LAND ON CHEGWYNS HILL
FOXHOLE
ST. STEPHEN-IN-BRANNEL
CORNWALL

Results of a Desk-Based Appraisal, Walkover Survey &
Historic Impact Assessment

South West Archaeology Ltd. report no. 170816

ARCHAEOLOGICAL SERVICES &
HISTORIC BUILDING RECORDING
SOUTHWEST ARCHAEOLOGY

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Land on Chegwyns Hill, Foxhole, St. Stephen-in-Brannel, Cornwall
Results of a Desk-Based Appraisal, Walkover Survey & Historic Impact Assessment

By E. Wapshott, N. Boyd & B. Morris
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Work undertaken by SWARCH for Ivan Tomlin of Planning for Results Ltd.
On behalf of Sharon Hancock

SUMMARY

This report presents the results of a desk-based appraisal, walkover survey and impact assessment (HIA) carried out by South West Archaeology Ltd. at Land on Chegwyns Hill, Foxhole, St. Stephen-in-Brannel, Cornwall, as part of the pre-planning submission for a proposed residential development.

The proposed development would be located on agricultural land on the eastern edge of the settlement of Foxhole. The name of the field (The Outer New Inclosure) and historic map sources imply it was enclosed in the early 19th century from open waste. The associated dwelling was called Julian's Cottage, occupied by a William Best but owned by Lady Anne Grenville. The desk-based appraisal and walkover survey did not identify any heritage assets on the site itself, and its location on the slopes above any putative medieval settlement/fieldsystem, but below the zone in which funerary remains might be expected, means its archaeological potential is likely to be low.

*There are two Scheduled monuments within 1km of the proposed site: the hillfort and cairn on St Stephen's Beacon, and a round on the south-west side of the Beacon. Other designated heritage assets in the wider area are located at such a distance to minimise the impact of the proposed development, or else the contribution of setting to overall significance is less important than other factors. The industrial character of the landscape, and the landscape context of those buildings and monuments, is such that they would be partly or wholly insulated from the effects of the proposed development. The only designated heritage asset likely to be affected in any appreciable way (**negative/minor**) is the Scheduled hillfort and cairn at St Stephen's Beacon.*

*With this in mind, the overall impact of the proposed development can be assessed as **negligible**. The impact of the development on the buried archaeological resource is **permanent/irreversible**, but the likelihood encountering significant archaeological deposits is deemed to be low.*

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ACKNOWLEDGEMENTS

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1.0 INTRODUCTION

LOCATION: LAND ON CHEGWYNS HILL, FOXHOLE
PARISH: ST. STEPHEN-IN-BRANNEL
COUNTY: CORNWALL
NGR: CENTRED ON SW 96727 54686
SWARCH REF: FCH17

1.1 PROJECT BACKGROUND

This report presents the results of a desk-based appraisal, walkover survey and historical visual impact assessment (HVIA) carried out by South West Archaeology Ltd. (SWARCH) on Land on Chegwyns Hill, Foxhole, St. Stephen-in-Brannel, Cornwall (Figure 1). The work was commissioned by Ivan Tomlin of Planning for Results (the Agent) on behalf of Sharon Hancock (the Client) in order to establish the historic background for the site and assess the potential impact of a proposed housing development.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The proposed site consists of a roughly triangular field on the south side of the road at Chegwyns Hill on the western edge of the settlement of Foxhole, on a south-west facing slopes of Watch Hill at an altitude of c.215m AOD. The soils of this area are the gritty, loamy, very acid soils with a wet peaty surface horizon with thin iron pan of the Hexworthy Association (SSEW 1983), which overlie the igneous granite bedrock of the St. Austell Intrusion (BGS 2017).

1.3 HISTORICAL BACKGROUND & ARCHAEOLOGICAL BACKGROUND

The site is located within the parish of St. Stephen-in-Brannel on the western side of the Hensbarrow granite uplands. Watch Hill, to the east of Foxhole, once sported the best group of Prehistoric monuments in the area before they were covered by the spoil tips associated with the china clay industry (CISI 2004). The area had a history of copper and tin mining before the china clay industry took hold in the late 18th century. The village of Foxhole expanded during the 19th century as china clay extraction gathered pace.

1.4 METHODOLOGY

The desk-based appraisal follows the guidance as outlined in: *Standard and Guidance for Archaeological Desk-Based Assessment* (CIfA 2014; revised 2017) and *Understanding Place: historic area assessments in a planning and development context* (Historic England 2017). The historic visual impact assessment follows the guidance outlined in: *Conservation Principles: policies and guidance for the sustainable management of the historic environment* (English Heritage 2008), *The Setting of Heritage Assets* (Historic England 2015), *Seeing History in the View* (English Heritage 2011b), *Managing Change in the Historic Environment: Setting* (Historic Scotland 2010), and with reference to *Visual Assessment of Wind farms: Best Practice* (University of Newcastle 2002), and *Guidelines for Landscape and Visual Impact Assessment* 3rd edition (Landscape Institute 2013).

FIGURE 1: SITE LOCATION (THE PROPOSED SITE IS INDICATED).

2.0 DESK-BASED APPRAISAL AND CARTOGRAPHIC ANALYSIS

2.1 DOCUMENTARY HISTORY

The village of Foxhole is located within the parish of St. Stephen-in-Brannel on the western side of the Hensbarrow granite uplands, in the East division of the Hundred of Powder. The village lies within the Blackmore Stannery, which, during the medieval period, produced a large proportion of the tin coming out of the South West. Stenagwyn Mine, first documented in 1584, is one of the earliest mines in the area, and the village takes its name from a tin works first documented in 1686. By the 18th century tin production had declined significantly, but as the rare mineral fluellite was noted at Stenagwyn in 1824 this indicates that works were still underway at that time.

Josiah Wedgwood leased china clay sets in Carloggas and Foxhole in 1779, and in 1798 he worked with the Minton and New Hall potteries to set up the Hendra Company to work china stone and clay on Hendra Downs. The development of the china clay industry in the 19th and 20th century has had a pronounced impact on the landscape and the development of settlement in the area.

Prior to the clay industry Foxhole was a very small farming hamlet located on the edge of open unenclosed upland grazing. The Census records indicate that over the course of the 19th century an increasing number of clay labourers lived in Foxhole; some of the farmers and tradesmen using their wagons to carry clay for extra income. By the late 19th century, a number of the smaller farms had merged, reducing the number of households recorded in the Census. However, prior to c.1900 the village of Foxhole still consisted of smallholdings and cottages loosely strung out along the main road (B3279). Since that time, its location in relation to a series of major china clay pits has ensured its steady growth.

The proposed site lies on the eastern edge of Foxhole, outside the medieval fields associated with the settlement and within one of the later larger intakes from the open moor. In c.1840 the land was owned by Lady Anne Grenville. At that time the manors of Brannell and Bodinneck were both held by the Grenville family, so it is unclear to which manor Foxhole belonged. The field in question (no.667) is listed as *Outer New Inclosure*, attached to *Julian's Cottage*. Its name strongly implies this was a fairly recent smallholding of 10a, enclosed from the open waste in the late 18th or early 19th century.

2.2 CARTOGRAPHIC SOURCES

The first useful historic map is the 1811 Ordnance Surveyor's draft map of the area. The layout of roads and settlements on these maps is usually correct, as is the boundary between open and enclosed land; field boundaries tend to be representative rather accurate. This map would appear to show the proposed site as unenclosed at this date.

The 1838 St. Stephens-in-Brannell tithe map shows this area as enclosed; the proposed site is listed as *Outer New Inclosure* (field no.667). It belonged to a tiny (10a) smallholding owned by Lady Anne Grenville and occupied by William Best (see Table 1). There are 80 people with the surname *Best* in the 1841 Census for St. Stephen-in-Brannel, 4 of whom are called William, but none are recorded as the head of a household. The land is listed as arable.

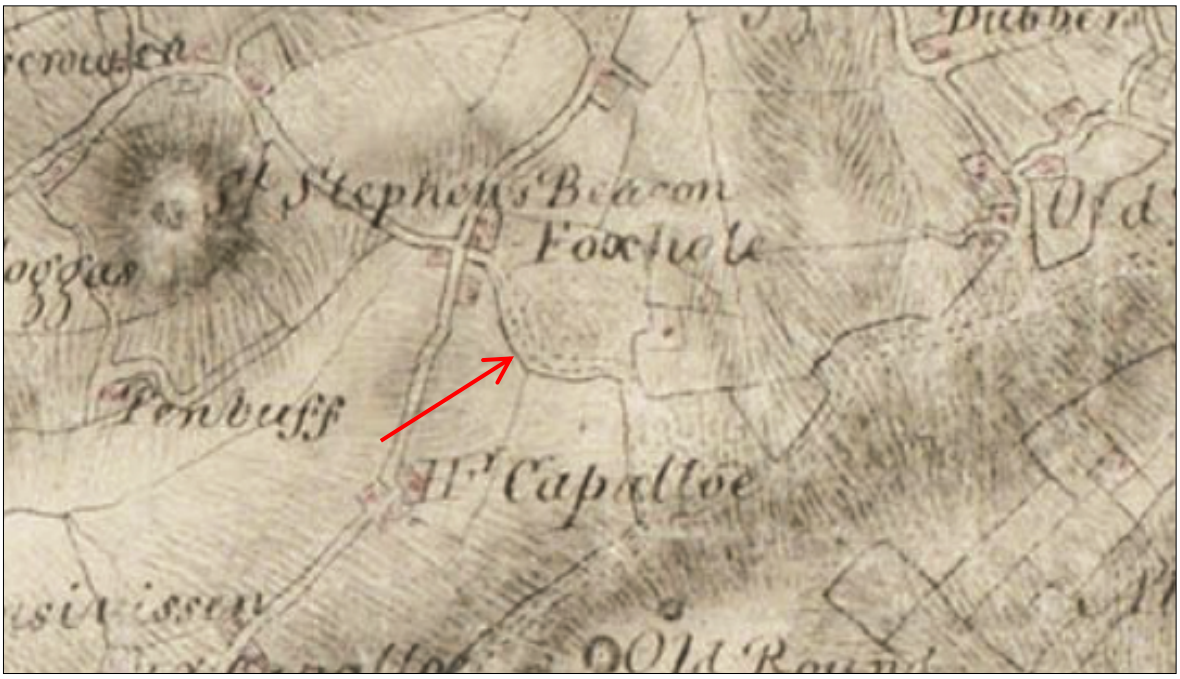


FIGURE 2: EXTRACT FROM THE 1811 OS SURVEYOR'S DRAFT MAP OF THE AREA (BL); THE SITE IS INDICATED.

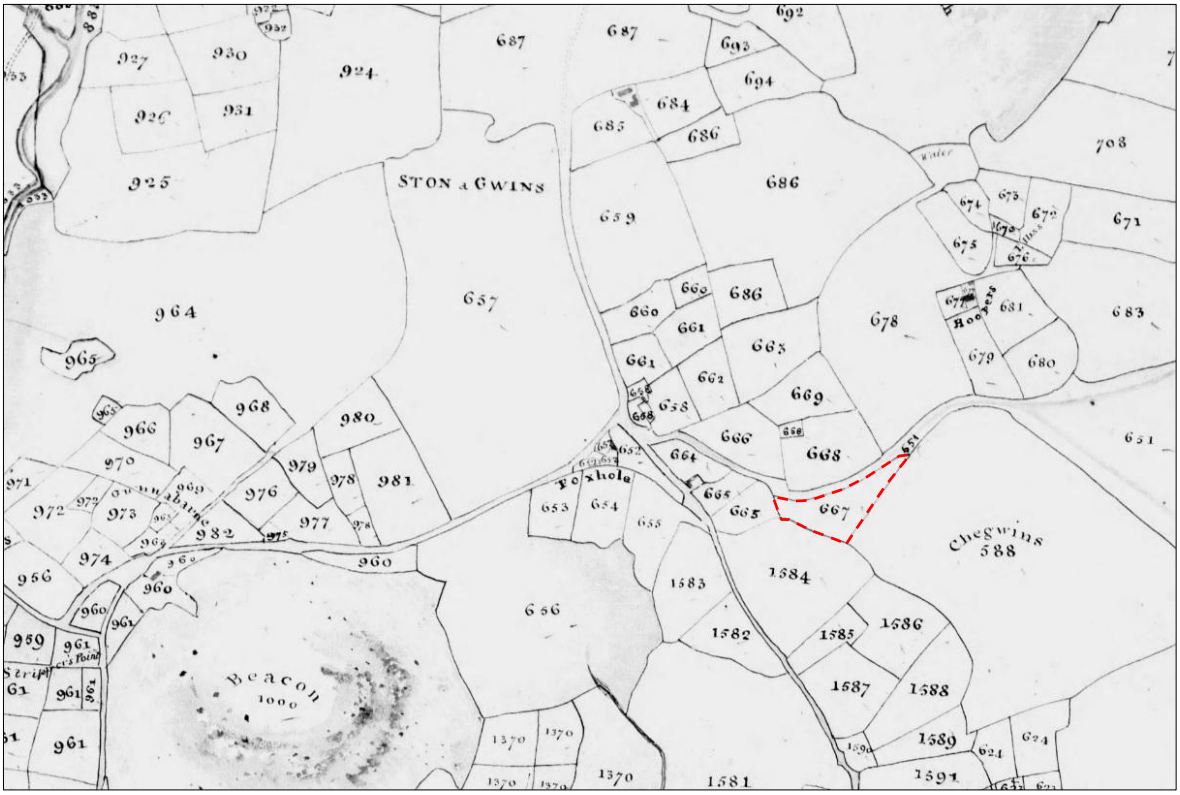


FIGURE 3: EXTRACT FROM THE 1838 ST. STEPHENS TITHE MAP. THE SITE IS INDICATED.

TABLE 1: EXTRACT FROM THE 1838 ST. STEPHENS TITHE APPORTIONMENT (CRO).

No	Land owner	Occupier	Plot name	Land use
664	Lady Anne Grenville	William Best	Julians Cottage and Ground	Cottage & Garden
665			The Two Home Meadows	Arable
666			The New Inclosure	Arable
667			The Outer New Inclosure	Arable
668			Lower Downs	Rough Pasture
669			Higher Downs	Rough Pasture

By 1889 (Figure 4) the field had been bisected by the track leading to Chegwins. Chegwins is not depicted on the tithe map, but field no.588 is listed in the apportionment as *Chegwins Cottage, Outhouses, Down, and New Inclosures*.

Wellbull (*Wheal Bull*) China Clay Works to the south-west were built in the mid 19th century, and by 1879 the settlement of Foxhole had expanded slightly. The field labelled *Ston a Gwins* on the tithe map had been enclosed and a new farm, *Stannagwyn*, built. Further enclosures are shown around the edge of the 1838 fields, and some internal rationalisation had taken place in the period 1838-1879 (e.g. the boundaries between field nos. 666, 667 and 669 have been removed and the space divided into five smaller fields). The Newquay and Cornwall Junction Railway was opened in 1869, and remains active.

