ARCHAEOLOGICAL AND HISTORICAL DESK BASED ASSESSMENT FOR THE PROPOSED SOLAR FARM AT SOUTHMINSTER HALL GOLDSANDS ROAD SOUTHMINSTER ESSEX

Centred on TQ 963945

Oasis No.: 142447

Client: Mosscliff Environmental, Horham Airfield Denham Eye Suffolk

Archaeoserv – Dennis Payne Archaeological Services Westhorpe, Stowmarket, Suffolk Email:archaeoserv@aol.com; Tel: 01449 780194

Contents

Non Technical Summary	1
Introduction	1
2. Site Location and Description and Geology	2
3. Planning Background	3
4. Policy and Planning	3
5. Methodology	3
6. Site Visit	3
7. Archaeological and Historical Evidence	4
8. Historic Environment Record Number and Description of Monuments	6
9. Archaeological Interventions	8
List of Archaeological Interventions for Southminster	9
10. Discussion of the Historical Environment	9
11. Discussion of the Archaeological Evidence	11
12. Discussion of the Cartographic Evidence	12
13. Synthesis of the Historical, Archaeological and Cartographic Evidence	12
14. Recommendations of Desk-Based Review and Mitigation	15
15. Conclusions	15
16. Acknowledgements	16
17. Note	16
18. Copyright Notice:-	16
Bibliography and Sources Consulted	17
Appendix I: Digital Images	18
Annendix II: The Mans	21

Non Technical Summary

A desk-based assessment was carried out for the proposed site of a solar farm at Southminster Hall, Southminster, Essex. A number of Archaeological features were identified in the vicinity of the proposal and were presented as part of the evidence which contained their significance within the context of the proposed solar farm. A scheduled monument and a crop-mark complex of national importance were identified within the study area along with the site of Southminster Hall, potentially of national importance if further archaeology exists within the bounds of the proposal. In addition, the historic environment was assessed and deemed to be worthy of preservation. Recommendations were made to mitigate the current archaeological status and unknown heritage assets that may be revealed during the course of any subsequent ground-works.

Introduction

A desk-base assessment was carried out on land at Goldsands Road Southminster Hall Essex, where a new solar array system is proposed.

This assessment considers the impacts on the archaeological assets, the heritage assets in general and the historical environment affected by the solar farm, its cable routes, accumulators and access tracks, likely to result from the construction scheme. It also provides a characterisation of the cultural heritage, known and potential within a one kilometre radius of the proposed development and assesses the impacts the proposal may have on these.

This assessment has been requested by the Essex Historic Environment team to form part of the evidence for an overall Environmental Impact Assessment and will be used to form an opinion on the application to construct the solar farm on the site as specified above.

Research was undertaken at the Essex Records Office Chelmsford and the Essex Historic Environment Record office was consulted.

A site visit was made on the 16th January 2013.

The purpose of the study was to establish the likelihood of archaeological remains surviving on the site, sufficient to allow mitigation advice to be given. Photographs were taken of the locality and the site to assist in acquiring first-hand knowledge of the setting and environment of the proposed development.

A copy of this report will be deposited with the Essex HER and M Medlycott, Essex Historic Environment officer, originator of the brief for this work. A copy will be sent to the client. An on-line report will be made available with the Archaeological Data Service/project oasis.

Detailed standards, information and advice to supplement this assessment will be sought in standards for '*Field Archaeology in the East of England*,' (East Anglian Occasional papers 14, Gurney, D., 2003). In addition, this assessment has been compiled respecting the following standards: Regional Research Framework (East Anglian Archaeology Occasional Paper 3, 1997, 'Research and Archaeology: A Framework for the Eastern Counties, 1.

resource assessment'; Occasional Paper 8, 2000, 'Research and Archaeology: A Framework for the Eastern Counties, 2. research agenda and strategy'; and Revised Research Framework for the Eastern Region, 2008 and Medlycott, M., 2011.

The cultural heritage interests will be dealt with in two main categories for the purpose of this assessment:

- Archaeological sites
- Historic Landscapes

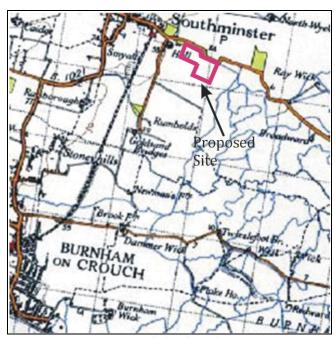
2. Site Location and Description and Geology

Location

2.1 The study area is located in the vicinity of Southminster Hall on the eastern limits of the historic settlement of Southminster, in Maldon District, Essex (TQ 963945).

Description

2.2 The proposed location site for the solar farm is on a ridge, formerly a Chenier island in prehistoric times, which today forms the higher land that overlooks the large expanse of mainly tidal marshes that extend to the River Crouch.



Proposed site location

Geology

2.3 The bulk of the Dengie Peninsula is shaped from the London Clay, but with a central tract lying inland forming a gently rolling or distinctly undulating plain above 20m AOD. A gravel ridge, over-lying the clay, runs roughly south-west north-east across the Dengie, and this important feature was a major influence on the original settlement pattern.

3. Planning Background

The proposed solar farm is in the early stages of the planning process. A recommendation was made by Maldon District Council that an EIA should be prepared for the site and that this should contain an archaeological and historic environment component. This assessment has therefore been prepared as per the brief issued by the Historic Environment Officer, Place Services, Essex County Council, as part of an Environmental Assessment and to be submitted as part of the EIA.

