

**ARCHAEOLOGICAL ASSESSMENT  
OF LAND AT CLENNON HILL, PAIGNTON**

**Prepared for Kay Elliott Architects  
on behalf of Paignton Zoo Environmental Park**

**Exeter Archaeology**

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Pl. 1 Section of curved stone walling which may represent remains of former limekiln.  
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Pl. 2 South-east corner of stone building. View to north-west.

**Palaeoenvironmental deposits**

William Pengelly was the first modern scholar to note the existence of vegetable remains and bones in the inlets in Torbay, although the antiquarian Leland wrote in his *Itinerary* of c. 1535-43 that fishermen in Torbay had recovered material suggestive of a submerged forest (Pearse Chope 1918, 67 in EA 1999).

## 1. INTRODUCTION

This report describes the results of an archaeological assessment undertaken by Exeter Archaeology (EA) in February 2001 at Paignton Zoo, Paignton, in advance of the construction of a new Rainforest Exhibition area. (centred on SX882594). The work was commissioned by Kay Elliott Architects on behalf of Paignton Zoo Environmental Park in respect of Planning Application No. 00/1549/PA.

### 1.1 **The site and geology** (Figs 1–2)

The proposed site of the new exhibition is located just to the east of the summit of Clennon Hill at c. 74m AOD, overlooking the Goodrington Sands area of Torbay. The area lies on the south-eastern side of the present zoo and encompasses the site of a former quarry, which it is proposed to enclose with a flexible canopy. The canopy will extend outside the bowl of the quarry, in some places by up to 20m (the wooded southern area) and by approximately 10m–12m on its south-western side in the less densely vegetated area leading towards the summit of the hill (Kay Elliott Drawing 1516–7/108). There will also be a number of service buildings to the north of the canopy.

The ground immediately surrounding the development site on the south and east sides of the hill consists of fairly dense woodland and ground cover. The land in the valley to the north-east/east is covered by modern development, and that to the east/south-east comprises a sports playing field. The belt of land to the west of the quarry on the summit of Clennon Hill is open grassland, flanked by fairly open tree cover on its northern and southern sides. Some 100m to the west of the quarry, signs of shallow quarrying are visible on the approach to the quarry sites on the western side of the hill.

Clennon Hill consists of Middle Devonian Limestone. To the west, north and north-east of the hill are Lower Devonian Staddon Grits, Sandstones and Shales. A band of alluvial deposits runs approximately east/west from the southern side of the hill (BGS 1976).

### 1.2 **Aims and objectives of the assessment**

The assessment consisted of a desktop survey and field visit, the aims of which were to identify sites and features of archaeological significance primarily within the building footprint, but also in the surrounding area. The work was undertaken in accordance with a brief supplied by the Torbay Council Archaeology Officer (Bishop December 2000), and a project design supplied by EA (Reed 2001).

### 1.3 **Method and sources utilised**

#### *Desktop assessment*

The desktop assessment consisted of the examination of material at:

- i) The West Country Studies Library (WCSL); OS maps; Annual Reports of the Herbert Whitley Trust; various published sources (see sources consulted).
- ii) The Devon Record Office; Paignton Tithe Map and Apportionment
- iii) Torquay Museum: it was not possible to consult sources held at this museum due to the building being closed for refurbishment.
- iv) The Torbay Sites and Monuments Register (SMR): relevant records supplied by the SMR

**Field visit**

The field visit consisted of a close inspection of the proposed development site and the immediate environs (an approximate 20m band around the perimeter), and a brief inspection of the surrounding land. Most of the land within the development site was accessible, albeit overgrown with low scrub. No archaeological features were noted on the site of the proposed new ancillary building(s) immediately to the north of the quarry, apart from indications of low quarry dumps. Part of the path leading north from the quarry (section 3, site 2) lies within the development area.

