

ARCHAEOLOGICAL  
SERVICES  
DURHAM UNIVERSITY

on behalf of  
Wessex Solar Energy Ltd

Bidwell Solar Park  
Totnes  
Devon

archaeological evaluation

report 3060  
January 2013

## Contents

1.	Summary	1
2.	Project background	2
3.	Landuse, topography and geology	3
4.	Historical and archaeological background	3
5.	The evaluation trenches	4
6.	The finds	9
7.	The palaeoenvironmental evidence	11
8.	The archaeological resource	12
9.	Impact assessment	12
10.	Recommendations	12
11.	Sources	12
Appendix 1: Data tables		14
Appendix 2: Stratigraphic matrices		15

## Figures

Figure 1:	Site location
Figure 2:	Trench locations
Figure 3:	Trench plans and sections
Figure 4:	Possible posthole [F3], facing north-east
Figure 5:	Probable tree bole [F12], facing north-west
Figure 6:	Former field boundary [F6], facing north-east
Figure 7:	Burnt spread [F15], facing north-west

## **1. Summary**

### **The project**

- 1.1 This report presents the results of an archaeological evaluation conducted in advance of a proposed development on land at South Downs Farm, near Totnes, Devon. The works comprised the excavation of 20 trial trenches.
- 1.2 The works were commissioned by Wessex Solar Energy Ltd and conducted by Archaeological Services Durham University.

### **Results**

- 1.3 No archaeological deposits were recorded in the majority of the trenches excavated. The remains of former field boundaries were exposed in Trenches 7 and 10, with a ground-raising or dump deposit and tree bole also uncovered in Trench 7. Possible disused trackways were identified in Trenches 10 and 12. A possible posthole was excavated in Trench 1, which contained a small sherd of window glass that may be medieval in date, charcoal and daub, and evidence for spelt wheat. An area of burning in Trench 20 contained charcoal and daub.

### **Recommendations**

- 1.4 No further scheme of archaeological works is recommended in relation to this development.

## 2. Project background

### Location (Figure 1)

- 2.1 The site is located on land at South Downs Farm, Dartington, Devon (NGR centre: SX 7713 6136). It covers an area of approximately 17.5 ha. The route of the A385 forms the north boundary of the site, with a minor stream marking the south. Open farmland lies on all sides.

### Development proposal

- 2.2 The development proposal is for a solar farm.

### Objective

- 2.3 The objective of the scheme of works was to assess the nature, extent and potential significance of any archaeological resource within the proposed development area, so that an informed decision may be made regarding the nature and scope of any further scheme of archaeological works that may be required in relation to the development.

### Specification

- 2.4 The works have been undertaken in accordance with Written Scheme of Investigation provided by Archaeological Services Durham University (reference DS12.499) and approved by the planning authority. The positions and dimensions of several trenches were altered during the field evaluations due to the presence of overhead power cables.

### Dates

- 2.5 Fieldwork was undertaken between between the 27th November and the 5th December 2012. This report was prepared for January 2012.

### Personnel

- 2.6 Fieldwork was conducted by Janet Beveridge, Ashley Hayes, Natalie Swann, Nathan Thomas, Bekah Watson, Dr David Webster, and Mark Randerson (supervisor). This report was prepared by Mark Randerson, with illustrations by David Graham. Soil sample processing was conducted by Sophie Laidler and Nathan Thomas. Specialist reporting was conducted by Jennifer Jones (finds) and Lorne Elliot (palaeoenvironmental). The Project Manager was Daniel Still.

### Archive/OASIS

- 2.7 The site code is **TBS12**, for **Totnes Bidwell Solar Park 2012**. The archive is currently held by Archaeological Services Durham University and will be transferred to the Royal Albert Memorial Museum, Exeter, in due course. The archive reference number for the project is **RAMM: 12/89**. Archaeological Services Durham University is registered with the **Online Access to the Index of archaeological investigations project (OASIS)**. The OASIS ID number for this project is **archaeol3-140386**.

### Acknowledgements

- 2.8 Archaeological Services Durham University is grateful to the landowner, Mr George Welch, for his forbearance and assistance in the difficult weather conditions at the start of the project.

### **3. Landuse, topography and geology**

- 3.1 At the time of this assessment, the proposed development area comprised eight open fields of pasture.
- 3.2 The proposed development area is uneven, and generally slopes downwards toward a minor stream to the south and east. The site occupies elevations between approximately 54m OD in the west and 40m OD in the east.
- 3.3 The underlying solid geology of the area comprises Middle Devonian Slates, which are overlain by alluvial deposits along the southern boundary of the site. The slate in this general area contains igneous intrusions, both basalt and dolerite sills, which are not shown on British Geological Survey 1:50,000 maps.

### **4. Historical and archaeological background**

#### **Previous archaeological works**

- 4.1 The site has previously been the subject of an archaeological desk-based assessment (Archaeological Services 2010). The results of this survey are briefly summarised below.
- 4.2 The Fishacre to Lyneham gas pipeline crosses the proposed development area. A desk-based assessment and fieldwalking survey were conducted along the pipeline route before construction (Cotswold Archaeology 2001a; 2001b). Neither of these projects produced significant results within the proposed development area, although former field boundaries were noted in the field immediately to the west. Archaeological monitoring was conducted during a major upgrade to the pipeline in 2010, and a post-excavation assessment report has been produced (Cotswold Archaeology 2010).
- 4.3 A programme of geophysical survey has also been undertaken on the site (Archaeological Services 2012). In addition to drains, the remains of ploughing, and former field boundaries, this identified a series of anomalies, mainly on the higher ground to the north of the site. It was suggested that these could reflect either geological variations or possible metal-working sites.

#### **The prehistoric and Roman Periods (up to 5th century)**

- 4.4 Monitoring during the pipeline upgrade revealed a group of undated pits and small burnt areas to the north-east corner of the proposed development area. These were interpreted as fire pits or hearths for metal-working. Immediately west of the current site, six clay-lined bowl furnaces, 11 pits and nine ditches were exposed, some of which contained iron slag. A radiocarbon sample from one furnace dated it to the Iron Age, with a date range of 391-210 cal. BC (Cotswold Archaeology 2010). It is possible that the two areas of activity are related, although no dating evidence was recovered to the north-east.

#### **The medieval period (5th century to 1540)**

- 4.5 There is no evidence of activity during the medieval period within the study site. However, activity is known from the wider landscape, particularly to the north-west of the proposed development area, and the district was generally being used for agriculture throughout the later medieval period.