4. Policy and Planning

The planning policy guidance of archaeology and planning: The National Policy Framework Section 12 (NPPF, Department for Communities and Local Government, 27 March 2012) (formerly PPG 16) consolidates advice to planning authorities. The Guidance stresses the non-renewable nature of the archaeological resource, details the role of the County Historic Environment Record (HER), encourages early consultation with county and district archaeological officers and sets out the requirement for developers to provide sufficient information on the archaeological impact of development to enable a reasonable planning decision to be made. PPG 16 also indicates the circumstances where further work would be necessary and outlines the use of agreements and conditions to protect the archaeological resource. (ii) Development which could adversely affect sites, structures, landscapes or buildings of archaeological interest and their settings will require an assessment of the archaeological resource through a desktop study, and where appropriate a field evaluation. Where there is evidence of archaeological remains, development will not be permitted except where it can be demonstrated that the archaeological features of the site will be satisfactorily preserved in situ, or a suitable strategy has been put forward to mitigate the impact of development proposals upon important archaeological remains and their settings; or, if this is not possible and the sites are not scheduled or of national importance, provision for adequately recording the site prior to destruction is made, preferably by negotiating a planning agreement to ensure that access, time and financial resources are available to allow essential recording and publication to take place.

5. Methodology

This assessment has been prepared using data obtained by undertaking a site visit, a desk-based review of available sources from the Essex Records Office and the Historic Environment Office and consultation of the relevant planning policies to produce a baseline assessment.

6. Site Visit

A site visit was carried out on the 16th of January 2013 to place the site within its topographical context and to check current land use along with any previously unrecorded

above-ground archaeological remains. The study area is on cultivated land and is currently under the plough. No upstanding archaeological features were noted within the study area except the scheduled monument of Pandole Wood (SM 1002123), which is situated approximately 100 metres to the north-west of the development site. A short walk-over survey was made of the scheduled monument, which is extensively overgrown with shrubs and trees with its central area now, in the main, waterlogged. The monument is currently used for local dog walkers.

7. Archaeological and Historical Evidence

Historical background

7.1 In order to understand the historical development of Southminster, a consideration for its topographical position is a major starting point. Situated on a ridge, the land gently inclines down to the marsh levels of the river Crouch. In prehistoric times the area now Southminster would have been a prominent island within a coastal area, and was indeed a Chenier island with sea marsh surrounding it. The first reference to the village of Southminster was in 825 AD when it was called *Suomynstre* (Reaney, 1935). The 'South' in the place name probably distinguishes it from the church at Bradwell (St-Peter-On-The-Wall), built on the landward foundations of the late Roman fort *Othona*, which lies to the north of Southminster and 'minster' in the place name denoting the presence of an important church and manorial settlement here also.

7.2 The Domesday Book, in 1066 and in 1086 (Rumble 1983) records Southminster as:

Land of the Bishop of London, Hundred of 'Wibertsherne'

In Southminster 30 hides which the Bishop holds in lordship.

Before 1066, 22 villagers, now 11; then 23 smallholders, now 25. Always 5 slaves; 3 ploughs in lordship. Then 18men's ploughs, now 11.

Pasture 1000 sheep.

Value then £24; now [£] 16.

In this manor were 15 free men before 1066 who held 18 hides and 30 acres. Now there are 14 men who hold them from the Bishop.

Then 4 smallholders, now 16; then 4 slaves, now 8. Then 12 ploughs, now 7.

Pasture, 300 sheep.

Value then £12; now [£]8.

In the lordship of this manor are 11 cattle, 700 sheep less 4 and 20 pigs.

King Canute took this land; but Bishop William recovered it after 1066.

This is a higher than average count for a village, which must have been sizeable even at the time of the survey.

Archaeological Background

Prehistoric and Roman

7.3 The prehistoric period is represented by a number of crop-mark features that are interpreted as ring ditches, enclosures and field boundaries. A number of Late Neolithic, Early and Middle Bronze Age finds were discovered during the construction of the railway. Immediately to the north of the village is an extensive cropmark complex (SAM 198). This complex contains a large rectilinear enclosure with internal features. To the east of this are two clusters of ring ditches, further rectilinear features suggesting enclosures, trackways with possible house sites, with a Bronze Age – Iron Age date suggested for this complex. Most importantly, in relation to the current proposed development, is an earthwork within what is now known as Pandole Wood (SM 1002123, ECHR11243, 11244 and 11374), a Scheduled Monument of unknown date. This is situated to the immediate north-west of the proposed development and could date to the Iron Age due to its location on the eastern end of a plateau with views across the River Crouch estuary and being a good vantage point to the north east and west. The location of this monument, although relatively small by Iron Age terms, would certainly be strategic and would command a good defensive position. Further crop-marks that appear to be enclosure ditches might be related to the Pandole wood complex giving it a much larger enclosed area than seen today within the wood. If this is the case then the defended area would be much greater increased and far more credible for an Iron Age defensive location, also giving views across to Ashledham Camp, to the north, an early Iron Age hill-fort (Bedwin 1991). Roman evidence for the area is sparse but salt workings or Salterns, also known as redhills, (EHCR 11294, 17050 and 17051) have been found to the east and to the south of Southminster Hall indicating tidal marshes were closer to the village than today. Other finds of Roman date are Roman tile and brick within the fabric of St Leonards church; Romano-British finds from Pantile Hall and a cremation burial was found at Caidge Farm in 1893.