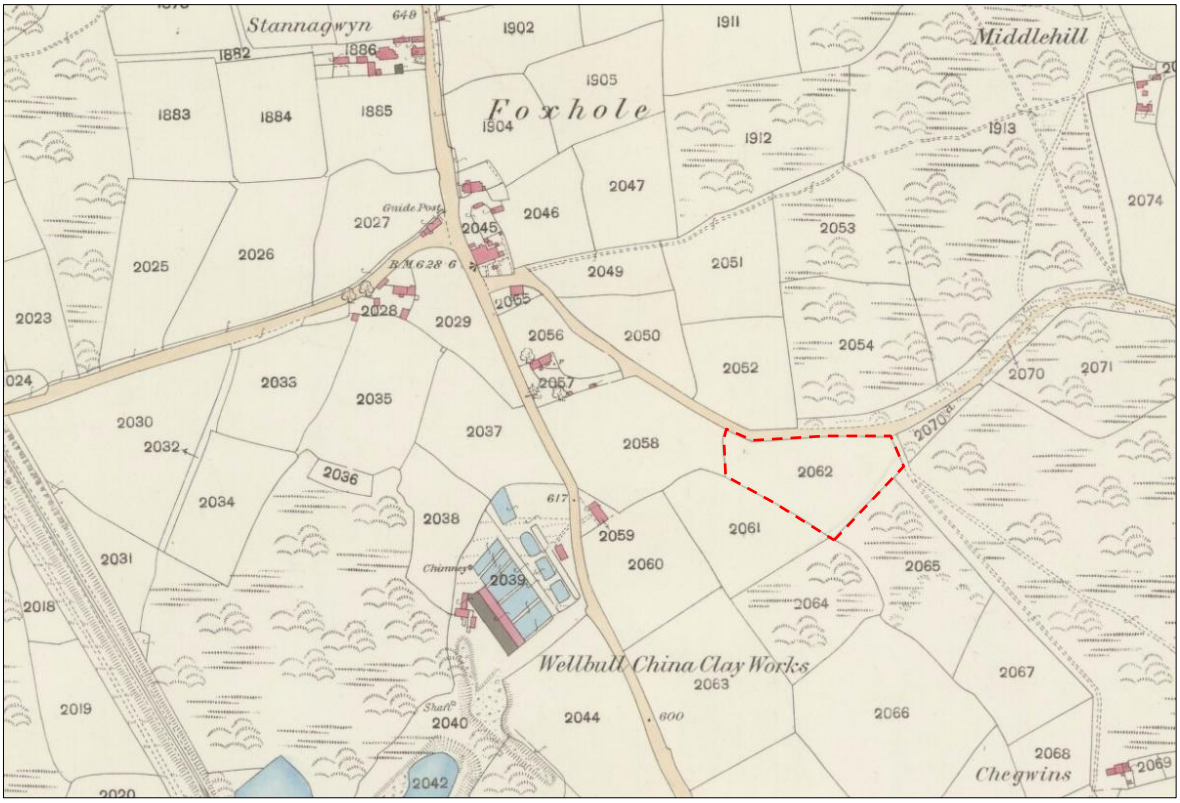


FIGURE 4: EXTRACT FROM THE OS 1ST EDITION 25 INCH MAP, 1879×81; THE SITE IS INDICATED (CRO) (CORNWALL SHEET L.2).

The OS map of 1907 (Figure 5) shows that Foxhole continued to develop. The Methodist Church had been constructed in 1894. The Wellbull China Clay Works were converted into houses, and rows of terraced housing are shown along the road to the south. Some of the fields have lost the rough ground symbols of the 1st edition map, implying the land had been improved.

The OS map of 1934 (Figure 6) additional housing and a school had been built. The *Old Clay Pit* has been extended and is labelled *Wheal Bull China Clay Works*. The site itself remains unchanged. The small strip of rough ground immediately to the north of the road running past the site appears to have had two long narrow exploratory pits dug along its length.

Later OS maps (not illustrated) chart the growth of the Wheal Bull China Clay pit and the expansion of settlement in Foxhole. The proposed site does not change, although in later maps the symbol for rough ground reappears.

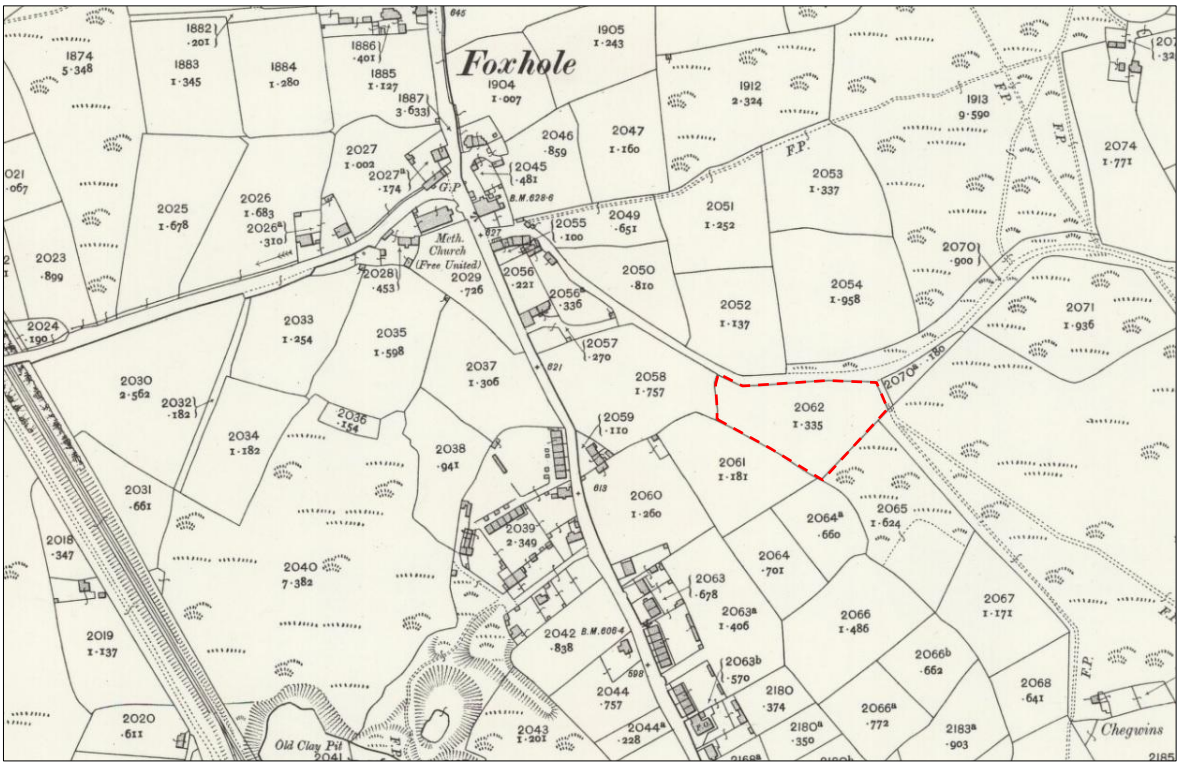


FIGURE 5: EXTRACT FROM THE OS 2ND EDITION 25 INCH MAP, 1906×07; THE SITE IS INDICATED (CRO) (CORNWALL SHEET L.2).

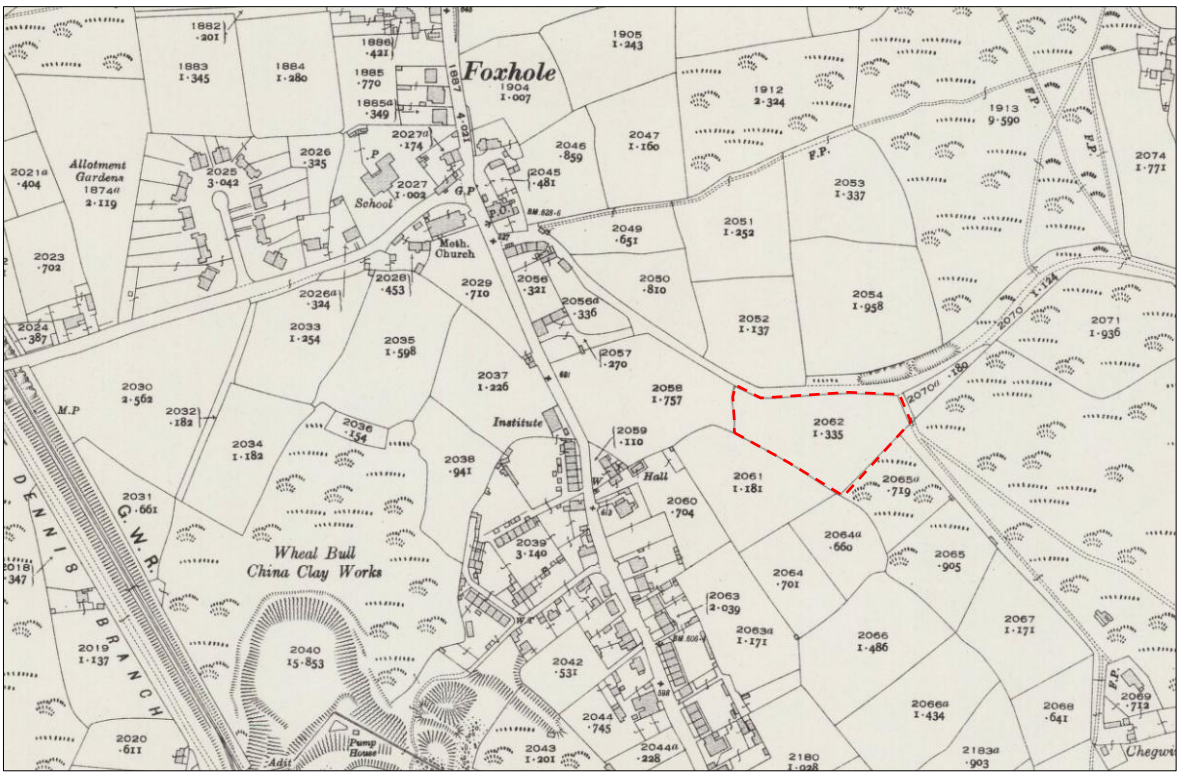


FIGURE 6: EXTRACT FROM THE OS 3RD REVISION 25 INCH MAP, 1932×34; THE SITE IS INDICATED (CRO) (CORNWALL SHEET L.2).

3.1.1 BASELINE DATA

The amount of archaeological investigation that has been carried out in the area is fairly limited (see Table 3). Much of this has formed part of the research into the wider industrial Cornish landscape (CAU 1991; Ratcliffe 1997; CAU2014), but some includes more localised surveys, including the mining district of Goverseth (CAU 1999) and the industrial settlements of Foxhole and Carpalla (CISI Cahill Partnership 2004). Surveys of individual buildings have been carried out prior to demolition at Goverseth Press Repair Shop (CAU 2000; 1995) and at Mica Pits (CAU 2000). Excavation has taken place at a number of barrow sites prior to china clay extraction/spoil heap extension (Miles 1973; 1975).

Most of the sites listed in the HER (see Table 2 and Figure 7) are upstanding or have been identified from documentary references. The Cornwall and Scilly HER identifies activity in the area dating from the Prehistoric through to the post-medieval and modern periods (see below). The county HLC characterises most of the landscape as *post-medieval enclosed* and *industrial* land, with a *high* potential for medieval and post-medieval industrial archaeological remains.

No prior archaeological investigations have been carried out on the site itself, and no monuments are recorded as existing on the site.

3.1.2 PREHISTORIC AND ROMANO-BRITISH 4000BC – AD410

Prehistoric activity is well evidenced within 1km of the site, possibly starting as early as the Neolithic. The SAM at St. Stephens Beacon is probably an Iron Age hillfort but may also be a Neolithic tor enclosure (MCO080). This monument forms part of wider Bronze Age funerary landscape that includes multiple barrows, on St. Stephens Beacon (MCO2336) as well as at Chegwins (MCO50911) and on Watch Hill (MCO3957-60). Later Prehistoric and Romano-British settlement is also represented by earthworks and/or documentary references to enclosures (rounds) at Watch Hill (MCO8893), Carpalla Farm (MCO45721), Penbough (MCO8308), as well as St. Stephens Beacon (MCO8520).

3.1.3 EARLY MEDIEVAL AD410 – AD1065

There is no direct evidence for early medieval activity within 1km of the site; four sets of cropmarks visible on aerial photographs suggest field boundaries at Goonabarn (MCO45718; MCO45719; MCO45720) and enclosures at Noppies (MCO53542); these are undated but have been interpreted as being possibly early medieval.

3.1.4 MEDIEVAL AD1066 - AD1540

There is much better evidence for settlement in the medieval period, at Goonbarn (MCO14570; first documented 1312), Penbough (MCO16049; in 1320), and Carpalla (MCO13844; in 1336). A medieval fieldsystem is documented at Nanpean (MCO21242), and earthworks associated with ridge and furrow agriculture are recorded at Chegwins (MCO50916). In the latter instance, unless the ridge and furrow is actually coeval with Chegwins (i.e. is late 19th century in date), the earthworks would form part of a medieval relict agricultural landscape.

3.1.5 POST-MEDIEVAL AND MODERN AD1540 - PRESENT

The bulk of the evidence falls in the post-medieval and modern periods, with the growth of earlier settlements and the creation of new ones, including at Carpalla (MCO50825; MCO50829), Foxhole (MCO50817), Goonabarn (MCO50763; MCO50771; MCO50772), Gribbs (MCO50819), Hoopers (MCO50921), and Middle Hill (MCO50926). The appearance and growth of these settlements is related to the increasing industrialisation of this landscape, with numerous china clay works and

associated structures (e.g. MCO11947; MCO25575; MCO48248); tin mining (MCO12584); and quarrying (MCO12584; MCO25561; MCO52869); the construction of the railway (MCO25522; MCO26826) facilitated the transport of goods. Settlement expansion was accompanied by the further enclosure and the layout of new fieldsystems (e.g. MCO50937).

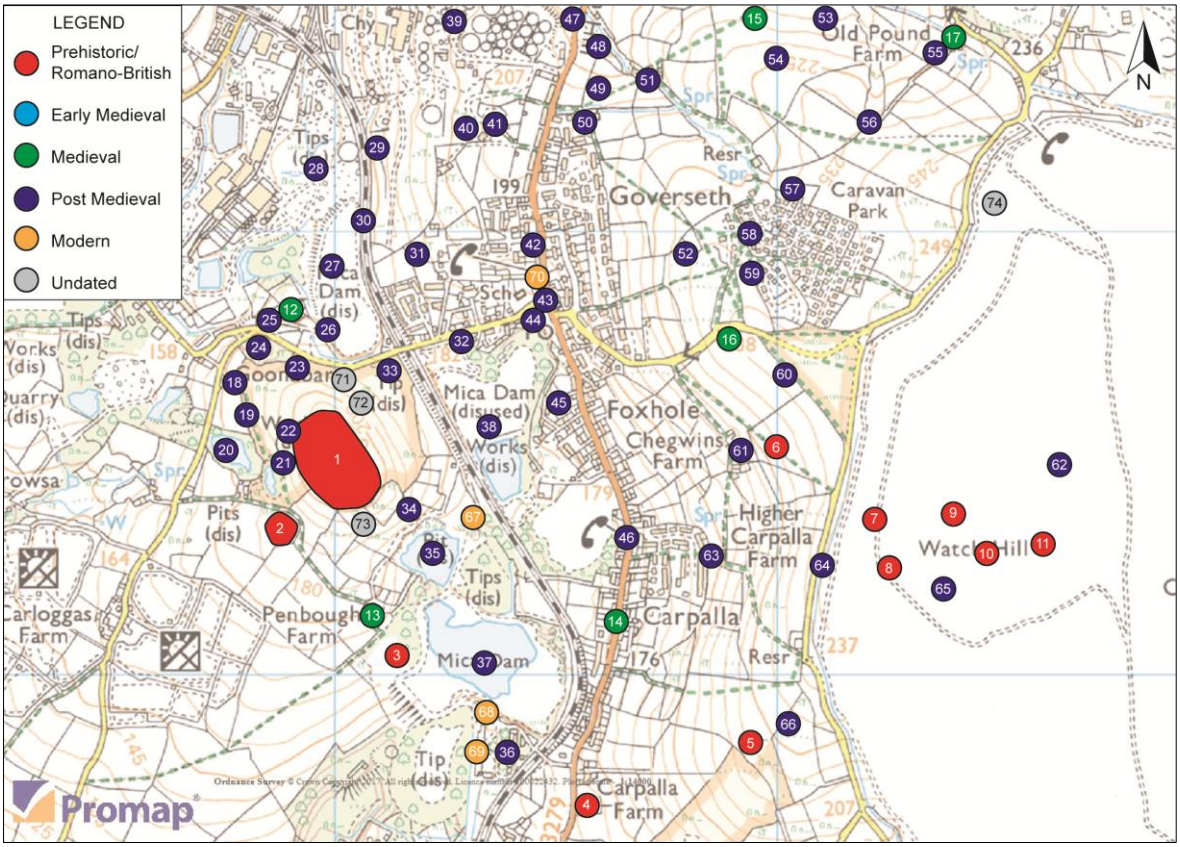


FIGURE 7: MAP OF NEARBY HERITAGE ASSETS (SOURCE: CORNWALL AND SCILLY HER).

