

AIRCRAFT STORAGE SHED, DUNKESWELL AIRFIELD, DEVON

(NGR ST 12927 07969)

Results of an archaeological watching brief

East Devon District Council planning reference 17/0451/FUL,
condition 3

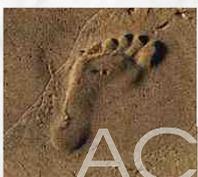
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CONTENTS

	<u>Page no.</u>
<i>Summary</i>	
1. Introduction	1
2. Archaeological background	1
3. Aim	2
4. Methodology	2
5. Results	2
6. Conclusions	2
7. Archive and OASIS	3
8. Sources consulted	3

List of figures

Fig. 1: Location of site and area monitored

List of plates

Plate 1: Area prior to ground reduction, looking northwest

Plate 2: Area after stripping of turf, looking southeast

Plate 3: Area following ground reduction, looking south (2m scale)

Plate 4: Area following ground reduction, looking west, showing patches of flint and chalk bottom right and top left (2m scale)

Summary

An archaeological watching brief was carried out by AC archaeology, on behalf of Air Westward Ltd, in March 2019 during the construction of an aircraft storage shed at Dunkeswell Airfield, Dunkeswell, Devon. The site is situated on the west side of Dunkeswell Airfield, within an area of existing aircraft storage sheds. The main archaeological interest in the site is that it is located in a wider area where iron ore extraction pits are recorded.

The recorded deposit sequence consisted of topsoil (associated with the construction of the airfield during the Second World War) overlying natural deposits. The groundworks did not expose any archaeological deposits or features, and no evidence for iron ore extraction was found. A review of the local archaeological evidence for the extraction of iron ore indicates that this was taking place in localised areas (within the investigated limits around the airfield) where ore-bearing clays were probably historically exposed, and not overlain by other natural chalk- and flint-bearing deposits or colluvium.

1. INTRODUCTION (Fig. 1)

- 1.1 An archaeological watching brief was undertaken by AC archaeology during March 2019 during construction of a new aircraft storage shed at Dunkeswell Airfield, Dunkeswell, Devon (NGR ST 12927 07969; Fig. 1). The work was commissioned by Air Westward Ltd, and required by East Devon District Council under condition 3 of the grant of planning permission 17/0451/FUL for a 'proposed aircraft storage shed'.
- 1.2 The site is situated on the west side of Dunkeswell Airfield, within an area of existing aircraft storage sheds, on the north side of one of a taxi-way (a former runway). It lies at a height of approximately 250m aOD, with the underlying geology comprising sandstone of the Upper Greensand Formation overlain by clayey gravel of the clay with flints formation (www.bgs.ac.uk).

2. ARCHAEOLOGICAL BACKGROUND

- 2.1 The main archaeological interest in the site is that it is located in an area where a number of iron ore extraction pits are recorded. A total of 10 intercutting pits was recorded by Context One Archaeological Services on the south side of the airfield in 2010 (Context One 2010), whilst geophysical survey and limited targeted excavation in the northeast corner of the airfield has identified two large areas of ore extraction (Cotswold Archaeology 2015). A small group of possible iron ore extraction pits was also excavated to the south of the current site in 2014 during the construction of an aircraft storage shed (Kerr-Peterson 2014), and more recently a series of pits (possibly following a seam of ore), radiocarbon-dated (from a secondary fill of a pit) to the mid-15th to mid-17th centuries, has been excavated during redevelopment at the Mansell Raceway to the north of the current site (Etheridge 2019). Other observations during construction projects adjacent to and close to the current site, and elsewhere on the airfield, have not exposed any evidence for iron ore extraction (Stead 2012; Farnell 2013; Kerr-Peterson 2014; Hollingrake 2016; Caine 2016).
- 2.2 Evidence for ironworking has also been found in a number of locations in the general vicinity (e.g. Devon County Historic Environment Record entries MDV14489, MDV53288 and MDV53062).
- 2.3 Whilst the majority of the excavated pits are undated, evidence from elsewhere in the Blackdown Hills indicates that iron ore extraction is likely to have been taking place in the area between the Romano-British and early post-medieval periods.

2.4 Dunkeswell was an RAF airfield built in 1942-3, and remains in use for light aircraft and parachuting (Francis 2006; MDV45090). During its construction the area was extensively landscaped, and there is evidence for extensive drainage (Farnell 2013; Kerr-Peterson 2014; Caine 2016). The site lies on the edge of former common land. The enclosure award for the final encroachment of the common was issued in 1813 (DRO 361A/PD/2/1), but this may not have taken place until after 1844 since the tithe map still shows the area unenclosed. The layout of the pre-enclosure field boundaries to the southeast has a curving pattern that is characteristic of medieval strip fields that extended out from the historic core of the village. Ridge and furrow ploughing is recorded in fields to the north of the common (MDV118115).