Anglo Saxon

7.4 There was a good sized settlement of 50 households at Southminster by the time of the Domesday survey suggesting a well established Anglo Saxon settlement here with the Bishop of London holding the majority of the land. The presence of a Minster church also alludes to its importance, although the present St Leonards church dates from the 15th century, earlier work in its fabric is present and was possibly built on the site, or very close to, the original Saxon Minster.

Medieval

7.5 One manor is known at Southminster held by the Bishop of London, however this was divided into two holdings some time during the fourteenth century. The principal manor was Southminster Hall (TQ9650/9950; EHCR 11359) with the second manor known as Cage being approximately one mile from the village. By 1086 a total of 79 households were recorded, but this number may include all outlying properties as well as the nucleated centre which is adjacent to the church of St Leonard. The estate map of 1610, being the earliest pictorial reference (ERO T/M 165/1), illustrates the size of the village at this time (see appendix II). This map, although in poor condition, shows the widening of the street opposite

the church suggesting that this area of widened high street and the church forms the early core of the village, but not necessarily of the Late Saxon period, which may have been located closer to the Manor of Southminster Hall. Indeed a number of properties are shown leading up to the Hall during the early post-medieval period. Southminster Hall (EHCR 11359) located at the south-eastern end of the village contains a much later property built, possibly, on the site of the Late Saxon manor or very close to it.

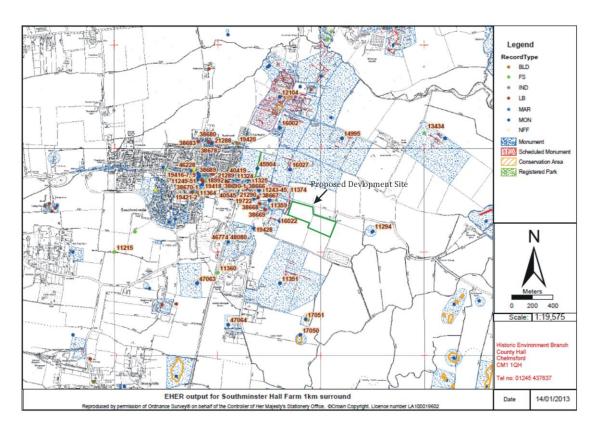
The Southminster Survey of 1790 (ERO D/P 259, 28/1) shows a circular moat around an H-plan house with ancillary buildings all within the moated area. The current hall lies outside of the originally moated area where an earlier hall once stood. A market place is also suggested at the north-western corner of the junction of the High street with North Street, evidenced possibly by a market house within the centre of the street, seen on the 1610 map.

Post-medieval and modern era

7.6 As mentioned, by 1610 the bulk of the settlement was centred on the church with ribbon development along the main road forming the high street with the junctions of North Street and Burnham Road to the south, which can be seen today. By 1777 the village extended further along Burnham Road and along Kings Road to the south of the High Street with development to the north along Queensborough Road.

8. Historic Environment Record Number and Description of Monuments

8.1 The Historic Environment Records list a reasonably high number of entries for Southminster in the form of monuments, find spots, listed buildings, etc for Southminster. For the purpose of this study, only those records adjacent to the current proposed development will be listed and discussed here as being relevant or having a potential or known impact on the archaeology and historical environment.



HER map showing monuments in relation to proposed site

Location	EHER No.	Record type and date/period		
North of Southminster Hall	11243	Road, ditch, rectangular enclosure, mound, bank, earthworks east and in Pandole Wood Possibly Iron Age		
North of Southminster Hall	11244	Pandole Wood. Ditch, bank leading north east from earthwork in wood. Possibly Roman		
North of Southminster Hall	11245	Fragments of pottery found on the 'wet' side of Pandole wood. Unknown date		
East of Southminster	11294	Red Hill – Saltern Roman		
Leath Heath	11351	Ring-ditch, track-way Unknown date		
Southminster Hall	11359	Part of a circular moat at the hall Medieval		
North of Southminster Hall	11374	Rectangular earthwork in Pandole Wood Possibly Iron Age		
South-west of	12104	Crop-mark complex: Ring ditch, house platform,		

Oldmoor		track-way rectilinear enclosure, linear feature, pit
		Possibly Bronze Age – Iron Age
East of North wick	13434	Ring ditch, field boundary, linear feature
		Possibly Bronze Age – Iron Age
North Wycke	14995	Linear features as crop-marks.
		Date unknown
East of Newmoor	16002	Cropmarks of three linear features
		Unknown date
East	16022	Earthwork ditches visible from aerial photographs
of Southminster Hall		Unknown date
500m north of Southminster Hall	16027	Ring ditch
		Unknown date
Leath Heath	17050	Up to three possible Salterns or Red Hills
		Roman
Leath Heath	17051	Saltern or Red Hill
		Roman
Pandole Wood	45904	Cropmark of a ring ditch and linear features
		Unknown date
Goldsands Road	46774	Prehistoric handaxe find spot
		Neolithic?
Ratsborough Farm	47063	Cropmarks of ring ditches
		Unknown date
Goldsand Bridge	47064	Ring ditch, enclosure
		Prehistoric
Goldsands Pit		Buried land surface
Goldsands Road	48080	Pleistocene

9. Archaeological Interventions

There are two archaeological interventions listed on the ADHS website: in 2005 a watching brief in Vicarage Court Southminster failed to locate any archaeology or finds; an evaluation took place on land to the rear of 14 High Street which revealed no archaeology or finds. http://archaeologydataservice.ac.uk/archives/view/greylit/query.cfm.

