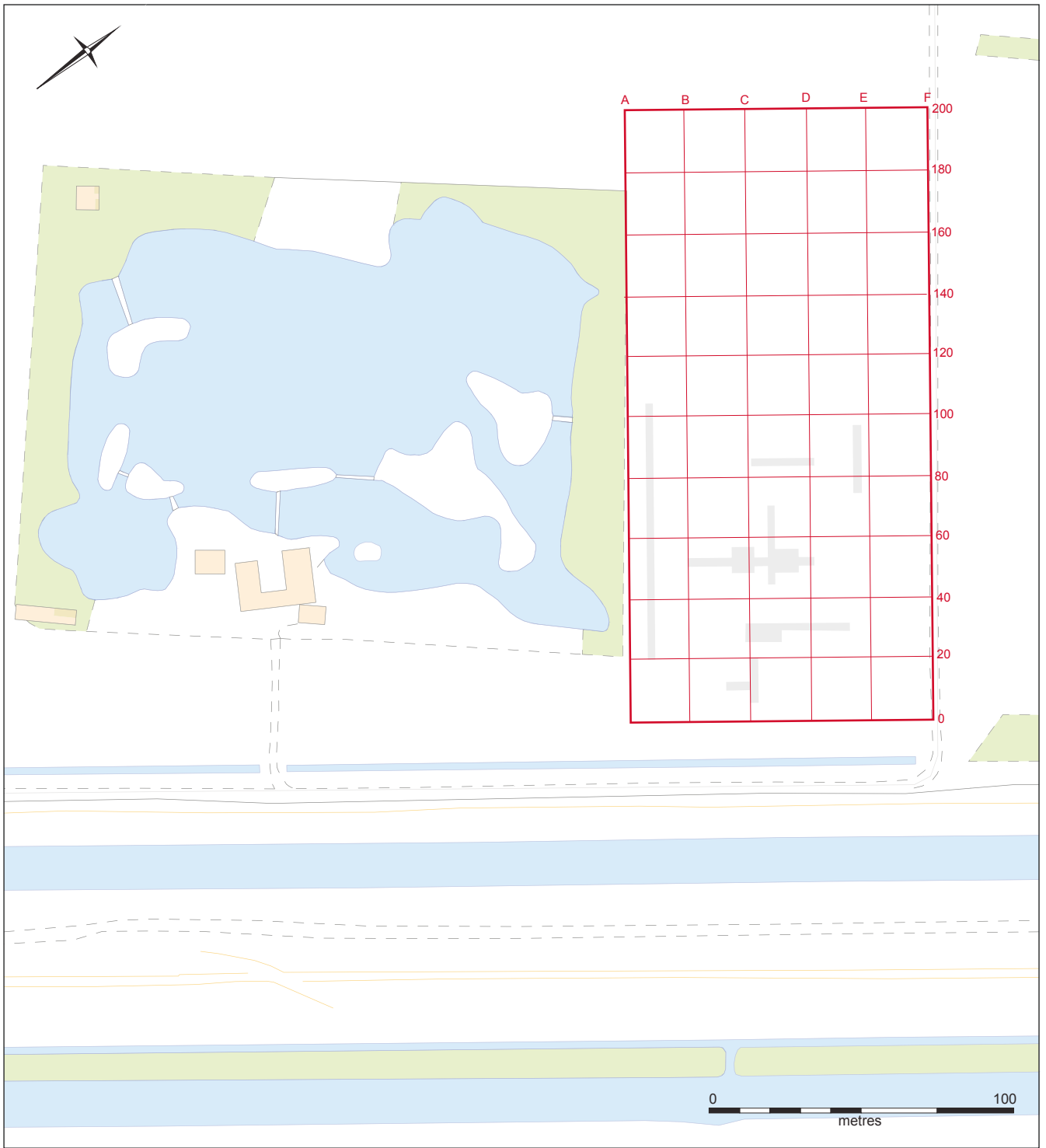


Figure 9. Project Area grid

Fieldwork Methodology

The fieldwork was conducted over a 1.6ha area of arable land that had been harvested and ploughed immediately prior to the project's commencement. A team of 29 dedicated volunteers undertook the entirety of the project's fieldwork under the guidance of the CAU's site director and two site supervisors (Figure 8; see also Appendices). Collectively, this totalled to 145 volunteer days during which time surface finds collection with geophysical survey, evaluation trenching and test pitting were conducted. A 100x200m grid was laid over the project area with a roaming Global Positioning System (GPS) and defined by fifty 20m² squares over a northwest axis and perpendicular to the Old Bedford River and access road (Figure 9). The x-axis was designated by alphabet (A-F) against a numerical y-axis (0-200). Each box was identified by its bottom left co-ordinate (e.g. A0; D160 etc.). The opening of trenches was begun on Day 4. Surface collection and geophysical survey were initiated on Day 1 and continued at various stages throughout the fieldwork.

Surface Collection: Prior to the fieldwork the site's crop had been harvested and the soil lightly turned for the best possible conditions to carry out a surface collection of ploughsoil artefacts (Figure 10). For this, each 20m² grid square was further subdivided into four 10m² boxes, designated anticlockwise from the bottom left box as Box 1-4. Teams were arranged so as to traverse northwest-southeast (i.e. with the grid) and to maximise the finds recovery. Brick and tile collection was restricted to hand-palm size, or any fragments with signature features (e.g. lettering, nail holes etc.); otherwise, all other material items were collected and bagged with the relevant grid square and box number labelling. The majority of the brick was weighed, quantified and described whilst on site, and subsequently discarded; samples were returned to the offices of the CAU for further analysis, and all fragments with slag residue were archived. A total of 110 of the boxes were subject to surface collection.

Geophysics: Both magnetometer and earth resistance surveys were conducted. The magnetometer survey was carried out using a Bartington GRAD601-2 dual vertical component fluxgate gradiometer with data logger. This measures the vertical geomagnetic field gradient, and readings were collected over the 20m² grid squares to a total area of 6800m² by making repeated parallel traverses at 1m intervals with readings being at intervals of 0.25m. A total grid square could therefore return 1600 sample measurements per 20m² grid square. The traverses were walked in a 'zig-zag' formation in which the direction of travel alternates between traverses, but during which the magnetometer takes into account the direction of magnetic North so to reduce heading error. The results are presented in units of non-Tesla (nT), which takes into account the difference between the field of intensity measured by the top and bottom sensors within the instrument. The data was processed using Geoplot v.3, and was run through a zero mean line, with high and low pass filters.

The earth resistance survey was conducted over an area of 2400m² using a Geoscan Research twin electrode RM15 resistance meter with mobile twin probe separations of 0.5m. Readings were collected by making repeated parallel traverses across grid squares in a zig-zag system, each separated by a distance of 1m from the last. Readings were taken along each traverse at 1m intervals with a maximum of 400 sample measurements per 20m². The measurements were collected with a built-in

data logger and were also recorded manually on a data sheet. The readings presented in plots are the actual values of earth resistance as recorded by the meter and measured in Ohms (Ω). Again using Geoplot v.3 the data was edge-matched, de-spiked with a low pass filter.

Excavation: Five 0.5m² test pits were manually excavated at B0, B40, B80, B120 and B160. This was mainly to ascertain a view of the basic geological profile within the project area prior to trenching. Following this and a preliminary assessment of the geophysical survey and surface collection data, six trenches were opened by a tracked 360 mechanical excavator monitored by an experienced banksman to a level at which archaeological deposits were exposed. A seventh trench was opened in the latter stages of the fieldwork, along with an extension southwest of trench 5/6. Together, this totaled 522.5m² of excavated area (Figures 11-13). Data sheets were completed for all of the trenches to record deposit profiles and geological variances and were accompanied by plans of all archaeological features at a scale of at 1:50 or 1:20 where necessary. In accompaniment with metal detector scanning, all archaeological features and deposits were manually excavated and recorded by drawn sections at a scale of 1:10, complimented by digital photography. All excavated stratigraphic events were assigned feature numbers (F.#) and all contexts assigned individual numbers ([context #]). The trenches were fixed to the OS grid with a GPS. Information detailing the character of the trenches (e.g. data sheets, digital photography and survey record) has been catalogued together within an archive following procedures outlined in MoRPHE (Historic England 2015); this is being stored with the processed material record at the CAU offices, under the site code MAN16.

Geological Context

Manea itself lies upon Mudstone bedrock of Ampthill Clay Formation with overlying Tidal Flat shoreline deposits of clay and silt. Within the project area, situated at c. 0-1m OD, a sequence of deposits encountered within the clay pit was noted in *The Working Bee* for 5th May 1840. This comprised three feet of alluvium over 16-18 feet of clay overlying a layer of 'vegetable mould', c. 3 feet thick, in which 'the remains of trees, such as trunks and branches of alder, birch, and willow, are found', as well as their leaves. This sealed a standing of gravel, c. 2.5 feet thick, upon 'a layer of strong clay'. The gravel was noted as a valuable resource for building purposes. It is clear that these layers represent the Ampthill Clay capped by gravel overlain by a probable earlier Neolithic peat sealed under a Flandrian deposit of marine clay and a crown of Iron Age and later alluvial silts (Hall 1992: 74). Traces of a thin overlying peat were noted beneath the ploughsoil in patches across the site during the fieldwork.



Figure 10. Surface artefact collection



Figure 11. Excavation process. Aerial view of site (top) and excavation working shot



Figure 12. Excavation process. Excavation work in progress (top) and recording (bottom)



Figure 13. Excavation process. Features prior to excavation in Trench 4 (top) and Trench 5-6 (bottom)

RESULTS

Given that the fieldwork was of only modest proportions, the finds return has been substantial (Table 1; Figure 6).

Find type	Surface		Feature		Total	
	No.	Weight (g)	No.	Weight (g)	No.	Weight (g)
Bone	365	886	1677	3471	2042	4357
Bone (worked)	3	9	0	0	3	9
Brick or Ceramic Tile	823	196040	1113	32180	1936	228220
Coal	24	73	18	5916	42	5989
Glass	1368	5363	271	3584	1639	8947
Leather & textile	4	30	36	140	40	170
Metal	148	5875	52	5142	200	11017
Plastic	39	97	7	15	46	112
Pottery	3340	9242	924	9879	4264	19121
Shell	33	39	35	47	68	86
Slag	47	2620	309	3081	356	5701
Slate tile	400	2692	216	2487	616	5179
Tobacco pipe	218	293	83	258	301	551
TOTAL	6812	223259	4741	66200	11553	289459

Table 1. Summary of the project's material finds

A total of 80 individual archaeological features covering four main phases were identified (Figure 9):

Phase 1. Pre-colony

Phase 2. Nineteenth century occupation

Phase 3. Twentieth century occupation

Phase 4. Post-occupation

These phases are used in the following to overview the results from the project's excavation work.

Survey

Surface Collection

A total of 6812 (223.259kg) of finds were recovered during the surface collection, dominated in number by pottery sherds at 3340, and in weight by brick or ceramic tile at 196.040kg.

As illustrated in Figure 14, the distribution of artefacts recovered during surface collection shows a distinct core in both weight and number of pottery, glass, handmade brick and other building materials including mortar and tile (not shown in the figure). This core lies between 0-100m and B-E of the grid. Machine-made brick was present only in small numbers in the north corner of the grid, between 120-160m and C-E. Tobacco pipe was found to have a slightly broader distribution,

through with a high cluster over the aforementioned core, but with a second clustering at a higher density towards the grid's east corner (10-30m, C-E).

Geophysics

Both the earth resistance and the magnetometer surveys registered geophysical anomalies (Figure 15), although the conditions for clear data readings were far from ideal. September 2016 proved to be one of the warmest on record, with only occasional heavy downpours. Owing to the site's geology of clay and silt alluvium, allied with the general lack of moisture, there was a background of magnetic disturbance and poor electrical conductivity, meaning that both techniques were in some way effected by the conditions. The earth resistance survey was effected most by these variables, returning limited clear response in both the FenArch and the 2016 surveys. Attention was therefore focused upon the magnetometer survey from which a greater degree of clarity was returned.

Few geophysical responses of clearly ferrous magnetic disturbance were noted, although biopolar responses (those marked by a combination of red and blue in Figure 15, top) are likely to represent exceptions to this. Within grid squares C-D (0-80) a broadly linear distribution of fairly high measurements were identified, broadly within a range of 15-60 nT. Magnetometry is a useful technique for tracing features that have been subject to fire or burning. This value of this particularly comes to the fore in clayey contexts where the geology is already measured as responsive on account of its magnetism. Where the temperature of a material has passed through a specific heat value - a Curie Point - the clay becomes demagnetised and then re-magnetised at a new value once it has cooled (Gaffney and Gater 2003: 37). At Manea Fen this is significant because brick would fall within this category and, made from the site's own clay, should have a specific magnetic value range. In this instance known brick foundations (as revealed during the trenching) returned values in the range of c. 15-35 nT, and from this it may therefore be possible to trace other possible structures or negative features containing similar material across the survey plot. It is likely therefore, that the series of responses within C-D (0-80), distributed over a northwest-southeast swathe, represent either structural features or negative features perhaps filled with buildings material. It is noteworthy that this corresponds with the core of artefacts plotted as a result of the surface collection.

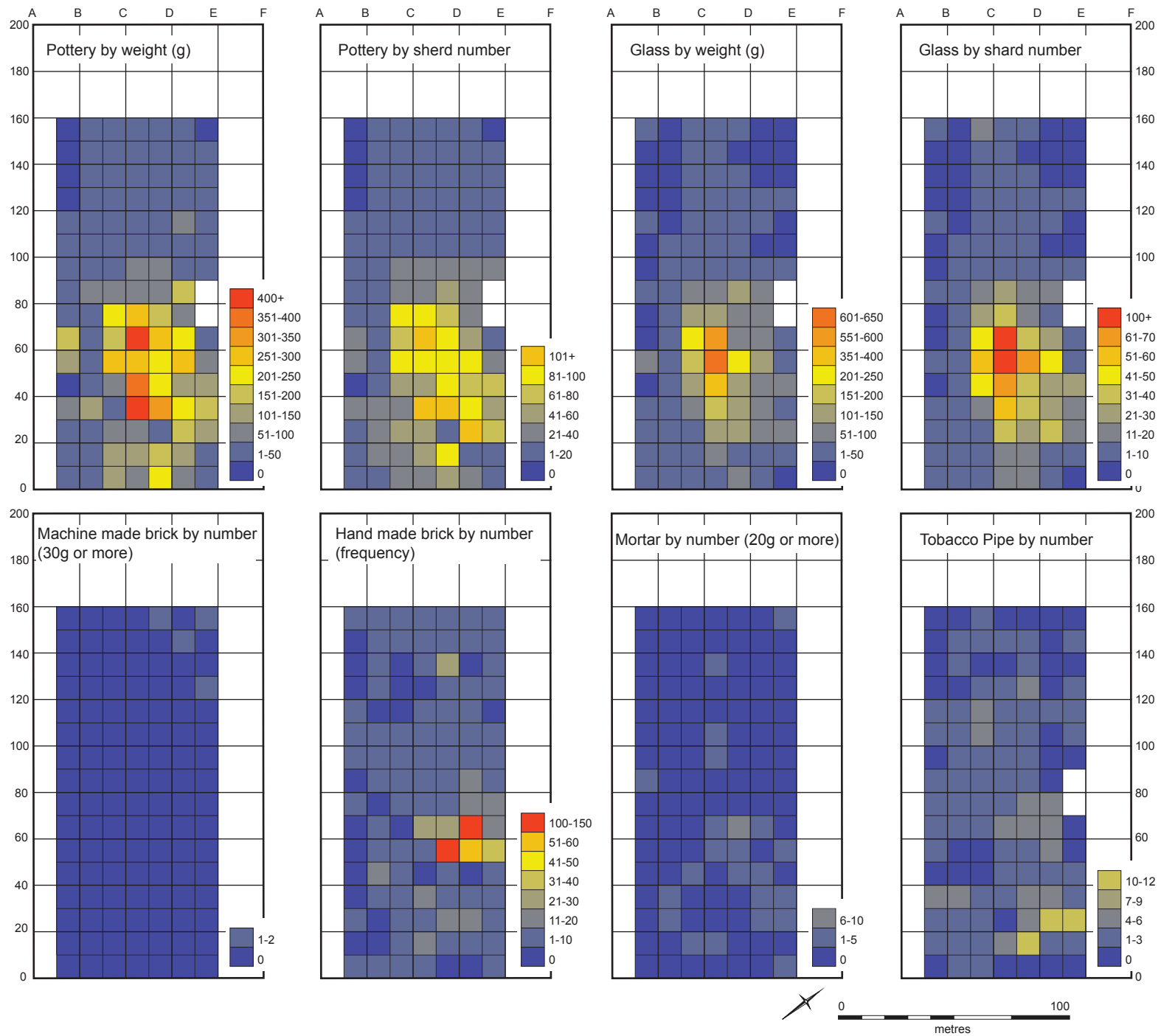


Figure 14. Surface artefact collection distributions

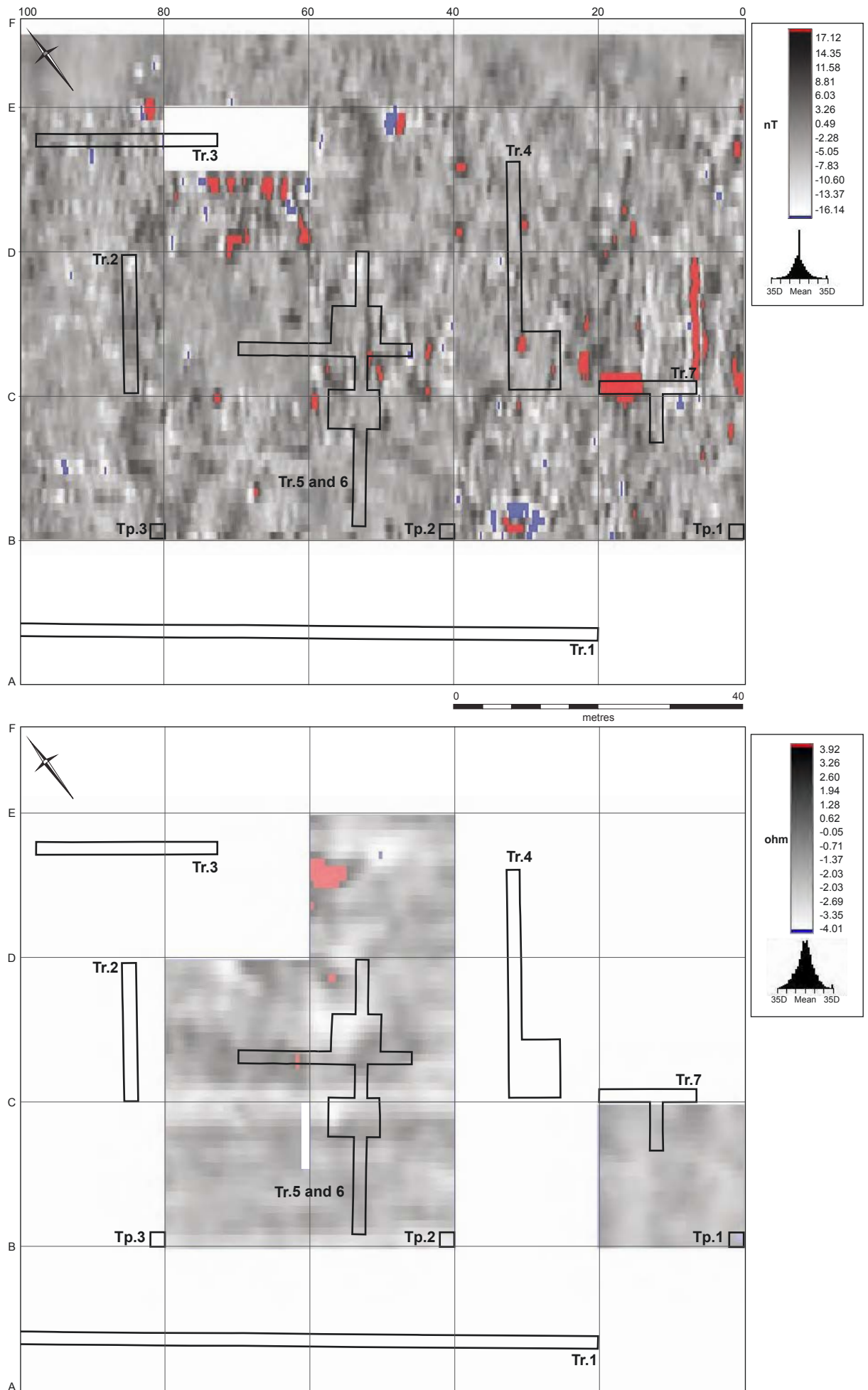


Figure 15. Geophysical survey results, magnetic (top) and resistivity (bottom)

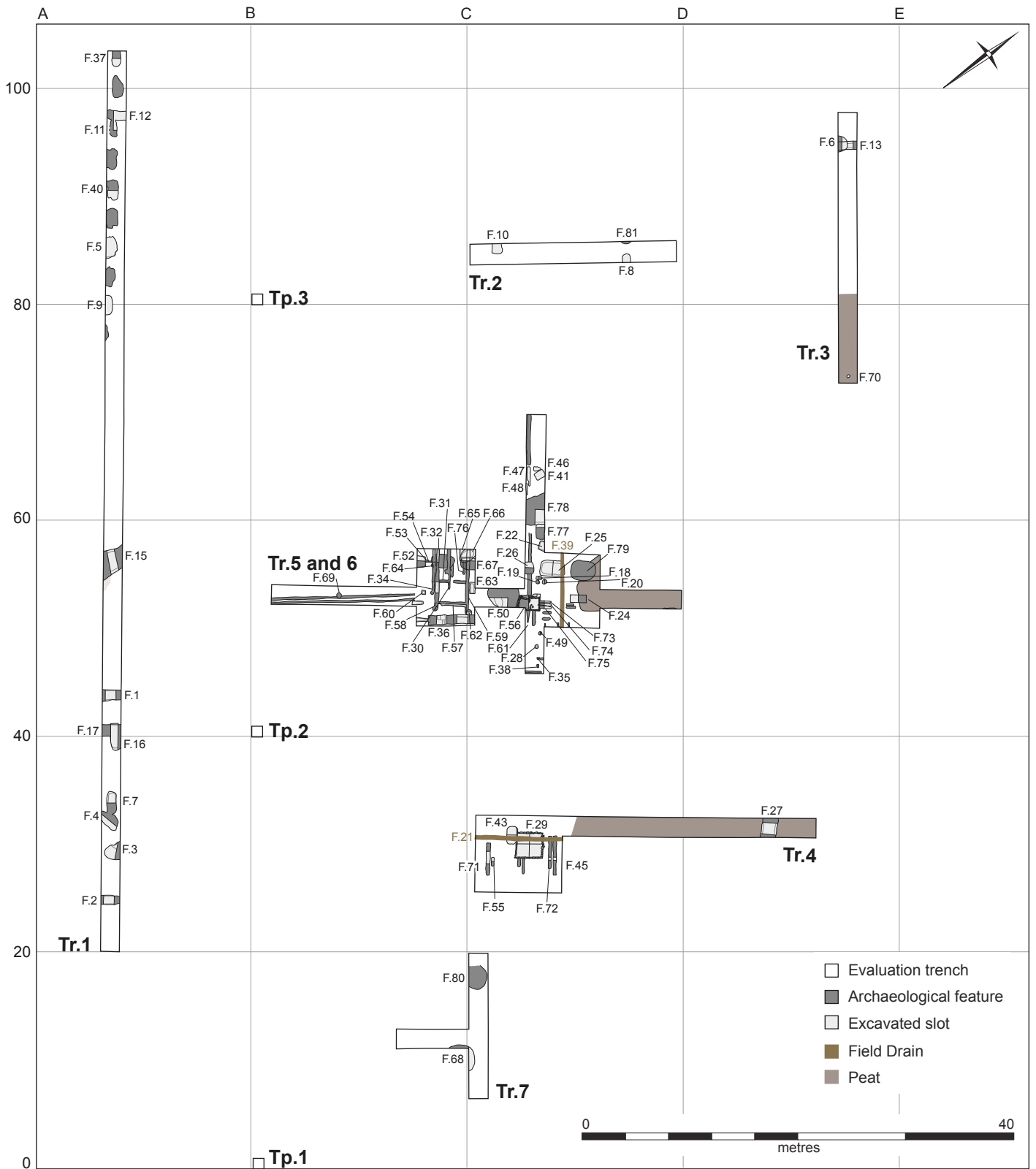


Figure 16. Trench plan on project area grid

Trial Trenches and Test Pits

Test pits 1-5 were consistent by exposing the ploughsoil to a depth of *c.* 0.3-0.5m upon the firm clay silt alluvium; the exception to this was in test pit 2 that was evidently positioned upon the continuation of linear F.17 from trench 1. The trench plan is shown in Figure 16.