### **The post-medieval and modern periods (1541 to present)**

- 4.6 The site was used as farmland throughout the post-medieval period. Several former field boundaries (now removed) have been identified on the site through map regression and the geophysical survey. The area is currently used as pasture land.

## **5. The evaluation trenches**

### **Introduction**

- 5.1 Twenty trenches were excavated across the site, targeted on anomalies and potential archaeological features identified by the geophysical survey. Due to a series of overhead power lines crossing the site, several trenches were moved to locations where these potential features could be investigated safely, or the trenches were shortened slightly to ensure a safe working distance.

### **Confidence rating**

- 5.2 The excavation of the trenches was conducted during clear weather conditions. Despite the waterlogged nature of the ground, features corresponding to the results of the geophysical survey were identified in all trenches, demonstrating that the methodology was successful. The confidence rating in the results is therefore good.

### **Trench 1**

- 5.3 Trench 1 was located in Area 1, in the north-west part of the site. It was 40m long, and was aligned roughly north-west / south-east across several potential soil-filled linear anomalies. Natural subsoil [4] was exposed across the base of the trench at a depth of 0.3m. This subsoil was mainly a moderately compact reddish-brown silty clay, containing occasional small sub-rounded gravel and pea grit. However, three narrow bands of yellow-brown clay and decayed shale crossed the trench: two toward the north and the final at the south. These natural variations are the probable cause of the geophysical anomalies recorded in this area. Toward the centre of the trench, a small, sub-circular cut [F3: 0.18m x 0.2m, 0.07m deep] was excavated (Figure 3). This had steeply-sloping sides and a rounded, smooth base, and was filled with a deposit of firm, friable reddish-brown sandy clay [2]. It is possible that this feature was a posthole, or the remains of a small pit. One small fragment of glass, which may be medieval window glass, was recovered from this feature, along with fragments of burnt daub, charcoal, and spelt wheat (which pre-dates the medieval period). The trench was sealed by a layer of light yellowish-grey silty clay topsoil [1: 0.3m thick].

### **Trench 2**

- 5.4 Trench 2 was located across a potential soil-filled anomaly in Area 1. The trench was 20m long, and was orientated north-east / south-west. Natural subsoil [4] was exposed at a depth of 0.25m. This deposit was again varied, with two bands of light yellow-grey silty clay and decayed shale encountered toward the north of the trench where the possible soil-filled features were recorded. No other archaeological deposits were encountered, and the trench was sealed by topsoil [1].

### **Trench 3**

- 5.5 Trench 3 was 20m long. It was positioned across three potential soil-filled features in Area 1, to the east of Trench 2, and was aligned north-east / south-west. A varied natural subsoil [4] was exposed at a depth of 0.3m, fluctuating between reddish-brown silty clay, stiff yellow-grey silty clay, and irregular patches of decayed shale.

These natural variations reflected the geophysical anomalies previously recorded. The natural subsoil was overlain by topsoil [1], and no archaeological features were encountered.

#### **Trench 4**

- 5.6 This trench was 10m long, located in Area 2, and was orientated north-west / south-east. Natural subsoil [4] was exposed at a depth of 0.3m. This was again a reddish-brown silty clay, with inclusions of occasional pea grit. Two thin natural bands of shale crossed the centre of the trench, aligned north-east / south-west, and echoing the two potential soil-filled linear anomalies recorded in this area. The trench was sealed by a layer of topsoil [1].

#### **Trench 5**

- 5.7 Trench 5 was located to the east of Trench 4, also in Area 2. It was aligned roughly north-south, across a potential circular soil-filled anomaly, and was 10m long. Natural subsoil [4] was encountered at 0.25m below ground surface. To the north of the trench, this was a deposit of mid yellow-brown clayey silt with inclusions of moderate small gravel. This changed to a reddish-brown silty clay in the centre and south end of the trench, crossed by two narrow bands of broken shale which were clearly the origin of the geophysics results. Topsoil [1] sealed the trench, and no archaeological features were recovered.

#### **Trench 6**

- 5.8 This trench was located at the south side of Area 2, and was intended to investigate a probable former field boundary and two potential soil-filled linear anomalies. However, due to the proximity of overhead power lines, it was not possible to excavate the northern part of the trench, and so the field boundary could not be exposed. The completed trench was 14.5m long, and was orientated north-east / south-west. Natural subsoil [4] was encountered at a depth of 0.2m. This was mainly a moderately compact soft light yellow-brown clayey silt, but changed to a heavier deposit of friable reddish-brown silty clay at the south-west end of the trench, mottled with flecks of mid yellow. This natural variation was coupled with a thickening of the overlying topsoil [1] to the south-west, the result of soil creep and hillwash down the southward-sloping ground in this part of the site. Both these factors were the probable cause of the geophysical anomalies. No archaeological features were encountered.

#### **Trench 7**

- 5.9 Trench 7 was 15m long, positioned to the east of Trench 6, and orientated north-west / south-east across a potential soil-filled curvilinear anomaly. Due to the overhead power lines, this location had to be moved slightly to the north-west. Natural subsoil [4] was revealed at a maximum depth of 0.4m below ground level. This was an orange-brown friable clayey silt across most of the trench, grading to a light yellow-grey silty clay to the north-west end. This layer was truncated toward the south-east by a shallow, sub-linear cut [F12: 1.5m long, 2.7m wide] which extended across the trench on a roughly north-east / south-west orientation (Figure 4). This cut had irregular, moderately-sloping sides and an uneven base. It was filled with a deposit of moderately compact, stiff dark brown-black clayey silt [11: 0.03m thick] containing very frequent charcoal fragments and flecks.

- 5.10 Several patches of charcoal extended away sinuously from the edges of cut [F12], suggesting that they were the remains of roots, and that the feature itself is likely to have been a burnt-out tree bole. It was overlain by a deposit of light yellow-grey clayey silt [10: 10m long, 0.1m thick], a horizon of buried topsoil which was sealed by layer of mid yellow-brown stiff clayey silt [9: 0.3m thick]. This was a dump deposit, possibly used for ground raising in the boggy, low-lying area of the trench, although it may have merely been discarded spoil from drainage excavations. The whole trench was covered by a layer of topsoil [1: 0.3m thick]. Although the former field boundary itself could not be investigated, the probable tree bole [F12] may well have been related to this feature. Two fragments of clay pipe were recovered from fill [11], indicating that this burnt deposit was laid down in the later post-medieval or early modern period, and the field boundary is known to have been removed in the initial years of the 20th century, sometime after 1906 (Archaeological Services 2010, 6). No other archaeological features were encountered.