TABLE 2: TABLE OF NEARBY HERITAGE ASSETS (SOURCE: CORNWALL AND SCILLY HER).

No.	HER No.	Name	Record	Description
1	MCO080	St Stephens Beacon	Earthwork	Neolithic tor enclosure Iron Age/Romano-British hillfort
	MCO2336	Carloggas – Bronze Age barrow	AP	Barrow within the hillfort, largely destroyed in 19th century but contained a stone-lined grave; traces survive
	MCO4065	St Stephens Beacon – medieval beacon, post-medieval beacon	Documentary	Frequent reference to a beacon
2	MCO8520	St Stephens Beacon – Iron Age round, Romano-British round	Earthwork	A round visible as a low bank and ditch
3	MCO8308	Penbough – Iron Age round, Romano-British round	Documentary	Field-name *Round Hill* suggests the site of a round, but there are no remains
4	MCO45721	Carpalla Farm – Iron Age round, Romano-British round	AP	A sub-circular enclosure is visible on aerial photographs
5	MCO403	Carpalla – Romano-British find spot	Findspot	Bronze coin of Constantius (AD293-306) found in 1933 on the downs at Carpalla
6	MCO50911	Chegwins – Bronze Age barrow	AP	Circular features visible on aerial photographs
7	MCO3960	Watch Hill – Bronze Age barrow	Documentary	One of four or five barrows that stood on Watch Hill; may just be a clearance cairn
8	MCO3959	Watch Hill – Bronze Age barrow	Excavation	One of four or five barrows that stood on Watch Hill. Excavated in 1973; central grave with a ditch and carin. Now covered by spoil heaps
9	MCO3958	Watch Hill – Bronze Age barrow	AP	One of four or five barrows that stood on Watch Hill. Visible on aerial photographs as flat topped with a ditch. Now covered by spoil heaps
10	MCO3957	Watch Hill – Bronze Age barrow	AP	One of four or five barrows that stood on Watch Hill. Visible on aerial photographs as a barrow with ditch. Now covered by spoil heaps
11	MCO8893	Watch Hill – Iron Age round,	Documentary	The documented remains of a possible round; the

No.	HER No.	Name	Record	Description
		Romano-British round		site has been destroyed by china clay works
12	MCO14570	Goonbarn – medieval settlement	Documentary	First recorded in 1312
13	MCO16049	Penbough – medieval settlement	Documentary	First recorded in 1320
14	MCO13844	Carpalla – medieval settlement	Documentary	*Carnpalla* first recorded in 1336
15	MCO21242	Nanpean – medieval field system	Cropmark	A series of long linear field boundaries survive to the south-east of Nanpean
16	MCO50916	Chegwins – medieval ridge & furrow; settlement	Earthworks	Remains include a ruined building, two enclosures and ridge and furrow (not visible on LiDAR)
17	MCO25258	Old Pound – medieval pound, post-medieval pound	Documentary	A pound was situated at Old Pound Farm since at least 1748; the pound no longer survives
18	MCO26861	St Stephens Beacon – post-medieval leat	Structure	A leat on St Stephens Beacon may be related to tin stream workings
19	MCO26862	St Stephens Beacon – post-medieval leat	Structure	A leat on St Stephens Beacon
20	MCO25558	Beacon – post-medieval china clay works	Earthwork	A short-lived china clay works now comprises a flooded pit and quarry.
21	MCO26862	St Stephens Beacon – post-medieval building	Structure	A building on St Stephens Beacon may have included a magazine
	MCO52868	St Stephens Beacon – post-medieval building	Structure	The remains of a building survive on St Stephens Beacon
	MCO52869	St Stephens Beacon – post-medieval quarry	Earthwork	A small stone quarry survives on St Stephens Beacon
22	MCO26860	St Stephens Beacon – post-medieval prospecting pit	Earthwork	A loose scatter of prospecting/shode pits
23	MCO25557	St Stephens Beacon – post-medieval quarry	Documentary	A quarry shown on the 1st edition OS map
24	MCO45717	Goonabarn – post-medieval quarry	AP	Two quarries visible on aerial photographs
	MCO50763	Goonabarn – post-medieval farmstead	Structure	The present dwelling at Goonbarn is 19th century.
25	MCO50771	Goonabarn – post-medieval farmstead	Structure	The northern settlement of Goonbarn consists of several dwellings.
26	MCO50772	Goonabarn – post-medieval settlement	Earthwork	Minor earthworks, possibly buildings, survive
27	MCO45687	Carloggas – post-medieval china clay works	AP	A pit belonging to Carloggas china clay works is visible on aerial photographs
28	MCO48248	Goverseth – post-medieval china clay works	Earthwork	China clay extraction is evident at this location, with remains including a pit and spoilheap
29	MCO25272	Goverseth – post-medieval quarry	Documentary	A quarry shown on the 1st edition OS map
30	MCO25522	Cornwall Junction Railway – post-medieval railway	Structure	A branch of the Cornwall Railway at Burngullow
31	MCO50814	Foxhole – post-medieval pit	AP	Circular feature visible on aerial photographs west of Foxhole may be the site of a small pit
32	MCO25569	Goonabarn – post-medieval quarry	Documentary	A quarry shown on the 1840 tithe map
33	MCO25568	Goonabarn – post-medieval quarry	Documentary	A quarry shown on the 1840 tithe map
34	MCO25559	St Stephens Beacon – post-medieval quarry	Documentary	A quarry shown on the 1st edition OS map
35	MCO26824	Penbough – post-medieval china clay works	Earthwork	Penbough china clay works, now flooded and overgrown.
36	MCO25577	Carpalla – post-medieval settling pit	Structure	A complex of settling pits and tanks
37	MCO11947	Carpalla – post-medieval china clay works	Earthwork	Carpalla china clay works comprises the clay pit and two overgrown flat-topped dumps
38	MCO25587	Foxhole – post-medieval china clay works	Demolished structure	Site of Foxhole china clay works; by 1977 the works had been destroyed by a mica dam
39	MCO48249	Goverseth – post-medieval trackway	AP	Trackways crossing on rough ground to the north of Goverseth are visible as earthworks on aerial photographs
40	MCO12584	Stennagywn – post-medieval mine	Structure	Stennagwyn mine produced tin but was of minor importance
41	MCO25274	Goverseth – post-medieval quarry	Documentary	A quarry shown on the 1st edition OS map
42	MCO50815	Stenagwyns – post-medieval settlement	Structure	The settlement of Stenagwyns north of Foxhole is first recorded in 1880
43	MCO50817	Foxhole – post-medieval settlement	Documentary	Two or three houses are recorded at Foxhole on the 1840 tithe map
44	MCO33070	Foxhole – post-medieval Nonconformist chapel	Structure	Free Methodist chapel, with Sunday School to rear, built in 1894
45	MCO25578	Wellbull – post-medieval china clay works	Documentary	Wellbull china clay works is shown on the 1st edition OS map
46	MCO50825	Carpalla – post-medieval farmstead	Structure	The farmstead consists of a farmhouse, barn, pre-19th century cartshed and other buildings

No.	HER No.	Name	Record	Description
	MCO50829	Carpalla – post-medieval farmstead	Structure	The farmstead consists of a heavily-restored cottage, a bungalow and a cowhouse
	MCO50819	Gribbs – post-medieval settlement	Structure	The settlement consists of five dwellings, two of which are modern, two are possible chall barns
47	MCO53638	Goverseth – post-medieval terrace	Structure	A terrace of 19th century cottages
48	MCO26910	Lower Goverseth – post-medieval streamworks	Earthwork	Eluvial streamworks at Lower Goverseth
49	MCO48253	Higher Goverseth – post-medieval field boundary	AP	Two parallel linear features visible on aerial photographs
50	MCO53461	Higher Goverseth – post-medieval buildings	Structure	Higher Goverseth is recorded on the 1840 tithe map; buildings include cartshed, barn and house
51	MCO53637	Goverseth – post-medieval settlement	Documentary	The settlement of Lower Goverseth is shown on the 1st edition OS map
52	MCO50937	Middle Hill – post-medieval field system	AP	A possible strip field system is visible on aerial photographs to the west of Middle Hill
53	MCO53571	Old Pound – post-medieval prospecting pit	AP	Two circular features visible on aerial photographs; appear to be natural
54	MCO48260	Old Pound – post-medieval trackway	AP	Two lengths of track are visible on aerial photographs.
55	MCO53559	Old Pound – post-medieval buildings	Structure	The settlement of Old Pound is recorded on the 1840 tithe map
56	MCO26909	Old Pound – post-medieval streamworks	Earthwork	Eluvial streamworks at Old Pound survive and included a cutting, leat and heaps
57	MCO50941	Henmoor – post-medieval settlement	Documentary	The settlement of Henmoor is shown on the 1840 tithe map
58	MCO50931	Middle Hill – post-medieval settlement	Documentary	A settlement to the south of Middle Hill is shown on the 1st edition OS map.
	MCO50926	Middle Hill – post-medieval settlement	Structure	The settlement of Middle Hill is shown on the 1880 1st edition OS map
59	MCO50921	Hoopers – post-medieval settlement	Structure	The settlement of Hoopers is shown on the 1840 tithe map; now within a caravan park
60	MCO50914	Chegwins – post-medieval reservoir, post-medieval pond	Earthwork	Possible 19th century pond or reservoir built into the higher eastern boundary of an enclosure
61	MCO50902	Chegwins – post-medieval farmstead	Structure	All that survives of Chegwins is the farmhouse
62	MCO25567	Watch Hill – post-medieval quarry	Documentary	A quarry on Watch Hill is marked on Hamilton Jenkin's map; now destroyed by the Blackpool china clay works
63	MCO50897	Higher Carpalla – post-medieval farmstead	Structure	Higher Carpalla is recorded on the 1840 tithe map; the farmhouse survives
64	MCO25561	Watch Hill – post-medieval quarry	Documentary	Quarry shown on the 1st edition OS map
65	MCO45722	Watch Hill – post-medieval quarry	AP	Four quarries are visible on aerial photographs running along Watch Hill.
66	MCO26864	Higher Carpalla – post-medieval prospecting pit	AP	Surface mine workings are visible on aerial photographs
67	MCO26825	Penbough – modern engine house	Structure	Engine house at Penbough china clay works
	MCO26826	Penbough – modern wharf	Structure	A railway wharf at Penbough
68	MCO25574	Carpalla – modern engine house	Structure	An unusual, late period beam-engine house
69	MCO25575	Carpalla – modern china clay dries	Structure	Partly-demolished large coal-fired pan-kiln
70	MCO53104	Foxhole – modern school	Structure	School built in 1911
71	MCO45718	Goonabarn – early medieval field boundary	AP	Earthwork bank 160m long visible on aerial photographs
72	MCO45719	Goonabarn – early medieval trackway	AP	Trackway 223m long is visible on aerial photographs
73	MCO45720	Goonabarn – early medieval field boundary	AP	Field boundary visible on aerial photographs
74	MCO53542	Noppies – early medieval enclosure	AP	Two circular cropmarks visible on aerial photographs

TABLE 3: TABLE OF NEARBY ARCHAEOLOGICAL EVENTS (SOURCE: CORNWALL AND SCILLY HER).

No.	HER No.	Name	Record	Description
1	ECO1219	St Austell China Clay Area	Interpretation	Survey/assessment of the St Austell China Clay area
2	ECO1885	Press Repair Shop, Drinnick	Building Record	Recording the press cloth repair shop, prior to its demolition
3	ECO1891	Mica Pits. Drinnick	Survey	Recording of three mica pits, prior to infilling
4	ECO2263	Watch Hill, St Stephen-in-Brannel	Intervention	Three possible barrows excavated prior to dumping of china clay waste; one contained a boat-shaped wooden coffin
5	ECO2265	St Austell Barrows	Intervention	Six barrows excavated, containing structural remains and funerary material

6	ECO2378	Industrial Settlement: Foxhole and Carpalla	Advice	Historical research and site visit of the Foxhole and Carpalla area
7	ECO2678	New Perspectives on Barrows	Presentation	Presentation on role of the ditch within barrows
8	ECO384	Goverseth ROMP	Interpretation	Historical assessment of Goverseth mining district
9	ECO49	China Clay Leader II Programme Area	Advice	Study of the archaeological sites of the St Austell china clay area
10	ECO6	Old Pound Farmstead	Survey	Building survey at Gracca farmhouse and Hillcrest Farm; survey of nearby earthworks and cartshed
11	ECO843	St Austell China Clay Area	Interpretation	Survey/assessment of archaeology/history
12	ECO884	Hill Crest (Blackpool Pit)	Survey	Building survey at Hillcrest Farm, earthwork survey of possible barrow, with subsequent evaluations
13	ECO4575	United Kingdom china-clay bearing grounds: mineral resource	Interpretation	Mapping of extent of past and current china clay exploitation in Cornwall and Devon; with assessment and recommendations
14	ECO3308	Goonbarrow Refinery, Drinnick Nanpean, West Carclaze, Baal	Interpretation	Desk-based assessment and walkover survey of known sites

3.2 WALKOVER SURVEY

The site was visited in July 2017 by E. Wapshott; the field was laid to pasture and the weather was fine and sunny, affording excellent landscape views. The site of the proposed development is a small and somewhat irregular field on a gentle west-facing slope. The grass sward of the field is mature, with clover, dandelions, docks and meadow grass species, indicating it is unlikely to have been ploughed in recent times. Small rocky outcrops were observed emerging from the grass in places, suggesting a fairly shallow soil profile. The edges of the field are populated by thistles, nettles, foxgloves and docks, with some invasive species like ragwort.