Phase 1 – Pre-colony

Features: 3-11, 15-16, 25-7, 37, 40, 51-2, 67, 78-9, 81

Feature	Fired Clay	Bone	Glass	Metal	Pottery	Shell	Slag	Clay Pipe	Slate
3	-	-	2	-	5	-	-	1	1
4	-	3	2	-	13	2	1	1	4
5	-	-	-	-	4	-	-	-	-
7	-	1	1	-	4	-	1	3	-
8	-	-	1	3	4	-	4	2	7
9	2	-	-	-	-	-	-	-	-
11	-	-	2	-	2	-	-	-	-
15	-	-	-	-	8	-	-	-	-
16	-	-	4	-	8	-	1	-	-
25	-	1	3	-	9	-	2	1	4
27	-	4	-	1	41	-	1	9	4
37	-	-	-	-	1	-	1	1	-
40	-	-	-	-	5	-	2	2	-
52	-	6	-	-	1	-	-	-	3
<i>Total</i>	2	15	15	4	105	2	13	20	23

Material	No.	Wt (g)
Fired Clay	2	75
Bone	15	40
Glass	20	115
Metal	3	12
Pottery	105	434
Shell	2	7
Slag	11	246
Clay Pipe	22	45
Slate	24	255

Tables 2 and 3. Summary of finds recovered from marl pits

Twenty-five oval or rectangular pits with undercutting sides were identified in all but one (no.7) trench (Figure 17); 20 of these were subject to investigation (Fs.3-11, 16, 25-7, 37, 40, 51-2, 67, 79, 81). These were up to 2m in length and between 0.5 and 1.6m width, and each contained the same primary deposit of dark greyish brown peaty clay to a depth between 0.1 and 0.52m. These were broadly aligned lengthways in series upon one of two perpendicular axes: NW-SE and NE-SW. For a number of the pits, where the sides had slumped owing to the undercutting profile, a shallow capping basin had occurred and encased later material, including building debris, within loose dark grey silty clay. This comprised in the main of later nineteenth century items, notably of clay pipes in F.27 [53] and the head of a ceramic figurine in F.25 [50]. Pits that produced the greatest numbers of finds (Tables 2 and 3) were located within the area of the main core of the surface collection recovery, rendering it unlikely that close dating of the pits is possible from their material assemblages.

The pits are a common feature of much of the Cambridgeshire fenland, believed to span at least the eighteenth and nineteenth centuries, and are traces of a strategy employed as a means to reduce peat wastage by mixing the pits' excavated contents into the plough soil, thereby increasing its density as a defence against erosion. The success of such measures was variable.

In addition to the marl pits was evidence for a wide shallow linear traversing the site from south to north. A 1.8m width and cut to a depth of 0.22-.25m, this was registered in trenches 1 and 5/6 as Fs. 15 and 78. It contained no artefacts within its peaty clay fill, similar to the deposit contained within the marl pits. This may be an early ditched boundary, but with little correspondence with landscape features in any early maps, it is more likely that this is an alternative method of defence against erosion.

Phase 2 – Nineteenth century occupation

Features: 29, 43, 56, ?68 and ?80

Whilst any of the undated features could fall under this timeframe, three could be assigned to the nineteenth century with confidence, along with two additional features of a likely nineteenth century date (Figures 18 and 19). The latter of these, Fs. 68 and 80, were exposed as an exercise to further test the results of the magnetometer survey where geophysical response had suggested the possible presence of structural remains. That two large pit features (c. 2m diameter) were encountered is encouragement for the reading of that survey, and although it was possible to only clean down a few inches into the upper layer of one of these, F.68, this nonetheless revealed a fill composed of structural debris and ceramic sherds and clay tobacco pipe of a nineteenth century date.

Linears: Fs.1-2, 12-13, 17

Feature	1	2	12	13	Total
Pottery	4 (105)	1 (3)	1 (2)	1 (3)	7 (113)
Glass	-	1 (4)	-	-	1 (4)
Metal	-	-	2 (21)	-	2 (21)
Slate	1 (34)	-	1 (5)	-	2 (39)
Burnt stone	-	1 (75)	-	-	1 (75)
Slag	-	1 (22)	-	-	1 (22)

Table 4. Summary of finds from nineteenth century linears

Five individual shallow linear features were identified in trenches 1 and 3 (and test pit 2), each aligned with the grid on a northeast axis. These were shallow ditches, no greater than 0.2m depth and 0.34-1.0m width, each with uneven steep sides to a near flat base and the majority containing a single deposit of compact mid brown clayey silt; the exception to this was F.2, which was filled with soft dark brown silty clay. Very few artefacts were recovered from the linears (Table 4), with none at all from F.17. Their attribution to this phase of the site's activity is, with the exception of Fs.12 and 13, on account of their likely depiction in OS maps, as discussed below.

Pit F.43, trench 4

This moderately large pit produced the greatest quantity of material that points to the first half of the nineteenth century (Tables 5 and 6). This was rectangular in plan (0.77x1.1m) with corners slightly rounded, and oriented with the grid on a northwest alignment. It was cut to a depth of 0.72m with near straight vertical sides, very slightly undercut on the long sides, to a flat base. This contained five deposits, rich with artefacts but devoid of any environmental (macrofossil) information other than a fruitstone from its basal layer that was a thick deposit (c. 0.2m) of soft and greasy very dark grey clayey silt infused with occasional charcoal flecks and degraded wood fragments [92]. This was overlain by loose dark orangey brown coarse sandy silt with a gritty texture and rare fragments of charcoal with occasional coke/clinker [91], along with five complete handmade bricks. Both deposits produced iron-rich concretions containing platy hammerstone most likely to have derived from a small iron smithy. Other materials were only minimally represented within these deposits, except for animal bone that was equivalent in weight (c. 350g) to that recovered from [90] which lay above and was similarly loose and of gritty texture. Species represented by the animal bone assemblage contained within [90] and [91] included young and mature pig, cow, chicken and rabbit, with distinct butchery patterns that together present the clearest insight to dietary habits. Absent from this picture are equine species, although horseshoes were nevertheless represented within the metalwork from [89] and [90], along with a copper alloy barrel tap key and a decorative pipe tamper.

Although also containing 643g of slag material, the greatest range of material of domestic origin was represented within [90], which included decorative ceramics alongside large storage vessels, as well as fragments of woven cotton and a partial leather 'Balmoral' boot. Other items of dress were found in [89] in form of a glass bead and bone button, and although lacking in its range of material – as well as differing in texture by its greater clay and silt content – this housed over 1200g of the ceramic assemblage, with additional sherds having been displaced by the emplacement of a later ceramic field drain that cut through the short length of the pit.

Cessford's analysis of the ceramic assemblage aligns the timeframe to within c. 1830-70; Herring's report on the glass refines this to within a post-1860 date, although accepting that some variation in this is possible. An eighteenth century copper farthing was recovered from [89] but is evidently not representative of the duration of the pit's use.

Find type	Feature	
	No.	Weight (g)
Bone	213	829
Brick or Ceramic Tile	294	11435
Coal	385	5373
Glass	83	319
Leather & textile	25	c.100
Metal	31	622
Pottery	301	7122
Shell	23	32
Slag	266	2406
Slate tile	77	1206
Tobacco pipe	19	30

Table 5. Summary of finds from pit F.43

Context	89	90	91	92
Fired clay	-	1	-	-
Bone	83	349	358	39
Glass	31	203	59	26
Leather/cloth	-	c.90	c.10	-
Metal	-	390	15	-
Pottery	1226	5708	10	178
Shell	5	26	-	1
Slag	99	643	874	790
Clay pipe	4	17	4	5
Slate	433	632	48	93
Brick	1646	6315	2317 (not including 5 complete bricks)	1157

Table 6. Summary of finds from pit F.43 by context and weight (g)

Brick-lined sunken floors: Fs.29 & 56

Trenches 4 and 5/6 each revealed structural remains in the form of small sunken floored building aligned with the grid on a northwest axis. Sub-square in plan, F.29 in trench 4 was the larger of these at 2.1x2.35m, though the shallower of the two at a depth of 0.18-.21m. In trench 5/6, and rectangular in plan, F.56 was 1.4x1.94m with a depth at 0.34. The floor of each structure was simply the exposed clay, with no obvious sign of any covering. The walls of each structure were lined with a single thickness of un-bonded handmade bricks, mainly in a complete state, on which were counted six and eight instances respectively of imprinted lettering that read 'DRAIN'. F.29 comprised up to four courses of brick, with an extra course in F.56. It is possible that these were set within a tight foundation cut in the base of the floors to a depth of a single brick (i.e. c. 7cm), as was observed through a sondage excavated through the south corner of F.29 and the opening of a later ceramic drain trench that cut straight through it. Alternatively, the weight of farming machinery has pressed the remaining brick structure into the clay, which would also account for the bowing of the walls of F.29 in particular.

Feature	Material type, number and weight (g)									
	Fired Clay	Bone	Glass	Metal	Pottery	Shell	Slag	Clay pipe	Slate	Brick
29	1 (9)	6 (10)	9 (20)	5 (35)	95 (380)	8 (6)	18 (134)	26 (44)	7 (221)	10 (459)
56	0	3 (2)	10 (13)	2 (6)	8 (15)	1 (1)	1 (66)	2 (5)	20 (94)	5 (46)

Table 7. Summary of finds from brick-lined sunken floors

F.29 was subject to 100% excavation (its walling being left *in situ*) via four quadrants individually numbered should there have been necessity for spatial differentiation of interior features and artefacts. With one corner continuing beneath the trench edge, F.56 was half-sectioned only. F.29 was filled with a single deposit of moderately firm and loose dark greyish brown silty clay that in character was indistinguishable from the ploughsoil. Although containing a range of material items (Table 7), including 95 sherds (380g) of ceramic pottery and 26 (44g) pieces of clay pipe, these were small and highly fragmented and may therefore not be securely associated with the structure's use. The same

may be true also of the smaller assemblage from F.56, its three main fills [119] [184] [185] accumulating from the east, each with fragmented structural debris mixed with clay and sand.

The assemblages drawn from the sunken floored structures, whilst perhaps not directly attributed to their use, nevertheless provide a broad nineteenth century timeframe. Adding to this are the bricks stamped with 'DRAIN', a number of which were also found in the ploughsoil during the surface collection and the FenArch survey. Taxes on construction materials were brought into effect in 1784 following the American War of Independence through which considerable war debts were incurred. In 1826 an Act of Parliament allowed for exemption from tax for bricks and tiles used in drainage, but on the basis that these materials would be clearly marked with 'DRAIN' (Lucas 1997: 42-3). Tax on roof tiles was lifted in 1833, but duties on bricks were lifted only in 1850 (*ibid.*). This provides a distinct timeframe of 1826-1850 for the production of the bricks. Although their use in the construction of the sunken floors may be secondary and therefore post-date 1850, there were no traces of mortar on the bricks that might suggest these to have been in previous use. The tight association of pit F.43 to the south face of structure F.29 is also suggestive of a direct relationship, perhaps with F.29 as an established feature that informed the positioning of F.43.

The initial purpose of the sunken floored structures may have been as an open cool area for individual households. This was proposed for a similar, though larger, sunken structure dated to the eighteenth century at a large timber framed house investigated at Gamlingay (Miller 1993). Accessible via three steps, this was no more than 0.65m deep and may have functioned as a dairy.

As with pits F.68 and F.80 the brick-lined and sunken floored structures were in broad correlation with strong magnetic responses during the geophysical survey. Additional and similar responses were registered within a series aligned through F.29 and F.56, which may point to a number (at least *c.* 5) of other surviving structures of similar character (e.g. F.48 may be the clipped edge of one of these). It is likely that these were in connection to one of the terraced cottages originally constructed by the Colonists; however, no direct trace of the foundations for these buildings was identified. As previously noted, established linears in the OS maps for 1886 either continue or show modification with new additions in the OS maps after 1900; either way, they are of nineteenth century provenance and are a useful means of defining the extent and spatial layout of the buildings (their identification specifically being the purpose of trench 1). Linears F.1 and F.17 appear to correlate with features on the maps that are first shown as a single linear which is then paralleled with a second to which it conjoins at the northeast where a third and slighter linear projects towards a join within the terraced buildings. The northwest extent of the terrace where it turns to the northeast is also defined by a pair of linear features in the 1886 map that is reduced to a single feature by the 1900s. However, no sign of this was encountered in any of the trenches, which suggests that the boundary was marked either by shallow root vegetation or by some other non-traceable means. Fs. 2, 12 and 13 bear no spatial connection to any of the documented linears.

Phase 3 – Twentieth century occupation

Features: 22, 36, 41, 46 50, 63, 65-6 and 77

Nine pits were assigned to Phase 3 (Figures 20 & 21). Ceramic drains F.21 and F.39 may also belong to this phase, although it is equally likely that the former relates to a post-occupation phase, and the latter to nineteenth century activity.

Pits F.22 and F.63 were rectangular pits with straight vertical sides and flat base upon which in each case, at a depth of 0.6 and 0.23m respectively, was the skeleton of a pig (Figure 21; Table 8); that in F.22 was a mature adult, whereas in F.63 the pig was aged 7-12 months. Both skeletons were complete and were tightly set within the pits; their burial most likely being the purpose for which they were dug. The skeletons appeared to have been covered with material originally excavated from the pit either immediately or soon after being laid. In F.22 the redeposited fill also contained the complete skeleton of a piglet; by contrast, although the pig skeleton in F.63 was entirely covered the pit itself was only partially filled and the remaining hollow subsequently used for refuse in the form of tinned food containers, three complete bottles and a metal basin. Similar refuse was encountered in Fs. 41 and 65-6 that represented a typical domestic assemblage including items of dinner service and glass container bottles from regionally sourced suppliers (Figures 23 and 24). Containing three clay and silt fills, the earlier of these features was F.66, dated by its ceramic and glass assemblage to *c.* 1921-40, and thereby correlating with the site's post-war use as a smallholding. Fairly shallow at a depth of 0.36m, F.66 was fairly wide (over 1.7m) and sub-circular with gradual concave sides. By comparison, Fs. 41 and 65 were cut to a sharp rectangular plan with modest dimensions (*c.* 1m length, 0.48-0.59m width) to depths, albeit truncated, of 0.07-0.24m and respectively filled with a single deposit of mixed dark grey clayey silt and greyish orange clay. The ceramic assemblage from F.41 was dated to *c.* 1952-60 and, with fragments of battery cylinders and other electrical lighting, clearly represents the final episodes of occupation at the site.

A linear pit (F.36) over 6m in length (0.75-.91m width) has also been assigned to this period, perhaps used as a convenient source of clay (the quarry long since being waterlogged). With spade marks evident on the uneven sides and base (depth of 0.55-.62m), this contained a range of material culture within a fill of firm and fairly loose dark greyish brown clayey silt that included structural debris.

Feature	22	36	41	46	50	63	65	66
Bone	214 (48) not inc. cow skeleton	11 (19)	5 (60)	2 (225)	7 (25)	538 (1557) inc. cow skeleton	-	4 (75)
Pottery	6 (16)	25 (67)	-	-	21 (119)	4 (3)	6 (18)	63 (1205)
Glass	6 (11)	19 (26)	47 (4400)	-	17 (112)	10 (953)	20 (1023)	1 (106)
Metal	1 (12)	10 (245)	19 (1758)	-	11 (2036)	44 (437)	-	6 (375)
Clay pipe	-	3 (10)	1 (2)	-	1 (110)	-	-	-
Slag	1 (20)	7 (151)	-	-	-	-	1 (17)	-
Slate	10 (39)	23 (153)	1 (1)	-	-	-	3 (58)	-
Brick	37 (494)	352 (3160)	-	-	-	2 (33)	-	6 (435)

Table 8. Summary of finds from twentieth century features

Phase 4 – Post-occupation

Features: 30-2, 34, 45, 47, 54-5, 57, 59, 61, 71-6

Following occupation the site was eventually returned to arable land, the last remaining buildings having been demolished. The degree to which the removal of a built environment is achieved is owed to the activities and mechanics of demolition

and clearance. When trenches 4 and 5/6 were originally opened and a swathe of shallow linears were revealed, there was debate as to whether these could be traces of foundation cuts as opposed to plough lines. Seventeen were investigated; they were no more than 6cm deep at widths of between 0.18 and c. 0.3m with a moderate and highly fragmented finds assemblage (Table 9; Figure 22). These were distinctly localised and partitioned by returning paths at intervals of c. 2.5m, forming distinct rectangular areas. The opening of the southeast extension to trench 5/6 dispelled with this view by illustrating the additional projection of the linears; nevertheless, by not projecting into trench 1 the linears were still confined to a relatively localised area. It is possible that the linears are one result of the methods used in the clearance of buildings foundations and, taking into account the wide and flat nature of the lines, the use of a trench cutting plough seems the likeliest method of raising of the material; this being subsequently collected by hand from the ground surface. As outlined in the discussion below, this holds implications for an understanding of the structural nature of the buildings as well as the possibilities for tracing their spatial composition.

Material	Number	Weight (g)
Bone	4	5
Glass	20	37
Metal	4	46
Pottery	19	41
Slag	1	3
Clay pipe	4	6
Slate	22	63
Brick	98	1027

Table 9. Summary of finds from trencher lines

Undated

Features: 28, 33, 35, 38, 49, 53, 58, 60, 62, 64 and 69-70

Although undoubtedly a part of the occupation of the site, thirteen pits and postholes could not be attributed more specifically to either Phases 2 or 3. This included eight structural postholes, of which seven (Fs. 33, 35, 38, 49, 53, 58 and 64) were sub square or oval and shallow, between 3cm and 0.18m depth (sides of 0.17-.35m length). The shallowness of these features renders their use more as the sunken base pads of vertical timber supports rather than robust cut postholes as such. By contrast, the eighth posthole, F.62, was circular (0.32-.34m diameter) and was with straight sides to a near flat base at a depth of 0.31m.

Four small pits were found to contain tightly packed bone groups. These too were shallow (0.04-.12m depth) and either sub-circular (Fs.28, 69 and 70) or square (F.60). Pits F. 60 and 69 were filled with remains of mature chicken or pheasant, 361g and 144g respectively, with chicken (66g) from within F.28. These may relate to chicken sheds constructed in the mid-1950s (see Figure 8), although an earlier date may not be discounted. These were all in trench 5/6. North of this, in trench 3, a surviving

though desiccated layer of upper peat produced finds of mature pig; it is likely that these represented the base of shallow and indeterminable cuts, such as F.70 that contained a circular cluster of piglet. A total of 666g of mature pig and piglet was recovered from F.70 and [156]. All of these species might be expected from any of the site's occupation phases.