### **Trench 8**

- 5.11 Trench 8 was located in Area 5, an area of higher ground in the centre of the site, and was positioned across two potential soil-filled linear anomalies. The trench was orientated roughly north-west / south-east, and was 20m long. Natural subsoil [4] was exposed across the entire base of the trench at a depth of 0.3m. This deposit was mainly a light yellow-grey stiff silty clay containing frequent fragments and spreads of shale, with two smaller areas of reddish-brown moderately compact silty clay. These natural variations were encountered near to each end of the trench, where the geophysical anomalies had been recorded. The trench was overlain by a layer of topsoil [1]. No archaeological features were observed.

### **Trench 9**

- 5.12 This trench was also located in Area 5, to the north-east of Trench 8. It was positioned to investigate a potential soil-filled geophysical anomaly on the eastern side of the area. The trench was 35m long, and was orientated roughly north-west / south-east. Natural subsoil [4], again a light yellow-grey stiff silty clay, was exposed at a depth of 0.3m, extending across the whole base of the trench. Another natural variation in this subsoil was visible toward the centre of the trench, where a patch of reddish-brown clayey silt was encountered, mirroring the position of the geophysical anomaly. The trench was sealed by a layer of topsoil [1]. No archaeological features were encountered.

### **Trench 10**

- 5.13 Trench 10 was located in Area 4, on the south-east side of the site. The trench was 10m long, aligned north-west / south-east, and was positioned to investigate the line of a probable former field boundary. A series of overhead power lines stood very close to the intended excavation area, and so the trench was moved to another position on the probable boundary, further to the north-east. Natural subsoil [4] was encountered at a depth of 0.3m. This was a friable to soft light yellowish-brown clayey silt, changing to a darker greyish-brown to the north. At the north-west end of the trench, this natural subsoil was cut by a linear ditch [F6: 0.8m wide, 0.24m deep]. This was orientated north-east / south-west, with moderately sloping sides falling to a rounded, smooth base (Figure 5). It was filled by a deposit of friable grey-brown clayey silt [5] containing very frequent medium angular shale and stone and moderate angular gravel. This was clearly the remains of the former field boundary, and contained post-medieval pottery and machine-cut iron nails.



- 5.14 To the south, a wide, shallow cut was exposed [F8: 3.2m wide, 0.21m deep], following a parallel alignment to [F6]. This cut had very gently sloping sides and a smooth, flat base, filled with a deposit of firm yellow-grey clayey silt [7]. It seems probable that this was the remains of a track or path, following the edge of the former field, and passing between two gates with still stood on the boundaries to the east and west. The trench was sealed by topsoil [1], and no further archaeological features were uncovered.

#### **Trench 11**

- 5.15 This trench lay on sloping ground at the south side of Area 4, and was located to examine a probable geological variation recorded by the geophysical survey. The trench was 25m long, and was orientated north-north-west to south-south-east. Natural subsoil [4], a moderately compact mid reddish-brown silty clay, was exposed at a depth of 0.45m. This changed to a deposit of light yellow-grey shale at the south end of the trench, suggesting that soil creep and hillwash down the south-facing slope had prompted the geophysics result. Topsoil [1] overlay the entire trench, and no archaeological features were recorded.

#### **Trench 12**

- 5.16 Trench 12 was located in Area 6, on the north side of the centre of the site. The trench was 35m long, and was positioned to intersect with two linear anomalies, along with several discrete possible soil-filled anomalies. The trench was aligned roughly north-east / south-west. Natural subsoil [4] was exposed at a depth of 0.2m. This was a light yellowish-grey moderately compact clayey silt, containing occasional pea grit. Toward the centre of the trench, a wide, shallow band of subsoil was encountered. This deposit [18: 7.2m long, 0.05m thick] was composed of a stiff light grey moderately compact clayey silt, with inclusions of occasional small sub-rounded gravel. No cut was evident defining this subsoil spread, and it seems probable that such a thin deposit represents an accumulation of soil, possibly in a shallow depression, rather than a feature.
- 5.17 Post-medieval pottery and glass was recovered from the deposit, indicating that the formation of subsoil [18] was of comparatively recent date. The deposit was located in the same place as the two potential soil-filled anomalies, and had clearly caused the geophysics trace. The very linear nature of this trace, roughly parallel with the nearby field boundaries, may also suggest that subsoil [18] was formed by a routeway or track, crossing Area 6 and causing the underlying soils to be disturbed and reworked. Topsoil [1] extended across the whole trench, and no other archaeological features were exposed.

#### **Trench 13**

- 5.18 All the remaining trenches were in Area 8, on the eastern boundary of the site. Trench 13 was located to the north of this area, orientated north-south on a south-facing slope. The trench measured 20m, and was positioned across a potential soil-filled anomaly. The proximity of overhead power lines meant that the trench had to be moved to the east of its original position, but it was still possible to investigate this anomaly. Natural subsoil [4] was revealed at a depth of 0.25m. This was mainly a deposit of mid brownish-red friable silty clay containing very frequent pea grit, distributed across the centre of the trench. To the north and south, however, this deposit was mottled by frequent shale and occasional irregular lenses of yellow clay, suggesting that a build-up of soil creep in the centre of the trench, coupled with a

slightly thicker layer of topsoil in this area, was the cause of the geophysical anomaly. Two modern field drains [F16] were exposed, filled by a redeposited natural subsoil [17], aligned north-east / south-west at the north and south ends of the trench. The trench was sealed by a layer of topsoil [1], and no archaeological features were encountered.

#### **Trench 14**

- 5.19 Trench 14 was positioned toward the centre of Area 8, and was aligned north-south across two potential soil-filled anomalies. A varied natural subsoil [4] was exposed at a depth of 0.25m: a moderately compact reddish-brown silty clay mottled with large irregular patches of light yellow-grey silty clay extended across much of the trench. However, two areas of clear reddish-brown silty clay were observed. These natural geological variations crossed the trench in the same locations as the potential anomalies, and had probably produced the geophysics results. Three field drains [F16], orientated north-west / south-east, were also exposed, overlain by a deposit of topsoil [1]. No archaeological features were recorded.