To the west, where the site abuts a garden, there is a post-and-wire fence with hedge beyond. The rest of the field is bounded by hedgebanks topped with woody shrub species like gorse and blackthorn. The northern-eastern hedgebank is faced with pitched stone; it is likely that the other hedgebanks are similar, but summer vegetation comprehensively concealed it from view. Access is via a galvanised steel gate in the northern boundary onto the road; the gateway has granite posts set back into the hedgebank. The surface of the field is not entirely even, with broad undulations noted (see the LiDAR imagery, below); it is likely these are geological in origin.

3.3 LIDAR AND AERIAL PHOTOGRAPHY

A review of the readily-available aerial photography for the site did not reveal any additional information. However, the LiDAR data for the site (see Figure 8) confirms the presence of broad undulations in the slope, and that these extend beyond the boundaries of the field. These broad, diffuse features are likely to be geological in origin.

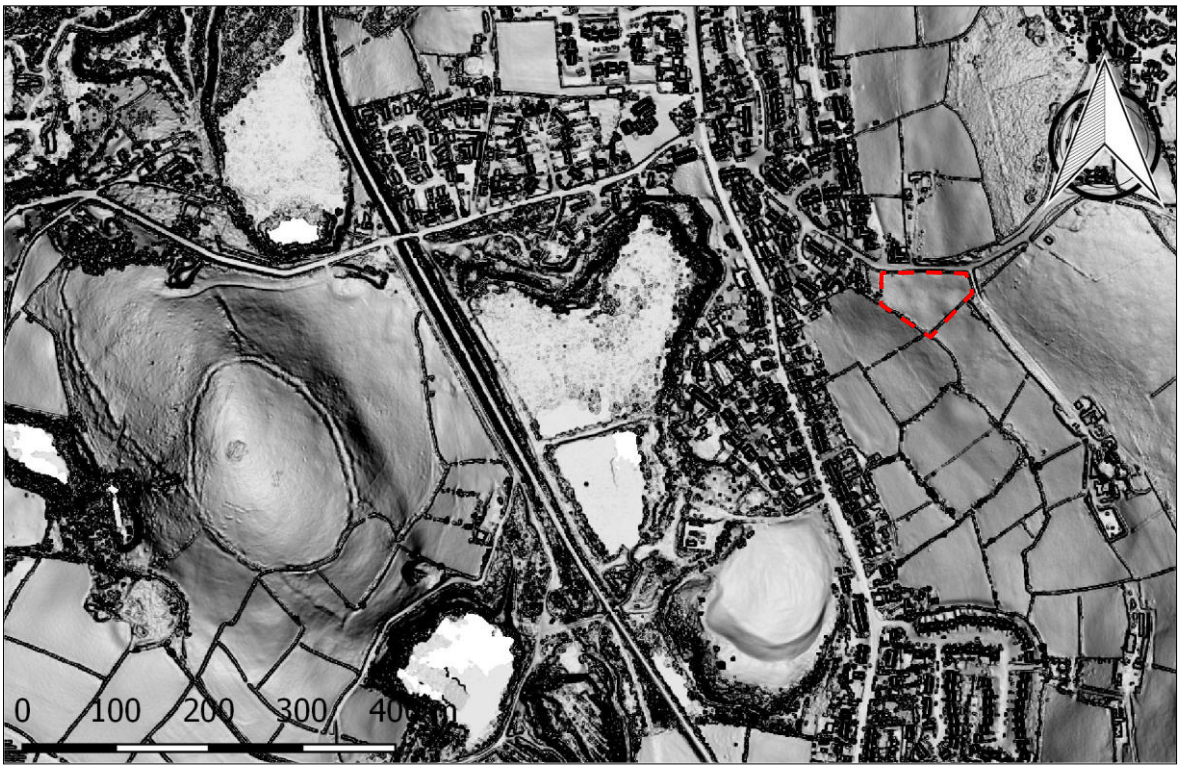


FIGURE 8: IMAGE DERIVED FROM 1M DSM LIDAR DATA, SHOWING THE SITE (INDICATED) (PROCESSED USING QGIS VER2.18.2, TERRAIN ANALYSIS/SLOPE, VERTICAL EXAGGERATION 3.0). DATA: © ENVIRONMENT AGENCY COPYRIGHT AND DATABASE RIGHTS 2017; CONTAINS OS DATA © CROWN COPYRIGHT AND DATABASE RIGHTS 2017. THE SITE IS INDICATED. NOTE THE HILLFORT AND ROUND TO THE LEFT OF THE IMAGE, AND THE LARGE ANNEX ON THE NORTH-WESTERN SIDE OF THE HILLFORT.

4.0 HISTORIC VISUAL IMPACT ASSESSMENT

4.1 HERITAGE IMPACT ASSESSMENT - OVERVIEW

The purpose of heritage impact assessment is twofold: Firstly, to understand – insofar as is reasonably practicable and in proportion to the importance of the asset – the significance of a historic building, complex, area or archaeological monument (the 'heritage asset'); secondly, to assess the likely effect of a proposed development on these heritage assets (direct impact) and their setting (indirect impact). The methodology employed in this assessment is based on the staged approach advocated in *The Setting of Heritage Assets* (GPA3 Historic England 2015), used in conjunction with the ICOMOS (2011) and DoT (DMRB vol.11; WEBTAG) guidance. Sections 4.2-4.5 discuss policy, concepts and approach; section 4.6 covers the methodology, and section 4.10 individual assessments.

4.2 NATIONAL POLICY

General policy and guidance for the conservation of the historic environment are now contained within the *National Planning Policy Framework* (Department for Communities and Local Government 2012). The relevant guidance is reproduced below:

Paragraph 128
In determining applications, local planning authorities should require the applicant to describe the significance of any heritage assets affected, including the contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should be consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which a development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

Paragraph 129
Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.

A further key document is the Planning (Listed Buildings and Conservation Areas) Act 1990, in particular section 66(1), which provides *statutory protection* to the setting of Listed buildings:

In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.

4.3 CULTURAL VALUE – DESIGNATED HERITAGE ASSETS

The majority of the most important ('nationally important') heritage assets are protected through *designation*, with varying levels of statutory protection. These assets fall into one of six categories, although designations often overlap, so a Listed early medieval cross may also be Scheduled, lie

within the curtilage of Listed church, inside a Conservation Area, and on the edge of a Registered Park and Garden that falls within a world Heritage Site.

4.3.1 SCHEDULED MONUMENTS

In the United Kingdom, a Scheduled Monument is considered an historic building, structure (ruin) or archaeological site of **'national importance'**. Various pieces of legislation, under planning, conservation, etc., are used for legally protecting heritage assets given this title from damage and destruction; such legislation is grouped together under the term 'designation', that is, having statutory protection under the *Ancient Monuments and Archaeological Areas Act 1979*. A heritage asset is a part of the historic environment that is valued because of its historic, archaeological, architectural or artistic interest; those of national importance have extra legal protection through designation.

Important sites have been recognised as requiring protection since the late 19th century, when the first 'schedule' or list of monuments was compiled in 1882. The conservation and preservation of these monuments was given statutory priority over other land uses under this first schedule. County Lists of the monuments are kept and updated by the Department for Culture, Media and Sport. In the later 20th century sites are identified by English Heritage (one of the Government's advisory bodies) of being of national importance and included in the schedule. Under the current statutory protection any works required on or to a designated monument can only be undertaken with a successful application for Scheduled Monument Consent. There are 19,000-20,000 Scheduled Monuments in England.

4.3.2 VALUE AND IMPORTANCE

While every heritage asset, designated or otherwise, has some intrinsic merit, the act of designation creates a hierarchy of importance that is reflected by the weight afforded to their preservation and enhancement within the planning system. The system is far from perfect, impaired by an imperfect understanding of individual heritage assets, but the value system that has evolved does provide a useful guide to the *relative* importance of heritage assets. Provision is also made for heritage assets where value is not recognised through designation (e.g. undesignated 'monuments of Schedulable quality and importance' should be regarded as being of *high* value); equally, there are designated monuments and structures of *low* relative merit.

TABLE 4: THE HIERARCHY OF VALUE/IMPORTANCE (BASED ON THE DMRB VOL.11 TABLES 5.1, 6.1 & 7.1).

Hierarchy of Value/Importance	
Very High	Structures inscribed as of universal importance as World Heritage Sites; Other buildings of recognised international importance; World Heritage Sites (including nominated sites) with archaeological remains; Archaeological assets of acknowledged international importance; Archaeological assets that can contribute significantly to international research objectives; World Heritage Sites inscribed for their historic landscape qualities; Historic landscapes of international value, whether designated or not; Extremely well preserved historic landscapes with exceptional coherence, time-depth, or other critical factor(s).
High	Scheduled Monuments with standing remains; Grade I and Grade II* (Scotland: Category A) Listed Buildings; Other Listed buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the Listing grade; Conservation Areas containing very important buildings; Undesignated structures of clear national importance; Undesignated assets of Schedulable quality and importance; Assets that can contribute significantly to national research objectives. Designated historic landscapes of outstanding interest; Undesignated landscapes of outstanding interest; Undesignated landscapes of high quality and importance, demonstrable national value; Well-preserved historic landscapes, exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	Grade II (Scotland: Category B) Listed Buildings; Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations; Conservation Areas containing buildings that contribute significantly to its historic character; Historic Townscape or built-up areas with important historic integrity in their buildings, or built settings (e.g.

Hierarchy of Value/Importance	
	including street furniture and other structures); Designated or undesignated archaeological assets that contribute to regional research objectives; Designated special historic landscapes; Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional value; Averagely well-preserved historic landscapes with reasonable coherence, time-depth or other critical factor(s).
Low	Locally Listed buildings (Scotland Category C(S) Listed Buildings); Historic (unlisted) buildings of modest quality in their fabric or historical association; Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures); Designated and undesignated archaeological assets of local importance; Archaeological assets compromised by poor preservation and/or poor survival of contextual associations; Archaeological assets of limited value, but with potential to contribute to local research objectives; Robust undesignated historic landscapes; Historic landscapes with importance to local interest groups; Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.
Negligible	Buildings of no architectural or historical note; buildings of an intrusive character; Assets with very little or no surviving archaeological interest; Landscapes with little or no significant historical interest.
Unknown	Buildings with some hidden (i.e. inaccessible) potential for historic significance; The importance of the archaeological resource has not been ascertained.

4.4 CONCEPTS – CONSERVATION PRINCIPLES

In making an assessment, this document adopts the conservation values (*evidential*, *historical*, *aesthetic* and *communal*) laid out in *Conservation Principles* (English Heritage 2008), and the concepts of *authenticity* and *integrity* as laid out in the guidance on assessing World Heritage Sites (ICOMOS 2011). This is in order to determine the relative importance of *setting* to the significance of a given heritage asset.

4.4.1 EVIDENTIAL VALUE

Evidential value (or research potential) is derived from the potential of a structure or site to provide physical evidence about past human activity, and may not be readily recognised or even visible. This is the primary form of data for periods without adequate written documentation. This is the least equivocal value: evidential value is absolute; all other ascribed values (see below) are subjective. However,

4.4.2 HISTORICAL VALUE

Historical value (narrative) is derived from the ways in which past people, events and aspects of life can be connected via a place to the present; it can be *illustrative* or *associative*.

Illustrative value is the visible expression of evidential value; it has the power to aid interpretation of the past through making connections with, and providing insights into, past communities and their activities through a shared experience of place. Illustrative value tends to be greater if a place features the first or only surviving example of a particular innovation of design or technology.

Associative value arises from a connection to a notable person, family, event or historical movement. It can intensify understanding by linking the historical past to the physical present, always assuming the place bears any resemblance to its appearance at the time. Associational value can also be derived from known or suspected links with other monuments (e.g. barrow cemeteries, church towers) or cultural affiliations (e.g. Methodism).

Buildings and landscapes can also be associated with literature, art, music or film, and this association can inform and guide responses to those places.

Historical value depends on sound identification and the direct experience of physical remains or landscapes. Authenticity can be strengthened by change, being a living building or landscape, and

historical values are harmed only where adaptation obliterates or conceals them. The appropriate use of a place – e.g. a working mill, or a church for worship – illustrates the relationship between design and function and may make a major contribution to historical value. Conversely, cessation of that activity – e.g. conversion of farm buildings to holiday homes – may essentially destroy it.

4.4.3 AESTHETIC VALUE

Aesthetic value (emotion) is derived from the way in which people draw sensory and intellectual stimulation from a place or landscape. Value can be the result of *conscious design*, or the *fortuitous outcome* of landscape evolution; many places combine both aspects, often enhanced by the passage of time.

Design value relates primarily to the aesthetic qualities generated by the conscious design of a building, structure or landscape; it incorporates composition, materials, philosophy and the role of patronage. It may have associational value, if undertaken by a known architect or landscape gardener, and its importance is enhanced if it is seen as innovative, influential or a good surviving example. Landscape parks, country houses and model farms all have design value. The landscape is not static, and a designed feature can develop and mature, resulting in the 'patina of age'.

Some aesthetic value developed *fortuitously* over time as the result of a succession of responses within a particular cultural framework e.g. the seemingly organic form of an urban or rural landscape or the relationship of vernacular buildings and their materials to the landscape. Aesthetic values are where proposed developments usually have their most pronounced impact: the indirect effects of most developments are predominantly visual or aural, and can extend many kilometres from the site itself. In many instances the impact of a development is incongruous, but that is itself an aesthetic response, conditioned by prevailing cultural attitudes to what the historic landscape should look like.

4.4.4 COMMUNAL VALUE

Communal value (togetherness) is derived from the meaning a place holds for people, and may be closely bound up with historical/associative and aesthetic values; it can be *commemorative, symbolic*, *social* or *spiritual*.

Commemorative and symbolic value reflects the meanings of a place to those who draw part of their identity from it, or who have emotional links to it e.g. war memorials. Some buildings or places (e.g. the Palace of Westminster) can symbolise wider values. Other places (e.g. Porton Down Chemical Testing Facility) have negative or uncomfortable associations that nonetheless have meaning and significance to some and should not be forgotten. *Social value* need not have any relationship to surviving fabric, as it is the continuity of function that is important. *Spiritual value* is attached to places and can arise from the beliefs of a particular religion or past or contemporary perceptions of the spirit of place. Spiritual value can be ascribed to places sanctified by hundreds of years of veneration or worship, or wild places with few signs of modern life. Value is dependent on the perceived survival of historic fabric or character, and can be very sensitive to change. The key aspect of communal value is that it brings specific groups of people together in a meaningful way.

4.4.5 AUTHENTICITY

Authenticity, as defined by UNESCO (2015, no.80), is the ability of a property to convey the attributes of the outstanding universal value of the property. 'The ability to understand the value attributed to the heritage depends on the degree to which information sources about this value may be understood as credible or truthful'. Outside of a World Heritage Site, authenticity may usefully be employed to convey the sense a place or structure is a truthful representation of the thing it purports to portray. Converted farmbuildings, for instance, survive in good condition, but are drained of the authenticity of a working farm environment.

4.4.6 INTEGRITY

Integrity, as defined by UNESCO (2015, no.88), is the measure of wholeness or intactness of the cultural heritage and its attributes. Outside of a World Heritage Site, integrity can be taken to represent the survival and condition of a structure, monument or landscape. The intrinsic value of those examples that survive in good condition is undoubtedly greater than those where survival is partial and condition poor.