List o	f Archae	ological Interventions for Southminster
PDF	(285KB)	Germany, M. (2005) <u>'Vicarage Court, Southminster'</u> Essex County Council Field Archaeology Unit
PDF	(210KB)	Robertson, A. (2007) <u>'Land to rear of 14 High Street, Southminster, Essex'</u> Essex County Council Field Archaeology Unit

10. Discussion of the Historical Environment

10.1 The *Planning Policy Guidance 15–Planning and the Historic Environment* sets out government policies for the identification and protection of historic buildings, conservation areas and other parts of the historic environment and explains the role of the planning system in their protection. Any development has to be sustainable, which means change for the better within the context of all conservation matters. Development on the site of or in the vicinity of a scheduled monument, or an unscheduled monument of known national importance will only be permitted if the development would not adversely affect the monument or its setting.

Consultation

10.2 As part of the scoping process, the Essex County Historic environment office was consulted in conjunction with the current proposal and provides the archaeological planning advice for all the local planning authorities in the county. A number of heritage assets are identified within the one kilometer radius that concerns the current study.

Pandole Wood (SAM)

10.3 Of primary importance are the Scheduled Ancient Monument known as Pandole wood (SM 1002123) and its associated features. This monument, c180 metres from the western extent of the intended solar array site, is an enigmatic site. It contains a series of earthworks, of banks forming an enclosure with a central mound. The mound is quite small and is not easily discernible from visiting the site. The central area is flooded and most of the area is very overgrown. Its morphology does not suggest a Motte and Bailey due to its small size and shape, being almost rectangular. It does however have similarities to certain Iron Age camps or defended places. Indeed, there is an early Iron Age hill fort not far from this monument known as Asheldham Camp (Bedwin 1991). This monument is hidden from view, being obscured by the trees that have grown up there, hence the name Pandole Wood and on its approach by road it is not apparent. There are associated earthworks that need to be considered. An earthwork interpreted as a ditch or enclosure (EHER 11374) can be seen clearly extending on the same alignment south of the scheduled area (HER map, p.6), continuing across the road and through Southminster Hall grounds. If this feature is part of the defensive system of the main monument, this would give a very sizeable enclosure, and would at least double the existing size, which is at present confined to Pandole wood.

Other monuments and Heritage Assets

10.4 Apart from Pandole Wood, there are few immediate monuments within the vicinity of the proposed development. Southminster Hall, being the closest building to the study area, is now of a modern construction but is sited very close to the medieval house, which stood on the island within the circular moat, a part of which still exists (EHER 11359). A few listed buildings are present nearby such as number 8 Hall road, a Late 18th century timber-framed cottage (LB 1308527 II); a timber-framed barn facing Goldsands Road (LB 1264081 II) and a Grain dryer at Southminster Hall (LB 1237451 II), but are not in view from the proposed development. Southminster church is the site of a Saxon Minster church, alluding to this settlement's importance in the Anglo Saxon period.

The Historic Landscape and Environment

In the local context

10.5 The setting of Southminster Hall, situated at the eastern extent of the village, Pandole Wood and the lane that threads through them has a certain charm and retains a spirit of place. Situated on the plateau of higher land that commands the Crouch estuary, it is an appealing location and retains a sense of wilderness also with the low lying fields that extend down to the marsh. The immediate setting of the proposed site is agricultural land and quite featureless except for the mature hedgerows and trees that bound the location. This setting is unlikely to have changed since the late Anglo Saxon period, with many field boundaries possibly existing from this period. The area is characterised by a distinctive co-axial rectilinear field pattern that is of considerable antiquity, and may have its origins in the middle Saxon period, if not before.

In the wider context

10.6 The following provides an overview of the Dengie peninsular and is from the *Maldon* District Historic Environment Characterisation Project, 2008: 'A low ridge of gravels, bordered by marshes to the east and the London Clays of the remainder of the Dengie Peninsula to the west. The field system comprises a distinctive co-axial rectilinear field pattern of considerable antiquity, and may have their origins in the middle Saxon period, if not before. The historic settlement pattern comprises dispersed settlement along the roads on the top of the ridge. Settlements developed at Southminster, Asheldham, Tillingham and Bradwell all of which have Historic settlement assessments which provide in depth historic environment information for each settlement and associated parish. Three conservation areas lie within this HECA. Throughout area 10 there are dispersed farmsteads and Halls many of which have their origins in the medieval or early post medieval period. The settlement on the gravel ridge would have had a close relationship with the reclaimed marsh and marshland to the east with this providing the main sheep grazing area. The former Bradwell-on-Sea airfield lies in the northern part of the area and the Bradwell Nuclear Power-station is a dominant landscape and visual feature at the north-eastern corner of the peninsula. Some quarrying has occurred in areas around Tillingham and Southminster' (HECP, 2008).