#### **Trench 15**

- 5.20 This trench lay to the east of Trench 14, and was orientated east-west. It was intended to reach a maximum length of 20m, intersecting with Trench 14 to the west. However, the proximity of overhead power lines meant that it was not safe to dig this intersection, but the easternmost 16m of the trench were excavated. This crossed one potential soil-filled linear anomaly to the east. Natural subsoil [4] was exposed at a depth of 0.25m. This was a light yellow-brown silty clay, mottled with occasional patches of shale. To the east, a natural variation was again apparent, with a large patch of reddish-brown silty clay corresponding with the location of the geophysical anomaly. One modern field drain [F16] crossed the centre of the trench of a north-west / south-east alignment. These were sealed by a layer of topsoil [1]. No archaeological features were exposed.

#### **Trench 16**

- 5.21 Trench 16 lay toward the centre of Area 8, along the line of a low-lying marshy channel which crossed the central and southern parts of the field. This trench was 15m long, orientated north-east / south-west, and positioned to investigate an irregularly-shaped potential soil-filled anomaly. Natural subsoil, a light yellow-grey stiff silty clay, was exposed at a depth of 0.25m. A thin band of shale crossed this natural subsoil to the north-east, with the deposit changing to a reddish-brown silty clay to the south-west. Once again, these geological variations were the probable cause of the geophysical anomalies, and no archaeological features were encountered. Topsoil [1] sealed the whole trench.

#### **Trench 17**

- 5.22 Trench 17 also lay along the course of the low-lying channel in Area 8, and was orientated roughly north-west / south-east. The trench was 40m long, and was designed to investigate four potential soil-filled anomalies. Natural subsoil was exposed across the base of the trench at a depth of 0.25m. This layer was very mixed, varying from light yellow-brown firm silty clay to friable reddish-brown clayey silt, changing in bands across the width of the trench. No archaeological features were observed, and these natural variations corresponded with the potential anomalies recorded by the geophysical survey. Two field drains [F16] cut through this natural subsoil, and were overlain by topsoil [1].

### **Trench 18**

- 5.23 Trench 18 was situated toward the base of the low-lying channel, and was orientated north-south. It was 10m long, and was located over another of the potential soil-filled anomalies identified in Area 8. A very varied natural subsoil [4] was exposed at a depth of 0.3m. This was mainly characterised as a friable light yellow-brown silty clay, which was seen at the north and on the east side of the trench. In the centre and to the west, this became a more compact reddish-brown silty clay, with soft grey-brown very silty clay exposed at the south end. This final variation was clearly related to the channel, which was marshy and heavily waterlogged in this area. These natural variations echoed the findings of the geophysical survey, and no archaeological features were identified. Topsoil [1] sealed the trench.

### **Trench 19**

- 5.24 This trench was positioned on the south-west side of Area 8, south of the low-lying area, and was aligned roughly north-north-west to south-south-east. It was 15m long, and was again located across several anomalies. A natural subsoil of light yellow-grey stiff silty clay was encountered at a depth of 0.3m. Toward the north this varied, with two irregular patches of grey-brown silty clay crossing the trench. To the south, an east-west aligned modern field drain [F13] cut through the natural subsoil, containing a backfill of re-deposited silty clay [12]. This was overlain by a layer of topsoil [1] which extended across the whole trench.

### **Trench 20**

- 5.25 Trench 20 was located on slightly higher ground on the south side of Area 8. It was 40m long, orientated north-east / south-west, and was situated so as to investigate several potential soil-filled anomalies. Natural subsoil was exposed at a depth of 0.25m. This was a moderately compact light brownish-yellow silty clay, without the geological variations observed elsewhere in the area. At the south-west end of the trench, this was overlain by an irregular, linear spread of burnt material [F15: 0.4m wide, 0.03m thick]. This was a thin patch of mottled light reddish-brown soft clayey silt, containing frequent inclusions of charcoal flecks and burnt clay (Figure 6). This contained burnt daub and charcoal. The underlying natural subsoil was slightly discoloured and reddened, suggesting that [F15] had been burnt *in situ*, and that the material had not been dumped from elsewhere. No indication of root action was observed, unlike [F12] in Trench 7, and no dating evidence was recovered.
- 5.26 Four north-south orientated field drains [F13] were recorded crossing the trench. Several irregular, thin spreads of reworked topsoil lay adjacent to these cuts, probably trampled into the surface of natural subsoil during the excavation of the drains. No other archaeological features were identified. The trench was sealed by a layer of topsoil [1: 0.25m thick]

## **6. The finds**

### **Pottery assessment**

#### **Results**

- 6.1 Seventy-five sherds (572g wt) of domestic and utilitarian wares were recovered from four contexts ([1], [5], [7], [18]) and unstratified. All but two of these are of post-medieval date. The medieval material comprises two abraded sherds of

oxidised sandy and gritty wares, both with internal green glaze, found in context [1] and unstratified.

- 6.2 The remaining material dates to the 17/18th-century or later. Wares represented include a single 17/18th-century sherd of tin-glazed earthenware from context [1], late 18/19th-century mocha wares from context [1], including one with a dendritic pattern [u/s], buff stoneware jar sherds from context [1], early 19th-century edged ware from context [18] and numerous sherds of 19th-century cane coloured ware, plain bone china, and plain, transfer printed and sponge printed white ware from all four contexts and u/s.

**Recommendation**

- 6.3 No further work is recommended.

**Clay pipe assessment**

**Results**

- 6.4 Nine post-medieval clay pipe stem fragments were found in contexts [1] (x5), context [12] (x2) and unstratified (x2). None have stamps or maker's marks.

**Recommendation**

- 6.5 No further work is recommended.

**Glass assessment**

**Results**

- 6.6 Nine pieces of glass were recovered, eight of them of post-medieval date. A fragment from the neck of a weathered dark green bottle was found unstratified, the shape of the applied string rim suggesting a mid-18th-century date. Part of the base from a highly weathered, dark green wine bottle of mid to late 18th-century date came from context [1], and a thick (12mm) dark green wine bottle body sherd came from context [18]. Sherds from modern brown and clear glass bottles were found in context [1], along with sherds of post-medieval green/clear flat window glass and a single piece from a possibly ornamental vessel in white opaque glass.
- 6.7 A single very small piece (7 x 5 x 2mm) of green/clear glass came from context [2] sample <1>. This has a section of rounded original edge and is highly pitted, suggesting that the original surface has been lost. It is likely to be window glass, and may be medieval.

**Recommendation**

- 6.8 No further work is recommended.

**Building materials assessment**

**Results**

- 6.9 A single piece (3g wt) of highly abraded brick or tile with no original surfaces was found unstratified. This cannot be dated. Small quantities of fired daub came from environmental samples from two contexts. Context [2] sample <1> produced 19g (x 26 fragments), and context [15] sample <2> had 267g (x 97 fragments). All the fragments are very abraded with no original surfaces. These may be fragments of wall covering material.