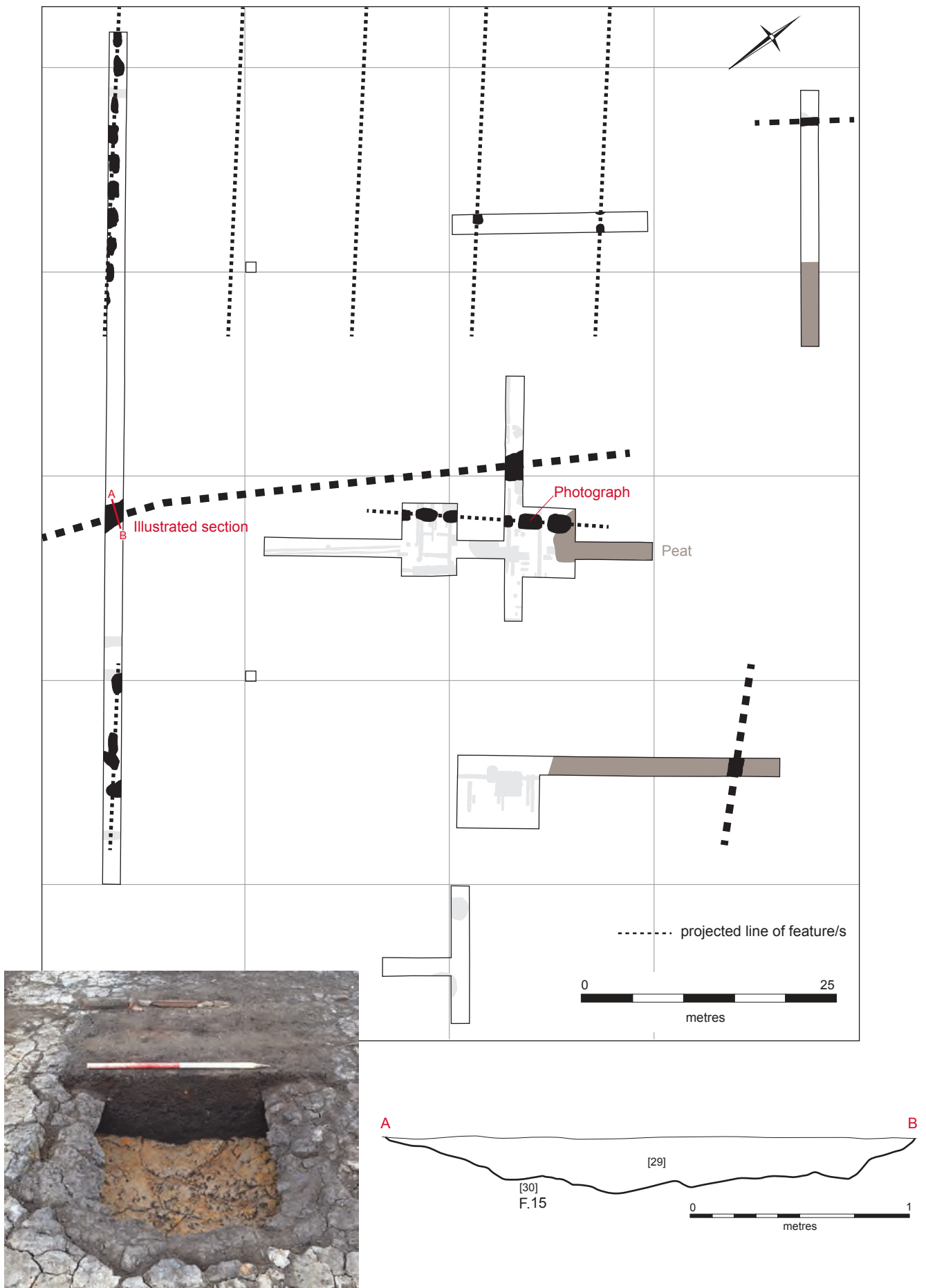


Figure 17. Plan of Phase 1 Pre-Colony marling pits, section of linear F.15 and photograph of F.25

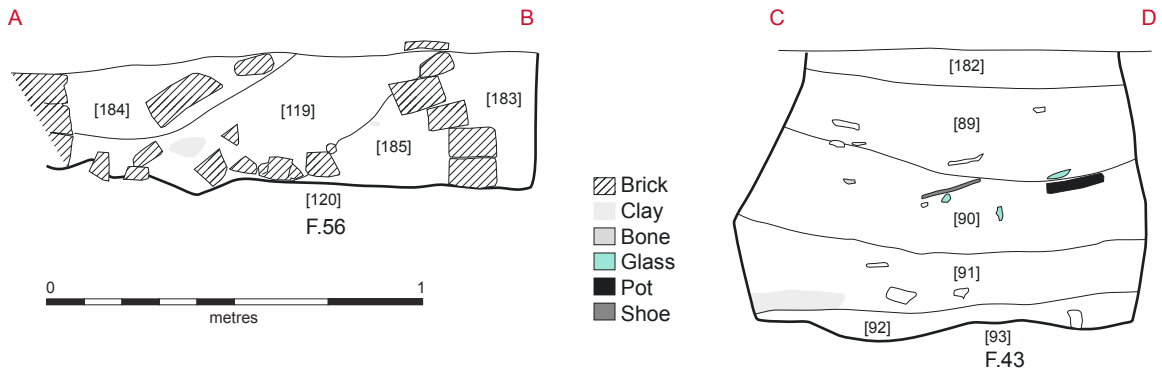
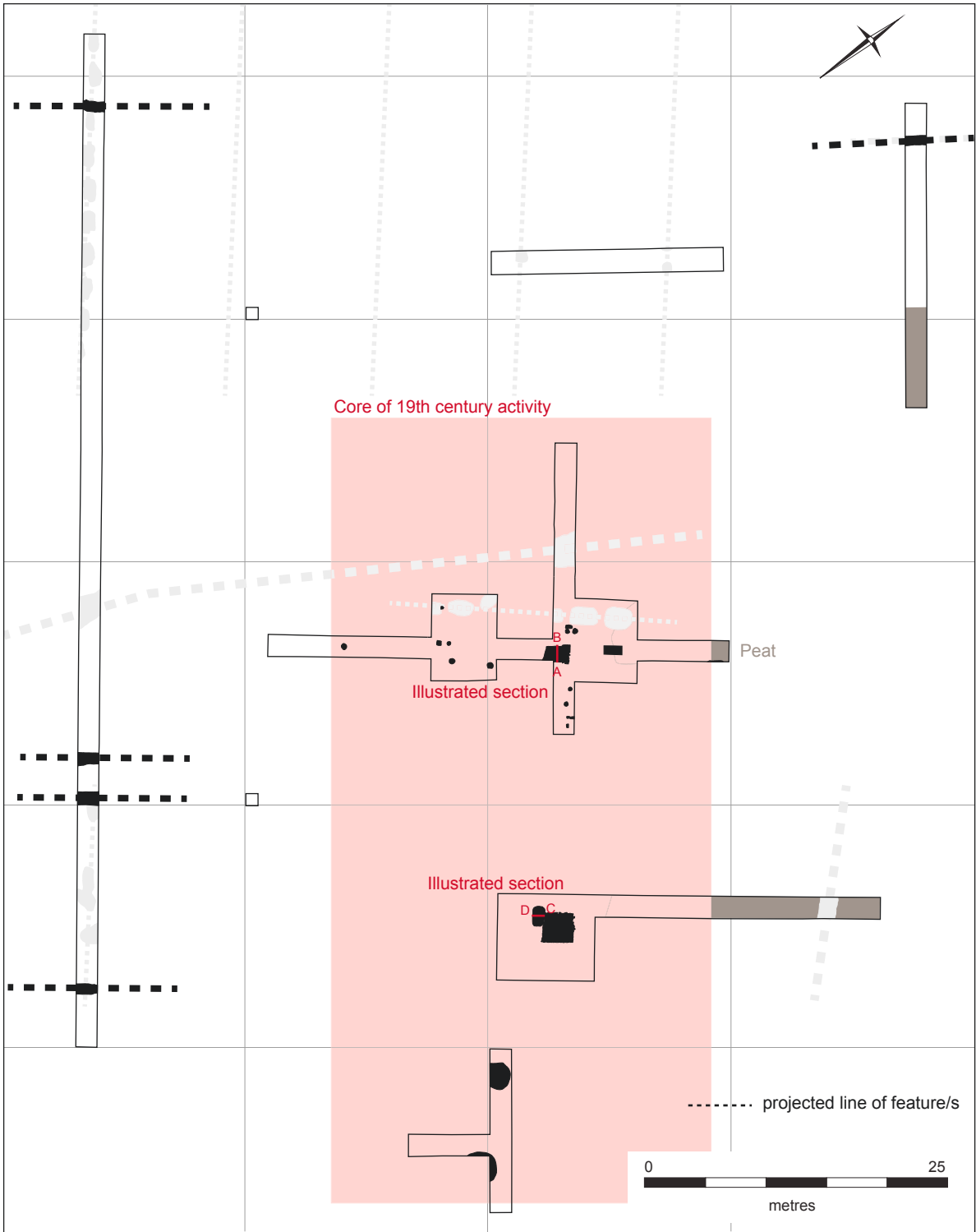


Figure 18. Plan of Phase 2 19th century occupation with sections of F.56 and F.43



Figure 19. Selected photographs of Phase 2

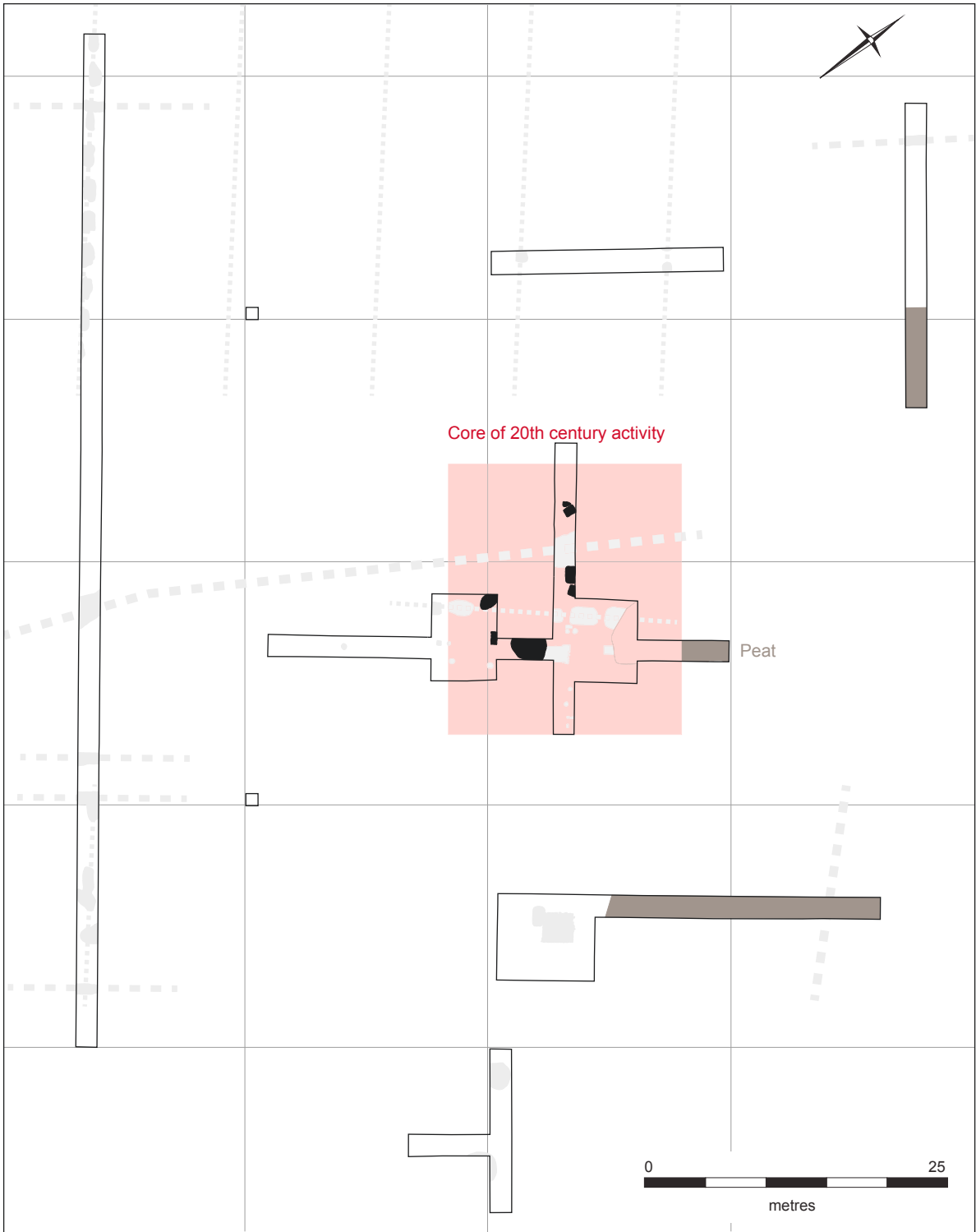


Figure 20. Plan of Phase 3 20th century occupation



Figure 21. Selected photographs of Phase 3

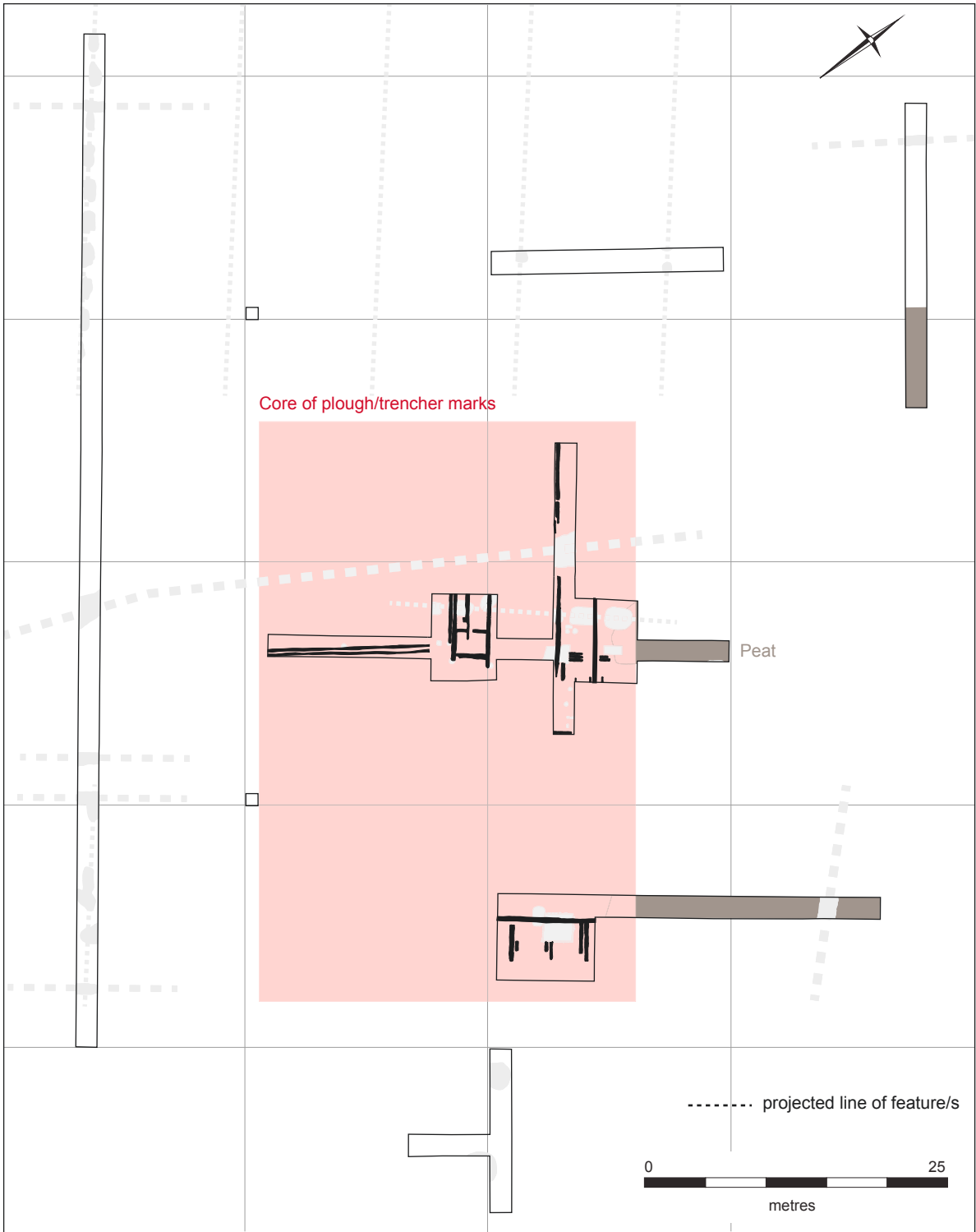


Figure 22. Plan of Phase 4 Post occupation with photograph of plough marks

ENVIRONMENT AND ECONOMIC DATA

Environmental Data – Christopher Boulton

Six bagged soil samples totalling 112 litres were collected from three features (Fs.25, 29 and 43) for the retrieval of plant macrofossil assemblages through washed sieving. The samples were bulk floated at the offices of the CAU to separate the floated organic material from the heavier residue. The flots were collected in a 300 micron mesh sieve and briefly scanned. Unfortunately, other than occasional material finds (Table 10), there was no evidence for plant macrofossils apart from rooting within each sample and a *Prunus* fruit stone in F.43.

Feature	Context	Sample	Volume/ litres	PT	BN	SH	BS	OT	Comments
25	50	1	24	-				-	Slag
	74	2	24						No finds
29	58	6	14		+			++	Coal, Glass, slag
43	90	3	28		+	+	BT - WS+	+++	Slag, MT-FE, glass, coal
	91	4	8	+	+			+++	Coal, slag, glass, nails
	92	5	14	+	+		WS - BT-	+++	Coal, Fruit stone, glass, slag

Table 10. Summary of finds >4mm recovered during washed sieving

Fauna – Vida Rajkovača

Fauna was recovered from 34 contexts in 23 features dated to the nineteenth and early twentieth centuries (Tables 11 and 12). Species represented were pig, cow, rabbit, chicken, chicken or pheasant, and possibly cat and hedgehog. The following is a summary statement of the assemblage.

Species	No. Features	No. Contexts
Chicken	10	13
Pig	8	12
Cow	2	3
Cat	1	1
Hedgehog	1	1
Rabbit	1	1

Table 11. Summary of fauna represented

Complete or near to complete skeletons were identified in five features, mainly of pig and chicken. In trenches 5/6, on the base of two rectangular pits were skeletons of pig. That within F.22 [163] was identified within the field and was further analysed from the field record. Two-thirds of the pit and skeleton therein extended northwards beyond the trench and it was therefore left *in situ*. This was a mature pig laid on its right side with head to the south and sealed by a mixed deposit of dark grey silt and clay [162]. A piglet was found within the deposit that overlay this and

which capped the pit. Another rectangular pit (F.63) within the same trench also contained the skeleton of a pig upon its base, aged 7-14 months. The capping deposit of F.63 contained material datable to the early twentieth century, and that of F.22 contained small quantities of demolition debris suggestive of a similar date. In Trench 3 peat deposit [156] produced multiple disarticulated and semi-articulated skeletal remains of mature pig and piglet. Occasionally found in small and discrete circular pits (e.g. F.70), this perhaps represents an area of mass deposition within a shallow pit or multiple small pits.

Trenches 5/6 were again the focus of small circular and rectangular pits containing articulated and semi-articulated skeletons. These comprised a chicken (F.28), only months old, a mature chicken of moderate size (F.60) and most of a large and mature chicken or pheasant (F.69).

Butchery was evident in 9 contexts from 5 features. The most evident signs of butchery practice were illustrated from the four deposits contained by pit F.43, dating to the nineteenth century. This faunal assemblage was represented by 174 elements (812g) of young and mature pig, cow, chicken and rabbit. Pig and cow vertebrae were found to have been halved from left to right by top to tail cutting and sawing. This is a technique generally carried out upon a hung carcass, and the slightly off-centre alignment in the case of the cutting points to the use of a semi-sharp blade not suitable for a clean cut. A number of the vertebrae and other elements illustrated that further partitioning of the carcasses had been administered through chopping and sawing, and ribs from [90] had been sawn to a size suitable for placement within a pot.

Table 12. Detailed summary of fauna represented

Feature	Context	Trench	Cat No	Qty	Wt(g)	Species	Observations (inc. butchery)
-	156	3	152	323	666	Pig (mature & piglet)	Various elements represented; no obvious butchery
4	7	1	112	3	2		Indeterminate fragment
7	11	1	120	1	1		Rib fragment
21	41	4	163	1	2		Longbone shaft with cut marks
22	43	6	248	214	48	Pig (Piglet)	Skeleton
23	45	6	254	1	1		Indeterminate fragment
24	47	6	259	1	1	Hedgehog?	Longbone
25	51	6	262	1	1		Cranial fragment of young small mammal
27	53	4	157	4	32	Pig	Fragments
28	55	6	266	192	66	Chicken	Young (only months old)
29	59	4	175	1	4		Rib with multiple cut marks; cut to pot size
	133	4	194	1	5		Rib with multiple cut marks; cut to pot size
30-32	87	6	268	2	1		Indeterminate rib fragments
32	104	6	273	2	1		Indeterminate small limb fragments
36	Surface	6	280	7	12		Indeterminate small limb fragments
		6	281	1	2	Chicken	Longbone fragment
	72	6	286	1	1	Cat?	Half mandible
	134	6	294	2	4	Pig?	Fragments of longbone & vertebra
41	96	6	302	5	60	Pig, chicken	Mainly pig with one chicken bone
43	89	4	200	11	83	Pig (young), cow (mature)	Mainly ribs & vertebrae, with one femur (pig). Butchery on most elements - sawn partitioning
	90	4	211	99	346	Pig, rabbit, chicken	Half split pig vertebrae as illustration of hung portioning, but off-centre alignment suggests that the blade was not sharp enough for clean cutting. A chopped right humerus points to further portioning, with pot-sized and sawn ribs.
	91	4	223	45	354	Pig, cow, chicken	A similar assemblage to [90]. A cow 3rd or 4th vertebra displays central saw portioning and further portioning through chopping, with pig elements showing left-right hung portioning followed again by additional chopped portioning.

Feature	Context	Trench	Cat No	Qty	Wt(g)	Species	Observations (inc. butchery)
	92	4	229	19	29	Pig, chicken	Various elements; chopping of pig rib
46	98	6	307	2	225	Pig (young)	Semi-articulated vertebrae and ribs of young pig
47	100	6	309	2	4	Chicken, other	Chicken vertebra and indeterminate fragment of larger animal
50	110	6	318	7	25	Chicken, Pig (piglet)	Various elements. No butchery
52	121	6	322	6	4	Chicken	Limb and rib fragments
56	119	6	326	3	2	Chicken, other	Mixed assemblage with fragment of butchered medium-sized animal
60	88	6	338	232	317	Chicken or pheasant	Large skeleton
	136	6	340	65	44	Chicken or pheasant	Most elements represented
63	143	6	347	2	2	Pig	Two unfused epiphyses
	SK. 147	6	350	536	1555	Pig	Skeleton, 7-14 months
66	177	6	356	4	75	Cow (mature), other	Cow vertebra halved and quartered; cow rib with cut marks; medium-sized sawn long bone shaft.
69	154	5	241	161	144	Chicken or Pheasant (Mature)	Most elements represented

Shell - Christopher Boulton

The shell was weighed and quantified by feature or by grid square for the surface collection items (Tables 13 and 14). Where present, diagnostic features include characteristics of the left and right valves, signs of infestation, along with evidence for human consumption or modification. The assemblage mainly consists of 24 fragments of Cockle, 21 fragments of Mussel and 16 fragments of Oyster; all being marine species and edible.

A single artefact was fashioned from pearl shell. This was a button recovered from pit F.43 and may be dated to within the mid- to late nineteenth century.

Features

Three features (Fs.32, 36 and 43) produced 33 fragments (35g) of shell (Table 13). The assemblage from these consisted of small fragments with little or no remaining diagnostic features.

Shell Type	Total Wt (g)	Total Fragments	% Wt	% Fragments
Oyster (<i>Ostrea edulis</i> Linnaeus)	1	2	3	6
Mussel (<i>Mytilus edulis</i>)	19	16	54	49
Cockle (<i>Cerastoderma edule</i>)	10	11	29	33
Periwinkle (<i>Littorina littorea</i>)	5	4	14	12
Total	35	33	100	100

Table 13. Assemblage from Features (F.23, F.36 and F.43):

The assemblage mainly consists of marine species: Oyster (European Flat Oyster or *Ostrea edulis* Linnaeus), Mussel (*Mytilus edulis*), Cockle (*Cerastoderma edule*), with Common Periwinkle (*Littorina littorea*) and Common or Blue Mussel making up the bulk of the assemblage from features (54% by weight, 49% by fragment count). There were 16 fragments of the Common or Blue Mussel (*Mytilus edulis*); only five were large pieces, with one being a complete valve. The remaining 11 fragments consisted of small fractured shards, ranging between 3-20mm at their widest point (F.43, Cat. nos. 205 and 950); in one case, all that remained was the worn, white inner lining of the shell (F.29, Cat. no. 191).