The land adjacent to the north-eastern edge of the site consists of dense undergrowth and woodland. The zoo staff assisted in the hand-clearance of sufficient undergrowth to enable structures 3–4 (see section 3) to be identified. These features were photographically recorded and measurements taken as appropriate. At this stage no scale drawings were warranted. This would have involved aggressive hand-clearance of vegetation resulting in the possible destabilisation of the structures themselves (in addition to the natural habitat) in an area outside, albeit adjacent to, the proposed development area.

Of the surrounding land, on the wooded slopes to the north-east, east and south of the site, ground visibility and access was very limited, and much of this area could not be examined. The land in the valley to the east of the wooded hillslope is a sports playing field, which is outside the boundary of the zoo and the Whitley estate.

**2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND****2.1 Previous archaeological work in the area**

In 1993 work was undertaken for the South West Water (SWW) Torbay Marine Scheme, which examined the sites of two alternative sewage treatment works in Brixham (Sharkham Quarry) and Churston Ferrers (Brokenbury Quarry) and the associated temporary haulage routes. The work included an assessment (Turton & Weddell 1993), observations during the excavation of a series of test pits and boreholes (EA Project No. 2660), and an evaluation excavation at Brokenbury Quarry (Reed & Weddell 1993). The assessment identified significant prehistoric activity in both areas, but particularly at Churston Ferrers. During the field observations the most westerly of the test pits and boreholes in the Clennon Valley to the east of Clennon Hill were located at SX888590–SX888594. At SX888593, a peat deposit up to 5m thick occurred at a depth of between 1.00m and 7.4m in TP 704, TP 709 and BH 705 (Fig. 1).

In 1996 archaeological work was carried out for SWW on the Goodrington Sands Link Main, the route of which lies principally within Goodrington Park, close to the east of Clennon Hill. The main sites identified of relevance here were peat deposits that extend inland from Goodrington Sands into the Clennon Valley (Turton 1996).

A variety of prehistoric sites are recorded along the ridges or upper valley slopes to the north-west of the site (SMR 86SE).

## 2.2 Historical background

The large and fertile Saxon manor of Paignton was acquired by the bishops of Exeter before the Norman Conquest. The town developed under the bishops, acquiring a weekly market and an annual fair from 1295, and becoming a borough at about the same time (Hoskins 1972, 449–50). Formerly an important episcopal centre, Paignton suffered a decline after the Reformation, and was described by Dr Richard Pococke in 1750 as ‘a poor town of farmers’ (Born 1989, 102). By the middle of the 19th century, however, the town and its beaches were becoming increasingly popular and developing as a holiday resort, and the railway line, which was extended from Torquay, was opened in 1859 (Born 1989, 115).

The name Clennon was recorded as *Clendon* in 1567, and derives from ‘*claene, dun*’ meaning ‘clean hill’ i.e. cleared of undergrowth etc. (Gover *et al.* 1932, 518). In the early 20th century at least, this land belonged to the Primley Estate, which is documented as *Prymley, -leigh, Est Prymleigh* in 1567 (*ibid.*).

The zoological and botanical gardens were founded by the naturalist and zoologist Herbert Whitley on part of the Primley Estate in the early 20th century. The gardens opened to the public in about 1923, closed temporarily due to a dispute over entertainment tax, but re-opened permanently in 1927 with the addition of a circus (Born 1989, 108).

Disused limestone quarries are a frequent feature on Clennon Hill, many of which date from at least the 18th century/early 19th centuries as is clear by the number of quarries and limekilns depicted on the 1841 Paignton Tithe Map. The limestone was used as building stone, and for processing (calcining) in limekilns, primarily producing quicklime for use in agriculture, but also for other industries. Around Paignton there are smaller quarries of New Red Sandstone and quarries of Lower Devonian Grits can be found around Hope’s Nose. There is also a record of slate quarrying at Hope’s Nose and Mudstone Bay (now St Mary’s Bay) Torquay (Born 1989, 70).