#### **Recommendation**

- 6.10 No further work is recommended.

#### **Iron objects assessment**

##### **Results**

- 6.11 Six nails or nail fragments were found. Three undateable shank fragments were recovered unstratified. A thin (5mm) hand-forged nail 70mm long came from context [7] – this could be of pre-industrial date. Corroded 19th-century or later machine cut nails came from contexts [1] and [5].

#### **Recommendation**

- 6.12 No further work is recommended.

#### **Other objects assessment**

##### **Results**

- 6.13 A circular hard plastic modern washer or castor, 25mm diam, was found unstratified. This has a central 7mm perforation for attachment.

#### **Recommendation**

- 6.14 No further work is recommended.

## **7. The palaeoenvironmental evidence**

- 7.1 A palaeoenvironmental assessment was carried out on two bulk samples; the fill [2] of a small pit or posthole [F3] and a burnt spread [15]. The samples were manually floated and sieved through a 500µm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification using a Leica MZ7.5 stereomicroscope for waterlogged and charred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classification follows Preston *et al.* (2002).

- 7.2 Where possible, a selection of charcoal fragments >4mm were identified, in order to provide material suitable for radiocarbon dating. The transverse, tangential and radial sections were examined at up to x600 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Hather (2000) and Schweingruber (1990), and modern reference material held in the Environmental Laboratory at Archaeological Services Durham University.

##### **Results**

- 7.3 The fill of [F3] comprised small fragments of daub, charcoal, clinker/cinder and a tiny sherd of glass. The charcoal was identified as oak and the only charred botanical remains were two spelt wheat glume bases. The burnt spread [15] contained large quantities of burnt daub and charcoal. Identified charcoal almost entirely comprised oak (large branchwood or stemwood), with *Maloideae* (hawthorn, whitebeams or apple) also recorded in small amounts. Material suitable for radiocarbon dating is present for both samples, although there may be insufficient weight of carbon for fill [2]. The results are presented in Table 1.2.

## **Discussion**

- 7.4 The assessment provides evidence for the use of spelt wheat at the site, of which the occurrence in small quantities of this cereal chaff from pit/posthole fill [2] may indicate deposition of domestic waste. Spelt wheat first appears in England during the middle to late Bronze Age (Greig 1991), although it is more commonly associated with Iron Age and Romano-British sites. The predominance of oak charcoal from the spread of burnt material [15] may suggest an industrial origin, as oak has often been used as a fuel when high temperatures are required due to its physical properties. *Maloideae* also makes a good fuel, although the use of both of these woods for structural purposes cannot be ruled out.

## **Recommendations**

- 7.5 No further analysis is required for the plant macrofossils due to their low numbers and poor preservation. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

## **8. The archaeological resource**

- 8.1 No archaeological deposits were recorded in the majority of the trenches excavated. The majority of potential features identified by the geophysical survey were identified as natural geological variations. The remains of former field boundaries were exposed in Trenches 7 and 10, with a ground raising or dump deposit and an area of modern burning in a tree bole also uncovered in Trench 7. Possible disused trackways were identified in Trenches 10 and 12, although the feature thus identified in Trench 12 was very indistinct, and may simply have formed as an accumulation of subsoil in a natural hollow. A possible posthole was excavated in Trench 1, and an area of burning in Trench 20. Both features, which are some distance apart, contained charcoal and daub. The fill of the possible posthole also contained evidence for spelt wheat but also window glass which may be medieval. It is possible that burnt area [F15] may be related to the group of pits and small burnt areas found to the north-east of Area 8 during the previous pipeline upgrade monitoring (Archaeological Services 2010, 4, and 4.4, above).

## **9. Impact assessment**

- 9.1 Given the nature of the development, and the extent and nature of the identified archaeological resource, it is considered unlikely that there will be a significant impact by the development on any archaeological resource.

## **10. Recommendations**

- 10.1 As no significant archaeological resource was identified, no further scheme of archaeological works is recommended in relation to this development.

## **11. Sources**

Archaeological Services 2010 *Land at South Down, near Totnes, Devon: archaeological desk-based assessment*. Unpublished report **2528**,  
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- Cotswold Archaeology 2010 *South-West Reinforcement Project: Ottery St Mary to Aylesbeare; Aylesbeare to Kenn; Fishacre to Choakford gas pipelines, Devon: Post-excavation assessment and updated project design*. Unpublished report
- Greig, J R A, 1991 The British Isles, in W Van Zeist, K Wasylikowa & K-E Behre (eds) *Progress in Old World Palaeoethnobotany*. Rotterdam
- Hather, J G, 2000 *The identification of the Northern European Woods: a guide for archaeologists and conservators*. London
- Preston, C D, Pearman, D A, & Dines, T D, 2002 *New Atlas of the British and Irish Flora*. Oxford
- Schweingruber, F H, 1990 *Microscopic wood anatomy*. Birmensdorf
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## Appendix 1: Data tables

**Table 1.1: Context data**

The • symbols in the columns at the right indicate the presence of finds of the following types: P pottery, G glass, M metal, O other materials.

No	Area	Description	P	G	M	O
1	T1-T20	Topsoil	•	•	•	•
2	T1	Fill of [F3]				
F3	T1	Cut for posthole/small pit				
4	T1-T20	Natural subsoil				
5	T10	Fill of [F6]	•		•	
F6	T10	Cut of former field boundary ditch				
7	T10	Fill of [F8]	•		•	
F8	T10	Line of probable former track				
9	T7	Dump deposit				
10	T7	Subsoil horizon				
11	T7	Burnt fill of [F12]				
F12	T7	Irregular cut – probable tree bole				•
F13	T19 & T20	Group number for field drains				
14	T19 & T20	Fill of [F13]				
F15	T20	Spread of burnt material				
F16	T13-T18	Group number for field drains				
17	T13-T18	Fill of [F16]				
18	T12	Subsoil horizon	•	•		

**Table 1.2: Macrofossil results**

Sample	1	2
Context	2	15
Feature	pit / posthole	spread
<i>Material available for radiocarbon dating</i>	(✓)	✓
<i>Volume processed (l)</i>	4	15
<i>Volume of flot (ml)</i>	60	200
<i>Residue contents</i>		
Charcoal	-	+++
Clinker / cinder	+	-
Daub	++	+++
Glass (number of fragments)	1	-
<i>Flot matrix</i>		
Charcoal	++	++
Clinker / cinder	++	-
Earthworm egg case	-	+
Roots (modern)	++	+++
<i>Charred remains (total count)</i>		
(c) <i>Triticum spelta</i> (Spelt Wheat) glume base	2	-