The two pieces of Oyster (*Ostrea edulis* Linnaeus) were retrieved from F.29 (Cat. no. 185) and were also quite small, being only 16mm wide. It was not possible to distinguish whether this was a left or right valve, and neither was it possible to identify modification (e.g. boring), although one shard (F.29, Cat. no. 185) did show faint and worn signs of *Polydora cilitata* burrows. It may be possible from a larger assemblage to identify forms of infestation from which harvest locations may be approximated (Winder 2011). In addition, there were 11 fragments of Cockle shell (*Cerastoderma edule*) from F.29, with two complete shells and another, smashed, that can be pieced together. The remaining six Cockle shells are represented by small fragments from F.43.

With the addition of the four Periwinkle shells (*Littorina littorea*), all the marine shell species within the feature assemblage are edible, the bulk of these coming from F.43.

Shell button - Marcus Brittain

F.43 [89] <209> x1 pearl shell button (0.3g). Shirt button: 9.6mm diameter, 2.0mm thickness; two drilled perforations within eye-shaped dish. C19.

Pearl buttons appear in use after c. 1820 and are manufactured in quantity by the mid-nineteenth century when pearly shells were imported from the East in thousands of tonnes. Their manufacture was inexpensive, and a particularly substantial industry emerged out of Birmingham. The shells

would be prepared by soaking for up to a week before blanks were removed with circular drills. Following the removal of the rough surface layers, the blanks were sliced to the appropriate thickness, then carved, drilled and polished, and occasionally bleached or dyed.

Surface Collection

A total of 66 (73g) of shell fragments was recovered during the surface collection (Table 13).

Similar to the feature assemblage, the oyster shell also consisted of small, fractured shell pieces with limited diagnostic characteristics. Several fragments showed signs of infestation, with the bore-holes of the *Clinoa celata* worm identified on four shells and the burrows of *Polydora cilitata* upon one other shell. No obvious signs of human consumption or modification were present. A complete Netted Dog Whelk (*Tritia reticulata*) does have a single hole within its shell but it is too worn to be positively identified as human modification.

Shell Type	Total Wt (g)	Total Fragments	% Wt	% Fragments
Oyster (<i>Ostrea edulis</i> Linnaeus)	19	16	26	24
Mussel (<i>Mytilus edulis</i>)	24	21	33	31
Cockle (<i>Cerastoderma edule</i>)	20	24	27	37
Periwinkle (<i>Littorina littorea</i>)	5	4	7	6
Netted Dog Whelk (<i>Tritia reticulata</i>)	5	1	7	2
<i>Total</i>	73	66	100	100

Table 14. Whole Assemblage (includes Features and Field Walking)

The shell retrieved from Manea Fen is dominated by edible marine species, and the majority of shell recovered from features came from F.43 which also produced the largest quantity of bone, coal and pottery from a single feature and is suggestive of a domestic context. The shell further adds to a picture of consumption of mixed marine and land resources; however, the relatively small size of the site's overall assemblage, along with its fragmentary condition, suggests that consumption of marine mollusca was only on a relatively small scale.

MATERIAL CULTURE

Building Materials - Simon Timberlake

The building materials and small-scale industrial debris suggests that there is a likely correlation between these and the occupation of the Manea Fen Colony in the late 1830s–1840s. The purchase of North Wales slate for the cottage roofing, some of it perhaps re-cycled, would have been possible from the late 1830s onwards, transported by rail then barge along the Bedford Level, whilst the bricks used to construct the foundations of the cottages and the basement levels seem likely to have been made in the adjacent brickyard, some of them from alluvial silt, and some from the quarried Amphill Clay. These same bricks were used within a smithy constructed on site (see Metalworking), where attempts were also made at forging, and almost certainly farrier work to shod horses and supply and mend tools.

Brick

Three different types of brick (just 2.094 kg of samples) were examined in order to characterise the site's potential brick production/ usage. However, it was not possible to confirm with absolute certainty which of these were manufactured here, nor which dated from the 1830-1840s occupation, although the bricks stamped 'DRAIN' seem more likely to represent the latter (probably dated 1826-1850). Fortunately, what could be established from the analysis of fabric composition was the likely identity of the clay geology, and the degree of probability also that these bricks were local. Most likely therefore we are looking at brick manufacture using both the marine alluvium (silt) dug from the Barroway Drove Beds and clay from the underlying Upper Jurassic Ampthill Clay beds, both of which may have been obtained during the digging of the adjacent quarry pit (BGS 1978, Sheet 173).

Only a proportion of the complete assemblage of brick from this site was examined. Fabric and weight of the brick collected from the surface collection was recorded during the fieldwork, from which a sample was retained for the analysis here. The three different brick fabrics have been characterised as follows:

Type 1 - 'hard red/orange' brick, width 90-100mm/ thickness 60-70mm, handmade: pinky-red hard and slightly micaceous silty clay fabric with round pellet grog inclusions and occasional-moderate burnt-out organic inclusions. A type similar to Type 2. Possibly made from Boulder Clay/ Ampthill Clay mixed with marine silts?

Type 2 - 'pink/ soft', length 235mm/ breadth 110mm/ thickness 75mm, handmade: pink buff/ yellow micaceous silt with occasional-moderate organic (burnt-out) plant inclusions (which includes some reed material) and rarely grog. Made from Barroway Drove or Terrington Beds (marine alluvium).

Type 3 - 'yellow', breadth 110mm/ thickness 40mm, handmade: yellow-pink hard non-micaceous clay fabric with occasional burnt out organic and 'swirly' red clay inclusions, and rarely calcined flint grit.

Burnt clay

Some 240g (10 pieces) of burnt (i.e. mostly lightly-fired) clay were recovered from three features (Fs. 9, 29 and 43) and five grid squares. It was difficult to determine how many of these represented examples of unfired brick or daub linings intended for hearths, or for fired clay kiln furniture, given that some of these fabrics resembled those manufactured elsewhere for worked clay objects such as loomweights upon prehistoric to Early Medieval sites. However, here it seems more likely that this burnt clay represent fragments of improperly-fired handmade 'modern' bricks made of river/ marine alluvium. Three fabric types were identified:

Fabric 1 - a dark grey to pinky-brown hard silty fabric, slightly vesicular, with small inclusions of burnt-out organic, slightly micaceous.

Fabric 2 - a mottled light grey-pink micaceous silty fabric, medium hard, with few inclusions, but with some small grog particles.

Fabric 3 - a high-fired, dark grey, slightly vesicular fabric, of flinty consistency.

Slate

A total of 5.47kg of broken roofing slate (482 fragments) was recovered from 31 features 25 grid squares and one test pit. This distribution appears to reflect the presence of a dispersed destruction/ demolition layer. Interestingly, this also ties in to documentary references to the use of slate as a roofing material on the site of the Colony.

All the slate has been identified as being probable North Wales greys, more likely than not from the quarries of Llanberis/ Bethesda; the occasional (<5%) presence here of purple slates confirming a likely source within the Cambrian outcrop (North 1925).

At least two different sizes were recognized within this assemblage; both of them being narrow rectangular roof slate types, one c. 120mm wide (but of unknown length), the other being narrower still (60mm wide and 210mm+ long). However, only one near complete (but still partial) example of the latter type was recovered. The use of such small size slates seems a little unusual, though of course they may be associated with the construction of valleys linked to the insertion of dormers or rooflights.

The presence of numerous score lines on the top surface of many of the thin slate fragments attests to the fact that most of these may have been cut to size on site. Likewise, the occurrence of two or more nail holes suggests considerable recycling, which is supported by the variation in roof nail hole sizes which range from between 2-7mm diameter (shank width). The use of roofing pliers during the cutting of the slates is evident from the occasional crimped slate edges, which is a factor suggesting a quite 'modern' approach to roofing technique.

The Llanberis quarries were active from the beginning of the eighteenth century, although the widespread distribution of slates throughout England by rail did not become commonplace prior to 1831, in part due to the lack of a distribution network, but mostly on account of the release of tax duty following that date (Lindsey 1974). The 1840s would thus have seen this new building material becoming more widely available for the first time, though it may still have been rather uncommon within a rural setting such as Manea Fen.

Ceramics - Craig Cessford

The investigations produced an assemblage of 4624 sherds totalling 21.351kg (MSW 4.6g). Of this it appears that 924 sherds (12.109kg) derive from excavated features (MSW 13.1g), with 3340 sherds (9.242kg, MSW 2.8g) recovered during surface collection and test pit excavation. The following report is an overview of the three most significant feature assemblages: Fs.41, 43 and 66. Owing to the quantity of the overall assemblage, and its mainly small-sherd character, the material was rapidly scanned for a summary assessment, and therefore awaits full and detailed analysis, if appropriate.

Almost all the ceramics are consistent with a mid-nineteenth to mid-twentieth century date. A few slightly earlier sherds of eighteenth to early nineteenth century date were noted as being present, including Black Basalt and Westerwald stoneware.; however, these sherds could derive from family heirlooms etc., and such fabrics are not particularly uncommon in small quantities in mid- nineteenth century assemblages. The overall character of the assemblage indicates a date of after *c.* 1820–30, although it is clear that some late nineteenth and twentieth century material is also present. The bulk of the assemblage consists of refined industrial whitewares, with bone china, and utilitarian English stonewares. Late Notts./Derby.-type stoneware, glazed red earthenware, unglazed red earthenware and Sunderland-type earthenware were all represented. Relatively little of the material can be closely dated, and whilst a few manufacturers marks and registered design numbers were present these were generally often too fragmentary or illegible to identify with any confidence. All the fabrics, forms and decoration are typical of domestic assemblages of the period.

There were three feature assemblages of minor note. Whilst none are particularly large by the standards of the period they do provide a series of ceramic ‘snapshots’ through time and are therefore of interpretative interest, particularly if viewed holistically with the other (non-ceramic) material in these assemblages. The two later assemblage groups probably represent small-scale ‘clearance’ events, with the latest of these potentially related to the disposal of unwanted material at the advent of the farm’s abandonment.

Given the relatively small sherd size of much of the assemblage further analysis is unlikely to add significantly to the understanding of the overall assemblage. Analysis based upon form and decoration would be highly problematic as it would be impossible to definitively categorise most of the assemblage, particularly the material from the surface collection that was primarily composed of small or very small fragments. Nevertheless, fabric-based analysis could be undertaken and may offer some further, although limited, insight. Given the general stability and longevity of fabrics for ceramics in the period *c.* 1820/30–1960, there are no grounds for assigning most features to particular phases apart from the three discussed here.

Pit F.43 (plus some material in F.21), c. 1830–70

F.43 contained sherds from a wide variety of vessels, most of which appear to be highly fragmentary. They are predominantly refined industrial whiteware dining related vessels, many with transfer printed decoration, and bone china tea drinking wares with purple sprigged decoration. There appear to be some semi-complete vessels, but the majority of the assemblage is highly fragmentary. A significant proportion of the assemblage by weight consisted of refitting sherds of a large red earthenware bowl or pancheon with internal yellow slip. There are no closely datable items in the assemblage, although based upon some sherds it dates to 1828 or later. In terms of overall composition, decoration etc. the assemblage is most comparable locally to domestic groups of *c.* 1830–70.

Pit F.66, c. 1921–40

The bulk of this assemblage consists of six semi-complete vessels of early twentieth century date; the remaining few stray sherds have the appearance of residual nineteenth century material. The assemblage probably dates to *c.* 1921–40.

Vessels 1–2: Matching pair of refined industrial whiteware saucers with multi-coloured decoration. Green transfer printed Tuscan crowned wings mark of RH&SL Plant, china manufacturer at the Tuscan Works, Longton, Stoke-on-Trent, 1898–1966. The presence of Made in England indicates that these date to 1921 or later and the style of mark is probably of the 1920s.

Vessel 3: badly faded refined industrial whiteware small plate with blue transfer printed design, may originally have been multi-coloured.

Vessel 4: refined industrial whiteware serving dish lid with blue transfer printed pattern.

Vessel 5: plain refined industrial whiteware 'hotelware' style plate.

Vessel 6: bone china tea cup with gilt tea leaf design.

Pit F.41, c. 1952–60

The bulk of the ceramic material from F.41 derives from a small number of between three and six semi-complete mid-twentieth century vessels, although there are also several stray sherds that appear to represent residual nineteenth century material. The group as a whole dates to *c.* 1952–65, and probably to *c.* 1952–60.

Vessel 1: Refined industrial whiteware teapot and lid with low relief moulding and patchy blue decoration. Brown transfer printed mark of Gibson & Sons Ltd., manufacturers of earthenware at Burslem, Stoke-on-Trent between *c.* 1885 and the mid 1970's. The style of mark dates this vessel to *c.* 1950+.

Vessel 2: Refined industrial whiteware rectangular serving tray with low relief moulding and pinkish edging.

Vessel 3: Refined industrial whiteware plate with multi-coloured floral transfer print decoration. Partial black transfer printed manufacturers mark that relates to the Grenville Pottery Ltd., active in Tunstall from 1946 until *c.* 1960–64.

Vessels 4–6: based upon manufacturers marks there are probably three largely plain refined industrial whiteware plates one of which may have a small amount of decoration around the edges, which have not been reconstructed. One has a green transfer printed registered design mark with text SOL. This is associated with the J&G Meakin Ltd. factory and dates to 1912–63. Two black transfer printed marks of W R Midwinter Ltd. of Burslem, Stoke-on-Trent, 1910–87. Made in England indicates date of 1921+, whilst the general style of the mark indicates that the pieces are of 1946–53. These vessels have a 'double' registered design number, the higher of which begins with '868...', indicating that the design was registered in 1952.

Glass – Vicki Herring and Marcus Brittain

A considerable quantity of glass was uncovered during both the surface collection and the excavation. The surface collection recovered 1368 items (5363g), and the catalogue lists 32 features as containing glass, totalling 271 items (3584g). Aside from features containing only a small number of glass shards, complete or near to complete vessels, expediency required that the strategy towards glass collection aimed towards only a representative sample. Attention was therefore paid to

complete or near to complete glass vessels, decorative shards, shards representative of the overall character of an assemblage (e.g. coloured or shaped shards), and shards with text or other lettering, or with other identifiable 'signatures'. The total weight and shard count is therefore considerably greater than that listed here.

A full overview of the glass catalogue is listed below. This is based on a scan of the assemblage with only basic diagnostic traits being taken into account (colour, morphology, dimensions etc.). A more detailed analysis was conducted of assemblages derived from two nineteenth century features (Fs. 29 and 43) that may serve as representative of the broader character of the nineteenth century glass within the catalogue. This was conducted by Vicki Herring, and is presented below.

A nineteenth century glass bead <705> was recovered in the surface collection. This was variegated blue glass (2g, c. 12mm diameter, 9mm tall) with a central perforation (2.5mm).

The most substantial assemblage was produced by pit F.41, dated to the first half of the twentieth century. This comprised nine complete bottles with a small decorative platter or coaster. Owing to the shallowness of this pit a number of additional vessels were broken during the trench's machine excavation, and the vessel count is therefore likely to be under-representative of the true number. The assemblage may be dated within a range of 1940-1960, which lies towards the end of the site's occupation.

Further distinct twentieth century assemblages were recovered from pits F.63 and F.65. The former of these is probably contemporary with F.41, within the range of 1940-1960. The latter, F.66, may be of an earlier range, though still within the twentieth century. This contained a small 'Ninham's Lemonade' bottle produced by H.C. Ninham & Son, Norwich that was established in 1863 and still operative into the 1940s.

The assemblage includes 210.38g of window glass, the largest single collection having derived from F.43 (86.31g). The dating for the window glass was calculated using Moir's (1983) formula that is deduced from glass thickness (method outlined in Weiland 2009). This method, one of several used to date glass from British colonial sites, may not necessarily be the most reliable for small assemblages, some of which in this context is very fragmented. Moreover, Moir's calculations would position the thinnest of sheet glass (c. 1.0mm thickness) within a late eighteenth century timeframe, which either raises a question regarding the status of this glass at Manea Fen as window pane, or suggests that the regional context of Manea Fen may not be suitably compared with colonial assemblages. The latter of these cases is the most likely, with glass panes of all thicknesses being clear of colour and without significant impurities, suggesting a quality of sand appropriate to glassmaking manufactured with sodium carbonate from the 1830s onwards. Nevertheless, the results from the Moir method serve as a useful guideline from which a broad 1796-1923(+) timeframe is represented. Chemical analysis of the window glass may provide further information on the date, location and method of manufacture of vessels and panes (Dungworth 2011; 2012).

Features 29 and 43 – Vicki Herring

As representative of the nineteenth century occupation of the site, Fs. 29 and 43 were chosen for detailed analysis. These totalled 70 glass fragments that, with the exception of one button, comprised vessel and window glass.

Dating of the vessel glass was possible using a number of published sources (Hedges 2002; Lindsey 2016; van den Bossche 2001). Dating of the window glass followed the method (after Moir 1983) outlined above.

The glass collection as a whole represents typical late nineteenth to very early twentieth century domestic glass refuse.

Brick-lined sunken floor, F.29

The assemblage contained three shards of vessel glass (two vessels min.) with three shards of window glass (two panes min.). All of the glass is of late nineteenth to early twentieth century manufacture (Tables 15 and 16).

Manufacturing Method	Type/Form	Colour	No. Shards	Context	Date
Moulded	Bottle	Light green	1	170	Late C19
			1	195	
	Jar	Colourless	1	182	Late C19– Early C20

Table 15. Vessel Glass overview from F.29

Manufacturing Method	Colour	Thickness (mm)	No. Shards	Context	Date
Cast Plate?	Colourless	2	1	59	1881
Cast plate/Cylinder?	Hint of green	2	2	84	1881

Table 16. Window Glass overview from F.29, using Moir’s (1983) typological dating

Pit F.43

The assemblage was very fragmented and comprised 25 shards of window glass (11 panes min.) and 39 shards of vessel glass (24 vessels min.). These fragments, though mostly undiagnostic, represent a domestic collection of common late nineteenth century forms, seemingly dumped as waste. Two items, a shard of bottle glass and a decorative ‘prunt’, show signs of post-breakage burning. Bottle glass was also found embedded within the hammerscale-concreted floor fragments derived from the former smithy in [92] (see Metalworking). The assemblage is detailed in Tables 17-19.

The window glass is all of uniform construction with few imperfections, and is most likely cast plate. After Moir (1983), most of the shards could be attributed to the late nineteenth century, thereby matching the vessel glass analysis. It is possible that some of the smaller, thinner shards are not window glass, for these would otherwise be aligned with a much earlier date, although the colonial context of Moir’s analysis may not account for local variation at Manea Fen.

In [91] the assemblage included an incomplete small black circular button (1g, 13.7mm diameter) with engraved flower decoration on the slightly concave face. The metal shank that would have provided attachment to the garment is missing, and the button was found to be missing one third of its body, which had broken off before deposition. Black buttons, especially those made of glass, became a very popular fashion item in 1861 upon the death of Prince Albert, following which Queen Victoria

adopted black clothing (Meredith and Meredith 2011). Nonetheless, black buttons were also in use in lower numbers before this date.

Context [89] also produced a small light blue glass sub-spherical bead (<208> c. 8mm diameter and 5mm tall, <1g).

Object	Type/Form	Colour	Decoration	Cat. No.	Date
Button	Pressed	Black	Etched flower on face	221	Post 1861?

Table 17. Other glass objects overview from F.43

Manufacturing Method	Colour	Thickness (mm)	No. Shards	Cat. No.	Date
Cast Plate?	Almost colourless	1.9	4	220	1872
			1		
Cast Plate/Cylinder?	Hint of blue/green	1.5	1	212	1839
			1.1		
	Hint of green	1.9	5		1872
			2.1		2
	Light blue/green	1.9	1	220	1872
	Hint of green	2.1	1	1839	
				1.5	3
		1	1		

Table 18. Window Glass overview from F.43, using Moir's (1983) typological dating

Manufacturing Method	Type/Form	Colour	No. Shards	Cat. No.	Date	
Moulded	Jar	Very light green	6	201 & 212	Late C19	
		Light green	1	201	c. 1870-1880	
	Very light blue/green	2				
	Hint of green	3				
	Bottle		Light blue	1	212	Late C19
			Black	2		
			Very light green	1		
			Colourless	1		
			Colourless	3		
			Colourless	1		
			Very light green	1		
			Colourless	2		
			Very light blue	1		
			Hint of green	1		
		1	230			

Manufacturing Method	Type/Form	Colour	No. Shards	Cat. No.	Date	
		Light blue/green	1			
		Black	2			
	Torpedo bottle?	Green	1	212	Mid-Late C19	
	Torpedo bottle?	Light green	1			
	Vessel	Colourless		1	201	Late C19
				1	212	
Press moulded		Milk	1			
Applied decoration	Prunt	Colourless	2	201		

Table 19. Vessel Glass overview from F.43

Catalogue

[156] Trench 3

1 shard clear bottle/drinking vessel glass rim

F.2

1 shard (4g) of brown glass bottle

F.3

2 shards (4.7g) of clear window glass, 1.15mm thickness, c. 1809

F.4

2 shards of clear window glass (2.5g), 1.15mm thickness, c. 1809

F.7

1 shard (4g) of clear glass bottle

F.8

1 shard (6g) of green glass bottle

F.11

2 shards (10g) of clear glass bottle

F.16

4 shards (6g) of clear glass bottle

F.19

2 shards (0.7g) of clear window glass, 0.9mm thickness, c. 1796

F.21

1 shard (0.9g) of clear window glass, 1.15mm thickness, c. 1809

1 shard (4.1g) of thick clear glass bottle

F.22

6 shards (11.2g) of clear window glass 0.9-2.1mm thickness, c. 1796-1889

F.23

2 shards (1.2g) of clear window glass, 0.9mm thickness, c. 1796

1 shard (4.8g) of clear glass bottle

F.24

3 shards (11.13g) of clear window glass

1 shard of clear oval ribbed bottle

2 shards of turquoise bottle; neck 27.5mm diameter with body marked with 'GLA'

F.25

1 neck of clear glass bottle with metal screw-cap (58.8g)

1 shard (1.2g) of clear window glass, 2.5mm thickness, c. 1923

F.27

1 shard (3.8g) of clear window glass; burnt and slightly bubbled

F.29

See above

F.30-32

8 shards (11g) of clear window glass, 0.9-2.5mm thickness, c. 1796-1923

8 shards (10g) of glass bottles (3 brown, 1 green, 4 clear)

F.34

2 shards (2g) of clear glass bottles

F.36

Surface: 2 shards (2g) of glass bottles (1 clear, 1 green)

[134] 2 shards (2.5g) of clear window glass, 1.15mm thickness, c. 1809

[72] 10 shards (7.2g) of clear window glass (one slightly melted)

4 shards (13.8g) of glass bottles (3 green, 1 clear)

F.41

Clear glass jar (125.6g) with metal screwcap marked with 'Frank Cooper's Marmalade, Oxford' and coat of arms; 4.5-5.7cm diameter, 9.2cm tall

Clear glass bottle with rounded profile (190g) and with screwcap marked with Heinz - 57 varieties' in red script against white background; 14.2cm tall, 5.2cm diameter (max)

Clear glass jar (256g) marked with 'Epicure', probably for preserves. Included with fragments of metal screwcap; 6.4x8.3cm width, 10.34cm tall

Clear glass jar (77.9g) with metal screwcap marked with 'Vaseline (Trade Mark) Brand Petroleum Jelly' in blue script, with some surviving contents; 4.15cm diameter, 5.8cm tall. Circa 1940-60s

Clear glass jar (222.8g) with squared profile and with metal screwcap marked with 'Vacuum Packed - Do not break seal until required'; 5.9cm flat side, 14cm tall

Clear glass bottle with moulded lettering: 'Dettol'; c. 1936-1950s

Clear glass bottle (445.7g) with squared body profile and rounded base marked with 'SEAGERS'; metal screwcap marked with 'Seager Evans & Co'. Probably a gin container; company closed in 1970

Clear glass bottle (433.2g) with mouldered lettering: 'Sunfresh'; c. 1925-1940s

Small clear glass flattened bottle with oval profile, ribbed base and flared body (65g); 2x4.7cm, 9.8cm tall. Screwcap neck without seal. Fragments of a label survive, with gold band and green lettering: "ROUGH-POND'S LTD"; probably a 1940s/50s skin (hand?) lotion of Chesebrough-Ponds Ltd.