## 3. LIST OF SITES OF ARCHAEOLOGICAL AND HISTORICAL SIGNIFICANCE

The following sites are numbered and those closest to the development site are located on Fig. 2. Sites marked with an asterisk \* denote those within or adjacent to the development area.

### \*1. Quarry (site of development) (centre SX 88175940)

This quarry is not shown on the OS surveyors’ drawing of 1803–4 but it may well have existed at this time. The quarry is depicted on the 1841 Paignton Tithe Map (Fig. 3), which may include an extended working area to the north and north-west. In the accompanying 1840 Tithe Apportionment the land to the west of the quarry (Claynon Hill; 1661) is described as arable and waste; the land immediately adjacent to the south (No. 1661a) is described as ‘Brake’.

By 1865 (Fig. 4) the main quarry had been enlarged, probably reaching its present size (OS 1:2500 map). A further area of shallow quarrying is shown on Clennon Hill to the north-west within the working area denoted on the Tithe Map. By 1905, the quarry appears to have ceased working, being marked as ‘Old Quarry’ (1:2500 OS map).

The quarry is approximately 16m deep. Most of the eastern side of the quarry floor (approximately 15m area east/west) is not visible due to it being utilised for topsoil storage;

there are also small mounds of loose stone in this area. The western side of the quarry floor is uneven, with occasional hollows and other changes in level. These irregularities may represent the original quarried surface (bedrock is exposed in some areas), or may have been created when the quarry was utilised as an animal enclosure. This side of the quarry contains varying amounts of vegetation, including bramble, ivy and some shrubs/trees. Nevertheless, enough of the area could be seen to suggest that there were no substantial structures or other features present. The quarry face is visible in parts, but the northern face in particular is obscured by dense vegetation.

### ***Chamois hut***

High up in the southern quarry face there is a large niche which has been roofed over to create an animal shelter, believed to have been for Chamois (goat antelope). The shelter measures 1.40m high by 3.30m deep (max.). The roof is constructed of concrete surmounted by a length of stone walling and is supported on a central stone pillar.

### ***Internal walls***

At the entrance to the main bowl of the quarry, there is a stone wall with gateposts to either side of the path (site 2). Most of the wall and the gateposts are obscured by vegetation. The wall is built of rubble limestone and is mortared; there is concrete rendering on the top of the wall. At ground level the wall is *c.* 1.50m high, however, to the west of the path the wall height extends to *c.* 4m where it meets the quarry face. Beyond this point the wall has been constructed diagonally across the quarry face, its western end laying some 2–3m from the summit. The line of the wall along the quarry face is known from a site survey carried out by the zoo, but only the extreme western end of the wall was actually seen within the dense vegetation. These internal walls are believed to have been constructed when the quarry was converted to an animal enclosure.

### **\*2. Path (SX 8818359440)**

The quarry is entered from a path on its northern side which leads from the main zoo area. There has been a pathway in approximately this position since at least 1803–4 (OS surveyors' drawing) at which time (and also on the Tithe Map; Fig. 3) it is shown as a substantial trackway or road. By 1865 (Fig. 4) an additional smaller path ran eastward from this main track, along the north-eastern edge of the woodland. This additional path still exists and marks the boundary of the zoo with the adjacent properties (although it is not depicted on Fig. 2).

### **\*3. Limekiln (SX8819759438)**

The OS 1865 1:2500 map shows a limekiln to the north of the quarry (Fig. 4). The map shows a circular feature, presumed to be the kiln, with an indistinct feature to the east of it (see site 4). By 1906 the limekiln (and quarry) appears to have been disused as it is marked as 'Old Limekiln' (1:2500 OS map). An 'Old Kiln' is depicted in this area on the OS 1:10560 map of 1933, but not that of 1963 (SMR SX85NE/96).

To the north-east of the quarry entrance the ground drops away fairly sharply to the zoo boundary fence with the adjacent properties. At the top edge of the slope a section of vertical mortared rubble stone walling (north-facing) is built into the slope. The walling is curved and survives for a length of 2m and a height of 1.85m. This may represent the remains of the former circular limekiln. The kiln does not appear to be shown on the Tithe Map, although a square area or feature is located in this approximate area (see site 4).