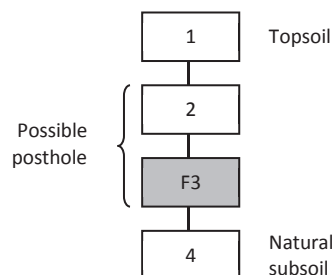
[c-cultivated (+): trace; +: rare; ++: occasional; +++: common; ++++: abundant

(✓) there may be insufficient weight of carbon available for radiocarbon dating]

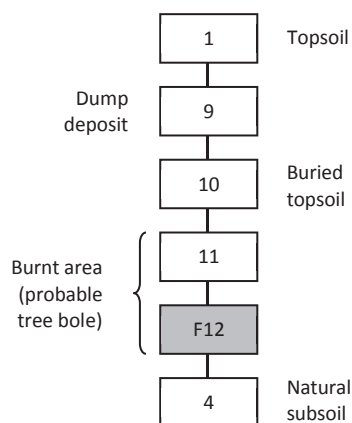


## Appendix 2: Stratigraphic matrices

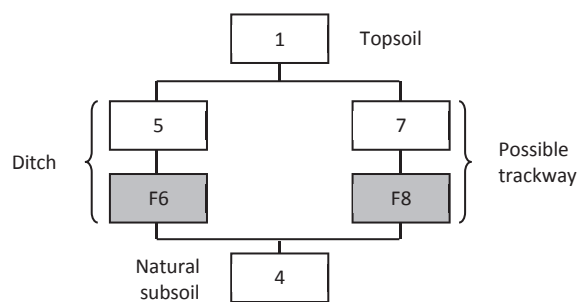
### Trench 1



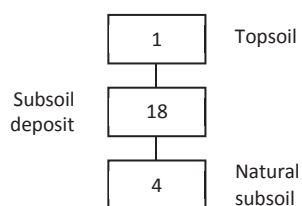
### Trench 7



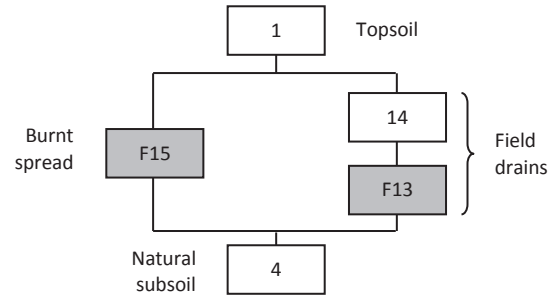
### Trench 10

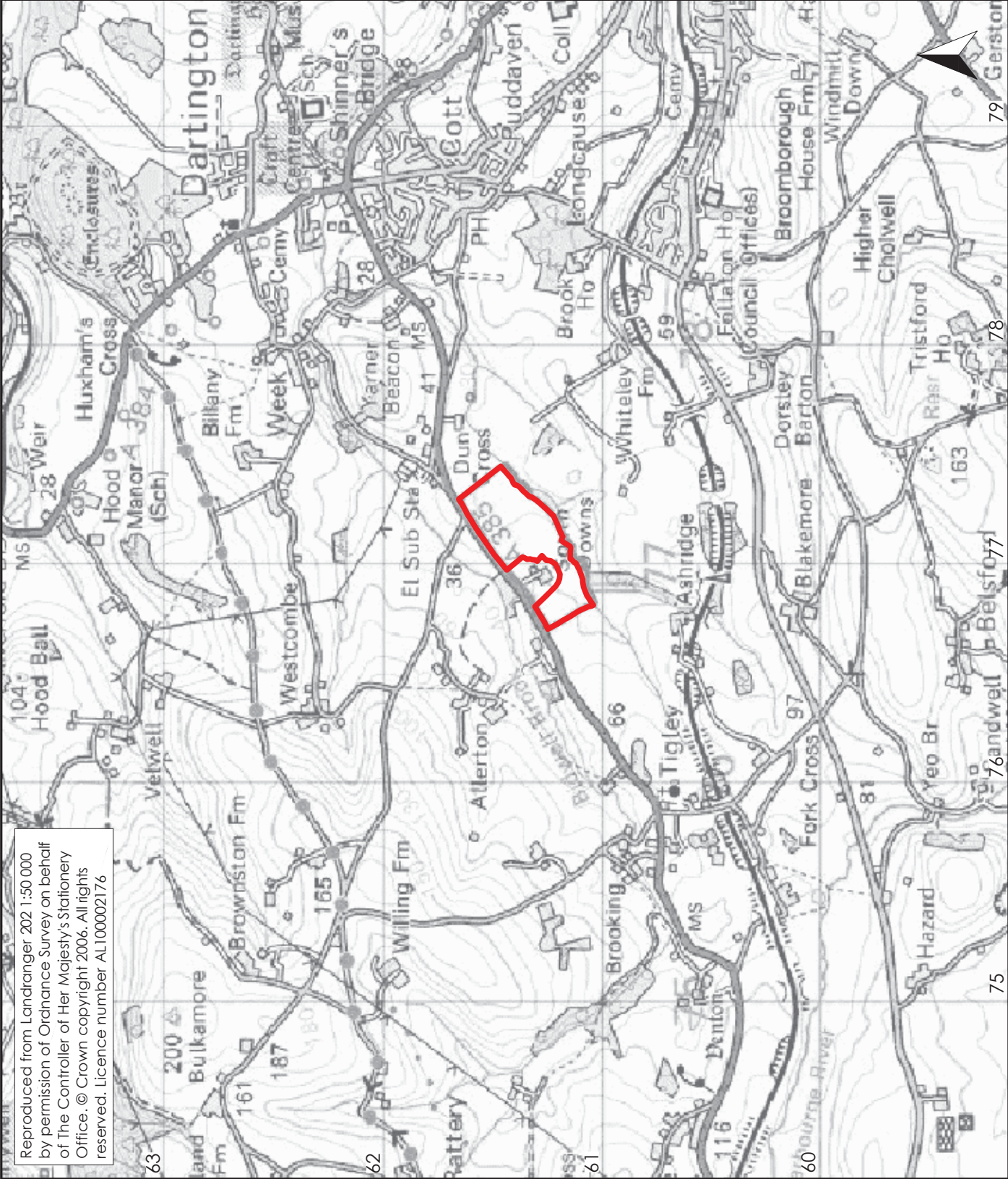