4.4.7 SUMMARY

As indicated, individual developments have a minimal or tangential effect on most of the heritage values outlined above, largely because almost all effects are indirect. The principle values in contention are aesthetic/designed and, to a lesser degree aesthetic/fortuitous. There are also clear implications for other value elements (particularly historical and associational, communal and spiritual), where views or sensory experience is important. As ever, however, the key element here is not the intrinsic value of the heritage asset, nor the impact on setting, but the relative contribution of setting to the value of the asset.

4.5 SETTING – THE SETTING OF HERITAGE ASSETS

The principle guidance on this topic is contained within two publications: *The Setting of Heritage Assets* (Historic England 2015) and *Seeing History in the View* (English Heritage 2011). While interlinked and complementary, it is useful to consider heritage assets in terms of their *setting* i.e. their immediate landscape context and the environment within which they are seen and experienced, and their *views* i.e. designed or fortuitous vistas experienced by the visitor when at the heritage asset itself, or those that include the heritage asset. This corresponds to the experience of its wider landscape setting.

Where the impact of a proposed development is largely indirect, *setting* is the primary consideration of any HIA. It is a somewhat nebulous and subjective assessment of what does, should, could or did constitute the lived experience of a monument or structure. The following extracts are from the Historic England publication *The Setting of Heritage Assets* (2015, 2 & 4):

The NPPF makes it clear that the setting of a heritage asset is the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve.

Setting is not a heritage asset, nor a heritage designation. Its importance lies in what it contributes to the significance of the heritage asset. This depends on a wide range of physical elements within, as well as perceptual and associational attributes, pertaining to the heritage asset's surroundings.

While setting can be mapped in the context of an individual application or proposal, it does not have a fixed boundary and cannot be definitively and permanently described for all time as a spatially bounded area or as lying within a set distance of a heritage asset because what comprises a heritage asset's setting may change as the asset and its surroundings evolve or as the asset becomes better understood or due to the varying impacts of different proposals.

The HIA below sets out to determine the magnitude of the effect and the sensitivity of the heritage asset to that effect. The fundamental issue is that proximity and visual and/or aural relationships may affect the experience of a heritage asset, but if setting is tangential to the significance of that monument or structure, then the impact assessment will reflect this. This is explored in more detail below.

4.5.1 LANDSCAPE CONTEXT

The determination of *landscape context* is an important part of the assessment process. This is the physical space within which any given heritage asset is perceived and experienced. The experience of this physical space is related to the scale of the landform, and modified by cultural and biological factors like field boundaries, settlements, trees and woodland. Together, these determine the character and extent of the setting.

Landscape context is based on topography, and can vary in scale from the very small – e.g. a narrow valley where views and vistas are restricted – to the very large – e.g. wide valleys or extensive upland moors with 360° views. Where very large landforms are concerned, a distinction can be drawn between the immediate context of an asset (this can be limited to a few hundred metres or less, where cultural and biological factors impede visibility and/or experience), and the wider context (i.e. the wider landscape within which the asset sits).

When new developments are introduced into a landscape, proximity alone is not a guide to magnitude of effect. Dependant on the nature and sensitivity of the heritage asset, the magnitude of effect is potentially much greater where the proposed development is to be located within the landscape context of a given heritage asset. Likewise, where the proposed development would be located outside the landscape context of a given heritage asset, the magnitude of effect would usually be lower. Each case is judged on its individual merits, and in some instances the significance of an asset is actually greater outside of its immediate landscape context; for example, where church towers function as landmarks in the wider landscape.

4.5.2 VIEWS

Historic and significant views are the associated and complementary element to setting, but can be considered separately as developments may appear in a designed view without necessarily falling within the setting of a heritage asset *per se*. As such, significant views fall within the aesthetic value of a heritage asset, and may be *designed* (i.e. deliberately conceived and arranged, such as within parkland or an urban environment) or *fortuitous* (i.e. the graduated development of a landscape 'naturally' brings forth something considered aesthetically pleasing, or at least impressive, as with particular rural landscapes or seascapes), or a combination of both (i.e. the *patina of age*, see below). The following extract is from the English Heritage publication *Seeing History in the View* (2011, 3):

Views play an important part in shaping our appreciation and understanding of England's historic environment, whether in towns or cities or in the countryside. Some of those views were deliberately designed to be seen as a unity. Much more commonly, a significant view is a historical composite, the cumulative result of a long process of development.

The Setting of Heritage Assets (2015, 3) lists a number of instances where views contribute to the particular significance of a heritage asset:

- Views where relationships between the asset and other historic assets or places or natural features are particularly relevant;
- Views with historical associations, including viewing points and the topography of battlefields;
- Views where the composition within the view was a fundamental aspect of the design or function of the heritage asset;
- Views between heritage assets and natural or topographic features, or phenomena such as solar and lunar events;
- Views between heritage assets which were intended to be seen from one another for aesthetic, functional, ceremonial or religious reasons, such as military or defensive sites, telegraphs or beacons, Prehistoric funerary and ceremonial sites.

On a landscape scale, views, taken in the broadest sense, are possible from anywhere to anything, and each may be accorded an aesthetic value according to subjective taste. Given that terrain, the biological and built environment, and public access restrict our theoretical ability to see anything from anywhere, in this assessment the term *principal view* is employed to denote both the deliberate views created within designed landscapes, and those fortuitous views that may be considered of aesthetic value and worth preserving. It should be noted, however, that there are distance thresholds beyond which perception and recognition fail, and this is directly related to the scale, height, massing and nature of the heritage asset in question. For instance, beyond 2km the Grade II cottage comprises a single indistinct component within the wider historic landscape, whereas at 5km or even 10km a large stately home or castle may still be recognisable. By extension, where assets cannot be seen or recognised i.e. entirely concealed within woodland, or too distant to be distinguished, then visual harm to setting is moot. To reflect this emphasis on recognition, the term *landmark asset* is employed to denote those sites where the structure (e.g. church tower), remains (e.g. earthwork ramparts) or – in some instances – the physical character of the immediate landscape (e.g. a distinctive landform like a tall domed hill) make them visible on a landscape scale. In some cases, these landmark assets may exert landscape *primacy*, where they are the tallest or most obvious man-made structure within line-of-sight. However, this is not always the case, typically where there are numerous similar monuments (multiple engine houses in mining areas, for instance) or where modern developments have overtaken the heritage asset in height and/or massing.

Yet visibility alone is not a clear guide to visual impact. People perceive size, shape and distance using many cues, so context is critically important. For instance, research on electricity pylons (Hull & Bishop 1988) has indicated scenic impact is influenced by landscape complexity: the visual impact of pylons is less pronounced within complex scenes, especially at longer distances, presumably because they are less of a focal point and the attention of the observer is diverted. There are many qualifiers that serve to increase or decrease the visual impact of a proposed development (see Table 4), some of which are seasonal or weather-related.

Thus the principal consideration of assessment of indirect effects cannot be visual impact *per se*. It is an assessment of the likely magnitude of effect, the importance of setting to the significance of the heritage asset, and the sensitivity of that setting to the visual or aural intrusion of the proposed development. The schema used to guide assessments is shown in Table 4 (below).

4.6 METHODOLOGY

The methodology adopted in this document is based on that outlined in *The Setting of Heritage Assets* (English Heritage 2011 and 2015 Guidance Note). The assessment of visual impact at this stage of the development is an essentially subjective one, and is based on the experience and professional judgement of the authors.

Visibility alone is not a clear guide to impact. People perceive size, shape and distance using many cues, so context is critically important. For instance, research on electricity pylons (Hull & Bishop 1988) has indicated scenic impact is influenced by landscape complexity: the visual impact of pylons is less pronounced within complex scenes, especially at longer distances, presumably because they are less of a focal point and the attention of the observer is diverted. There are many qualifiers that serve to increase or decrease the visual impact of a proposed development (see Table 4), some of which are seasonal or weather-related.

The principal consideration of this assessment is not visual impact *per se*. It is an assessment of the likely magnitude of effect, the importance of setting to the significance of heritage assets, and the sensitivity of that setting to the visual intrusion of the proposed development. The schema

used to guide assessments is shown in Table 4 (below). A key consideration in these assessments is the concept of *landscape context* (see below).

4.6.1 ASSESSMENT AND LANDSCAPE CONTEXT

The determination of *landscape context* is an important part of the assessment process. This is the physical space within which any given heritage asset is perceived and experienced. The experience of this physical space is related to the scale of the landform, and modified by cultural and biological factors like field boundaries, settlements, trees and woodland.

Landscape context is based on topography, and can vary in scale from the very small – e.g. a narrow valley where views and vistas are restricted – to the very large – e.g. wide valleys or extensive upland moors with 360° views. Where very large landforms are concerned, a distinction can be drawn between the immediate context of an asset (this can be limited to a few hundred metres or less, where cultural and biological factors impede visibility and/or experience), and the wider context (i.e. the wider landscape within which the asset sits).

When new developments are introduced into a landscape, proximity alone is not a guide to magnitude of effect. Dependant on the nature and sensitivity of the heritage asset, the magnitude of effect is potentially much greater where the proposed development is to be located within the landscape context of a given heritage asset. Likewise, where the proposed development would be located outside the landscape context of a given heritage asset, the magnitude of effect would usually be lower. Each case is judged on its individual merits, and in some instances the significance of an asset is actually greater outside of its immediate landscape context, for example, where church towers function as landmarks in the wider landscape.

4.7 TYPE AND SCALE OF IMPACT

The effect of a proposed development on a heritage asset can be direct (i.e. the designated structure itself is being modified or demolished, the archaeological monument will be built over), or indirect (e.g. a housing estate built in the fields next to a Listed farmhouse, and wind turbine erected near a hillfort etc.); in the latter instance the principal effect is on the setting of the heritage asset. A distinction can be made between construction and operational phase effects. Individual developments can affect multiple heritage assets (aggregate impact), and contribute to overall change within the historic environment (cumulative impact).

Construction phase: construction works have direct, physical effects on the buried archaeology of a site, and a pronounced but indirect effect on neighbouring properties. Direct effects may extend beyond the nominal footprint of a site e.g. where related works or site compounds are located off-site. Indirect effects are both visual and aural, and may also affect air quality, water flow and traffic in the local area.

Operational phase: the operational phase of a development is either temporary (e.g. wind turbine or mobile phone mast) or effectively permanent (housing development or road scheme). The effects at this stage are largely indirect, and can be partly mitigated over time through provision of screening. Large development would have an effect on historic landscape character, as they transform areas from one character type (e.g. agricultural farmland) into another (e.g. suburban).

Cumulative Impact: a single development will have a physical and a visual impact, but a second and a third site in the same area will have a synergistic and cumulative impact above and beyond that of a single site. The cumulative impact of a proposed development is particularly difficult to estimate, given the assessment must take into consideration operational, consented and proposals in planning.

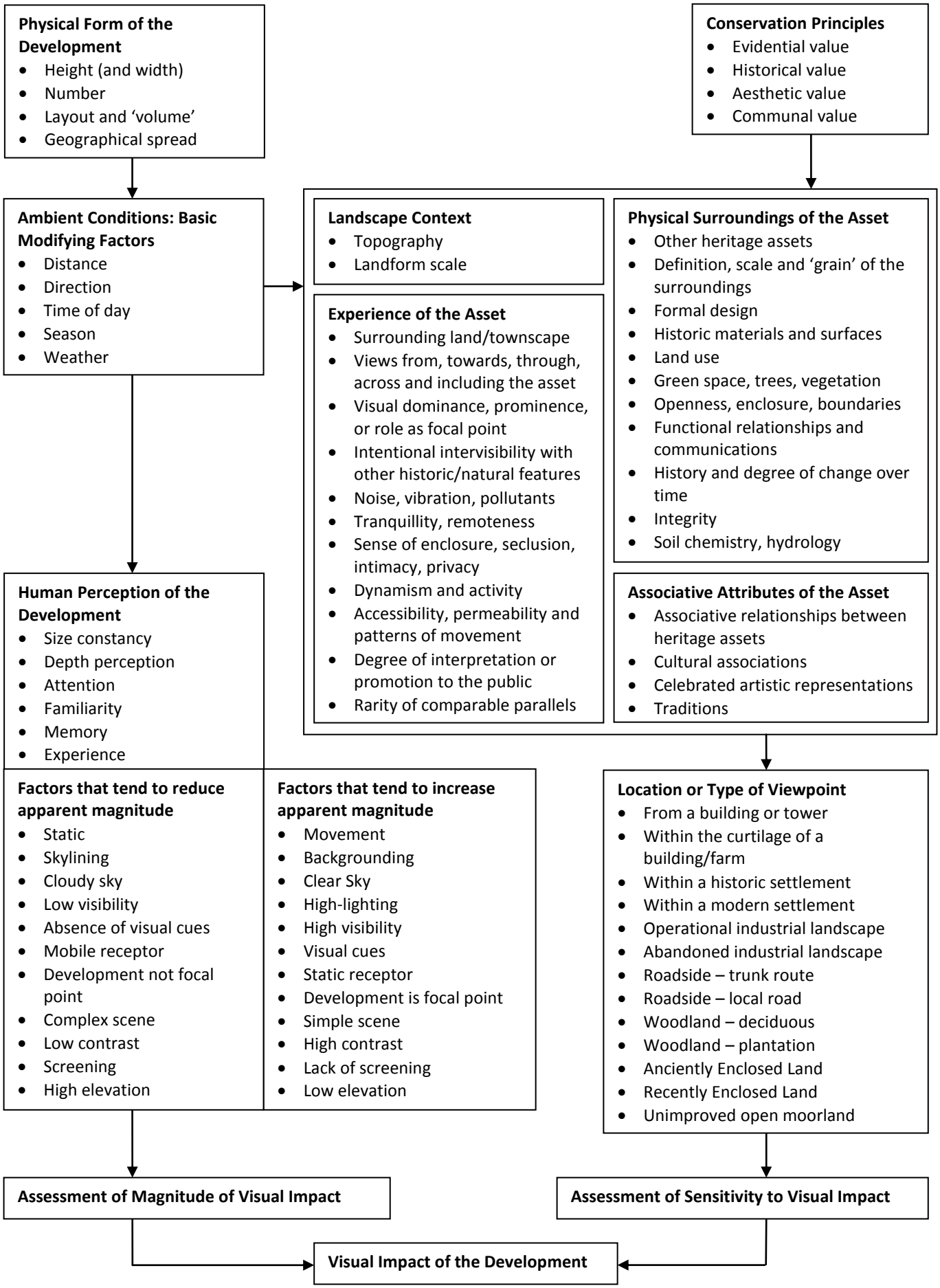


TABLE 5: THE CONCEPTUAL MODEL FOR VISUAL IMPACT ASSESSMENT PROPOSED BY THE UNIVERSITY OF NEWCASTLE (2002, 63), MODIFIED TO INCLUDE ELEMENTS OF *ASSESSMENT STEP 2* FROM THE SETTING OF HERITAGE ASSETS (ENGLISH HERITAGE 2011, 19).

Aggregate Impact: a single development will usually affect multiple individual heritage assets. In this assessment, the term aggregate impact is used to distinguish this from cumulative impact. In essence, this is the impact on the designated parts of the historic environment as a whole.