3. AIM

3.1 The groundworks had the potential to expose and destroy or bury any surviving archaeological deposits or artefacts, in particular any evidence for iron ore extraction. The aim of the watching brief was to observe, investigate, excavate and record any surviving below-ground archaeological artefacts and deposits across the area affected by the development.

4. METHODOLOGY

4.1 The watching brief was carried out in accordance with the Chartered Institute for Archaeologist's *Standard and Guidance for an archaeological watching brief* (2014) and an approved written scheme of investigation prepared by AC archaeology (Passmore 2019). The work comprised the stripping of topsoil in the area of the new aircraft storage shed.

5. RESULTS (Fig. 1; Plates 1-4)

5.1 The monitored area measured 42m north-south by 24m east-west, and was situated between an existing aircraft storage shed to the north and the east-west aligned taxi-way to the south. The existing topography slopes very slightly uphill to the north, and the ground was reduced to a horizontal level just below the surface of the taxi-way to create a flat surface for the movement of aircraft. The extent of reduction varied from 0.20m at the south end to 0.85m below ground level at the north end where the existing ground level is higher.

5.2 The sequence of deposits was consistent across the area with turf and topsoil of dark grey friable silty-clay with frequent sub-angular gravel inclusions up to 50mm overlying a natural deposit of dark yellow-brown silty-clay with frequent sub-angular gravel and chalk with flint inclusions, as well as thin bands of white clay. Due to the topography and required depth of groundworks the topsoil was not fully removed within the southern half of the excavation area.

5.3 No archaeological deposits, or features cut into the natural, were exposed. The only feature (not shown on Fig. 1) was a modern plastic drain probably associated with the existing aircraft storage shed to the north.

6. CONCLUSIONS (Plate 4), by Andrew Passmore

6.1 The groundworks did not expose any archaeological features or deposits, and no evidence for iron ore extraction was found.

6.2 This observation along with the recent identification of iron ore extraction pits within the Mansell Raceway complex to the north (Etheridge 2019) has prompted a brief review of the location of the evidence for this industrial activity in the area (see also Smart 2018, 216, which includes a

comment on the 20th-century truncation caused by the construction of the airfield). It is clear from descriptions and photographs of excavations where iron ore extraction pits have been identified that these pits are found where the geology comprises 'clean' red or brown silty clays generally with few inclusions of gravel (Context One 2010; Cotswold Archaeology 2015; Etheridge 2019), but where such pits have not been present (Stead 2012; Farnell, 2013; Kerr-Peterson 2014; Hollingrake 2016; Caine 2016) the underlying geology is much more mixed, and contains more gravel inclusions, in particular quantities of flint. This was most pronounced in the excavations reported here where particularly large bands and nodules of flint-bearing chalk were present (Plate 4); the excavation appears to have exposed remnants of the overlying flint-bearing chalk above the clay-with-flints. The obvious conclusion to draw from this is that iron ore extraction pits were historically excavated where *in situ* iron nodules were present in clays, and where these clays were not (at that time) overlaid by natural chalk- and flint-bearing, deposits, or as noted by Hollingrake, where natural clays are overlaid by colluvial or illuviated (Stephen Reed *in litt.* 7 May 2019) deposits. This interpretation is comparable with similar observations in Crediton where medieval clay extraction for cauldron founding took place where suitable clean clays were exposed and overlying (unsuitable) natural gravel had been removed by previous activity (Allan *et. al.* 2010, 144).

- 6.3** There is currently no clear topographic or archaeological reason for the partial survival of chalk- and flint-bearing material, although this could be related to either natural processes or early anthropogenic processes. There is no clear evidence that this can be entirely attributed to the construction of the airfield in the mid-20th century.
- 6.4** Comparison of the location of archaeological observations at Dunkeswell Airfield and the pre-airfield landscape broadly indicates that areas containing iron ore extraction pits is located within later post-medieval enclosed land, i.e. not within the medieval field systems, precluding a potential conflict between agriculture and industry. This land may have been agriculturally poor – although former medieval field systems are known to have extended onto the plateau above the village – and therefore not farmed. The location of iron ore extraction might also have been influenced by differing landowners, potentially including Dunkeswell Abbey.

7. ARCHIVE AND OASIS

- 7.1** An online OASIS entry has been completed, using the unique identifier 346693, which includes a digital copy of this report. This document and the OASIS entry represent the archive for the project.

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Plate 1: Area prior to ground reduction, looking northwest



Plate 2: Area after stripping of turf, looking southeast



Plate 3: Area following ground reduction, looking south (2m scale)



Plate 4: Area following ground reduction, looking west, showing patches of flint and chalk bottom right and top left (2m scale)

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