Significance of the Historic Environment and Heritage Assets

10.7 The proposal lies within a relict landscape with a number of known monuments within the vicinity. The majority of these monuments is only discernible as crop-marks, and individually are mute within the landscape. However, they are potentially and collectively

forming part of the settlement pattern that existed in this area within the prehistoric period and possibly through to the Roman period and the Anglo Saxon period. The site of the proposal has the potential to reveal more knowledge of past activities dating back to the Neolithic period when the present site of Southminster stood on a Chenier island (a sandy ridge).

10.8 The proximity of Pandole Wood is highly significant but is not compromised physically by the proposed development of the solar farm, nor is it compromised visually within its setting and environment. The proposed solar farm would only be visible from the lower lying ground and would be prominent if viewed from the river but not so easily from the lane which runs along the northern perimeter of the site.

10.9 There is a mature hedgerow in existence around the site in question which would mask much of the solar array being a total height for each panel at 2.2 metres; in addition, it is believed that a new two metre chain-link fence is to be erected also for security purposes.

10.10 Southminster Hall is the other monument to be considered and is of historical interest. The present hall is a relatively modern build and is situated immediately to the west of the site of the earlier hall, an H-plan house with ancillary buildings all within the moated area now signified by the remains of the circular moat that enclosed it (appendix II, plt.4). This earlier hall site and moat is the closest known heritage asset to the proposal; now masked by a hedgerow and mature trees along the western boundary of the proposed development. It is not known if the site extended into the field where the solar panels are to be placed, but this will be dealt with in more detail under the archaeological implications for the site.

11. Discussion of the Archaeological Evidence

Known Evidence

11.1 A number of known archaeological sites and features, some of known and unknown date, are located within the study area. Whilst there are no known sites, monuments or finds within the confines of the proposal, this does not rule them out. Of particular interest, and being the closest monument to the proposal is the earthwork (EHER 16022), a possible enclosure ditch that is present and appears to be perpendicular to the scheduled stretch (EHER 11374) within Pandole Wood. If these two are related, then the enclosure is much larger than that confined to the wooded area, and runs along the immediate western boundary of the proposal (HER map, p.6), within the grounds of Southminster Hall. Cropmarks of a ring ditch, c. 20m in diameter are recorded at 500m north of Southminster Hall (EHER 16027), and are probably prehistoric. Later on in the Roman period this area was known for salt production and a number of these sites are known close by called Salterns or Red Hills, a soil colouration derived from boiling sea water to extract salt, leaving fired clay residues. To the east c. 100m away from the proposal is one of these sites (ECHR 11294), further examples are recorded to the south, c 300m away (ECHR 17050, 17051). A prehistoric handaxe was found in Goldsands Road pit, c 200m south-west of the study area, which further substantiates prehistoric activity evidence for this location. To the north, c.250m of the proposal lies the crop-mark complex (ECHR 12104 with 16002), interpreted as a prehistoric settlement with houses and enclosures and may represent the main focus of prehistoric settlement in the area.

Potential for Archaeological Finds

11.2 The area represented by the proposal lies within a sensitive area for archaeology. Known sites are located in most directions from the proposed development, suggesting more could be revealed during any development of the site. Of particular interest is the proximity of the scheduled monument, Pandole Wood and its associated features. Linear earthworks can be seen extending down along the western boundary that may be directly related to the earthwork at Pandole Wood or may have a relationship to the early hall site with its moat or may be related to both. Further archaeology could be encountered, especially within the western section of the proposal, being closest to the hall and the SAM. The sensitivity of the area for locating further prehistoric evidence must be considered as high along with possible Roman and Anglo Saxon settlement activity also. Medieval finds are more likely to be confined to the centre of the village except if related to the medieval hall close by.

12. Discussion of the Cartographic Evidence

The 1610 Estate map of Southminster (ERO T/M 165/1), (plt 1.) is of little help in interpreting the location of Southminster Hall, however, the Tithe map of 1841 (plt 2.) gives a much clearer picture of the hall and its environs. On this map the hall is shown with the moat, and a pond to the east of the hall (to the south on the map's orientation) which is not shown on subsequent maps, suggesting the possibility of further earthworks in the field of the proposed development. The Survey of Southminster (hand-coloured map: D/P 259 28/1)) is very clear and informative for the year 1790, showing the earlier Southminster Hall within the circular moat, but no large pond to the east, a connected watercourse is shown, now replacing the pond (plt 4.). Subsequent maps show the site much as seen today.

13. Synthesis of the Historical, Archaeological and Cartographic Evidence

Summary of the available evidence in the local context

13.1 The proximity of Pandole Wood (SAM) is highly significant; the effect on this monument is undetermined without further archaeological investigative work. The proximity of the earlier site of Southminster Hall (TQ9650/9950; EHCR 11359) and its circular moat is also significant and may have earlier Anglo Saxon origins. Map evidence, specifically the HER map clearly shows that the earthworks for both these monuments may extend outwards into the proposed development area. Further archaeological features may be present with known sites in the vicinity indicated by various crop-marks. The potential for prehistoric finds are moderate to high with the site located on higher ground, a former Chenier island, overlooking the salt marsh and estuary.

Summary of the available evidence in the regional and national context

13.2 Southminster is of considerable importance, archaeologically and historically. The Scheduled Ancient Monument of Pandole Wood is of national importance. The proximity of the cropmark complex to the north is also of national importance. The proximity to other archaeological sites makes the proposed solar farm site a sensitive area for potential archaeological finds. During prehistoric times the sea level was much lower than it is today, this has resulted in the discovery of many archaeological sites around the coast of Essex,

exposed at low tides on the mud flats. To gain additional knowledge on the cultural heritage of this region is of the highest priority, which can enlighten our understanding of the past. The proposed solar farm site is potentially of considerable importance and interest in furthering our understanding of this location, archaeologically and historically.