Small clear glass bottle (59.7g) with square profile, 2.2x4.4cm, 7.8cm tall. Probably for medicine or skin lotion

Large clear glass rounded jar (365g, not screwcap), 8.9cm diameter, 14cm tall

Clear glass bottle (453.5g) with rounded profile; 7.5cm diameter, 25cm tall

Clear glass bottle (413g) with rounded profile marked with moulded lettering: 'GENUINE MALT VINEGAR'; 7.5cm diameter, 22cm tall

Clear glass bottle (355g) with square profile; 4.9cm flat face, 21.5cm tall

Clear glass shard (sample from complete smashed bottle) marked with 'Regent March'; refers to Regent Dairy Ltd, March, active circa 1945-77.

Small square decorative moulded glass platter or coaster (117g) with small thumb corner handle; 8.5x8.7cm, 1.5cm tall

F.43

See above

F.45

1 shard (1.2g) of clear window glass 1.8mm thickness, *c.* 1864

F.47

1 shard (4g) of clear glass bottle

F.49

1 shard (72g) of thick base of a brown (beer?) bottle

F.50

7 shards (41.9g) of clear window glass, 1.5-2.8mm thickness, *c.* 1839-1923+

8 shards (67.1g) of clear glass bottle

1 shard (3g) of green ribbed glass

F.52

2 shards (1.45g) of clear window glass

2 shards (13.55g) of clear glass bottles

F.56

7 shards (10g) of clear window glass, 0.9-2.5mm thickness, *c.* 1796-1923

3 shards (3g) of bottle glass (2 clear, 1 green)

F.57

2 shards (0.69g) of clear window glass, 1.5mm thickness, *c.* 1839.

6 shards (19.31g) of glass bottles (3 clear, 1 blue, 1 turquoise, 1 brown).

F.60

1 shard (0.4g) of clear window glass, 1.5mm thickness, *c.* 1839.

F.63

Complete clear glass bottle with rounded profile, sealed with metal screwcap marked with 'Heinz - 57 varieties' in red script against white background; 14.5cm tall

Clear glass jar, 12cm tall

Large ribbed flat clear glass bottle 21cm tall

Small flat clear glass bottle 12cm tall

Small clear glass bottle with rounded profile, still with some contents; 7cm tall. Possibly for medicine

Fragment of green decorative moulded glass (dish?)

F.65

Near complete decorative clear moulded glass bowl, 23.5cm diameter, 6.7cm tall

Complete clear glass bottle (91.18g) with square profile, 10.6cm tall. Marked on one side with 'Ninham's Lemonade' and on the other with 'H.C. Ninham & Son, Norwich'. Company established in 1863 and still operative in the 1940s.³⁴

5 shards (21.81g) of clear glass bottle with 2 shards (16.98g) of turquoise glass bottle

F.66

Small clear glass bottle (106g) with square profile, 10.38cm tall

F.68

2 shards (9g) of clear window glass, 2.2mm thickness, c. 1842

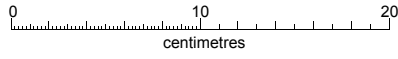
³⁴ See 'Law Reports' in *British Food Journal* (1942), volume 44, issue 9.



0 10 20
centimetres

Figure 23. Selected artefacts from F.41

F.43



F.65



F.66



Surface finds



Figure 24. Selected artefacts

Worked Bone – Marcus Brittain

Four items of worked bone were recovered from the surface collection, with none attributable to excavated features. These are all sawn and carved and consist of three disc buttons and one side of a handle. The buttons are probably all from trousers or, more likely, from jackets. Although also in use before the nineteenth century, bone buttons were produced in quantity between 1800 and the mid- 1860s, appearing in more limited numbers thereafter and into the early twentieth century. The manufacture of bone buttons in the nineteenth century comprised the cleaning of sawn bone slabs (probably from cattle limbs) by boiling, from which disks were fashioned through cutting, spinning and drilling (Luscomb 1967). The bone handle is from a cutlery utensil, and is also likely to have been manufactured in the mid-nineteenth century.

Catalogue

Grid C20, Box 2

x1 bone button (half) cut and spun from one piece of bone (0.6g). Round in plan view with four eye holes at centre of carved circle depression (10.5mm diameter); eyes drill from both sides. Concave in section. Polished finish. Probably a jacket button: 19.1mm diameter, 2.5mm thickness.

Grid C40, Box 3

x1 (partial) bone scale for a cutlery handle. Sawn along the axial length of bone shaft, with flattened face and flattened flared sides, both polished to natural colour. Two 1.5mm diameter perforations along the centre of the face, one with an iron pin c. 7mm length. Near squared (slightly concave) terminal (rather than a pistol grip) suggests a C19 date. 7.42mm length, 17-15.3mm width, 4.7mm thickness.

Grid C60, Box 2

x2 bone buttons (one complete, one near complete) each cut and spun from one piece of bone (0.7-0.9g). Round in plan view with four eye holes at centre of carved circle depression (10.2-10.3mm diameter); eyes drilled from one side on button, both sides from the other. Concave in section. Polished finish. Probably jacket buttons: 17.7mm diameter, 2mm thickness; and 17.5mm diameter, 2.3mm thickness.

Worked and Burnt Stone – Simon Timberlake

Stone marbles

Three stone marbles (12g) were recovered, two from squares B0 and D20. The finest example was <656>, a natural stone agate or 'aggie' of cut and polished stone of c. 18mm diameter (6g), most probably one worked from a red banded flint nodule. These hand-cut stone marbles are amongst the earliest nineteenth century (Victorian) types used for marble gaming, this particular example being referred to commonly as a 'fingerprint stone shooter', used in games such as 'shooting', 'ring taw' or solitaire. However, it is difficult without further research to determine a more precise date for its manufacture, given that today rather similar examples are still being made for the specialist connoisseur market. In all probability this example predates the common introduction of hand-made glass marbles which took place during the latter half of the nineteenth century.

The two other smaller plain stone marbles appear to be manufactured from limestone and flint (13mm and 16mm respectively). One or other of these may be opportunistically collected spherical sponge fossils, rather than as shaped and ground-down 'filberts'; the small sponge fossil *Porospaera globularis* from the chalk is one possibility. In particular, the (2g) flinty one shows signs of considerable use and wear.

Whetstone

A single fragment of a rectangular whetstone (80x25x30mm; 128g) was recovered from square B40; this being a synthetic carborundum stone of the 'old' type, with evidence for a moderate degree of use. The introduction of carborundum whetstones or other abrasive grinding wheels in Britain dates from around 1891 (Johnson 1943; Anderson 1994).

Graphite disc

A fragment of a perforated graphite disc (27x10mm diameter; 6g) was recovered from square C60. It was evident that this had been manufactured from a raw (i.e. cut) graphite block, rather than pressed from powder (synthesized), and as such it appears likely that this is late nineteenth century to early twentieth century rather than more modern in date. It is difficult now to ascertain whether this was intended to function as a lubricant washer, or else an electrode, either of which would have been common uses for this material. Another possible use is as a graphite marker.

Burnt stone

Just 320g of burnt stone was recovered in very small amounts from two features and several metre squares. Most of these pieces consisted of lightly burnt carstone, quartz and coal shale, and were almost certainly linked to the operation of the forge or smithy, being generally associated with the distribution of iron smithing slag, with the burnt and vitrified hearth brick, and amongst the cinders of coal.

Metal Items and Metalworking

Metal Items – Marcus Britain and Andrew Hall

The assemblage of 200 items totalling 11,017g comprises mainly of ferrous items with a small number of copper alloy, tin, lead, carbon and steel objects. In the main the assemblage may be assigned to a broad nineteenth to twentieth century date, with a number of items diagnostic of more determinate datelines. Excavated features account for 52 (5142g) items, with the remaining 148 (5875g) items having been recovered during the surface collection. The assemblage represents a combination of domestic utilitarian and decorative items, with buildings materials and agricultural implements forming the bulk of the assemblage by weight.

In the following is a brief overview of the assemblages of five excavated features (Fs.29, 41, 43, 63 and 66) which, much like the ceramic evidence, provide snapshots of the character of period-specific metal assemblages. The full metal catalogue is described in detail in Tables 20 and 21. Metalworking residues such as slag are detailed in a separate report by Simon Timberlake.

Pit F.43, nineteenth century

Containing iron, copper alloy and lead items, metalwork from F.43 may be contrasted with most other features for its predominantly copper and decorative element, as well as the site's only coin. Recovered from one of the upper fills [89], the coin provides only a *terminus ante quem*, for this is clearly heavily worn and much older than the deposit from which it derived. It appears to be an eighteenth century British (George III) copper farthing with a date of either 1773 or 1775 (Figure 25), with remnants of the image of a seated Britannia on the reverse side (the front being too heavily worn for identification). A well-crafted copper alloy barrel tap key (Figure 25) came from the main fill of the pit [90]; this being of a clear nineteenth century provenance, for which more refined dating is not possible. A third copper item was a small button cap with a single eyelet, but its preservation was too partial for further comment, and a fourth item was a small decorative baluster shaped object. This latter item is probably a pipe tamper with a screw-head cleaner at one end and stamp at the other (Figure 25). Finally, small shards of thin copper sheet may be the remains of a small bottle seal.

A large iron horseshoe was found in [89], and a small iron horseshoe with moulded spikes was recovered from the core fill [90] (Figure 25). With this was also a length of wire, recovered in fragments, but combined to a length of 28.7cm. Delicate and poorly preserved, the wire may have served any number of purposes, but not to be discounted are wire-strung musical instruments.

Overall, the assemblage is illustrative of domestic activities, quite normal to nineteenth century contexts.

Metalworking – Simon Timberlake

Some 6.191 kg (241 pieces) of 'slag' was recovered; 3.441kg came from 18 features (Table 22), with the remainder from the surface collection. This included numerous fragments of vitrified brick hearth lining, and some denser slag lumps and iron-rich (hammerscale) concretions were examined, and another box of material was scanned as part of this assessment. The vitrified and glaze-coated brick lining material of the smithing hearth(s) was by far the most abundant component of this material, whilst there were only small amounts of glassy slag drips, approximately 1.9kg of iron hammerscale and smithy floor surface concretion, and around 20 or so small dense silicate to iron-rich slag smithing lumps (c. 150-200g), some of which were proto-smithing hearth bases (PSHB). Some of the latter were strongly magnetic, suggesting a high percentage of wustite or free iron, though the majority instead probably containing a mixture of glass and fayalite.

As a group this assemblage seems typical of late Post-Medieval to Modern iron smithing debris, most likely being one associated with a small smithy. Traces of ferrous scrap including small horsehoes and nails embedded within the iron-rich concretions were identified as containing platy hammerscale (1-3mm), coal fragments and cinders, suggests that this spread of iron smithing debris and that across the site reflected the presence of redeposited floor material alongside the broken-down sides of brick hearths dismantled from a demolished blacksmith's workshop. Some of the densest recovery of this material came from pit F.43, an indication perhaps that the location of a smithy was nearby.

No evidence for tuyeres was encountered amongst the hearth debris recovered, yet there does seem to be a suggestion of partially clay-lined uncemented square brick structures used as hearths, these being blown by hand-operated blacksmith's bellows, often to a temperature (>1200°C) probably in excess of what was required for simple farrier work, but not necessarily for the forging and welding of new tools. In some respects, this level of industrial activity may have been carried out inexpertly, although the presence of accumulations of hammerscale on the floors does suggest that a fairly considerable amount of forging was undertaken. Coal seems to have been used exclusively as a fuel within the smithy.

More precise identification of the smithy workspace may be visible in the results of the geophysical survey, and in future work the appliance of magnetic susceptibility may be advantageous as a method to help identify the hammerscale-covered floors and hearths, assuming that these have survived.

Leather and Textile – Marcus Brittain

Dated to the mid to late nineteenth century, pit F.43 [91] in trench 4 produced fragments of grey woven cloth and a 'Balmoral' leather boot with copper alloy eyelets. Fragments of two twentieth century hobnail leather boots were also recovered from pit F.66 in trenches 4/5.

Clay Tobacco Pipe – Craig Cessford

The investigations produced an assemblage of 306 clay pipe fragments weighing 556g. Of this 82 fragments weighing 257g were recovered from features, whilst the bulk of the rest of the assemblage derives from field walking and test pitting. The following is a scan assessment of the assemblage.

The vast majority of pieces were stem fragments (259, 84.6%); these are generally quite short (including the material from features) and not indicative of primary deposition. The vast majority are consistent with a nineteenth to twentieth century date, and only a few appear to be potentially earlier, but none of these derive from cut features. There were also 18 spurs (with no heels present) and 29 bowls or bowl fragments, representing a minimum of 20 pipes. In terms of form and decoration all the spurs and bowls/bowl fragments are consistent with a mid to late nineteenth century date. There are a few pieces worthy of individual comment:

F.27: Stem with the maker's name W GALLANT / WISBECH of c. 1840–75. William Gallant was born c. 1811 at Market Dereham, Norfolk, and was apparently still living in Norfolk in 1836. Gallant had moved to Wisbech by 1841 and in 1850–51 was living and working on Chapel Street. This was a relatively small scale business, as William only employed one man and one boy. By 1856 he had moved to Goal Lane, he was still working as a pipemaker in 1871 and died at Wisbech in 1875. His son William was working with his father as a journeyman pipemaker by 1861, but appears to have left Wisbech soon after his father's death as he was working in Hull 1877–1901. From the same feature there was also a complete bowl of small mid to late 19th century spurred form with the initials ML on the spur. This was manufactured by a member of the Lupson family of Ely c. 1830–63 (Michael Lupson II, 1806–57, Michael Lupson III 1824–63, Mary Lupson 1857–63). Finally, there is a spur with sunbursts on the side and vinescroll foliage/vegetation decoration on the stem, this is the same as fragments from boxes DO and D20. This group dates to c. 1840–63.

F.36: Small mid to late 19th century spurred form bowl with fluting on sides and stylized oak leaves on front and rear. On the upper part of the side of the bowl there is a bird in a shield.

BO: Stem with vinescroll foliage/vegetation style decoration and lettering ... GHT. This was probably manufactured by Samuel Wright of Wisbech, who had been born in 1819 in Walsoken, Norfolk, and was working at Algenoria Street in Wisbech. In 1851 he was living on Canal Side and employing two men, one of whom was the apprentice George Wright born c. 1835 in Walsoken. Samuel Wright does not appear to have been resident in Wisbech in 1841, but it is unclear how long prior to 1850 he moved there.

B20: Decorated stem, mainly stars but with text D... and ...E

B100: Decorated stem with text [P?]AG... /...OWNH

D0: Stem with foliage/vegetation decoration and text TH•S... and ...H. Potentially an unknown maker working in Wisbech, as this placename ends with the letter H.

D20: Spur with the makers initials J/H, possibly James Hoyle of Cambridge who died in 1847. Also a spur with sunbursts on both sides and vinescroll foliage/vegetation on stem.

The overall assemblage is relatively small and of limited significance. It appears to be dominated by Wisbech products, with some material from Ely. The bowl from F.36 warrants illustration and further research might identify the sources of the stems with small fragments of texts present.

Table 20. Metal items from features

Feature	Context	Qty	Wt(g)	Material	Trench No.	Cat. No.	Description
		1	25	Fe	Test Pit 1	942	Fragment of iron plough blade, 81.9mm length, 12mm wide, 6mm max thickness
	156	1	11	Fe	3	876	Heavily corroded nail with significant concretions, 8mm length
8	13	3	12	Fe	2	875	Nail with flat head and square profile, 90mm length, 11mm width
12	22	2	21	Fe	1	874	Nail with flat head and square profile, 130mm length, 11mm width
22	43	1	12	Fe	6	884	1 fragment of iron bar, 26.3mm length, 19mm wide, 4.7mm thick
24	47	2	219	Fe	6	885	1 iron nail with square profile and flat head, 76mm length, 11mm thick; iron bolt terminal with screw nut attached, 160mm length, 8.2mm thick, 18mm wide
29	58	2	12	Fe	4	877	2 nail fragments with square profiles, 25-57mm length
	77	1	5	Fe	4	878	slag?
	84	2	18	Fe	4	879	2 handmade nails with square profile and flat or rounded head; 35-59mm length, 7.4mm width
32	104	4	17	Fe	6	886	1 fragment of iron sheet, 4mm thick; 1 fragment of iron nail with square profile, 7.2mm thick
34	106	1	21	Fe	6	887	1 fragment of corroded iron nail with square profile, 67mm length, 11mm thick
36	72	8	36	Fe	6	889	1 fragment of iron strip 38.5mm length, 26mm wide, 2.6mm thick; 2 fragments of iron nail with flat head and square profile, 24-50mm length, 5.5-16mm diam.
	Surface	2	209	Fe	6	888	2 fragments of possible fixed boot scraper, U-shaped, 25mm wide, 4.5 thick
41	96	4	10	Sn	6	890	Tin lids; two are white with black script: "VACUUM PACKED - DO NOT BREAK SEAL UNTIL REQUIRED" and "..ASE VACUUM ... THEN PUSH OFF WITH ... 1lb NET", Both C20; Bottle screwcap, yellow with red text: "YOUNG'S (REGD.)", probably of Young & Co.'s Brewery, C20; Ribbed circular silver cap over degraded cork, with dark grey scrip of "Y & O", possibly of H&O Vallance brewers that closed in 1905; C19-C20
		3	1763	Fe, Sn	6	891	Tin kettle, round with handle fittings but no handle, spout present but missing lid. Partly damaged during machine excavation; 160mm diameter, 70mm height. One large flat plough head, 220mm length, 23.8mm max thickness; two large iron nails with flat heads, one with square profile and the other circular, 130-148mm length, 7.2mm diameter and 12.5mm thickness
		12	123	Fe	6	892	Two ring headed looped pins with square profile, 115mm length, 4.2mm thickness; 2 thin and flat iron fittings with curved ends, 84mm length, 3.2mm wide; 4 heavily corroded iron nail, circular in profile with flat heads, 53mm-112mm length, c.7mm thick;

Feature	Context	Qty	Wt(g)	Material	Trench No.	Cat. No.	Description
							1 thin wire fragment, 3.6mm thick, 250mm length
		2	34	C	6	893	Two battery cylinders with central cathode; C20
43	89	1	217	Fe	4	880	Horseshoe with arc of 125mm, and main dimensions of 23.5mm width, 10.5mm thickness. 4 rectangular nail holes visible
		2	5.73	Cu alloy	4		Decorative pipe tamper (2.53g, 42.4mm length), baluster shaped (2.3-4.1mm diameter) with three grooved bands at centre, and screw cleaner to one end. Coin (3.25g) with heavy corrosion on both sides, fragments of 'AN' and 'IA' from BRITAN NIA on reverse side with spear staff and globe visible of seated Britannia; date below exergue is unclear ('x77x') but is possibly 1773 or 1775; obverse side may have raised ribbon along circumference; 22mm diameter, 0.6mm thickness; C18 British farthing?
	90	17	363	Fe	4	881	Mainly slag with 1 small U-shaped horseshoe (81.6g) with 5 pins attached, arc of 79mm width, and main dimensions of 12.2mm width, 7.2mm thickness; C19
		6	20	Fe, Cu alloy	4	882	1 barrel tap key (19.03g, 47.3mm length) with an oval handle (24.5mm width, 3.2mm thickness) and double recessed 'hourglass' aperture (5.5-11.6mm), sub rectangular (5x9.5mm) socketed bit with external spline, on circular shaft (5.7-6mm diameter); 4 fragments of copper, all thin sheet with one being a base and wall, possibly all of a bottle seal; 1 iron wire 2.8mm diameter, 287mm long
		1	4	Pb	4	883	Lump of lead
		2	3	Cu alloy	4	951	Copper button cap (15mm diam.) with eyelet (6.6mm wide)
	91	2	15	Fe	4	957	Nail with flat head and square profile, 65mm length, 11mm width
50	110	5	366	Fe	6	896	Large fragments of cogged wheel
	111	6	1670	Fe	6	897	Iron rectangular spade and partial T-shaped spade handle
56	119	2	6	Fe	6	898	Fragments of iron sheet (c.2mm thickness) and nail, 42mm length, c.6mm diam.
57	127	1	11	Fe	6	899	Circular profile flat head nail, heavily corroded, possibly machine made; 92mm length, 5mm diam.
61	138	2	14	Fe	6	900	Rectangular profile flat head nail, possibly handmade, 51mm length, 7mm width; heavily corroded fragment of possible chain link
63	143	1	279	Fe	6	901	Thin (2.6mm) oval basin 29.8 x 25.5cm, 7cm tall. Flat base with shallow concave sides. Light blue enamel interior and exterior with mid blue stripe around flattened rim; C20
		43	158	Fe	6	902	Mainly comprised of at least two tin containers, rectangular with rounded corners, possibly corned beef tins. 10x5.5cm, 0.8cm tall. Also a 'Captain Morgans' bottle