### Trench 12



## Trench 20





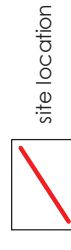
on behalf of  
Wessex Solar Energy Ltd

Bidwell Solar Park  
Tothes  
Devon

archaeological evaluation  
report 3060

Figure 1: Site location

0 1km  
scale 1:25 000 for A4 plot



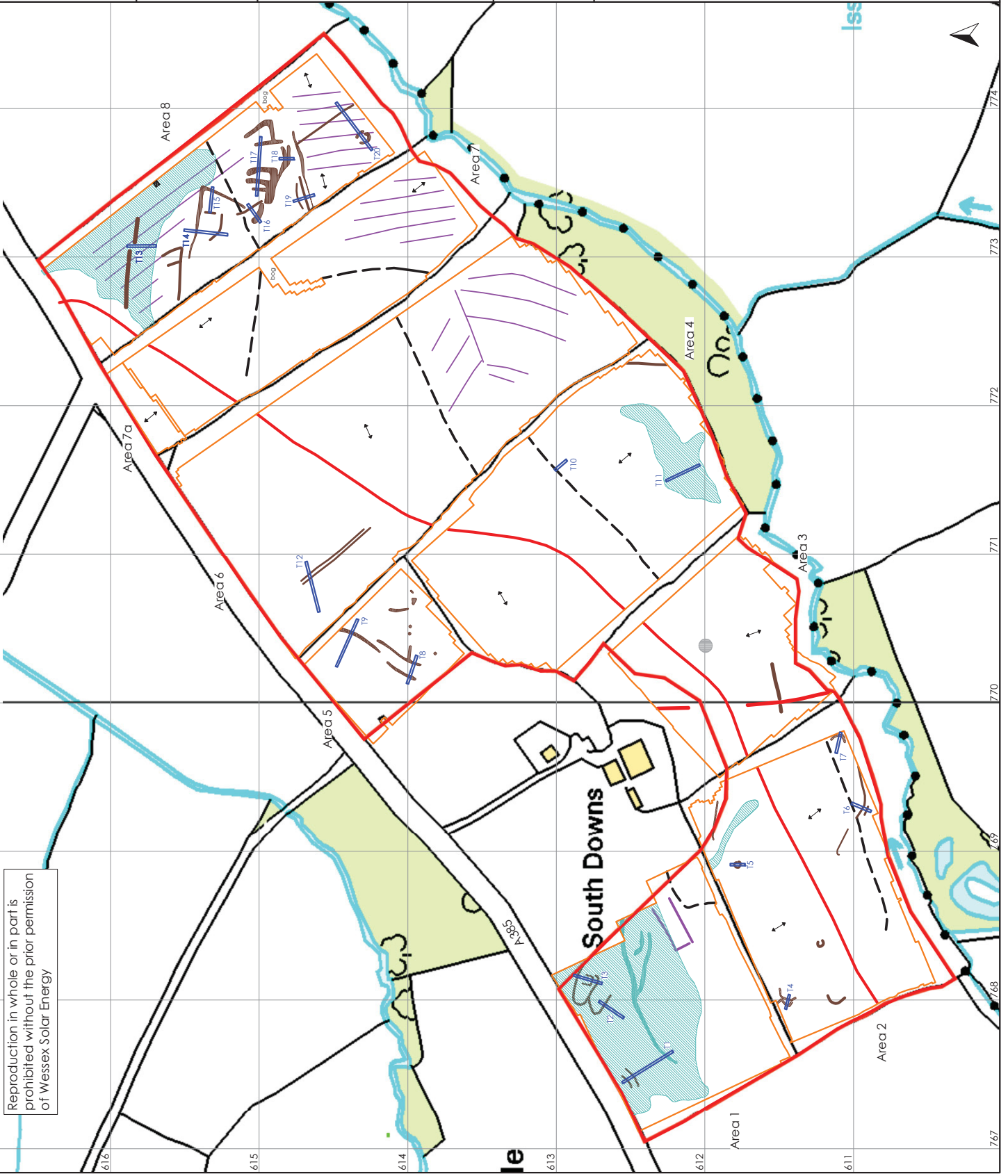
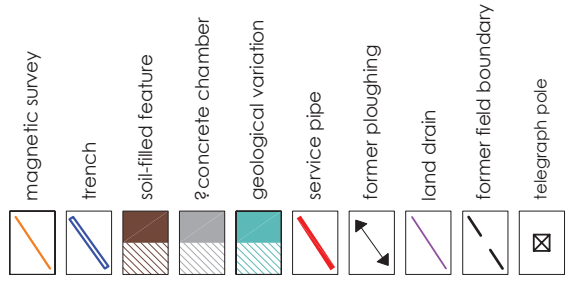
on behalf of  
Wessex Solar Energy Ltd

Bidwell Solar Park  
Totnes  
Devon

archaeological evaluation  
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Figure 2: Trench locations