13.3 A Survey of Southminster was carried out by M, Medlycott in 2001, in her *Historic Settlement report* she highlights the potential of Southminster for further study as follows: 'The understanding of the development and function of the medieval and post-medieval settlement and the testing of theories on social action, economy, politics, etc. have been highlighted as an important area of study at the national level (English Heritage 1997; MSRG 1999) and at a regional and local level (Wade and Ayres in Brown and Glazebrook 2000; Ward in Bedwin 1996). Study of similar settlements, such as Southminster, has been highlighted as a priority of the Medieval Settlement Research Group (HSRG 1999). Whilst this deals mainly with the medieval period these frameworks apply to any period with further research in mind.

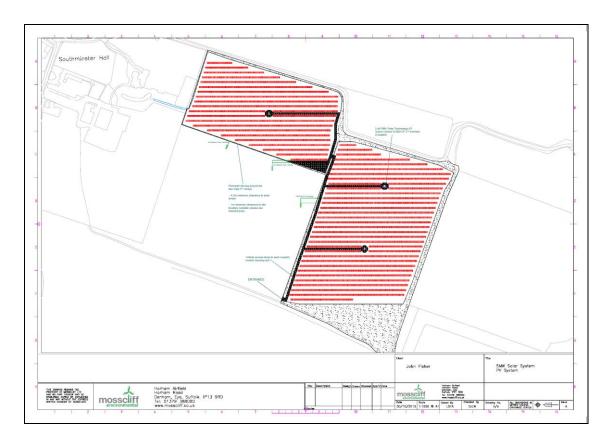
Impact and Effects on the Archaeology

13.4 The impact of the proposed development on the archaeology within this study consists of three main elements:

- The Post Holes for the Solar Array
- Access and hard-standings
- Cabling and substations/accumulators

Post Holes

13.5 The main consideration for any impact on the potential archaeology is from the post holes for the solar panel supports. Specifications for the postholes, 3,400 in number, are to be excavated to an approximate depth of one metre by 0.40m in diameter. The impact of tracked vehicles on the site may be an issue, particularly if ground conditions become wet during the installation of the panels (see plan below).



Plan of Grid Array at Southminster Hall

Access and Hard-standings

13.6 It is understood there will be no new hard-standings for the duration of the development, utilising existing farm areas for logistics. Access is from the west through Southminster Hall Farm with no new access roads required, and therefore no threat to any potential archaeology.

Cabling and Substations/Accumulators

13.7 At the time of this assessment, it is understood that there will be a total of 20,305 panels arranged in a grid pattern, linked to five inverters with accumulators to be constructed on concrete plinths of 10m long by 4.50 m in width, being excavated to a depth of 0.25 m. The impact on the archaeology from the concrete bases should be minimal with only the topsoil being removed; a deposit model is required to confirm this. Connecting these are a series of cable trenches to be excavated to a depth of approximately one meter by 0.40m in width, as highlighted in black on the grid plan above. These in turn are to be connected via a cable trench to the main grid feeder (location of yet to be determined).

Impact and Effects on the Historic Environment

13.8 The impact and effects on the historical environment will consist of three main elements:

- The immediate historic environment and setting
- The historic landscape within a one kilometer area of the development
- The effects on upstanding monuments including scheduled monuments

- 13.9 The study area is already dominated by a wind turbine, the location of the solar farm adjacent to the wind turbine seems logical to contain it into one area for energy production. There are no details on any plans to change the morphology of the field system, remove any hedgerows or divert any footpaths; therefore the field systems remnants of dispersed co-axial systems and their environs are to remain unchanged. The setting is not necessarily picturesque, but is an ancient setting, probably unchanged for the last millennium or from even further back in time.
- 13.10 Appearance is another consideration that can only be judged when the panels have been erected to fully appreciate their affect on the immediate historic landscape. The proposed development is very close to the SAM at Pandole Wood, the extent of which is not fully understood as yet. Similarly, the site of Southminster Hall and the moated enclosure is adjacent to the study area, and further evidence of this monument may extend east into this location. The visual effect of the proposed solar farm within the setting of Southminster village is very subjective, but its location is not visible from any point from its centre. The location of the proposed solar farm on the eastern extent of the settlement is on a no-through road and will not be seen by any traffic moving through Southminster to other villages.
- 13.11 Apart from Southminster Hall and a Tithe barn located to the west of the hall, there are no other built or upstanding monuments except the SAM at Pandole Wood. The effects on this monument are minimal from a visual perspective but are potentially adverse from an archaeological perspective. There are no listed buildings close by.

14. Recommendations of Desk-Based Review and Mitigation

- 14.1 In line with the general principles enshrined in *Planning Policy Guidance Notes 15 and 16: Archaeology And Planning* (1990), mitigation measures for any cultural heritage resources affected by the scheme comprise either *in-situ* preservation or preservation by record in advance of destruction. Any cultural heritage assets identified by initial phases of investigation through field-walking; geophysics and or evaluation will be assessed by the Essex County Historic Environment team to form a strategy for the long-term preservation of any archaeology encountered, either by record or *in-situ*.
- 14.2 Any decision made based upon the results will take into consideration the significance, form, character, quality and quantity of any archaeology considered at risk. Where the results of any archaeological intervention, whether that is excavation, strip and map or evaluation, prove to be of low risk status, monitoring of the ground-works can prove sufficient to fulfill the archaeological requirement during the final phase of works.