Feature	Context	Qty	Wt(g)	Material	Trench No.	Cat. No.	Description
							screwcap; C20
66	176	1	244	Fe	6	903	Large complete bucket handle with looped terminals, 485mm length, 16mm width, 3.5mm thickness
		3	14	Fe	6	904	Fragments of a tin or container
		1	1	Fe	6	905	Loop hole rivet
		1	50	Cu alloy	6	906	Wooden handle fragment 25.7mm diameter with thin copper sheet band cover 24.7mm wide, and flat copper base with central screw hole 9.3mm diameter
		9	8	Cu alloy	6	907	Loop hole rivet, 12.9mm diameter, with multiple threads of copper wire fragments, 1.3-2.4mm diameter
		3	57	C	6	908	Three battery cylinders with central cathode; C20

Table 21. Metal items from surface collection

Grid	Box	Qty	Wt(g)	Material	Cat. No.	Description
A80	Box 3	1	84	Fe	923	S-shaped iron link, 98.5mm length, 24.3mm diameter
B0	Box 3	1	4	Fe	924	Circular washer, 20.1mm width with internal aperture of 7.3mm, 2mm thickness
B40	Box 3	3	446	Fe	925	Hook, 111mm length; flat bar with pointed hook, 125mm length, 18mm width, 4.7mm thickness; fragment of iron bar, 33x50mm, 3.4mm thickness
B60	Box 3	1	10	Fe	926	Fragment of iron sheet, 25.6x34.3mm, 2.5mm thickness
	Box 4	1	17	C	934	Battery cylinder with central cathode; C20
B80	Box 1	1	15	Fe	909	Drain or pipe fragment
	Box 2	3	174	Fe	917	Fragment of iron (drain?) pipe, 59mm length, 62mm width, 10mm thickness; fragment of iron, ceramic and copper light fitting, 67mm length, 10-27mm diameter; fragment of iron bar, 75mm length, 17.5mm width, 10.5mm thickness
	Box 3	1	9	Pb	927	Lead lump
	Box 4	1	28	Fe	935	Fragment of iron bar or pipe, 31x66mm, 5mm thickness
C100	Box 3	1	524	Fe	930	Bucket handle with looped attachments to flat connector fittings 9cm in length, 2.3cm width; C19-20
C140	Box 4	1	8	Fe	939	Fragment of iron sheet or bar, 34.5mm length, 28.6mm width, 2mm thickness
C20	Box 2	2	150	Fe	918	Iron double headed nail attachment, 67.5mm length, 13.7mm width, 6.1mm thickness; fragment of

Grid	Box	Qty	Wt(g)	Material	Cat. No.	Description
						iron (drain?) pipe, 46x59mm, 5mm thickness
C40	Box 1	2	339	Fe	911	fragment if iron bar, 77mm length, 52.3 width, 7.3mm thickness; fragment of L-shaped iron border fitting with rivet, 87.2mm length, 26.2 width
	Box 3	2	194	Fe	928	Two large iron nails with rounded heads and circular profiles, 63.8-142.7mm length, 13.6mm body diameter, 28.3mm head diameter
	Box 4	3	113	Fe	936	Iron bar fragment, slightly curved, 46x52mm, 9.2mm thickness; iron hook with nail point and circular profile, 67mm length, 8mm diameter; nail fragment with rectangular profile, 56mm length, 7.5-10.5mm width
C60	Box 1	3	26	Fe, steel	912	Steel and iron battery fitting, 32.4x21.8mm, 8.1mm thickness; fragment of iron sheet, 31.4mm length, 1.6mm thickness; iron nail with square profile and flat head, 56mm length, 8.6mm thickness
	Box 2	1	77	Fe	919	Fragment of iron sheet, 52x47mm, 8.7mm thickness
		1	9	Cu alloy	920	Small rectangular handle or fastener, broken from circular rod at one end, 41.3mm length, 15.1mm max width, 1.3mm thickness
	Box 3	3	1299	Fe	929	Two fragments of iron bar, 88-103mm length, 20.4-28mm width, 11.5-18mm thickness; one iron straight crank handle, 245mm length
Box 4	2	295	Fe	937	Fragment of drain pipe, 97.5x70.2mm, 11mm thickness; fragment of iron sheet, possibly of a door hinge, 81x38mm, 5.8mm thickness	
C80	Box 1	1	1	Cu alloy	913	Shotgun cartridge primer
	Box 4	1	147	Fe	938	Fragment of curved iron sheet with concave profile, 130mm length, 4.5mm thickness
D100	Box 3	1	57	Fe	933	Four oval connected chain links, each 42mm length, 24.6mm wide, with 5.6mm diameter
	Box 4	1	170	Fe	941	Fragment of iron plough blade, 115.4mm length, 42.5mm wide, 10.1mm max thickness
D120	Box 2	1	2	Fe	922	Small cylindrical iron flat headed stud, 23,4mm length, 22.5mm diameter
D140	Box 1	2	8	Fe	916	Fragment of iron nail, sub-square in profile, 24.8mm length, 14.3mm wide
D20	Box 1	1	158	Fe	914	Fragment of iron sheet, 80x74mm, 9mm thickness
D40	Box 1	2	403	Fe	915	Two fragments of plough fittings; one flat headed, 92mm wide, 68.5mm length; the other hooked, 100mm length, 21mm diameter
	Box 2	1	96	Fe	921	Fragment of iron bar, circular in profile, 91.1mm length, 37.2mm diameter
	Box 3	2	222	Fe	931	Large iron nail with squared profile, tapering to point, with flat square head (38.8mm width) crowned with circular mount (18.5mm diameter), 128mm length, 21.7mm max thickness of body
	Box 4	1	14	Fe	940	Fragment if iron sheet or bar, 53.3mm length, 23.1mm width, 2.8mm thickness
D80	Box 3	1	6	Fe	932	Circular washer, 20.1mm width with internal aperture of 7.3mm, 2mm thickness

Table 22. Summary of Slag from Features

Feature	Context	Sample	No. Pieces	Diameter (mm)	Wt (g)	Fe slag?	Magnetic (0-4)	Type	Notes
2	3		1	55	24	Y	0-1	vitriified melted clay	smith hearth lining
4	7		1	20	4	Y	4	slag smithing lump (coating)	smith hearth
7	11		1	35	8	Y	2	vitriified clay + slag drip	smith hearth lining
8	13		4	35-45	72	Y	1+3+4	slag smith lump (proto smith base 22g) + Fe slag and vitrif lining+ vitrif and melted clay + coal cinder	smith hearth
12	22		2	60	28		3	corroded ironwork within hammerscale	nail shank
16	31		1	90	128	Y	0	vitrif melted vesicular brick	smith hearth lining
21	41		1	30	12	Y	0	vitrif vesicular brick	smith hearth lining
22	43		1	40	22	Y	1	vitriified brick	smith hearth lining
23	45		1	35	8	Y	2	vitriified vesicular clay	smith hearth lining
25	50	1	1	10	<1	Y	2	fused spheroidal hammer scale?	smithing hearth
27	53		1	30	14	Y	0	hammerscale concretion?	smith hearth (all oxidised)
29	57		2	40	22	Y	0	vitrif vesicular brick	smith hearth lining
29	58	6	12	10+40	30	Y	0	fused clay drips + coke/coal	smithing hearth
29	59		1	35	22	Y	0	vitrif vesicular brick	smith hearth lining
29	77		1	55	68	Y	0-1	vitriified+vesicular brick	smith hearth lining
29	77		1	30	15		0	corroded ironwork within hammerscale	nail shank
36	134		1	40	44	Y	4	slag smithing lump	smithing hearth
36	72		3	25-55	40	Y	0+1	vitriified glazed brick + caly	smith hearth lining
37	75		1	65	32	Y	0	vitrif melted vesic clay incorp coal shale	smith hearth lining
43	89		10	25-60	102	Y	0	vitriified brick + vitriified clay + coal cinder + hammer scale concretion?	smith hearth
43	90		65	10 to 60	446	Y	0+2	hammerscale concretion(11) + coal + coal cinders(56)	smith hearth or smithy floor NB one concretions has remains of Fe knife blade
43	90		9	15-90	354	Y?	0+1+4	corroded ironwork within hammerscale + coal concretion	smithy floor? NB inc. small pony horseshoe

Feature	Context	Sample	No. Pieces	Diameter (mm)	Wt (g)	Fe slag?	Magnetic (0-4)	Type	Notes
									with nails (80mm diameter; 82g) plus other shoeing nails + bits of plate and larger nails
43	90	3	20+	15-25	200	?	0	coal cinders or coke	smithing hearth?
43	91	4	20+	10 to 25	170	?	0	coal cinders or coke	smithing hearth?
43	91		15	10-110	704	Y	0+2+3	hammerscale concretions	smith hearth or smithy floor
43	92		9	10-170	768	Y	0+2	hammerscale concretions + coal cinder(1)	smithy floor NB includes glass
43	92	5	10	20-40	18	?	0	coal cinders or coke	smithing hearth?
56	119		1	80	66	Y	1	iron corrosion, clay + cinder	smithing deposit?
57	127		1	30	2	Y?	0	fused vesicular brick?	smith hearth lining
65	174		1	50	18	Y	0	vitriified and melted clay+stone	smith hearth lining

DISCUSSION

Four core phases of activity were represented by the archaeological record (Figure 25):

Phase 1. Pre-colony

Phase 2. Nineteenth century occupation

Phase 3. Twentieth century occupation

Phase 4. Post-occupation

The cartographic record of the Ouse Washes shows there to be numerous nineteenth century buildings and smallholdings along the bank of the Old Bedford River of which little surface trace survives except for in the ploughsoil, there being the material detritus of everyday life – the small things forgotten (Deetz 1977). Through the experience of investigations over the site of the Manea Fen Colony it becomes clear that a combination of techniques may return no small quantity of data from such contexts; but it is true also that the measures of clearance required to return the land to arable use have in this instance been effective. The overall lack of foundations within the trenches appears to have been one such result, but then even their removal has left its mark in the form of trencher lines. Adding to this a lack of foundation cuts (as perhaps also evidenced in their absence within the geophysics), a greater understanding of the nature and robustness of the Colony site's original buildings becomes apparent. With the soily overburden parted, the walls probably rested, quite simply, upon the exposed and firm silty clay geology; a not uncommon method of nineteenth century buildings construction in the district, and explanatory of the Colonists' speed of raising.

Touring the tenements still standing on the site in 1914, Guy Pearson of Wisbech commented that the Colonists' work 'could not have been of very good quality, these bricks being somewhat soft that a nail can easily penetrate,' although he acknowledged that it was 'hardly fair to judge them by this one example,'³⁵ although the necessary buttressing of the walls evident in the 1950s photographs (Figure 8) suggests that after 100 years their structural quality was further reduced. That most of the construction of the buildings was undertaken using the local clay resource is attested by the dominance of the two (of three) fabric types identified by Timberlake: those moulded from the Upper Jurassic Ampthill Clay and those utilising the marine alluvium (silt) dug from the overlying Barroway Drove Beds. It was of course this resource that was an attraction of the site's location, thereby limiting materials' transport costs during a phase, at least until 1850, of irksome taxation of bricks and tiles. Similarly, proximity to the Old Bedford River – tantamount to a fenland superhighway – could facilitate export of materials produced on the site, their sale bolstering the collective capital of the Colonists. This was presumably one allure of the site's later ownership, and it may be possible to trace some passage of these transactions, perhaps connected to the development of the railway after 1845, or the regeneration of Manea following the devastating fire that consumed half of the

³⁵ 'A Past Effort at Socialism. History of Manea Colony', Typescript notes dated 1914 at the Wisbech and Fenland Museum.

As a group this assemblage seems typical of late Post-Medieval to Modern iron smithing debris, most likely being one associated with a small smithy. Traces of ferrous scrap including small horsehoes and nails embedded within the iron-rich concretions were identified as containing platy hammerscale (1-3mm), coal fragments and cinders, suggests that this spread of iron smithing debris and that across the site reflected the presence of redeposited floor material alongside the broken-down sides of brick hearths dismantled from a demolished blacksmith's workshop. Some of the densest recovery of this material came from pit F.43, an indication perhaps that the location of a smithy was nearby.

No evidence for tuyeres was encountered amongst the hearth debris recovered, yet there does seem to be a suggestion of partially clay-lined uncemented square brick structures used as hearths, these being blown by hand-operated blacksmith's bellows, often to a temperature (>1200°C) probably in excess of what was required for simple farrier work, but not necessarily for the forging and welding of new tools. In some respects, this level of industrial activity may have been carried out inexpertly, although the presence of accumulations of hammerscale on the floors does suggest that a fairly considerable amount of forging was undertaken. Coal seems to have been used exclusively as a fuel within the smithy.

More precise identification of the smithy workspace may be visible in the results of the geophysical survey, and in future work the appliance of magnetic susceptibility may be advantageous as a method to help identify the hammerscale-covered floors and hearths, assuming that these have survived.

Leather and Textile

Dated to the mid to late nineteenth century, pit F.43 [91] in trench 4 produced fragments of grey woven cloth and a 'Balmoral' leather boot with copper alloy eyelets. Fragments of two twentieth century hobnail leather boots were also recovered from pit F.66 in trenches 4/5.

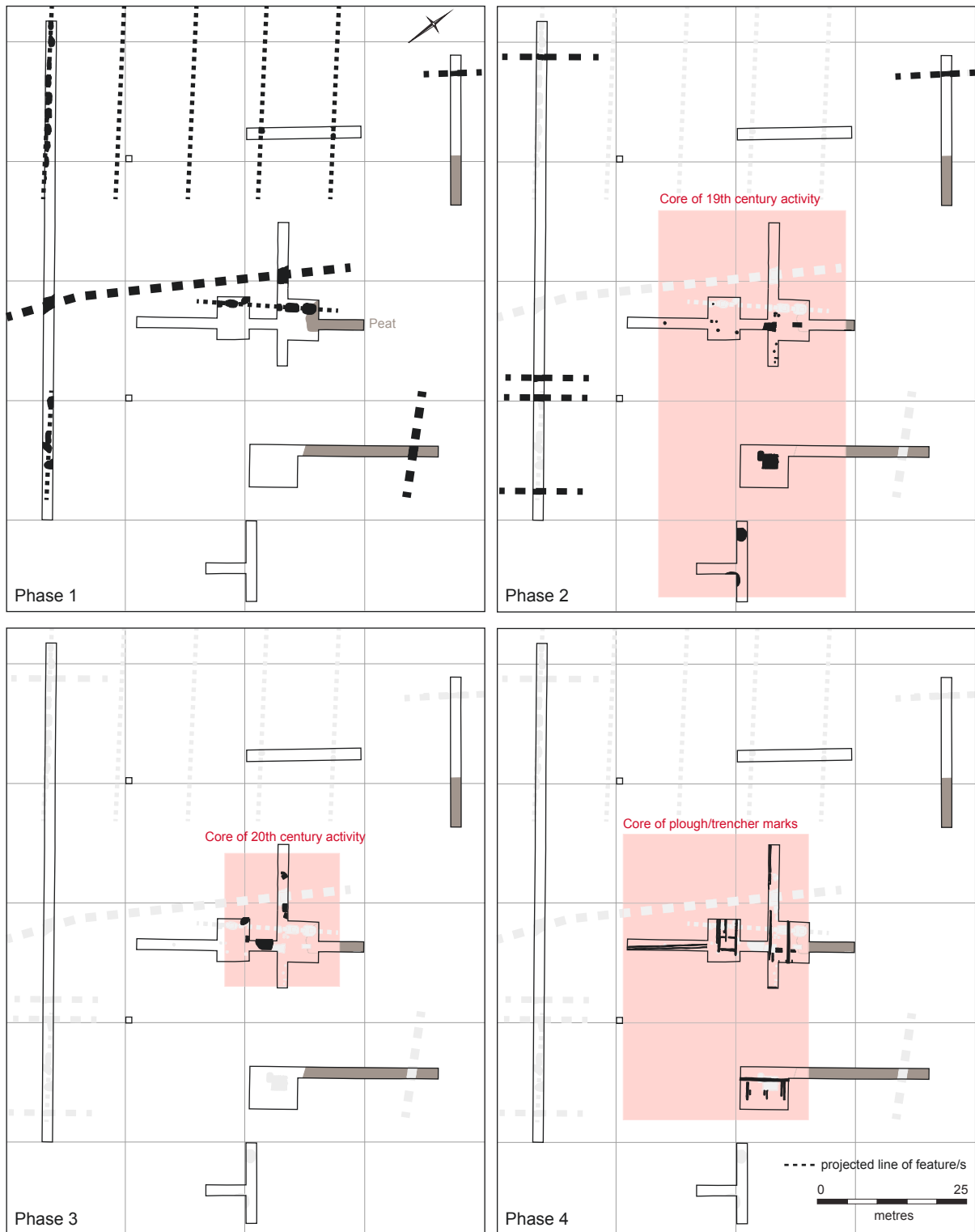


Figure 25. Summary of Phases 1 - 4

village on 16th May 1852.³⁶

There is a sense here that durability was seconded to speed in the construction of the Colony's buildings. Establishing an infrastructure early and in haste was a part of a chase to perfectibility, though perhaps with a mind to these initial structures as being of temporary status, to be transformed into permanence once the experiment had passed into paradigm. Whatever the case, Utopia was built with only the slightest of foundations. The archaeological implication of this is that the Colony's spatial character will not be retraced with blueprint accuracy. Nevertheless, whilst broad outlines of some buildings may possibly be visible in the distribution of trencher lines, it is in small discrete features through which the detail may be more forthcoming. Returning to Figure 7, if the scaling of the site's grid over the early OS maps is suitably accurate, then we may posit that the brick-lined sunken floors were set directly within the terraced buildings, perhaps as underfloor storage coolers. As registered in the magnetic survey, a line of at least five or six possibly comparable features may further secure this view and, by implication, lend potential to future assessment of the spatial layout of the site's built environment. It is noteworthy that the presence of these was unknown during the remaining buildings' mid-twentieth century occupation (*pers. comm.* Roy Upchurch), and they may therefore be characteristic only to the nineteenth century.

It is also by way of these small features, such as the brick-lined sunken floors, in which insight may be gleaned of the site's more subtle narratives. As an example, the removal of the levy in 1826 on such materials as to be used in drainage may have been an opportunity somewhat expanded upon by the site's residents. The use of bricks marked with 'DRAIN' is a case in point, here potentially being a use not strictly in the legal tenor. Although drainage must have undoubtedly been a feature within the site's infrastructure, it did not apply to storage structures, for which taxes would have been expected.

The suitability of Manea's fenland context for the formation of a new community was a point raised in the *New Moral World*, no doubt through cynical intent, with concerns as to its lack of topography – a hallmark of Victorian natural beauty – as well as for the health of newcomers to that landscape (Langdon 2000: 127-8). Whilst the response of *The Working Bee* was to highlight the area's picturesque and tranquil qualities, the challenges presented by the saturation of the Ouse Washes were described by the Revd Richard Taylor, Curate of Coveney in the 1830s, during his travels to Manea where he encountered more than three feet of water at the Washes' shallowest point, and a beating of stormy wind.³⁷ The site of the Colony itself, according to the *Star in the East*, was liable to flooding (Langdon 2000: 235). Additionally, reports of fenland ague (malaria) still occasioned the region, with the epidemic of 1826-9 a living memory (Nicholls 2000), as well as a cholera epidemic that in less than two months in 1832 had taken 67 lives in William Hodson's village of Upwell and neighbouring Nordelph (Atkinson *et al.* 2002). What impact, if indeed any, this had for the Colonists and the site's later occupants is not clear, and although there are reports that five of Hodson's children died on the site and are

³⁶ *Globe* 17th May 1852: 3

³⁷ <https://ousewasheslps.wordpress.com/tag/richard-taylor/>

buried there,³⁸ the cause of these deaths is currently unknown. And whatever natural trials may have been thrown upon successive inhabitants, the lure either of Utopia, the business of brickmaking or smallholding ensured continued occupancy of the site for over 120 years.

'But alas !', claimed a directory for Cambridgeshire in 1851, 'for the mutability of human institutions !-the socialists have fled.'³⁹ Histories of the Colony generally end with the dissolution of the Hodsonian Community in 1841, resigned upon the failure of a grand yet misdirected social experiment. Reflecting upon the prospect of an archaeology of nineteenth century 'ideal' communities, Tarlow (2002) argues that emphasis upon their success or failure diverts from potentially more intriguing issues such as the consideration (after Pitzer 1997) of the communal as a developmental stage in the evolution of communities. Moreover, and particularly in the case of Manea Fen, the subsequent legacy of Utopian ventures to immediate landscapes and local communities is an original possibility for scrutiny. Whilst there is little evidence to support any claim that the Hodsonian Community included membership drawn from the local area, its local relevance both during and after its course has yet to be addressed in detail.

The degree of interaction between self-contained Utopian communities and their local neighbours, and the degree of reliance placed upon them is, in theory, potentially materially visible. Although seemingly post-dating the Colonists' occupation of the site, nineteenth century pit F.43 illustrates the degree of the site's preservation, containing both cloth and leather items amongst its important finds assemblage. Comparably rich pits pertaining to the Colony phase were not encountered but must nevertheless be present; however, taking into account the views upon unsanitary conditions in contemporary urban contexts it may be possible that recognised archaeological patterns from other nineteenth century sites may not be appropriate guides for modelling the discard habits adopted by the Colonists. Such may not be the case for the site's later occupancy, which can only be addressed by further investigation. Finally, assessment of the many other nineteenth century smallholdings across the Ouse Washes might provide a comparative basis for addressing broader questions concerning the culture of nineteenth and early twentieth century occupation of this landscape, and the ways by which the Manea Fen Colony either stands apart from, or conforms with these.

In his book *The Sense of an Ending*, Frank Kermode (1967) distinguished between two Greek words that are translated as the English word for 'time'. The first of these, *chronos*, is that by which time is measurable as a succession of repeated waypoints such as numbers on a clock face. For Manea Fen this may be the document of the censuses, with names appearing and departing, one past the other in successions of lives, young to old. The second, *kairos*, is a living time, contextual and marked by durations of intentions and goals through which lives and events may be judged. It is through a combination of these, in succession and interval, by which legacies are moulded. Although limited by the successful clearance of much of the site's built

³⁸ 'A Past Effort at Socialism. History of Manea Colony', Typescript notes dated 1914 at the Wisbech and Fenland Museum.

³⁹ *History, Gazetteer, and Directory of Cambridgeshire* (1851): 498

environment, its archaeological potential suggests that it is possible to ask such questions of it.