0 100m  
scale 1:2500 for A3 plot

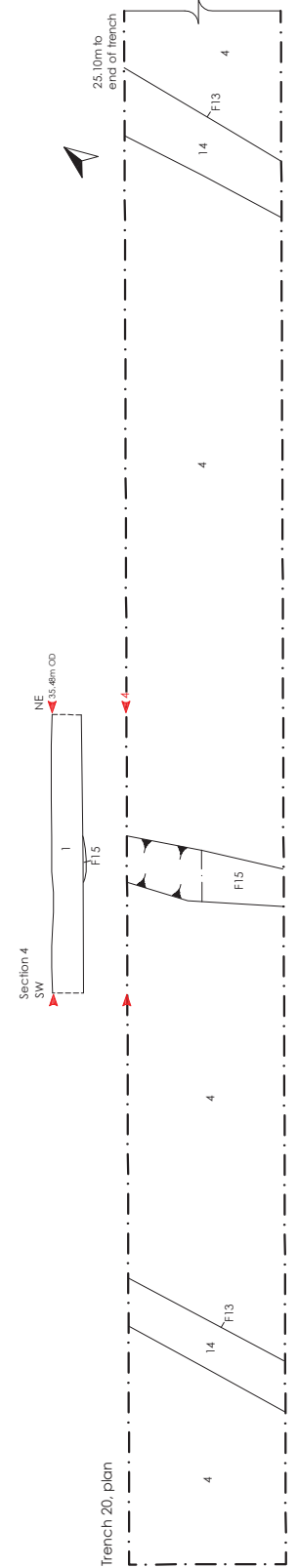
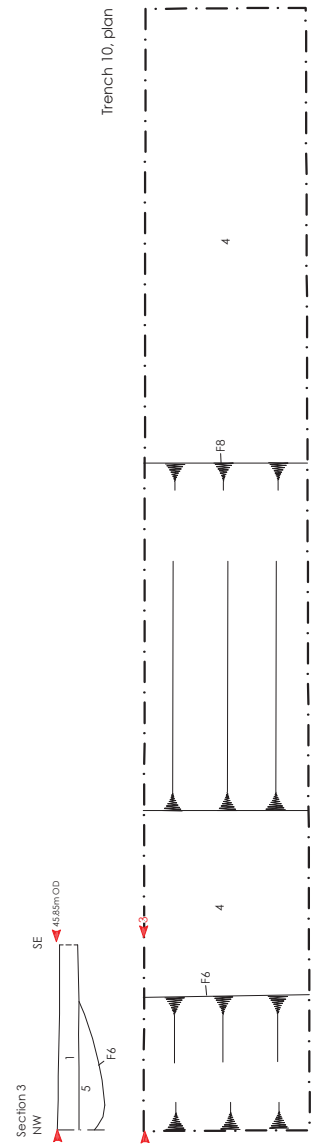
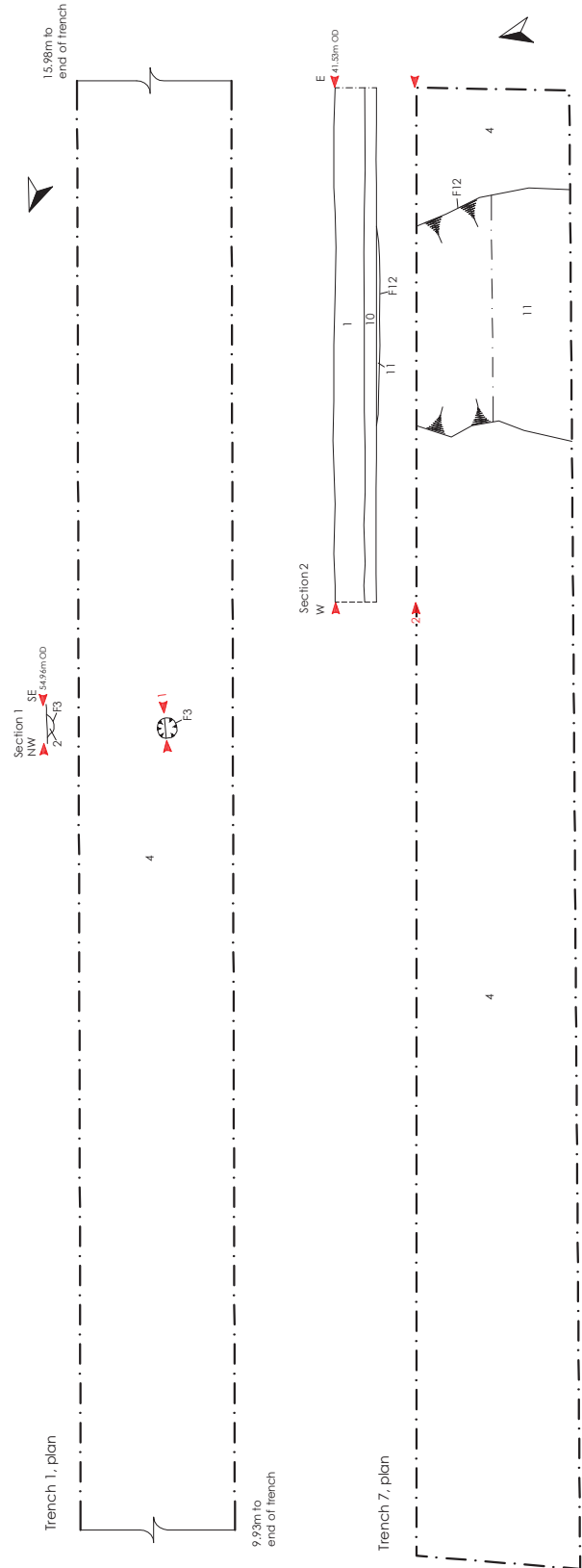


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Figure 3: Trench plans and sections





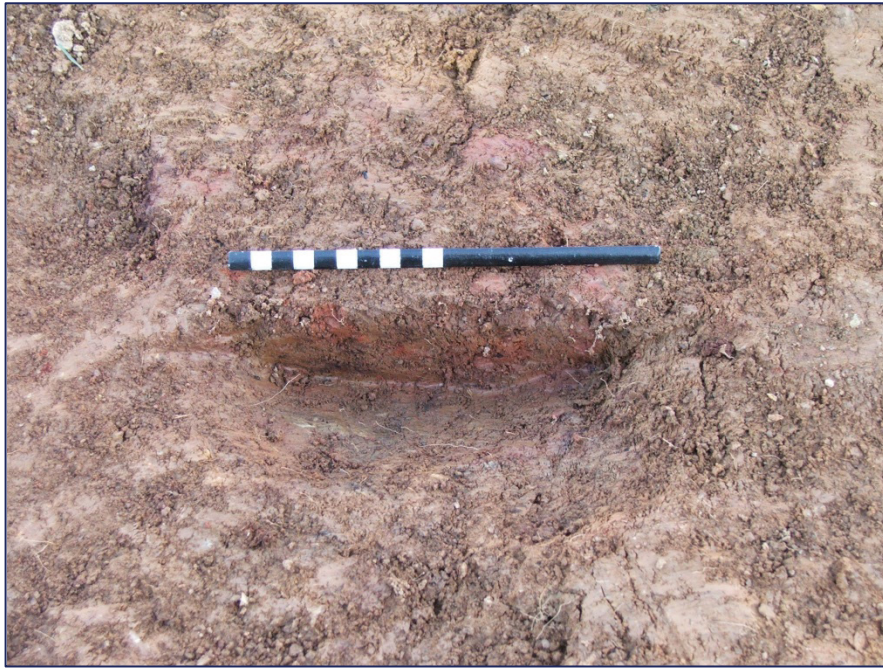


Figure 4: Possible posthole [F3], facing north-east



Figure 5: Probable tree bole [F12], facing north-west. The remains of possible burnt roots can be seen toward the base of frame (indicated)





Figure 6: Former field boundary [F6], facing north-east



Figure 7: Burnt spread [F15] (indicated), facing north-west. The section excavated into natural subsoil through the feature illustrates how thin this deposit was