15. Conclusions

It is possible that the proposed development will have some significant effects on archaeological sites of local, regional and national importance. The effects are of an indirect nature based upon the current understanding of the site; however, this may change to direct impact on heritage assets if archaeology is located within the boundaries of the proposal. The cable route to link up with the national grid has yet to be determined; it is therefore not

possible to comment on the implications of this part of the proposal. From a historical setting perspective, the proposal will change the setting of this part of Southminster, albeit contained within the original field systems. The juxtapositions of Pandole wood and Southminster Hall require careful consideration to base an opinion as to whether either of these monuments will be adversely affected by the proposal, and the evidence submitted herein will, hopefully, inform that decision to the benefit of all concerned.

16. Acknowledgements

Archaeoserv would like to thank Maria Medlycott of the Essex Historic Environment team for her assistance in providing extra data, the staff of the Essex Record office for their help. This report was prepared by Dennis Payne, Archaeoserv – DP Archaeological Services.

17. Note

Notwithstanding that Archaeoserv- DP Archaeological Services have taken reasonable care to produce a comprehensive summary of the known and recorded archaeological evidence, no responsibility can be accepted for any omissions of fact or opinion, however caused. January 2013.

18. Copyright Notice:-

Archaeoserv, DP Archaeological Services retain copyright of this report under the Copyrights, Designs and Patents Act, 1988

Bibliography and Sources Consulted

Published sources

Bedwin, O., 1991 Archaeological Project 1985-1989, (Essex County Council)

British Geological Survey, 1990

Brown and Glazebrook, 2000 Research and Archaeology: A Framework for the Eastern Counties 2- research and Strategy, East Anglian Archaeology Occ Paper 18

Medlycott, M., 2001 Southminster Historic Settlement Assessment, ECC Internal Report

Medlycott, M (ed.) 2011 Research and Archaeology Revisited: a revised framework for the East of England, East Anglian Archaeology Occasional Paper 24

Morris, J., 1983 Domesday Book: Essex; Rumble

Reaney, P, H., 1935 The Place-Names of Essex, Cambridge University Press

Grey Literature:

Germany, M., (2005) 'Vicarage Court Southminster, Essex' Essex County Council Field Archaeology Unit

Robertson, A. (2007)'Land to rear of 14 High Street, Southminster, Essex' Essex County Council Field Archaeology Unit

Cartographic sources

1610 Estate Map of Southminster, (Essex Records Office, Chelmsford, ref: ERO T/M 165/1) 1777 Map of Southminster by Chapman & Andre (Essex Records Office, Chelmsford) 1790 Survey of Southminster (Essex Records Office, Chelmsford, ref: D/P 259 28/1) 1841 Tithe Map of Southminster (Essex Records Office, ref: C/T 321B) 1881- First Edition Ordnance Survey, six inch series and 25 inch series (Essex Records Office, Chelmsford)

Other sources

Historic Environment Records Office, Chelmsford Essex The Essex Records Office, Chelmsford Essex The Archaeological Data Service (on-line source)