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OUTREACH

The project comprised four core public elements:

- Volunteer fieldwork team
- Talks and tours, including Open Day
- Print and broadcast media
- Project website

Volunteer fieldwork team

The fieldwork was conducted by 29 volunteers (Figure 26) with up to 13 volunteers per day totalling to 145 volunteer days. Basic demographic data was collected in the build-up to the fieldwork (n=29), with data concerning prior experience, reflections and related information collected by Online questionnaire within six weeks of the cessation of the fieldwork. There were 15 respondents (51.7%) to the questionnaire (Tables 23-28, Graphs 1-6).

The team's ratio of men to women was 1.9:1 of which 65% were aged 50 years or more (Tables 23 and 24). Prior experience with archaeological fieldwork was held by 69% of the participants (Table 25), and almost 51.7% were able to commit to 4 or more days (Table 26).

	Male	Female
No.	19	10
%	66	34

Table 23. Gender summary of participants

Age	<13	14-24	25-34	35-49	50-65	>65
No.	1	2	3	4	11	8
%	3.4	6.9	10.3	13.8	38	27.6

Table 24. Age summary of participants

Prior experience	Yes	No
No.	20	9
%	69	31

Table 25. Experience summary of participants

no. days	1-3	4-6	7-9	10-12	13-15
no. volunteers	14	8	3	3	1
%	48.3	27.6	10.3	10.3	3.5

Table 26. Summary of number of days spent on site by participants



Figure 26. Volunteer and CAU team

Awareness of the project was gained through a range of media, mainly via leaflet drops across the local communities, contact with local heritage and volunteer organisations, the OWLP e-Newsletter and website and other web-based forums (Table 27). The majority of participants (79.4%) were based within 29 miles of the site with three in excess of 100 miles (Table 28).

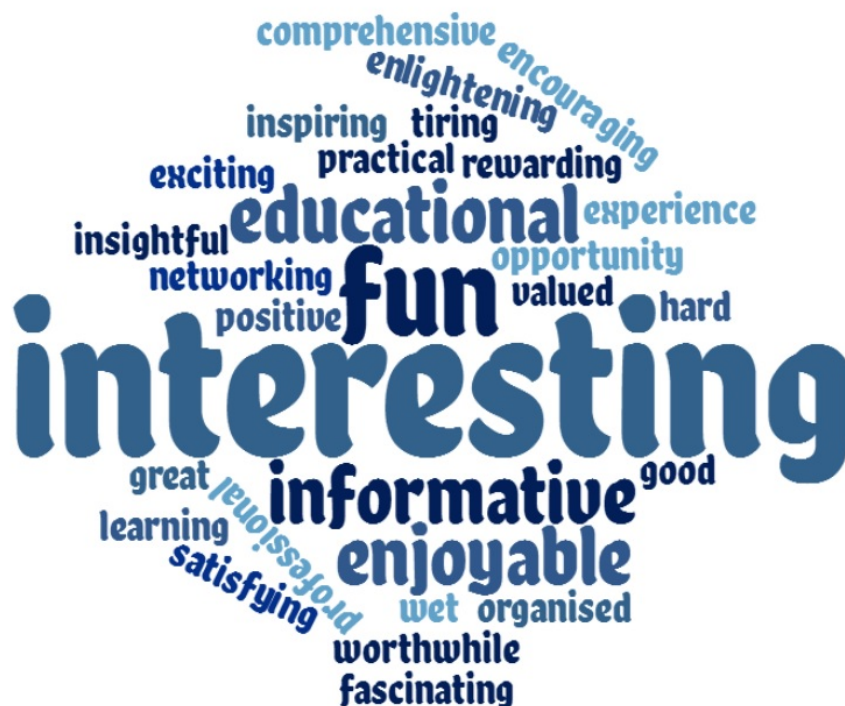
Media	FenArch	Internet/ Facebook*	Manea Connect	Octavia Hill Museum	OWLP e-Newsletter	OWLP website	Word of Mouth	Total
No.	6	7	2	1	3	5	1	25
%	24	28	8	4	12	20	4	100

Table 27. Media through which awareness of the project was gained (n=25). *Also includes email circulars to participants of the 2015 fieldwork

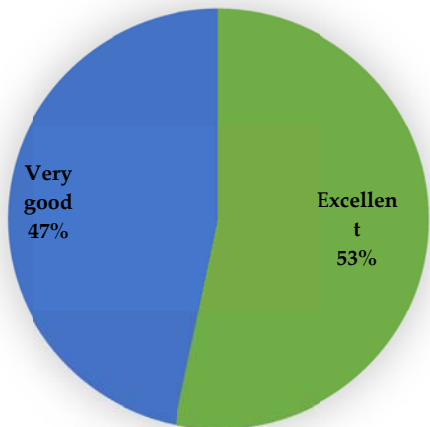
Distance travelled (Miles)	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100+
No.	5	10	8	1	0	1	0	0	1	0	3
%	17.3	34.5	27.6	3.4	0	3.4	0	0	3.4	0	10.4

Table 28. Travel distance of participants to site of fieldwork

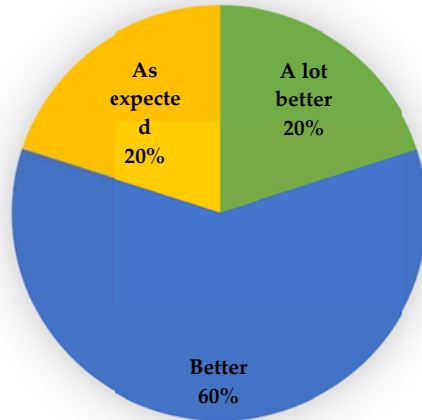
Feedback was positive overall, with the fieldwork experience as a whole rated as ‘Excellent’ and ‘Very good’, and with expectations being either met or exceeded. Asked to provide three words that describe their experience, the response may be most clearly presented through a word cloud:



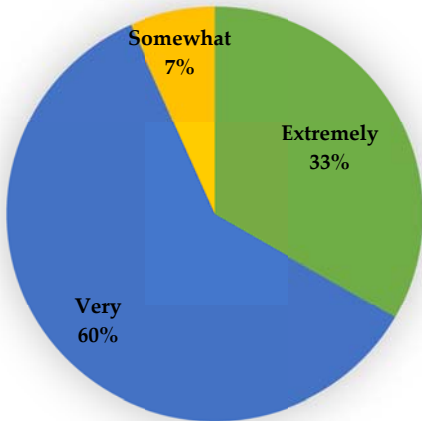
Overall experience



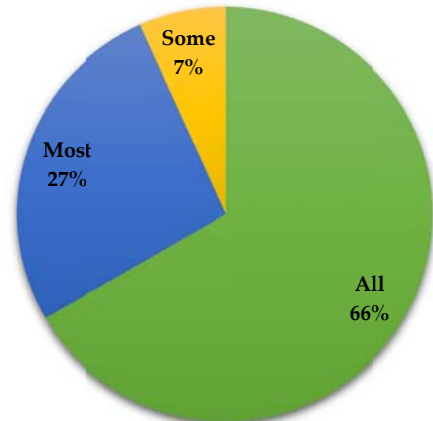
Expectations



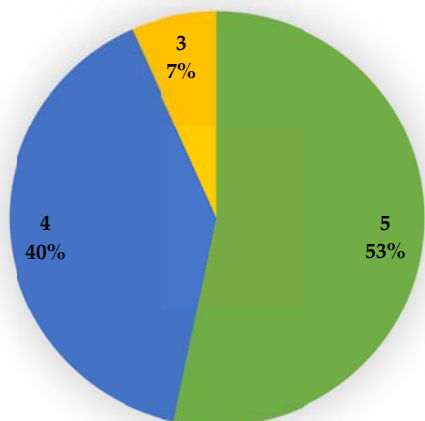
How good was the level of organization?



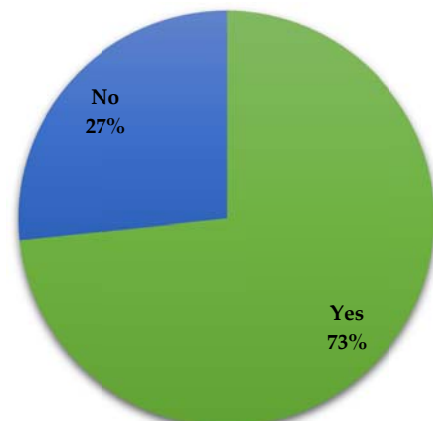
How much information was provided before the fieldwork?



Teaching Quality (5=excellent, 1=poor)



Were new skills learned during the fieldwork?



Graphs 1-6

Talks and tours, including Open Day

The site was open for public tours throughout the duration of the fieldwork, and both pre-arranged and spontaneous visits were conducted by local history groups, archaeology societies and interested individuals, particularly in the project's final week. Groups travelled from within c. 30 miles of the site.

The Open Day consisted of two main parts on Saturday 24th September 2016. The first of these was 'The Manea Colony Story': a free (2.5 hour) morning session of talks from six invited speakers at the William Marshall Centre in Welney covering a range of topics connected to the Colony and its aftermath (Figure 27). This was advertised as part of the Heritage Festival through the Octavia Hill Birthplace House, along with the project's Facebook page and by hand-posting of fliers across the region. It was attended by an audience of 53, and was followed by lunch in the Lamb and Flag public house. Tours of the site were conducted in the afternoon with poster displays and access to the Colony Lake (the latter by kind permission of Peter and Sandra Crouch), all whilst fieldwork was being conducted. A similar number of visitors attended the tours which, given the site's remote location, was taken to be a success.

A talk with an update on the project's progress was delivered in Ely in October 2016 as part of the Fenland History on Friday series organised by Mike Petty.

Print and broadcast media

In addition to a brief overview of the project in *Current Archaeology* (Issue 323, February 2017, p.11), various radio, print and online news covered the story, with requests for follow-up reports:

Archaeology, the publication of the Archaeological Institute of America
<http://www.archaeology.org/news/4891-161005-utopia-manea-fen>

BBC Radio Cambridgeshire on the Jeremy Sallis show (21st November 2016; 20-minute segment)
https://soundcloud.com/ousewashes/marcus-brittain-and-mike-petty-manea-colony?utm_source=soundcloud&utm_campaign=share&utm_medium=twitter

BBC News Live Reporting
http://www.bbc.co.uk/news/live/uk-england-cambridgeshire-37588424?ns_mchannel=social&ns_source=facebook&ns_campaign=bbc_live&ns_linkname=57ffa676e4b0dd1c54fef610%26Archaeologists+complete+Manea+Fen+colony+dig%26&ns_fee=0#post_57ffa676e4b0dd1c54fef610

Cambridge News
<http://www.cambridge-news.co.uk/news/cambridge-news/cambridge-university-archaeologists-digging-long-11979791>

Ely Standard
http://www.elystandard.co.uk/news/big_fenland_dig_uncovers_the_mysteries_of_the_manea_colony_1_4718336

The Manea Colony Story

Saturday 24th September, 2016

Life and legacy of a 19th century Utopian experiment in the fens

“Industry brings Plenty”



TALKS

10.00-12.00 William Marshall Centre, Welney

Opening address by Kasia Gdaniec of the Cambs County Council Historic Environment Team

Characters of the colony (Peter Cayton, Octavia Hill Museum)

Community life within the colony (Dr. John Langdon, SOAS Uni of London)

The archaeology of the colony (Dr Marcus Brittain, Uni of Cambridge)

The colony's founder, William Hodson, in America (Mike Petty, Cambridgeshire researcher)

The Fenland Ark (Kirsten Bennett, Cambridge Acre)

Book your FREE ticket at: <https://www.theheritagefestival.org/WhatsOn.php>

VISIT ARCHAEOLOGICAL EXCAVATIONS

13.30-16.30 Colony Farm, PE14 9TB

More info at: <https://www.facebook.com/ManeaColonyArchaeology/>



**CAMBRIDGE
ARCHAEOLOGICAL UNIT**



Ouse Washes
The Heart of the Fens

**Octavia
Hill's**
BIRTHPLACE HOUSE

Figure 27. The Manea Colony Story - Open Day Flyer

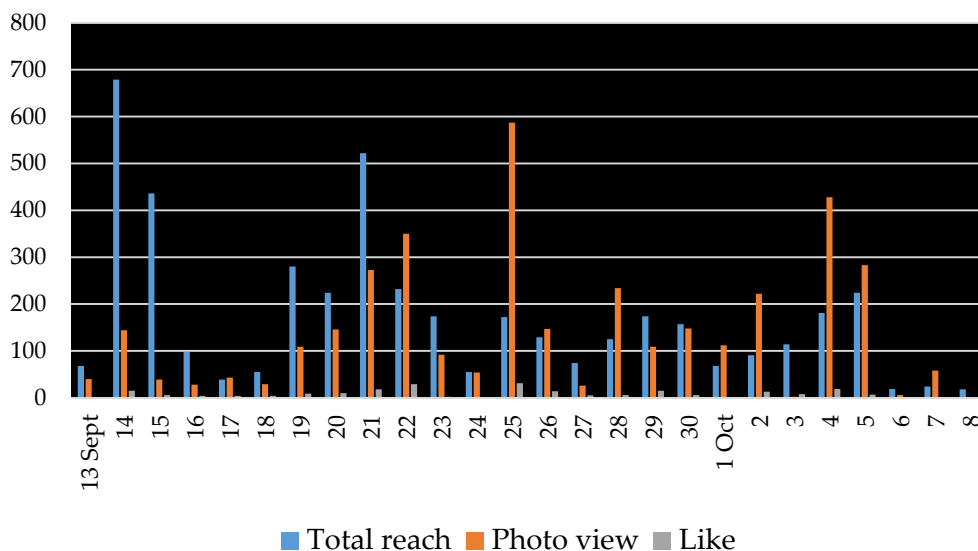
Project Website

<https://www.facebook.com/ManeaColonyArchaeology/>

A public Facebook page was created for the project and launched on the first day of the fieldwork (13th September). Facebook documents a broad range of data concerning pages, posts and interface users, from which statistical patterning may be drawn to identify the 'reach' of particular aspects of project presentation and engagement. Using these data, the response to the page can be presented in multiple formats. At the most basic level this may cover the daily, weekly and monthly page activity, taking into account responses to individual posts and the distribution of that information through likes, shares, comments, etc., that are further distributed through other unique user's pages and newsfeeds. This takes into account repeat views by individual users, as well as one-time visits to the page and/or its content. Data drawn from the response to the page have been assembled to cover the duration of the fieldwork through to its official closure on 8th October. Reference will be further made to selected data drawn in the period between 9th October and 31st December 2016, which importantly covers the online distribution of the interim report through the OWLP website, and advertised via the project's Facebook page.

Fieldwork Exposure

By the end of the fieldwork duration the page was connected to unique users via 65 'likes', with individual post 'likes' numbering to 226. Photo views totalled to 3710, and the page's total daily reach (i.e. the number of unique users who have seen any content associated with the page) was 4432 at an average of 170.5 per day, with the highest number being 679 on September 14th (Graph 7); this coincided with a post advertising the programme for the project's Open Day.

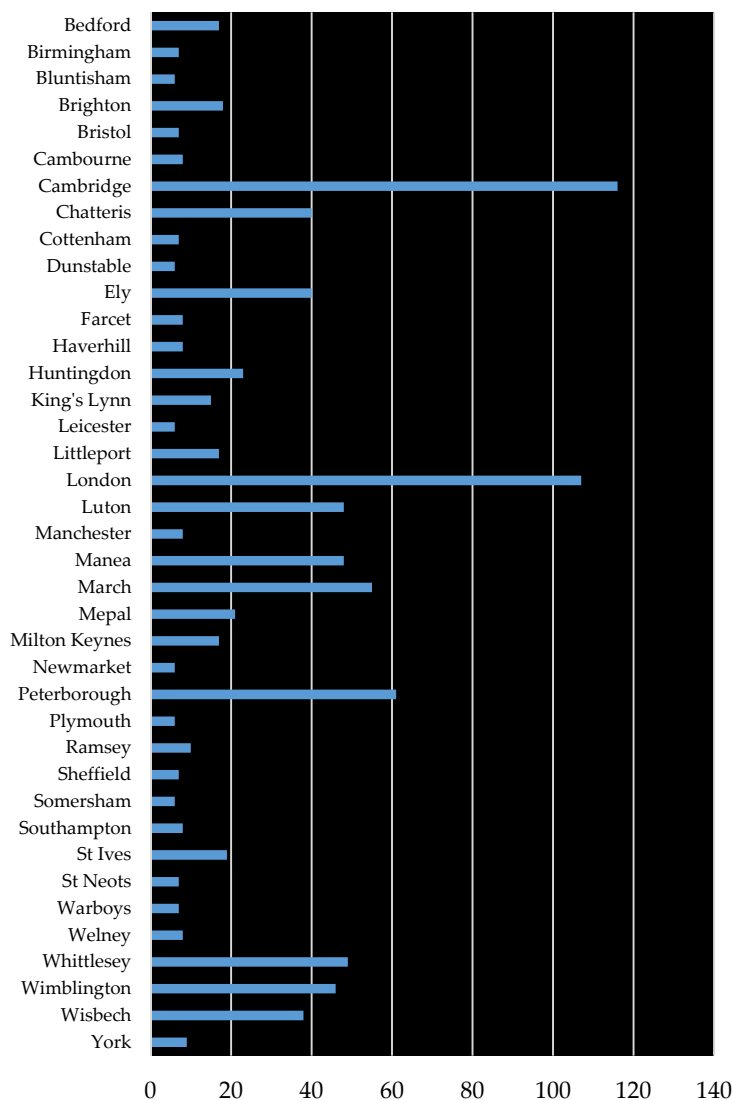


Graph 7. Summary of daily total post reach, photo views and likes

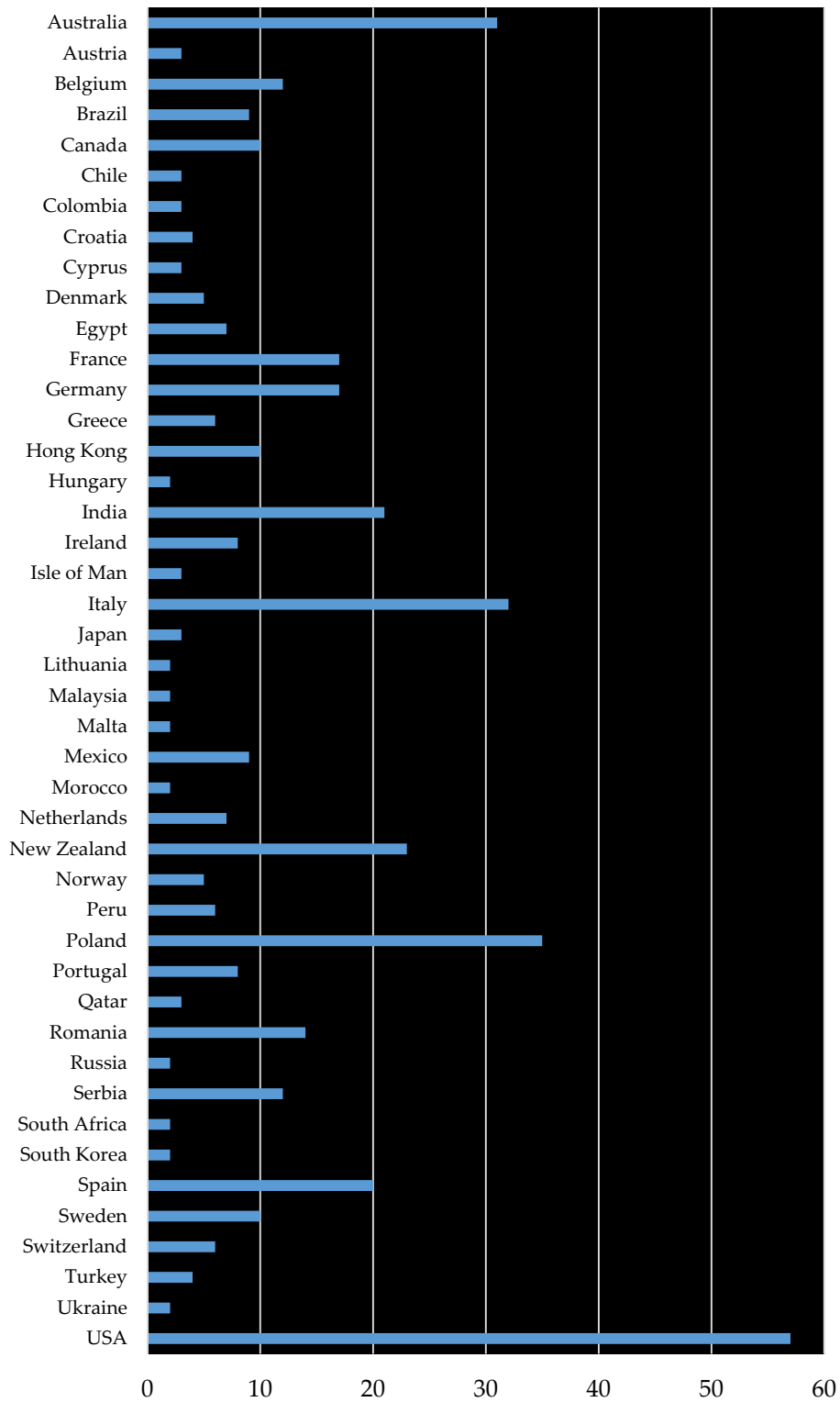
The overall number of unique users directly reached by the page was 2172, of which 1728 were attributed to 40 different urban centres in the United Kingdom (Graph 8). Countries reached by the distribution of the page content was 44, including the United Kingdom (Graph 9), and covered 29 different languages (Graph 10).