4.7.1 SCALE OF IMPACT

The effect of development and associated infrastructure on the historic environment can include positive as well as negative outcomes. However, all development changes the character of a local environment, and alters the character of a building, or the setting within which it is experienced. Change is invariably viewed as negative, particularly within respect to larger developments; thus while there can be beneficial outcomes (e.g. positive/moderate), there is a presumption here that, as large and inescapably modern intrusive visual actors in the historic landscape, the impact of a development will almost always be **neutral** (i.e. no impact) or **negative** i.e. it will have a **detrimental impact** on the setting of ancient monuments and protected historic buildings.

4.8 THE STRUCTURE OF ASSESSMENT

This assessment incorporates the systematic approach outlined in the ICOMOS and DoT guidance (see Tables 6-8), used to complement and support the more narrative but subjective approach advocated by Historic England (see Table 5). This provides a useful balance between rigid logic and nebulous subjectivity (e.g. the significance of effect on a Grade II Listed building can never be greater than moderate/large; an impact of negative/substantial is almost never achieved). This is in adherence with GPA3 (2015, 7).

There are relatively few designated heritage assets in the local area (within 1km). There are no Registered Parks and Gardens, Battlefields, World Heritage Sites, Conservation Areas or Listed buildings, and only two Scheduled Monuments: St Stephen's Beacon and a round.

Under normal circumstances, with an emphasis on practicality and proportionality (see *Setting of Heritage Assets* pages 15 and 18), only those assets where an effect greater than negligible is anticipated would be considered in detail. In this instance both SAMs, and the historic but undesignated settlement of Foxhole, are considered. These few assets may be divided into two classes:

Category #1 assets: Where proximity to the proposed development or the significance of the asset demands detailed consideration (St Stephen's Beacon, round).

Category #2 assets: Assets where their location, current setting or perceived value would indicate less detailed assessment is appropriate (Foxhole).

For both Category #1 and Category #2 assets, this assessment groups and discusses heritage assets by category (e.g. hillforts, enclosures, historic settlements) to avoid repetitious narrative; the initial discussion establishes the baseline sensitivity of the categories of assets to the projected change within their visual environment, followed by a site-specific narrative. It is essential the individual assessments are read in conjunction with the overall discussion, as the impact assessment is a reflection of both.

4.9 THE PROPOSED DEVELOPMENT AND SITE ASSESSMENT

The proposed works consists of a small residential development with associated roads etc. The site is located on a west-facing slope within an area of agricultural land on the eastern edge of the settlement of Foxhole. The site is very open, with expansive views to the south-west, west and north-west. There are clear views to the Blackpool China Clay Tip to the south-east and Watch Hill to the east. There is a wind turbine on the skyline to the south.

There are clear views along the road and out across the valley to St Stephen's Beacon, but direct intervisibility with the adjacent Scheduled round is not apparent. There is intervisibility with the southern part of Foxhole along the main road, and the site is visible from the road (B3279) near Carpalla. That part of historic Foxhole close to the site is at present screened by the intervening modern bungalows and houses.

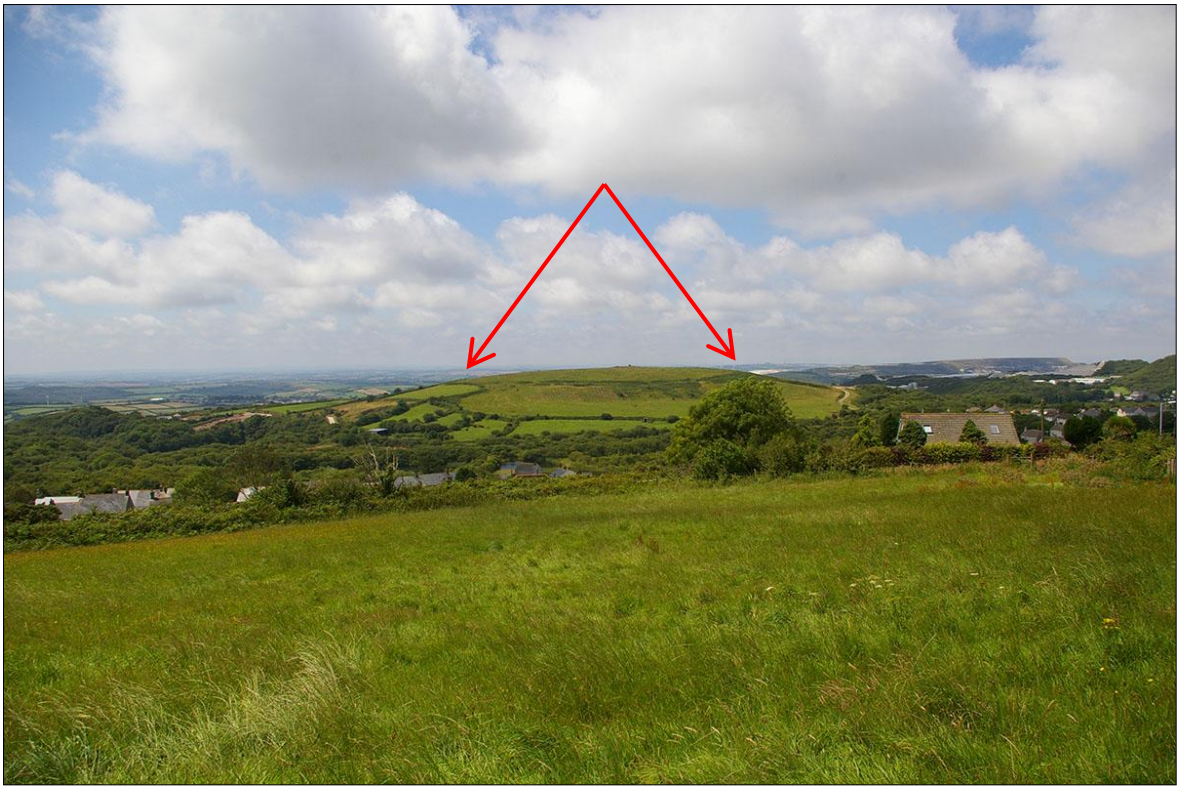


FIGURE 9: VIEW FROM THE NORTHERN CORNER OF THE SITE, LOOKING ACROSS THE VALLEY TO ST STEPHEN'S BEACON (THE RAMPARTS OF THE HILLFORT ARE INDICATED); VIEWED FROM THE EAST, LOOKING WEST.

TABLE 6: MAGNITUDE OF IMPACT (BASED ON DMRB VOL.11 TABLES 5.3, 6.3 AND 7.3).

Factors in the Assessment of Magnitude of Impact – Buildings and Archaeology	
Major	Change to key historic building elements, such that the resource is totally altered; Change to most or all key archaeological materials, so that the resource is totally altered; Comprehensive changes to the setting.
Moderate	Change to many key historic building elements, the resource is significantly modified; Changes to many key archaeological materials, so that the resource is clearly modified; Changes to the setting of an historic building or asset, such that it is significantly modified.
Minor	Change to key historic building elements, such that the asset is slightly different; Changes to key archaeological materials, such that the asset is slightly altered; Change to setting of an historic building, such that it is noticeably changed.
Negligible	Slight changes to elements of a heritage asset or setting that hardly affects it.
No Change	No change to fabric or setting.
Factors in the Assessment of Magnitude of Impact – Historic Landscapes	
Major	Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit.
Moderate	Changes to many key historic landscape elements, parcels or components, visual change to many key aspects of the historic landscape, noticeable differences in noise or sound quality, considerable changes to use or access; resulting in moderate changes to historic landscape character.
Minor	Changes to few key historic landscape elements, parcels or components, slight visual changes to few key aspects of historic landscape, limited changes to noise levels or sound quality; slight changes to use or access: resulting in limited changes to historic landscape character.
Negligible	Very minor changes to key historic landscape elements, parcels or components, virtually unchanged visual effects, very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.
No Change	No change to elements, parcels or components; no visual or audible changes; no changes arising from in amenity or community factors.

TABLE 7: SIGNIFICANCE OF EFFECTS MATRIX (BASED ON DRMB VOL.11 TABLES 5.4, 6.4 AND 7.4; ICOMOS 2011, 9-10).

Value of Heritage Assets	Magnitude of Impact (positive or negative)				
	No Change	Negligible	Minor	Moderate	Major
Very High	Neutral	Slight	Moderate/Large	Large/Very Large	Very Large
High	Neutral	Slight	Moderate/Slight	Moderate/Large	Large/Very Large
Medium	Neutral	Neutral/Slight	Slight	Moderate	Moderate/Large
Low	Neutral	Neutral/Slight	Neutral/Slight	Slight	Slight/Moderate
Negligible	Neutral	Neutral	Neutral/Slight	Neutral/Slight	Slight

TABLE 8: SCALE OF IMPACT.

Scale of Impact	
Neutral	No impact on the heritage asset.
Negligible	Where the developments may be visible or audible, but would not affect the heritage asset or its setting, due to the nature of the asset, distance, topography, or local blocking.
Negative/minor	Where the development would have an effect on the heritage asset or its setting, but that effect is restricted due to the nature of the asset, distance, or screening from other buildings or vegetation.
Negative/moderate	Where the development would have a pronounced impact on the heritage asset or its setting, due to the sensitivity of the asset and/or proximity. The effect may be ameliorated by screening or mitigation.
Negative/substantial	Where the development would have a severe and unavoidable effect on the heritage asset or its setting, due to the particular sensitivity of the asset and/or close physical proximity. Screening or mitigation could not ameliorate the effect of the development in these instances. This is, as is stressed in planning guidance and case law, a very high bar and is almost never achieved.

TABLE 9: IMPORTANCE OF SETTING TO INTRINSIC SIGNIFICANCE.

Importance of Setting to the Significance of the Asset	
Paramount	Examples: Round barrow; follies, eyecatchers, stone circles
Integral	Examples: Hillfort; country houses
Important	Examples: Prominent church towers; war memorials
Incidental	Examples: Thatched cottages
Irrelevant	Examples: Milestones

4.10 SENSITIVITY OF CLASS OF MONUMENT OR STRUCTURE

4.10.1 HILLFORTS

Hillforts, tor enclosures, cross dykes, promontory forts

Hillforts are large embanked enclosures, most often interpreted as fortifications, and usually occupy defensible and/or visually prominent positions in the landscape. They are typically visible from all or most of the surrounding lower and higher ground, with the corollary that they enjoyed extensive views of the surrounding countryside. As such, they are as much a visible statement of power as they are designed to dissuade or repel assault. The location of these sites in the landscape must reflect earlier patterns of social organisation, but these are essentially visual monuments. They are designed to see and be seen, and thus the impact of wind turbines is often disproportionately high compared to their height or proximity.

Tor enclosures are less common, and usually only enclose the summit of a single hill; the enclosure walls is usually comprised of stone in those instances. Cross dykes and promontory forts are rather similar in nature, being hill spurs or coastal promontories defended by short lengths of earthwork thrown across the narrowest point. Both classes of monument represent similar expressions of power in the landscape, but the coastal location of promontory forts makes them more sensitive to visual intrusion along the coastal littoral, due to the contrast with the monotony of the sea. Linear earthworks are the cross dyke writ large, enclosing whole areas rather than individual promontories. The investment in time and resources these monuments represent is usually far greater than those of individual settlements and hillforts, requiring a strong centralised authority or excellent communal organisation.

Asset Name: **Prehistoric hillfort and round cairn at St Stephen's Beacon**	
Parish: St. Stephen-in-Brannel	*Value:* High
Designation: SAM	*Distance to Development:* c.0.6km
Summary: Scheduling: *The monument includes an earlier prehistoric hillfort and round cairn, situated at the summit of the prominent hill called St Stephen's Beacon. The hillfort survives as a roughly oval enclosure surrounding the summit of the hill with an annexe to the north and is defined by a terrace or scarp of up to 7m wide and 2m high which has been partially fossilised in field boundary banks to the south. Other associated ditches, structures, layers, deposits and features will be preserved as buried features. The outer side of the terrace is partially revetted by large stones and marked in places by upright orthostats. The area of the hillfort has been the subject of mineral prospecting, evidenced by numerous pits. First noted in 1864 as being 'distinctly visible' and recorded variously as having between one up to three surrounding ramparts, the hillfort has been variously recorded as being of Neolithic through to Iron Age date. Within the enclosed area on the summit of the hill is a round cairn which was re-used as a beacon. It survives as a low, irregular spread of stones. The cairn was largely dismantled in 1853 when, according to Thomas, it actually measured up to 20m in diameter. The outer stone was removed and used to construct an engine house for Tin Hill Mine and, at this time, a lower platform of stones and a large cist containing ashes was found and left in situ. Its re-use as a beacon is largely inferred from its very prominent position and place-name evidence of 'St Stephen's Beacon', 'Foxhole Beacon' or 'Beacon Hill'.*	
Supplemental Comments: The ramparts of the hillfort survive as earth and stone banks that encircle the top of the hill; during the site visit they were somewhat obscured by rough grasses, bracken and gorse. The summit and flanks of the hill are, for the most part, unenclosed. The banks survive in better condition to the south, where they have been subsumed into hedgebanks. The cairn survives as a wide, low grassy mound of rocks and earth on the top of the hill. It is only visible in profile from certain angles against the skyline of the hill. There is some animal (cattle) damage to the mound.	
Evidential Value: The monument has high evidential value. It has not been surveyed or investigated, and it is multi-period (i.e. Neolithic through to post-medieval). Its archaeological value includes medieval and post-medieval mineral prospection and extraction. The cairn has been badly-damaged in the past, but will retain evidential value.	
Historical Value: Limited, though the hilltop is a prominent local landmark and was used as beacon.	
Aesthetic Value: The hilltop retains a rather wild and open aspect, one of the few elevated points in this landscape that has not been devastated by the china clay industry. It affords excellent views out across low-lying areas to the south, and across the industrial landscapes to the north and east. The aesthetic value of the *location* is thus considerable; the aesthetic value of the *monuments* much less so – the cairn has been badly damaged in the past, and as the ramparts encircle quite a large area and are comparatively slight. Neither feature prominently in the visitor experience, though the ramparts are visible on the approach to the monument.	
Communal Value: None.	
Authenticity: The ramparts encircle the open hilltop; this upland setting provides a slightly more authentic experience than others that have been subsumed within the modern agricultural landscape. The cairn survives as a distinguishable grassy mound, but it is very disturbed and much-altered.	
Integrity: The ramparts survive as visible earthworks, with localised damage in places. The integrity of the burial mound has been affected by historic excavations, but the below-ground sections may retain value.	
Topographical Location and Landscape Context: The monuments occupy the upper slopes and summit of the hill above St Stephen-in-Brannel churchtown. Most of the other hills across this part of the Hensbarrow uplands have been defaced, destroyed or augmented by the china clay pits and tips.	
Principal Views: The barrow and hillfort both have extensive landscape views across the surrounding countryside. These industrial landscapes have a brutal aesthetic of their own. The hillfort itself is a natural focus of attention. The beacon site will relate to other beacon sites up and down the spine of Cornwall.	
Landscape Presence: The hill stands out from the lower slopes and draws the eye; the ramparts and cairn contribute to its profile, but neither retains individual landscape presence.	
Immediate Setting: Both assets occupy the top of the hill, surrounded by a large, irregular area of open-access land and a patchwork of pasture fields.	
Wider Setting: The wider setting is the industrial landscape around St Dennis, Nanpean and St Stephen; the historic parts of this industrial area are characterised by its surviving skytips, now covered by vegetation,	

and the tall tapered chimneys and gabled stone engine houses. This important 19th and 20th century landscape, once of stark industrial character, is now softened by scrub and bracken and has taken on a more romantic appearance, with ivy-clad stone ruins breaking up the skyline. The scale and profile of the modern tips diminish the visual effect of St Stephens Beacon.
Enhancing Elements: The assets survive in an unenclosed area of publicly-accessible land between the agricultural fields. Views remain open and unimpeded. Two footpaths cross on the lower slopes and the public can walk around and within the monuments.
Detracting Elements: The animal grazing and farm tracks have cut down into the ramparts, and a lack of effective management is leaving parts of the site to become very overgrown.
Direct Effects: None.
Indirect Effects: The proposed development would be located on the other side of the valley, above the linear settlement of Foxhole. Views from the interior of the hillfort to the site would be unimpeded, and views back to the hillfort and cairn from along Chegwins Hill would be affected by the development. Views to the Beacon from other parts of this landscape would not be affected, nor would the hillfort as visual focus within the wider landscape. The proposed development would represent a slight incremental change in the visual environment of the Beacon. The construction phase would be more intrusive, both visually and aurally.
Contribution of Setting to the Significance of the Asset: Integral. The hillfort site was deliberately selected for its elevated position and local prominence, a well-defined hill on the edge of the Hensbarrow uplands that overlooks the adjacent lowland areas. Its selection as a later beacon site recognises that quality. The character of its current setting – upland rough ground surrounded by enclosed agricultural land with historic and (extensive) modern industrial impacts – is very different.
Magnitude of Impact: The scale of the proposed development is fairly small, very small relative to the modern china clay pits and tips in this industrial landscape. The proposed site would appear in views from the Beacon across the valley, and disrupt the linear visual character of Foxhole.
Magnitude of Impact: High value asset and Minor effect = *Slight* impact
Overall Impact Assessment: **Negative/Minor**