Appendix I: Digital Images



Plate 1. The site looking west towards Southminster Hall



Plate 2. The site looking south-west towards the estuary



Plate 3. The site looking east

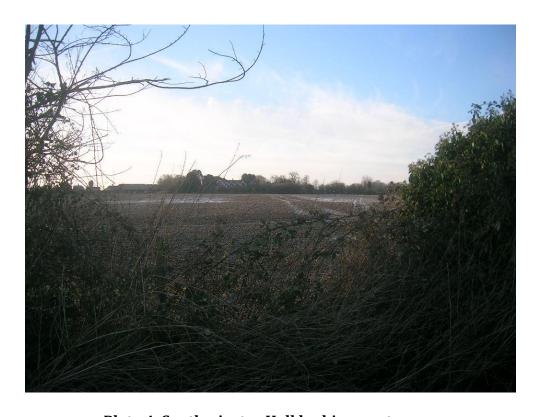


Plate 4. Southminster Hall looking west



Plate 5. The site looking south towards the wind turbine

Appendix II: The Maps

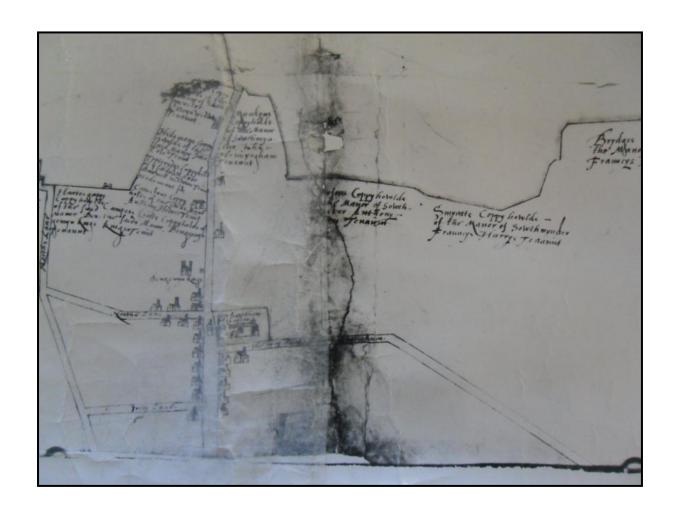


Plate 1. Estate map of Southminster, 1610



Plate 2. The Chapman and Andre map, 1777 for Southminster

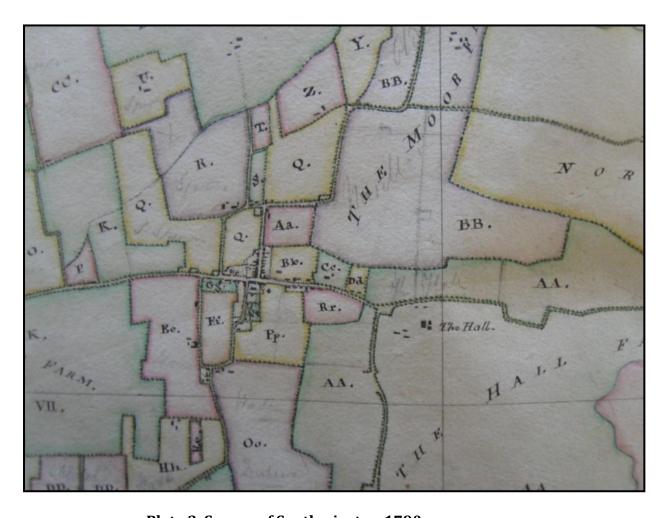


Plate 3. Survey of Southminster, 1790



Plate 4. Survey of Southminster, 1790

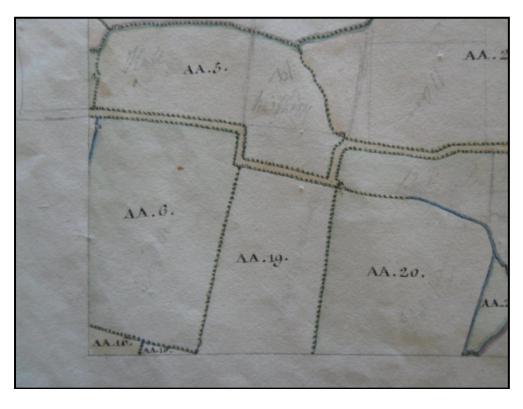


Plate 5. Survey of Southminster, 1790, showing close up of proposed site

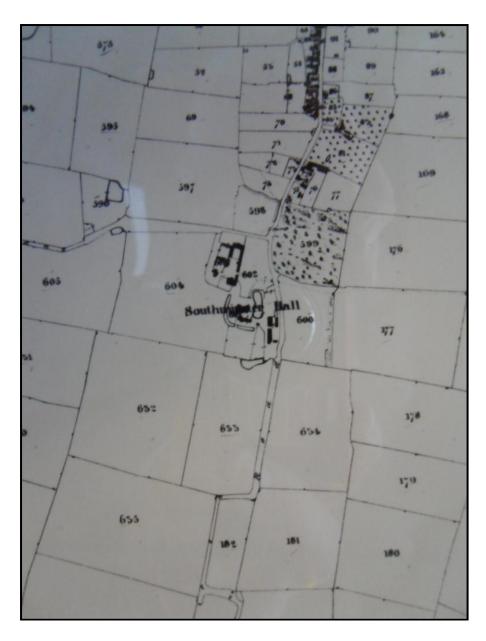


Plate 6. The Tithe map of 1841 for Southminster

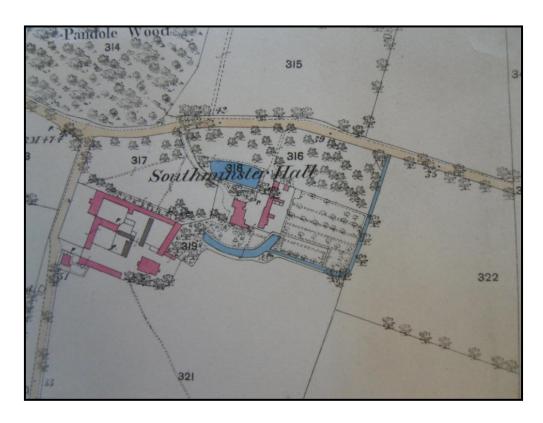


Plate 7. The Ordnance Survey, 1st edition 25 inch series

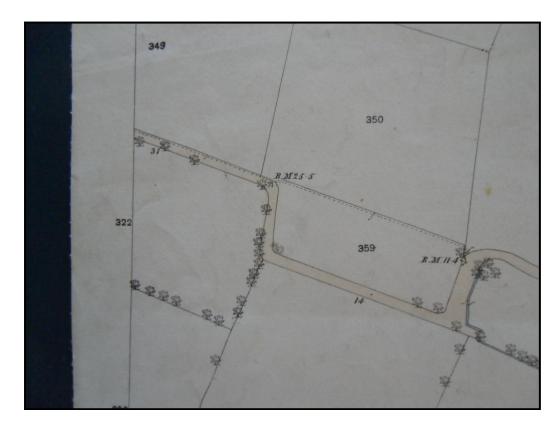


Plate 8. The Ordnance Survey, $\mathbf{1}^{\text{st}}$ edition 25 inch series, showing close up of proposed site



Plate 9. The Ordnance Survey, 1881, 1^{st} edition 6 inch series