Interim Report

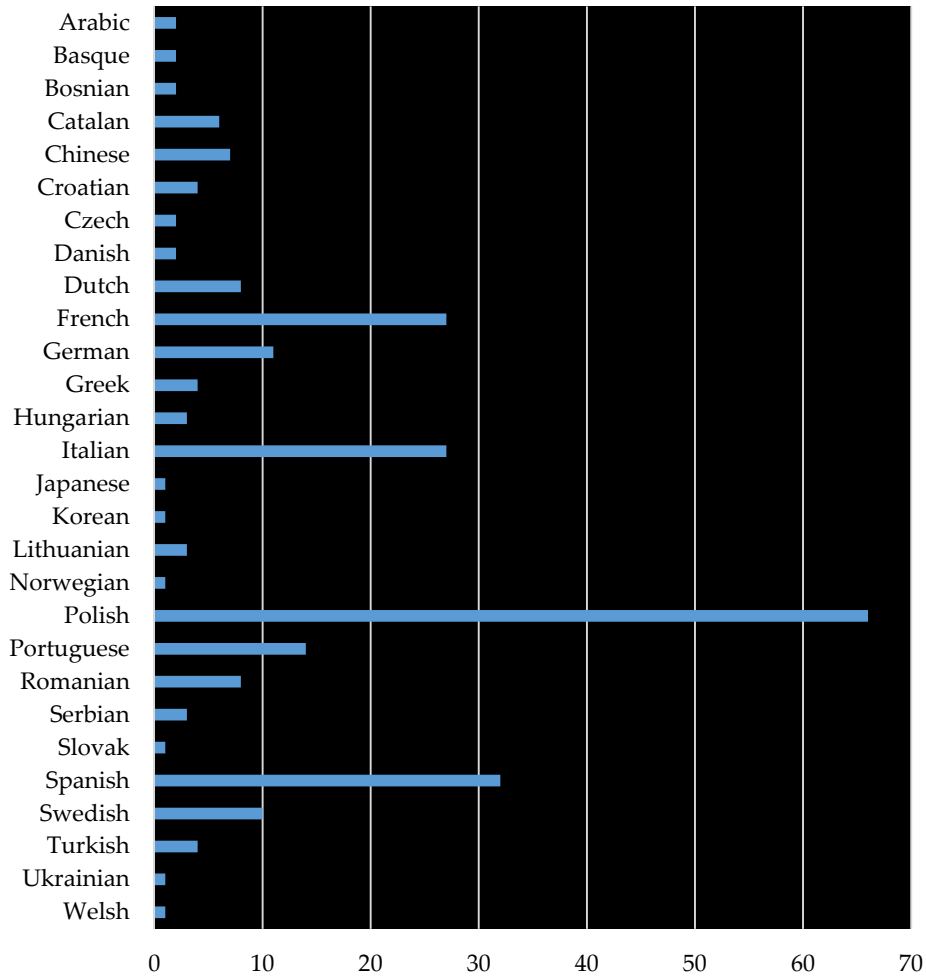
The project’s interim report was posted onto the OWLP website with a link via the project’s Facebook page on 23rd December 2016. On 1st January 2017 the link had been ‘reached’ 1360 times. Whilst this is not a clear indication of the number downloads of the report, it is a guide as to the relative interest generated by it, and may not be far from the total of downloads when taking into account the multitude of other sources through which the link to the report was posted.



Graph 8. Number of people reached in towns and cities of the United Kingdom during the study period



Graph 9. Number of people reached outside of the United Kingdom during the study period



Graph 10. Non-English language speakers reached during the study period. English speakers totalled to 1949.

Context Description	Dimensions (m)			Cuts	Cut by
	Length	Width	Depth		
Peat layer in Trench 3 - desiccated			0.2 max		
Compact mid brown clayey silt with occasional CBM fragments					
NE-SW linear with uneven steep sides and near flat base		0.34	0.14		
Soft dark brown silty clay with very rare small stones					
NE-SW linear with uneven and slightly undercutting sides to near flat base		0.75	0.14		
Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
E-W oval pit with steep undercutting sides with slightly stepped and uneven base.	1.92	1.4+	0.46		
Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
NW-SE oval pit with steep undercutting sides and near flat base	1.8+	0.8	0.36		
Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
NW-SE oval pit with steep undercutting sides and near flat base		1.02	0.1		
Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					F13
NW-SE? oval pit with steep undercutting sides and near flat base	1.05	0.7+	0.4		
Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
NW-SE oval pit with steep undercutting sides and near flat base	2	0.8	0.3		
Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
NW-SE oval pit with steep undercutting sides and near flat base		0.75	0.2		
Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
NW-SE oval pit with steep undercutting sides and near flat base	1.7	0.6+	0.32		
Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					

Feature No.	Tr	Context No.	Context Type	Feature Type	Context Description	Dimensions (m)			Cuts	Cut by
						Length	Width	Depth		
		20	C		NW-SE oval pit with steep undercutting sides and near flat base	1.5	0.7	0.37		
12	1	21	F	Linear	Compact mid brown clayey silt with occasional CBM fragments				F11	
		22	C		NE-SW linear with uneven steep sides and near flat base		0.75	0.15		
13	3	25	F	Linear	Compact mid brown clayey silt with rare CBM fragments				F6	
		26	C		NE-SW linear with uneven steep sides and near flat base					
14		27		VOID	Number not used					
		28			Number not used					
15	1	29	F	Linear	Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
		30	C		N-S linear; shallow uneven sides and uneven near concave base. See also F78		1.8	0.25		
16	1	31	F	Marl pit	Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					F17
		32	C		NW-SE oval pit with steep undercutting sides and near flat base	1.73	1.0+	0.17		
17	1	33	F	Linear	Compact mid brown clayey silt with occasional CBM fragments				F16	
		34	C		NE-SW linear with uneven steep sides and near flat base		1	0.2		
18	6	35	F	Post Hole	Loose dark greyish brown silty clay with rare CBM					
		36	C		NE-SW oval post hole with shallow sides and near flat base	0.45	0.33	0.02		
19	6	37	F	Post Hole	Loose dark greyish brown silty clay with rare CBM					
		38	C		NE-SW oval post hole with shallow sides and near flat base	0.35	0.24	0.09		
20	6	39	F	Post Hole	Loose dark greyish brown silty clay with rare CBM					
		40	C		NE-SW oval post hole with shallow sides and near flat base	0.34	0.3	0.04		
21	4	41	F	Drain	Firm mid greyish brown clay with occasional CBM fragments				F29	
		42	C		NE-SW ceramic drain trench; only partially excavated		0.19	0.07 ex		
		85	F		Stiff dark greyish brown clayey silt mixed with yellowish brown clay; occasional CBM, including brick from F29 and finds from F43. Large circular-profiled ceramic drain at base.					
		86	C		NE-SW ceramic drain trench with vertical sides		0.18	0.35+		
22	6	43	F	Pit	Firm mid greyish brown clay mixed with firm light yellow clay with occasional CBM fragments					
		44	C		NE-SW aligned rectangular pit with rounded corners, straight vertical sides and near flat base. Continues beyond trench		0.9	0.6		
22	6	162	F	Pit	Soft mid brown silt occasionally mixed with redeposited yellow clay					
		163	SK		Pig skeleton (mature); left <i>in situ</i>					
24	6	47	F	Pit	Firm mid greyish brown loose orange sand with occasional clay lumps and CBM					

Feature No.	Tr	Context No.	Context Type	Feature Type	Context Description	Dimensions (m)			Cuts	Cut by
						Length	Width	Depth		
		48	F		Firm light yellowish brown silty sand with occasional CBM					
		49	C		NE-SW rectangular foundation base with straight near vertical sides and flat base	1.5	0.84	0.17		
25	6	50	F	Marl pit	Firm dark greyish brown clayey silt mixed with reddish-brown desiccated clayey peat and occasional CBM; ceramic figurine head					F39
		51	C		NE-SW oval pit with steep undercutting sides and near flat base	1.85	1.6	0.52		
		74	F		Moderately soft very dark greyish brown silty clay peat					
26	6	45	F	Marl pit	Firm mid greyish brown clay mixed with firm light yellow clay with occasional CBM fragments					
		46	C		NE-SW rectangular pit; partially excavated		0.82	0.25 ex		
		52	F		Firm dark greyish brown silty clay peat; unexcavated					
27	4	53	F	Marl pit	Loose dark grey silty clay with CBM and clay pipe					
		54	C		NW-SE oval pit? with steep undercutting sides and near flat base		1.3	0.48		
		186	F		Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
28	6	55	F	Pit / Post hole	Firm and loose dark greyish brown silty clay with rare CBM					
		56	C		Circular pit or post hole with vertical sides and flat base		0.3	0.1		
29	4	57	F	Brick structure	SW Quad; firm and loose dark greyish brown silty clay with rare CBM					F21
		58	C		Brick-lined sunken floor structure. Slightly rectangular, with long side oriented NE-SW. Up to four courses of bricks survived, un-bonded, all handmade and mainly complete. At least eight bricks stamped with 'DRAIN'. Basal course of bricks possibly set within 0.1m deep and brick-wide foundation cut, although this may also have occurred through compaction due to heavy machinery.	2.35	2.1	0.18-0.21		
		59	F		NE Quad; firm and loose dark greyish brown silty clay with rare CBM					
		77	F		SE Quad; firm and loose dark greyish brown silty clay with rare CBM					
		84	F		NW Quad; firm and loose dark greyish brown silty clay with rare CBM					
30	6	60	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM					
		61	C		Shallow linear plough or trencher line oriented NE-SW. Flat base with occasional uneven voids and uneven shallow sides		0.18	0.02		
		87	OT		Number assigned to assemblage of finds from F30-2, F34					
31	6	62	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM					
		63	C		Shallow linear plough or trencher line oriented NW-SE. Flat base with occasional uneven voids and uneven shallow sides		0.18	0.02		
32	6	64	F	Plough	Compact mid greyish brown clayey silt with flecks of CBM				F58	

Feature No.	Tr	Context No.	Context Type	Feature Type	Context Description	Dimensions (m)			Cuts	Cut by
						Length	Width	Depth		
		65	C	Mark	Shallow linear plough or trencher line oriented NE-SW. Flat base with occasional uneven voids and uneven shallow sides		0.18	0.06		
		104	F		Compact mid greyish brown clayey silt with flecks of CBM					
		105	C		Shallow linear plough or trencher line oriented NE-SW. Flat base with occasional uneven voids and uneven shallow sides		0.24	0.06		
33	6	66	F	Post Hole	Firm and loose dark greyish brown silty clay with rare CBM					
		67	C		Circular pit or post hole with vertical sides and flat base		0.33	0.03		
34	6	68	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM					
		69	C		Shallow linear plough or trencher line oriented NE-SW. Flat base with occasional uneven voids and uneven shallow sides		0.18	0.02		
		106	F		Compact mid greyish brown clayey silt with flecks of CBM					
		107	C		Shallow linear plough or trencher line oriented NE-SW. Flat base with occasional uneven voids and uneven shallow sides		0.18	0.04		
		150	F		Compact mid greyish brown clayey silt with flecks of CBM					
		151	C		Shallow linear plough or trencher line oriented NE-SW. Flat base with occasional uneven voids and uneven shallow sides		0.18	0.03		
35	6	70	F	Post Hole?	Firm and loose dark greyish brown silty clay with rare CBM					
		71	C		Rectangular post hole or part of a plough/trencher line. Straight sides and near flat base oriented NE-SW	0.22	0.16	0.05		
36	6	72	F	Linear Pit	Firm and fairly loose dark greyish brown clayey silt with occasional CBM					
		73	C		Rectangular/linear pit with vertical straight sides and uneven, stepped base with spade markings; oriented NE-SW		0.75	0.55		
		134	F		Firm and fairly loose dark greyish brown clayey silt with occasional CBM					
		135	C		Rectangular/linear pit with vertical straight sides and uneven, stepped base with spade markings; oriented NE-SW		0.91	0.62		
37	1	75	F	Marl pit	Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
		76	C		NW-SE oval pit with steep undercutting sides and near flat base	1.4+	0.75	0.34		
38	6	78	F	Post Hole	Firm and loose dark greyish brown silty clay with rare CBM					
		79	C		Rectangular pit or post hole oriented NW-SE with vertical sides and flat base	0.25	0.17	0.04		
39	6	80	F	Drain	Arched ceramic drain with flat base; main fill truncated during machining				F25	
		81	C		NW-SE ceramic drain		0.2	0.05+		
40	1	82	F	Marl pit	Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					

Feature No.	Tr	Context No.	Context Type	Feature Type	Context Description	Dimensions (m)			Cuts	Cut by
						Length	Width	Depth		
		83	C		NW-SE oval pit with steep undercutting sides and near flat base	1.7	0.85	0.21		
41	6	96	F	Pit	Occasional loose dark grey clayey silt, but mainly broken glass, metal and ceramic finds packed together					
		97	C		Shallow rectangular pit oriented N-S. Sides truncated, with near flat base	0.93	0.59	0.07		
42	6	88	F	Pit	See F60					
43	4	89	F	Pit	Loose dark greyish brown clayey silt with clear basal boundary					F21
		90	F		Loose and slightly gritty dark reddish brown sandy silt with clear basal boundary					
		91	F		Loose and gritty dark orangey brown coarse sandy silt with rare charcoal fragments and moderate coke/clinker, occasional CBM including 5 whole bricks					
		92	F		Soft very dark grey slightly greasy clayey silt with occasional charcoal flecks and degraded wood fragments					
		93	C		Rectangular pit with slightly rounded short sides, oriented NW-SE. Sharp sides, straight at top with c.10cm undercut to flat base. Slightly undercuts F29.	1.1	0.77	0.72		
		182	F		Firm and slightly loose dark grey clayey silt with occasional CBM					
45	4	94	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM					
		95	C		Shallow linear plough or trencher line oriented NW-SE. Flat base.		0.2	0.05		
46	6	98	F	Pit	Occasional loose dark grey clayey silt, but mainly remnants of semi-articulated animal bone with occasional CBM and pottery					
		99	C		Shallow and truncated pit, possibly rectangular.	0.5	0.48	0.04		
47	6	100	F	Pit / Plough mark	Compact mid greyish brown clayey silt with flecks of CBM					
		101	C		Shallow linear plough or trencher line oriented NW-SE. Flat base.	1.23	0.3	0.04		
48	6	102	F	Plough mark / Brick structure	Loose very dark brown clayey silt with frequent CBM, and occasional pottery and clay pipe.					
		103	C		Possible that this is the edge of another sunken floored feature with brick lining, perhaps truncated by plough/trencher line. Only partially exposed in edge of trench		1	0.06		
49	6	108	F	Post Hole	Loose mid greyish brown silty clay with moderate small-medium stones					
		109	C		NW-SE oval post hole with steep sides sloping slightly to west; flat base		0.35	0.9		
50	6	110	F	Pit	Firm mid brown sandy clay with moderate small stones and CBM and demolition debris, including an iron bar					F56
		111	F		Firm and mixed yellowish grey clay with silty clay and concrete lumps					
		112	F		Compact layer of mid brownish yellow gravelly sand					
		113	F		Firm dark brown organic clay, slightly peaty on west-east section					

Feature No.	Tr	Context No.	Context Type	Feature Type	Context Description	Dimensions (m)			Cuts	Cut by	
						Length	Width	Depth			
		114	C		Sub-circular pit with steep concave and slightly stepped sides to uneven base		2.6	0.8			
51	6	115	F	Marl pit	Dark desiccated clayey peat						
		116	C		Unexcavated NE-SW rectangular pit	1.94	0.95				
52	6	121	F	Marl pit	Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					F53	
		122	C		NE-SW oval pit with steep undercutting sides and near flat base	1.1+	0.75	0.43			
53	6	123	F	Post Hole	Firm dark greyish brown silty clay					F52	
		124	C		Possible rectangular posthole with straight vertical sides and uneven base; oriented NE-SW	0.3	0.2	0.18			
54	6	125	F	Plough	Compact mid greyish brown clayey silt						
		126	C	Mark	Shallow linear plough or trencher line oriented NE-SW. Unexcavated		0.22	0.03			
55	4	117	F	Plough	Compact mid greyish brown clayey silt with flecks of CBM						
		118	C	Mark	Shallow linear plough or trencher line oriented NW-SE. Flat base.		0.26	0.03			
56	6	119	F	Brick structure	Firm but fairly loose dark greyish brown clayey silt with small fragments of CBM and occasional orangey brown clay lumps					F50, F61, F73, F74, F75	
		120	C		Rectangular sunken floored feature with brick lining; oriented NE-SW. Up to five courses of brick, un-bonded and mainly complete (though with occasional half bricks). At least 6 with 'DRAIN' marking. As with F29 the lowest course may be set within a shallow foundation trench, although this may again be a result of compression into the clay through heavy machinery.	1.94	1.4	0.34			
		142	BR		Un-bonded brick structure						
		183	F		Firm dark greyish brown clayey silt; no CBM						
		184	F		Same as [119] but separated by band of yellow brown clay and containing whole bricks instead of fragments						
		185	F		Firm dark grey silty clay mixed with yellow gravelly sand and small CBM fragments						
57	6	127	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM						
		128	C		Shallow linear plough or trencher line oriented NE-SW. Flat base with occasional uneven voids and uneven shallow sides		0.36	0.05			
58	6	129	F	Post Hole	Compact mid brown silty clay					F32	
		130	C		Sub-circular and shallow post base ; irregular base	0.4	0.35	0.03			
59	6	131	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM						
		132	C		Shallow linear plough or trencher line oriented NW-SE. Flat base with occasional uneven voids and uneven shallow sides		0.26	0.03			

Feature No.	Tr	Context No.	Context Type	Feature Type	Context Description	Dimensions (m)			Cuts	Cut by	
						Length	Width	Depth			
		172	F		Compact mid greyish brown clayey silt with flecks of CBM						
		173	C		Shallow linear plough or trencher line oriented NE-SW. Flat base.		0.26	0.03			
60	6	136	F	Pit	Mainly packed with bone, interspersed with dark grey silty clay. Same as F42 (Use F60)						
		137	C		Square pit with straight vertical sides and flat base. Same as F42 (Use F60)	0.38	0.35	0.12			
61	6	138	F	Plough Mark	Compact mid greyish brown clayey silt with small brick fragments, iron nails and pottery				F56		
		139	C		Probably multiple shallow linear plough or trencher lines oriented NW-SE and cutting through brick-lined feature.	0.5	1.05	0.05			
62	6	140	F	Post Hole	Moderately firm mid brownish grey clayey silt mixed with redeposited natural yellow clay						
		141	C		Circular post hole with vertical straight sides and near flat base	0.34	0.32	0.31			
63	6	143	F	Pit	Firm dark grey clayey silt occasionally mixed with yellow redeposited clay. Contains metal, glass and pottery finds of early C20; right rear foot of pig protrudes into [143] from [144], and the time between deposits may not be great.						
		144	F		Firm re-deposited yellow silty clay with occasional patches or lenses of dark grey clayey silt containing CBM and slate						
		145	C		Rectangular pit, oriented NW-SE with rounded corners, straight vertical sides and near flat base	1.14	0.64	0.26			
		147	SK		Pig skeleton (young) on left side with head to NW.						
64	6	148	F	Post Hole	Soft dark grey clayey silt						
		149	C		Square post hole with vertical sides and flat base	0.25	0.24	0.04			
65	6	174	F	Pit	Mixed dark grey clayey silt and greyish orange clay (mainly as a capping deposit)					F66, F67	
		175	C		Rectangular pit oriented NW-SE with sharp concave sides and flat base		0.48	0.24			
66	6	176	F	Pit	Mainly redeposited light yellowish grey clay mixed with occasional streaks of dark grey clayey silt				F65, F66	F67	
		177	F		Mid brownish grey silt with occasional small fragments of CBM		1.8				
		178	F		Dark grey clayey silt occasionally mixed with greyish orange clay						
		179	C		Oval pit oriented N-S with gradual concave sides and near flat base	1.7+	0.76	0.36			
67	6	180	F	Marl pit	Firm dark greyish brown silty clay peat						
		181	C		NE-SW oval pit; only partially excavated			0.39+			
68	7	152	F	Pit	Soft dark grey clayey silt occasionally mixed with CBM						
		153	C		Circular pit exposed and cleaned but not excavated		2				
69	5	154	F	Pit	Firm dark grey clayey silt packed with animal bone						

Feature No.	Tr	Context No.	Context Type	Feature Type	Context Description	Dimensions (m)			Cuts	Cut by
						Length	Width	Depth		
		155	C		Oval shallow pit or post hole with vertical sides and flat base	0.3	0.25	0.07		
70	3	146	F	Pit	Entirely bone fill					
		157	C		Circular pit?		0.2	0.04		
71	4	158	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM					
		159	C		Shallow linear plough or trencher line oriented NW-SE. Flat base.		0.26	0.03		
72	4	160	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM					
		161	C		Shallow linear plough or trencher line oriented NW-SE. Flat base.		0.25	0.03		
73	6	164	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM				F56	
		165	C		Shallow linear plough or trencher line oriented NE-SW. Flat base.		0.24	0.03		
74	6	166	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM				F56	
		167	C		Shallow linear plough or trencher line oriented NE-SW. Flat base.		0.25	0.03		
75	6	168	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM				F56	
		169	C		Shallow linear plough or trencher line oriented NE-SW. Flat base.		0.25	0.03		
76	6	170	F	Plough Mark	Compact mid greyish brown clayey silt with flecks of CBM					
		171	C		Shallow linear plough or trencher line oriented NE-SW. Flat base.		0.25	0.03		
77	6	187	F	Pit	Firm mid greyish brown clay mixed with firm light yellow clay with occasional CBM fragments					
		188	C		Rectangular pit; unexcavated.		1.6			
78	6	189	F	Linear	Firm dark greyish brown silty clay peat with occasional lighter brown (desiccated?) patches and frequent silty clay lumps					
		190	C		N-S linear; shallow uneven sides and uneven near concave base. See also F15		1.8	0.22		
79	6	191	F	Marl pit	Dark grey desiccated clayey peat					
		192	C		Rectangular marl pit cutting into remaining peat; unexcavated	1.7	1.6			
80	7	193	F	Pit	Dark grey clayey silt with occasional CBM					
		194	C		Sub-circular pit; unexcavated		1.7+			

Oasis Form

OASIS ID: cambridg3-278697

Project Summary

Project dates	12-09-2016 to 30-09-2016
Project reference codes	ECB4807 - HER event no, MAN16 - Sitecode
Type of project	Field evaluation
Site status	None
Current land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Methods & techniques Pits"	"Fieldwalking", "Geophysical Survey", "Targeted Trenches", "Test
Prompt	Research
Solid geology	AMPTHILL AND KIMMERIDGE CLAY
Drift geology	ALLUVIUM and PEAT
Techniques	Magnetometry and Resistivity (area)
Project location	England, Cambridgeshire, Fenland, Manea, Manea Fen Colony
Postcode	PE14 9TB
Study area	1.6 Hectares
Site coordinates	TL 5122 9178 52.502523361166 0.22814341232 52 30 09 N 000 13 41 E
Point	
Height OD / Depth	Min: 0m Max: 1m

Project creators

Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Self (i.e. landowner, developer, etc.)
Project design/manager	Christopher Evans
Project supervisor	Marcus Brittain
Type of sponsor/funding body	Heritage Lottery Fund

Project archives

Archive recipient & ID	Cambridge Archaeological Unit (MAN16)
Physical Contents	"Animal Bones", "Ceramics", "Glass", "Leather", "Metal", "Textiles", "Worked bone"
Digital Contents	"Survey"
Digital Media available	"Spreadsheets", "Survey", "Text"
Paper Contents	"Stratigraphic"
Paper Media available	"Context sheet", "Photograph", "Plan", "Report", "Section", "Survey"
"	

Project bibliography

Publication type	Unpublished Grey literature
Title	Manea Colony Investigations
Author(s)/Editor(s)	Brittain, M
Other bibliographic details	Ouse Washland Archaeology Excavation Report no.3; CAU Report no. 1362
Date	2017
Issuer or publisher	Cambridge Archaeological Unit
Description	102 pages, 27 BW and Colour figures, 1 volume