4.10.2 PREHISTORIC SETTLEMENTS AND ROUNDS

Enclosures, 'rounds', hut circles

Rounds are a relatively common form of enclosed settlement in Cornwall and, to a lesser extent, in Devon, where they are often referred to as hillslope enclosures. These settlements date to the Iron Age and Romano-British periods, most being abandoned by the sixth century AD. Formerly regarded as the primary settlement form of the period, it is now clear than unenclosed – essentially invisible on the ground – settlements (e.g. Richard Lander School) were occupied alongside the enclosed settlements, implying the settlement hierarchy is more complex than originally imagined.

Prehistoric farmsteads – i.e. hut circles – tend to be inward-looking and focused on the relationship between the individual structures and the surrounding fieldsystems, where they survive. The setting of these monuments does contribute to their wider significance, but that setting is generally quite localised; the relevance of distance prospects and wider views has not been explored for these classes of monument, and it is thus difficult to assess the impact of a wind turbine at some distance removed.

Early fieldsystems sometimes survive in upland areas as earthworks, more often surviving as crop- or soilmarks in lowland areas. They rarely receive statutory protection, and where they do they are often associated with other well-preserved Scheduled Monuments. Most relict fieldscapes are very local in character, and thus the impact of a wind turbine is likely to be muted. The notable exception to this would be the Reaves of Dartmoor.

Asset Name: **Round 310m east of Carloggas Moor Farm**	
Parish: St. Stephen-in-Brannel	*Value:* High
Designation: SAM	*Distance to Development:* c.0.8km
Summary: Scheduling: *The monument is situated on the upper south-west facing slopes of a long, gently sloping ridge. The round survives as a circular enclosure defined by a single rampart bank of up to 1m high with a partially buried outer ditch. The rampart to the north and east has been partly incorporated into a field boundary. It has been partially cut by workings from a tin mine. Further archaeological remains in the vicinity are the subject of a separate scheduling.*	
Supplemental Comments: The eastern rampart is preserved by the line of a field boundary. The north-west section is overgrown by ferns and bracken; the south-west section lies within the adjacent pasture field. The bulk of the interior is covered with bracken and regenerating scrub.	
Evidential Value: The round will have considerable evidential value, with sealed archaeological deposits.	
Historical Value: Limited, based on assumptions about its date and character.	
Aesthetic Value: Limited, and largely based on its location within the landscape.	
Communal Value: None	
Authenticity: The round retains considerable authenticity, with both upstanding earthworks and below-ground remains. It has been incorporated into the adjacent fieldsystem.	
Integrity: The asset survives as a well-preserved monument; it retains structural and spatial integrity. The rampant growth of bracken on the site would suggest buried archaeological deposits are at risk.	
Topographical Location and Landscape Context: The round is located on the middle slopes of the Beacon, south-west of the summit but still elevated above the lowlands to the south and west.	
Principal Views: Views are limited to the fields immediately adjacent and the Beacon above. There is a key view from the ramparts of the hillfort down to the round, where the shape and form of the monument can be readily appreciated.	
Landscape Presence: Very limited; subsumed within the fieldsystem and very overgrown.	
Immediate Setting: The round is located on the south-western slopes of the Beacon. It is framed by the steeply-rising slopes to the north-east. It is covered in bracken and gorse to the north and east, with open fields bounded by hedgebanks to the south-west. There are scattered mine ruins in the immediate vicinity and a flooded pit. The site is accessed via a historic green lane, now a very overgrown footpath.	
Wider Setting: The wider setting is the industrial landscape around St Stephen and the adjacent agricultural lowlands. This important 19th and 20th century landscape, once of stark industrial character, is now softened by scrub and bracken and has taken on a more romantic appearance, with ivy-clad stone ruins breaking up the skyline. The position of this site relative to the Beacon insulates it somewhat from the scale and profile of the modern tips.	
Enhancing Elements: None	
Detracting Elements: The round is very overgrown; there is also the probability that the growth of scrub and bracken will damage the monument.	
Direct Effects: None.	
Indirect Effects: The proposed development would be located behind the Beacon and on the other side of the valley, above the linear settlement of Foxhole. Views from the round and its immediate vicinity would be blocked by the Beacon. The construction phase would be more intrusive, both visually and aurally.	
Contribution of Setting to the Significance of the Asset: Important. It is probable that the site was selected for its elevated position relative to the Beacon, a location one that emphasised utility and convenience over landscape prominence. The character of its current setting – subsumed within enclosed fields but on the edge of upland rough ground – need not be so very different from its original setting. The extent of modern settlement, and the character of the modern industrial landscape, is very different.	
Magnitude of Impact: There is no intervisibility between the proposed site and the round. Meaningful views of the round are from the summit of the Beacon, looking down and across the round, away from the proposed site. There would be a slight incremental change in the visual environment of the area.	
Magnitude of Impact: High value asset and Negligible effect = *Moderate/Slight* impact.	
Overall Impact Assessment: **Negligible.**	

4.10.3 HISTORIC SETTLEMENTS

Clusters of Listed Buildings within villages or hamlets; occasionally Conservation Areas

The context of the (usually) Grade II Listed buildings within settlement is defined by their setting within the village settlement. Their significance is determined by their architectural features, historical interiors or role/function in relation to the other buildings. The significance of their setting to the experience of these heritage assets is of key importance and for this reason the curtilage of a property and any small associated buildings or features are often included in the Listing and any changes must be scrutinised under relevant planning law.

Most village settlements have expanded significantly during the 20th century, with rows of cottages and modern houses and bungalows being built around and between the older 'core' Listed structures. The character of the settlement and setting of the heritage assets within it are continually changing and developing, as houses have been built or farm buildings have been converted to residential properties. The setting of the heritage assets within a village, dependant on the form and location of the settlement, can be harmed by unsympathetic development. The relationships between the houses, church and other Listed structures need not alter, and it is these relationships that define their context and setting in which they are primarily to be experienced, but frequently the journey taken by the experient to reach that setting can be affected.

The larger settlements and urban centres usually contain a large number of domestic and commercial buildings, only a very small proportion of which may be Listed or protected in any way. The setting of these buildings lies within the townscape, and the significance of these buildings, and the contribution of their setting to that significance, can be linked to the growth and development of the individual town and any associated industries. The original context of any churches may have changed significantly since construction, but it usually remains at the heart of its settlement. Given the clustering of numerous individual buildings, and the local blocking this inevitably provides, a distant housing development is unlikely to prove particularly intrusive.

What is important and why

Historic settlements constitute an integral and important part of the historic landscape, whether they are hamlets, villages, towns or cities. The physical remains of previous occupation may survive beneath the ground, and the built environment contains a range of vernacular and national styles (evidential value). Settlements may be archetypal, but development over the course of the 20th century has homogenised most, with streets of terraced and semi-detached houses and bungaloid growths arranged around the medieval core (limited historical/illustrative value). As dynamic communities, there will be multiple historical/associational values relating to individuals, families, occupations, industry, retail etc. in proportion to the size and age of the settlement (historical/associational). Settlements that grew in an organic fashion developed fortuitously into a pleasing urban environment (e.g. Ledbury), indistinguishable suburbia, or degenerate urban/industrial wasteland (aesthetic/fortuitous). Some settlements were laid out quickly or subject to the attention of a limited number of patrons or architects (e.g. late 19th century Redruth and the architect James Hicks, or Charlestown and the Rashleigh family), and thus strong elements of design and planning may be evident which contribute in a meaningful way to the experience of the place (aesthetic/design). Component buildings may have strong social value, with multiple public houses, clubs, libraries (communal/social), chapels and churches (communal/spiritual). Individual structures may be commemorative, and whole settlements may become symbolic, although not always in a positive fashion (e.g. the Valleys of South Wales for post-industrial decline) (communal/symbolic). Settlements are complex and heterogeneous built environments filled with meaning and value; however, beyond a certain size threshold distant sight-lines become difficult and local blocking more important.

Asset Name: Foxhole Historic Settlement	
Parish: St Stephen-Brannel	*Value*: Medium
Designation: n/a	*Distance to Development*: c.0.1-1.0km
Summary: A 19th century mining village, a ribbon development that developed from multiple nuclei along one of the main roads from St Austell to Nanpean. There has been mining in the area around Foxhole since the medieval period, but it is the scale and intensity of china clay extraction from the later 18th century and has had the most pronounced impact. The settlement itself developed in the latter half of the 19th century, with its main phase of expansion dating to c.1900. The historic structures have a strong late Victorian and Edwardian character, with semi-detached villas and terraced cottages, defined by their grey dressed granite elevations, with rusticated quoins, bay windows and dark slate roofs. The settlement had a small core at the cross roads, with a chapel, school building and a few shops, but it was primarily a dormitory settlement for the mine workers at Nanpean to the north.	
Conservation Value: The settlement as a whole is undesignated, but includes a good number of late 19th and early 20th century terraces and individual structures of historic vernacular character.	
Authenticity and Integrity: The settlement has expanded in the later 20th century, with housing estates and individual infilled plots. The settlement largely retains its linear character. The china clay area is relatively depressed, so large unsympathetic developments or conversions are relatively rare.	
Setting: The settlement is located on the eastern side, and towards the base, of a valley dropping down from the interior of the Hensbarrow uplands to the north. The sides of the valley are pastoral and largely agricultural. St Stephen's Beacon stands to the west and is largely untouched, with its summit open and unenclosed. Watch Hill to the east has been capped with a large modern tip that dwarfs other features in the valley. The settlement is fairly open, with clear views out from the surrounding landscape.	
Contribution of Setting to the Significance of the Asset: *Incidental*. The linear character of the settlement is an accidental but characteristic feature of industrial settlements in upland areas. The village as a whole can readily be viewed within its agricultural setting from elevated viewpoints to the east and west.	
Magnitude of Effect: The proposed development would take place on the eastern edge of the settlement ad set slightly apart. It would contribute to disrupting the linear character of the settlement, appearing in views from Carpalla on the slopes above the village. Subject to design, the use of more modern materials would detract from the historic vernacular employed in the historic parts of the village. The construction phase would be more intrusive, both visually and aurally.	
Magnitude of Impact: Low value asset and Minor change = Neutral/Slight	
Overall Impact Assessment: **Negligible**	

4.10.4 HISTORIC LANDSCAPE

General Landscape Character

The landscape of the British Isles is highly variable, both in terms of topography and historical biology. Natural England has divided the British Isles into numerous 'character areas' based on topography, biodiversity, geodiversity and cultural and economic activity. The County Councils and AONBs have undertaken similar exercises, as well as Historic Landscape Characterisation.

Some character areas are better able to withstand the visual impact of development than others. Rolling countryside with wooded valleys and restricted views can withstand a larger number of sites than an open and largely flat landscape overlooked by higher ground. The English landscape is already populated by a large and diverse number of intrusive modern elements, e.g. electricity pylons, factories, quarries and turbines, but the question of cumulative impact must be considered. The aesthetics of individual developments is open to question, but as intrusive new visual elements within the landscape, it can only be **negative**.

The proposed site would be erected within the *St Austell or Hensbarrow China Clay Area* Landscape Character Area (LCA):

- This LCA is characterised as a very varied, dramatic landscape of china clay tips and deep pits interspersed within areas of rough vegetation, recently-enclosed agricultural land and untidy, straggling industrial settlements. The scale of the industrial features is in stark contrast with the small-scale field patterns and historic settlements. The complexity of this landscape when viewed from elevated viewpoints, and the sheer scale of the modern china clay industry, means the visual effect of the proposed development will be greatly diminished. The impact on the historic landscape as a whole is assessed as **negligible**.

4.10.5 AGGREGATE IMPACT

The aggregate impact of a proposed development is an assessment of the overall effect of a single development on multiple heritage assets. This differs from cumulative impact (below), which is an assessment of multiple developments on a single heritage asset. Aggregate impact is particularly difficult to quantify, as the threshold of acceptability will vary according to the type, quality, number and location of heritage assets, and the individual impact assessments themselves.

Only one SAM asset (the hillfort) is likely to suffer any appreciable negative effect. On that basis the aggregate impact is taken to be **Negligible**.

4.10.6 CUMULATIVE IMPACT

Cumulative impacts affecting the setting of a heritage asset can derive from the combination of different environmental impacts (such as visual intrusion, noise, dust and vibration) arising from a single development or from the overall effect of a series of discrete developments. In the latter case, the cumulative visual impact may be the result of different developments within a single view, the effect of developments seen when looking in different directions from a single viewpoint, of the sequential viewing of several developments when moving through the setting of one or more heritage assets.
The Setting of Heritage Assets 2011a, 25

*The key for all cumulative impact assessments is to focus on the **likely significant** effects and in particular those likely to influence decision-making.*
GLVIA 2013, 123

The visual impact of a single housing development can be significant, but the cumulative impact could undoubtedly eclipse this in some areas. An assessment of cumulative impact is, however, very difficult to gauge, as it must take into account operational developments, those with planning consent, and those still in the planning process. The threshold of acceptability has not, however, been established, and landscape capacity would inevitability vary according to landscape character.

In terms of cumulative impact in this landscape, the fields immediately to the north have been developed for housing, with other (earlier) developments breaking up the linear character of the historic settlement. On that basis, the cumulative impact is taken as **negative/minor**.

4.10.7 SUMMARY

TABLE 10: IMPACT SUMMARY.