**\*4. Stone building (SX 8820359435)**

The 1:1250 plan supplied by Kay Elliott Architects (Drawing No. 1516–07–1081; Fig. 2) depicts a rectangular structure to the north-east of the development site. On the modern OS digital map (WCSL) it is annotated ‘disused limekiln’. The structure may be that shown in this position on the OS 1865 map (Fig. 4), and also that of 1904, lying to the east of the circular limekiln (site 3). The Paignton Tithe Map (Fig. 3) also shows a square feature in this position.

Two walls representing the remains of a probable small building were located in this area during the field visit, 4m east of site 2. Upon clearance of the dense vegetation, the eastern wall was found to measure 3.10m north/south (probably the complete original length) and the truncated southern wall measured 1.15m east/west. The walls were constructed of mortared limestone rubble, *c.* 0.30m wide, and survived to a maximum height of *c.* 1.50m. Corresponding western and northern walls were not located within the vegetation cover. If the structure is not a kiln (i.e. the annotation on the modern map may refer to site 3), its small size and proximity to the circular limekiln (site 3) and to the quarry itself suggests a relationship both in date and industrial function. Abutting the western end of the southern wall was a low, short section of brickwork (machine-made bricks). This extended 0.63m southward, and was 0.24m (two bricks) wide and 0.20m (three courses) high. It appears to be a 20th-century addition to the earlier building.

**\*5. Ancient woodland**

The woodland surrounding the south, east and west sides of Clennon Hill was included in the provisional *Devon Inventory of Ancient Woodlands* prepared by the Nature Conservancy Council in 1986 (Lister & Pinches). English Nature have confirmed that this area has been designated ‘ancient semi-natural woodland’ (T. Lawton, English Nature, pers. comm.). This is defined as woodland stands ‘which do not obviously originate from planting ... which occupy a site with a history of continuous woodland cover from at least the Middle Ages’ (Lister & Pinches, 23). In the 1840 Paignton Tithe Apportionment the land on the summit of the hill is described as arable and waste (Fig. 3, No. 1661) and the upper slopes on the west and southern sides, and all of the eastern side as brake (No. 1661a). The latter refers to a thicket of bushes, low trees and furze etc.

In 1840 the strip of land along the south-western side of the hill (Nos 1662,1663) was utilised as orchard (‘Claynon Hill Orchard’), and the fields to the south (Nos 1664–1665) were used for arable and plantation respectively (‘Claynon Hill Field’ and ‘Claynon Hill Plantation’). These descriptions taken together with the place-name evidence suggesting a ‘clean hill’, i.e. cleared of undergrowth, are not necessarily indicative of areas of ‘ancient woodland’.

The fields to the east and north-east (Nos 1668, 1630 and 1618) were used as meadow and arable in the mid 19th century. No. 1668 (‘Higher Willow Meadow’) is now included within the Sports Field, while arable fields 1630 and 1618 have largely been engulfed by housing development.



#### 6. **Field boundaries** (centred on SX 8828559430)

The modern OS map (1:1250, Fig. 2) shows a small sub-square enclosure to the north-east of the development site. This feature was shown on the 1841 Tithe Map (Fig. 3, No. 1660a) and listed in the Apportionment (1840) as an orchard. This area is currently densely overgrown, but some of the field boundaries are still visible on the ground. The western boundary, which runs southward from the perimeter trackway, consists of a low stone and earth bank with a pillar at either end. The pillars (depicted on Fig. 2) are sub-cylindrical and constructed of mortared rubble limestone. The northern pillar (SX 8821559441) is *c.* 1.90m high by *c.* 1.25m wide; the southern pillar (SX 8820859427) is almost completely obscured but appears to be of similar dimensions. Further pillars of similar design were also located further to the east (see site 7).