Asset	Type	Distance	Value	Magnitude of Impact	Assessment	Overall Assessment
Category #1 Assets						
Hillfort	SAM	0.6km	High	Minor	Moderate/Slight	Negative/Minor
Round	SAM	0.8km	High	Negligible	Slight	Negligible
Category #2 Assets						
Foxhole	n/a	0.1-1km	Medium	Negligible	Neutral/Slight	Negligible
Landscape						
Historic Landscape Character						Negligible
Aggregate Impact						Negligible
Cumulative Impact						Negative/Minor

5.0 CONCLUSION

The proposed development would be located on agricultural land on the eastern edge of the settlement of Foxhole. This field is associated with a smallholding of 10a and its name (*The Outer New Inclosure*) and historic map sources imply it was enclosed in the early 19th century from open waste. The associated dwelling was called *Julian's Cottage*, occupied by a William Best but owned by Lady Anne Grenville as parcel of the manor of Brannell or Bodinneck.

The desk-based assessment and walkover survey did not identify any heritage assets on the site itself, and its location on the slopes above any putative medieval settlement/fieldsystem, but below the zone in which funerary remains might be expected, means its archaeological potential is likely to be *low*. Most of the known heritage assets in the wider area are post-medieval in date.

There are two Scheduled monuments within 1km of the proposed site: the hillfort and cairn on St Stephen's Beacon, and a round on the south-west side of the Beacon. Other designated heritage assets in the wider area are located at such a distance to minimise the impact of the proposed development, or else the contribution of setting to overall significance is less important than other factors. The industrial character of the landscape, and the landscape context of those buildings and monuments, is such that they would be partly or wholly insulated from the effects of the proposed development. The only designated heritage asset likely to be affected in any appreciable way (**negative/minor**) is the Scheduled hillfort and cairn at St Stephen's Beacon.

With this in mind, the overall impact of the proposed development can be assessed as **negligible**. The impact of the development on the buried archaeological resource is **permanent/irreversible**, but the likelihood encountering significant archaeological deposits is deemed to be *low*.

6.0 BIBLIOGRAPHY & REFERENCES

Published Sources:

Barton, R. M. 1966: *A History of the Cornish China-Clay Industry.*

Cadw 2007: *Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process*, 2nd edition.

Chartered Institute of Field Archaeologists 2014: *Standard and Guidance for Historic Environment Desk-based Assessment.*

English Heritage 2008: *Conservation Principles: policies and guidance for the sustainable management of the historic environment*.

English Heritage 2011a: *The Setting of Heritage Assets*.

English Heritage 2011b: *Seeing History in the View*.

Herring, P. & Smith J. R. 1991: *The Archaeology of the St Austell China Clay Area*.

Highland Council 2010: *Visualisation Standards for Wind Energy Developments*.

Historic England 2015: *Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets*.

Historic England 2017: *Understanding Place: Historic Area Assessments.*

Historic Scotland 2010: *Managing Change in the Historic Environment: Setting*.

Hull, R.B. & Bishop, I.D. 1988: 'Scenic Impacts of Electricity Transmission Towers: the influence of landscape types and observer distance', *Journal of Environmental Management* 27, 99-108.

ICOMOS 2005: *Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas*.

ICOMOS 2011: *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*. International Council on Monuments and Sites.

Landscape Institute 2013: *Guidelines for Landscape and Visual Impact Assessment*, 3rd edition. London.

Lysons, D. & Lysons, S. 1814: *Magna Britannia, volume 3: Cornwall*. London.

Polsue, J 1872: *Lake's Parochial History of the County of Cornwall, vol. IV.*

Soil Survey of England and Wales 1983: *Legend for the 1:250,000 Soil Map of England and Wales (a brief explanation of the constituent soil associations)*.

UNESCO 2015: *Operational Guidelines for the Implementation of the World Heritage Convention*.

University of Newcastle 2002: *Visual Assessment of Wind Farms: Best Practice*.

Websites:

Archaeological Data Service (ADS) 2017: *Archsearch & Grey Literature*
http://archaeologydataservice.ac.uk

British Geological Survey 2017: *Geology of Britain Viewer*.
http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html

Cornwall Council Interactive Map 2017: *HER and HLC*
https://map.cornwall.gov.uk

Cornwall Record Office (CRO) 2017: *National Archives*
http://discovery.nationalarchives.gov.uk

Environment Agency 2017: *LiDAR, Digital Surface Model data*
http://environment.data.gov.uk/ds/survey#

Unpublished Sources:

CAU 1991*: The Archaeology of the St. Austell China Clay Area: An Archaeological and Historical Assessment.* CAU.

CAU 1995: *China Clay Area 'Preservation by Record' Surveys 1994-5.* CAU.

CAU 2014: *United Kingdom China Clay Bearing Grounds: Mineral Resource Archaeological Assessment Devon and Cornwall.* CAU.

Cole, R. 1999: *Goverseth: An Archaeological and Historic Assessment for ROMPs.*

Cole, R. 2000: *Goverseth Press Repair Shop, Drinnick.*

Cole, R. 2000: *Mica Pits, Drinnick.*

Miles, H. 1973: 'Watch Hill, St. Stephen-in-Brannel', *Cornish Archaeology* 12, 57.

Miles, H. 1975: 'Barrows on the St. Austell Granite, Cornwall (Watch Hill, Caeloggas, Trenance, Cocksbarrow)' *Cornish Archaeology* 14, 5-82.

Ratcliffe, J. 1997: *China Clay Leader Programme Area.*

Cahill Partnership 2004: *Cornwall Industrial Settlements Initiative: Foxhole and Carpalla (Hensbarrow Area).*

British Library
Ordnance Survey Surveyor's Draft 1811
Cornwall Record Office
St Stephen-in-Brannel tithe map and apportionment 1838
Ordnance Survey First Edition 25 Inch Map
Ordnance Survey Second Edition 25 Inch Map
Ordnance Survey Revised Edition 25 Inch Map

APPENDIX 1: SUPPORTING PHOTOGRAPHS

Walkover

VIEW DOWN CHEGWYN HILL, LOOKING OUT OVER THE SITE AND ACROSS THE LANDSCAPE BEYOND; VIEWED FROM THE EAST, LOOKING WEST.

THE NORTHERN BOUNDARY OF THE SITE FROM THE ROADSIDE; VIEWED FROM THE NORTH-EAST, LOOKING SOUTH-WEST.

THE ACCESS TRACK TO CHEGWYNS FARM; VIEWED FROM THE NORTH, LOOKING SOUTH.

THE STONE-FACED HEDGEBANK ENCLOSING THE NORTH-EASTERN SIDE OF THE SITE; VIEWED FROM THE NNE, LOOKING SSW.

VIEW UP AND ALONG THE HEDGEBANK THAT FLANKS CHEGWYNS HILL; VIEWED FROM THE WEST, LOOKING EAST.

VIEW FROM THE NORTH CORNER OF THE FIELD, LOOKING OUT TO ST STEPHENS BEACON; VIEWED FROM THE EAST, LOOKING WEST.

AS ABOVE, DETAIL OF ST STEPHEN'S BEACON.

AS ABOVE, VIEW DOWN ACROSS FOXHOLE; VIEWED FROM THE NORTH, LOOKING SOUTH.

VIEW DOWN THE NORTHERN PART OF THE SITE; VIEWED FROM THE ESE, LOOKING WNW.

AS ABOVE, LOOKING WEST.

THE NORTH HEDGEBANK, VIEWED FROM THE WEST CORNER; VIEWED THE WSW, LOOKING ENE.

THE SITE VIEWED FROM THE WEST CORNER; VIEWED FROM THE SOUTH-WEST, LOOKING NORTH-EAST (SCALE 2M).

AS ABOVE, LOOKING SOUTH-EAST.

VIEW ALONG THE SOUTH-WEST BOUNDARY OF THE SITE; VIEWED FROM THE NORTH-WEST, LOOKING SOUTH-EAST.

THE WEST CORNER OF THE FIELD, SHOWING THE ADJACENT HOUSE AND GARDEN; VIEWED FROM THE EAST, LOOKING WEST.

AS ABOVE.

THE GATEWAY ONTO THE ROAD; VIEWED FROM THE SOUTH-EAST, LOOKING NORTH-WEST.

THE SOUTH CORNER OF THE FIELD; VIEWED FROM THE NORTH-EAST, LOOKING SOUTH-WEST (SCALE 2M).

VIEW ACROSS THE FIELD FROM THE EAST; VIEWED FROM THE EAST, LOOKING WEST (SCALE 2M).

THE SOUTH-EAST SIDE OF THE FIELD; VIEWED FROM THE SOUTH-WEST, LOOKING NORTH-EAST (SCALE 2M).

AS ABOVE; VIEWED FROM THE WSW, LOOKING ENE.

VIEW OUT FROM THE SITE TO THE CHINA CLAY TIP THAT DOMINATES THE LANDSCAPE TO THE EAST; VIEWED FROM THE NORTH-WEST, LOOKING SOUTH-EAST.

VIEW DOWN INTO THE MAIN STREET OF FOXHOLE FROM THE SOUTHERN PART OF THE FIELD; VIEWED FROM THE NNW, LOOKING SSE.

HIA

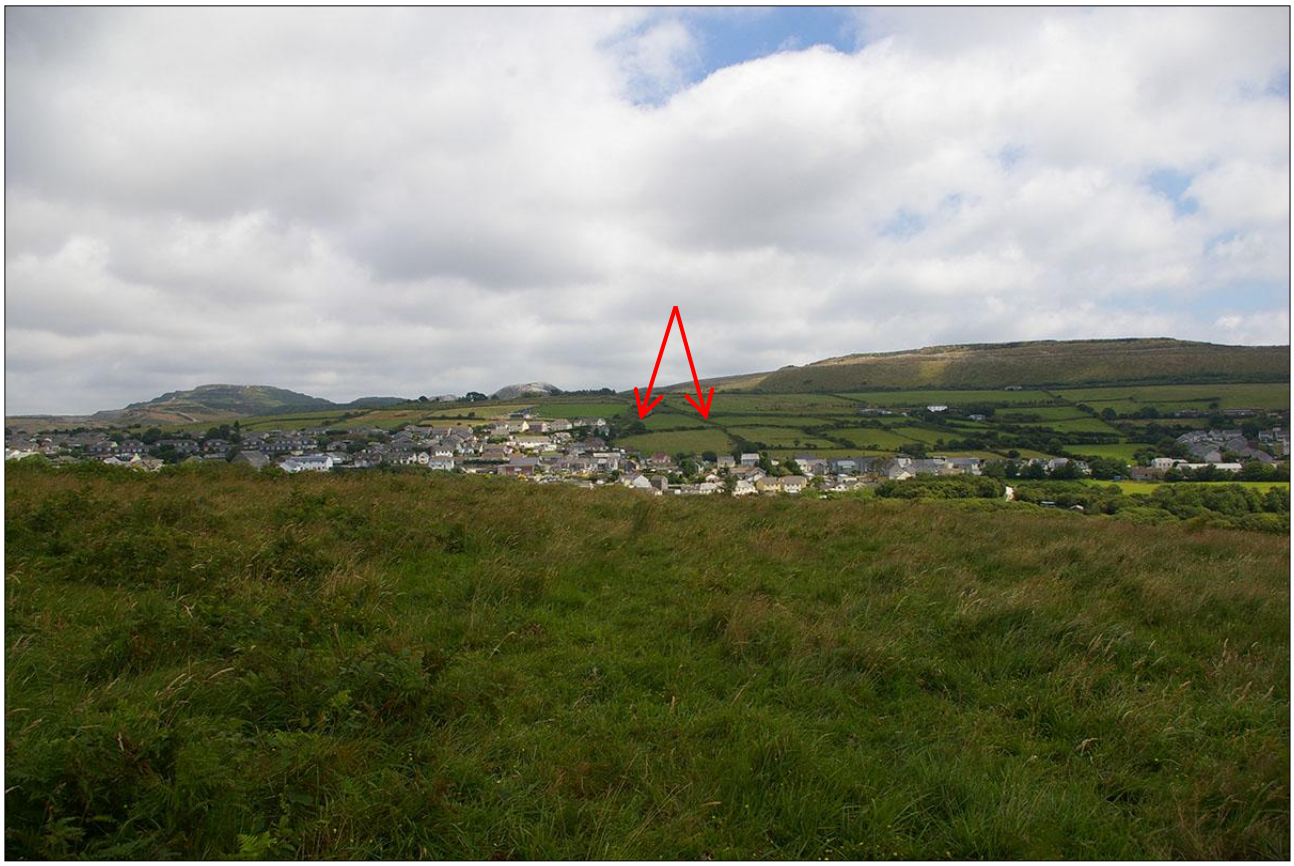
EXAMPLE OF THE MINING REMAINS AROUND ST STEPHEN'S BEACON; VIEWED FROM THE WEST, LOOKING EAST.

VIEW OF THE WELL-PRESERVED SOUTH-WEST RAMPARTS OF THE HILLFORT ON ST STEPHEN'S BEACON; VIEWED FROM THE SOUTH-WEST, LOOKING NORTH-EAST

VIEW OF THE CAIRN ON THE SUMMIT OF ST STEPHEN'S BEACON; VIEWED FROM THE SOUTH-WEST, LOOKING NORTH-EAST.

VIEW ALONG THE WESTERN SIDE OF THE HILLFORT TO THE CHINA CLAY EXTRACTIVE LANDSCAPE TO THE NORTH; VIEWED FROM THE SSE, LOOKING NNW.

VIEW TO THE HILLFORT ACROSS THE LANDSCAPE TO THE SOUTH-WEST; VIEWED FROM THE NORTH-EAST, LOOKING SOUTH-WEST.



VIEW FROM THE HILLFORT ENCLOSURE OUT ACROSS FOXHOLE TOWARDS THE PROPOSED SITE; VIEWED FROM THE WEST, LOOKING EAST.

AS ABOVE, LOOKING ACROSS TO FOXHOLE; VIEWED FROM THE WNW, LOOKING ESE.

VIEW FROM THE HILLFORT TO THE SCHEDULED ROUND; VIEWED FROM THE ENE, LOOKING WSW.

VIEW OF THE RAMPARTS OF THE ROUND; VIEWED FROM THE WNW, LOOKING ESE.

THE MODERN BUNGALOWS (CREAZ-AN-BRE) IMMEDIATELY NORTH OF THE SITE; VIEWED FROM THE SOUTH-EAST, LOOKING NORTH-WEST.

VIEW OF THE NON-CONFORMIST CHAPEL IN FOXHOLE; VIEWED FROM THE ESE, LOOKING WNW.

AS ABOVE, LOOKING ACROSS TO THE HISTORIC SCHOOL BUILDING IN FOXHOLE; VIEWED FROM THE SOUTH-EAST, LOOKING NORTH-WEST.

VIEW ALONG THE TERRACED HOUSES FLANKING GOVERSETH ROAD; VIEWED FROM THE SOUTH, LOOKING NORTH.

TRAFFIC CALMING MEASURES SOUTH OF THE CHAPEL; VIEWED FROM THE SSW, LOOKING NNE.

VIEW OF THE TYPICAL GREY GRANITE TERRACED HOUSES OR SEMI-DETACHED VILLAS THAT FORM THE HISTORIC CORE OF THE LINEAR RIBBON SETTLEMENT; VIEWED FROM THE SSW, LOOKING NNE.

VIEW ALONG THE MAIN ROAD APPROACHING FOXHOLE; THE LOCATION OF THE PROPOSED DEVELOPMENT SITE CAN BE SEEN ON THE GREEN RIDGE ABOVE THE VILLAGE. VIEWED FROM THE SOUTH, LOOKING NORTH.

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