#### 7. **Stone pillars** (SX 88204559443)

Two sub-cylindrical pillars are situated to either side of the path which runs along the north-eastern property boundary of the zoo. These are sub-cylindrical in form and constructed of mortared rubble limestone, measuring *c.* 1.90m high by *c.* 1.25m wide. It is clear from the rebated section in the southern post, and the two iron pintles on the northern post that they once functioned as gateposts. A gateway is shown in approximately this position on the 1865 1:2500 OS map (Fig. 4) and it may be that the present pillars date from this period. The pathway does not seem to have existed in 1841 (Fig. 3).

#### 8. **Quarry** (SX 88215937)

During the field visit a small quarry was observed in the woodland to the south-east of the development site as shown on the 1865 1:2500 OS map (Fig. 4). The area lay some 10–15m from the south-eastern corner of the main quarry. The visible area measured *c.* 10m square and *c.* 2m deep.

#### 9. **Quarry and limekiln** (SX 87825946; not shown on Fig. 2)

A quarry, with a limekiln on its western side, was shown on the west side of Clennon Hill on the OS 1890 1:10560 map. The limekiln is also depicted and named on the Tithe Map, although the quarry is not shown. The quarry and kiln are recorded at the SMR (SMR SX 85NE/55/55.1).

#### 10. **Quarries and limekilns** (not shown on Fig. 2)

To the west of Clennon Hill a series of quarries and limekilns are shown on the 1890 OS 1:10560 map. These are:

Quarry and Limekiln at SX 87745943 (SMR SX85NE/47, 47.1)

Quarry and Limekiln at SX 87695936 (SMR SX85NE/48, 48.1)

‘Old Limekiln’ at SX87705944 (SMR SX45NE/49)

Quarry and Limekiln at SX87555937 (SMR SX85NE/50, 50.1).

#### 11. **Neale’s cave** (SX 877595; not shown on Fig. 2)

At the western edge of Clennon Hill, a limestone cave was discovered by Mr L. Neale in 1957. During excavations in the cave in 1958–9 (by Mr Neale and Dr Sutcliffe) animal remains, including Lynx, were recovered, which are believed to date from the Mesolithic period (Cullingford 1962, 324). It has been claimed that human remains were also found (Baker 1988, 111). However, this has not been verified.

#### 4. CONCLUSIONS

The bulk of the proposed development area lies within an existing quarry of probable late 18th- or 19th-century date, the construction of which will have destroyed former archaeological deposits. A possible exception would be if the groundworks were to intersect underground limestone fissures/caves (cf. site 11). Such features may contain archaeological deposits of prehistoric or later date. Within the quarry itself, the only features identified relate to earlier animal enclosure areas, which post-date the opening of the zoo in *c.* 1923. The locations of these enclosure walls have been recorded during an earlier topographical survey by the zoo.

The path (site 2) which leads into the site was formerly a more substantial trackway, as shown on 1803–4 and 1841 maps (Fig. 3). This will be directly affected by the construction of ancillary buildings to the north of the quarry.

The perimeter of the proposed canopy extends outside the bowl of the quarry. On the south and east sides this encroaches into an area of designated ‘ancient semi-natural woodland’. No archaeological features were identified in these specific areas. The west side of the development lies on the summit and upper slopes of Clennon Hill. No features were visible in this area, however, such hilltop sites were frequently utilised during the prehistoric period, and any groundworks may expose evidence of such activity.

Two late 18th- or early 19th-century sites adjacent to the north-eastern edge of the site may be affected by the development: the remains of the circular limekiln (site 3) and a stone building (site 4). These lay just outside the footprint of the ancillary buildings to the north of the canopy (see Fig. 2). At present it is not known if they are to be left *in situ*. The detailed recording of these features would require the removal of dense undergrowth and tree cover, and a degree of excavation. If they are to be left *in situ*, consideration should be given to the method of clearance (e.g. to preserve benign vegetation), repair and reconsolidation.

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