

Geotechnical works for the P & RTC were conducted by Babbie Group in March 2000 and comprised the excavation of nine deep test pits (3.0-3.5m in depth) and two shallow test pits (1.5m and 1.7m in depth). These investigations were carried out immediately north and north-east of the 'fill' part of the 1938 levelling works. An unusually thick layer of topsoil was recorded at each test pit location, which extended to depths of between 0.9-1.5m bgl. In many instances the upper part of the topsoil layer was 'clearly imported', with occasional bricks and similar foreign material being present (Babbie Group 2000). Unfortunately, the boundary between this and the underlying *in situ* topsoil could not be identified. It was concluded that the area may have been used for the disposal of topsoil from adjacent developments. A variable layer of clayey sand/very sandy clay was encountered beneath the topsoil in the central and western parts of the site. This varied in thickness between 0.2-0.45m (0.8m in one instance) and was medium dense/firm in consistency. In all test pits a layer of grey and brown sandy gravel with cobbles was encountered at depths between 1.2-2.1m (*ibid.*).

Some Air Ministry drawings (held in the G4 Estate archive by the Establishment Works Consultants at Catterick Garrison) have proved very useful in identifying considerable areas of landscaping. Although most of the drawings define 'proposed' levelling activities, all but one are believed to have been carried out, as evidenced by the geomagnetic survey discussed below. The information contained in these drawings has been converted into a colour-coded plan (Figure 3) for ease of reference.

The regrading identified on Air Ministry drawing CK649 (no date), in an area east of Building 54 (Watch Office with Tower), is assumed not to have been carried out since drawing CK668 (dated March 1938) identifies the same, though larger, area for levelling. This cut-and-fill operation does appear to have been completed, centred on NGR SE 461 717. The maximum depth of infilling here is recorded on the plan as 1.46m, and the maximum recorded cut would have involved removing 1.90m of earth and gravel. Some of this dumping will have encroached slightly on the site of the recent P & RTC development.

Prior to the upgrading of the runway in 1940, two substantial areas of the airfield were broadly levelled by means of cut-and-fill operations. The locations of the works, together with existing and proposed levels, are shown in AM drawings CK425, CK426 (dated 1935) and CK664 (dated October 1937). Up to 1.5m of earth and gravel were removed from the highest parts of the large northern area, the majority of which was deposited to the east of a former river terrace, although some was used to fill a broad shallow depression to the west, centred on NGR SE 475 695. The maximum thickness of redeposited material was also 1.5m. The other levelling operation was carried out in the southernmost part of the airfield where up to 0.65m of earth and gravel were removed from the highest points and redeposited to a maximum thickness of 1.0m in a hollow to the south-west. Both of these levelling activities are clearly evident in the geophysical survey image (Figure 4).

## 5.2 Walkover reconnaissance

A walkover reconnaissance of the Barracks has been undertaken in order to identify any features of potential archaeological interest, particularly in the area of the Castle Hills earthworks. The results of the reconnaissance have been integrated throughout this report.

### 5.3 Gradiometer survey

Given the general lack of topographic features on the airfield, the absence of crop or parchmark features on aerial photographs and the extent of landscaping in the 1930s, the survey has produced a remarkable amount of information regarding sub-surface features and past activities (Figures 4-6). A 1:1250 copy of the greyscale image is also provided, inside the back cover of this report.

#### 5.3.1 Anomaly types

The geophysical anomalies have been divided into the following categories for the purposes of description and interpretation: archaeological features, landscaping features and other features. Some anomalies are described by reference to their 100m OS grid square coordinates as shown on Figure 4 e.g. 'a circular positive magnetic anomaly in 4964'. Colour-coded geophysical and archaeological interpretation plans are also provided in Figures 5 and 6.

Three types of geomagnetic anomaly have been distinguished in the data:

- |                   |                                                                                                                                                                                                                      |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| positive magnetic | regions of anomalously high or positive magnetic field gradient, which may be associated with high magnetic susceptibility soil-filled structures such as pits and ditches                                           |
| negative magnetic | regions of anomalously low or negative magnetic field gradient, which may correspond to features of low magnetic susceptibility such as tracks, wall footings and other concentrations of sedimentary rock, or voids |
| dipolar magnetic  | paired positive-negative anomalies, the smaller of which typically reflect ferrous litter whereas the larger ones could reflect fired structures such as kilns or hearths                                            |

#### 5.3.2 Archaeological features

Parallel positive magnetic lineations have been detected across virtually the whole of the western half of the airfield, oriented north-east/south-west. Some of the more intense positive lineations have a slight negative magnetic anomaly along their northern side, most evident near the western end of the runway. This is known as a 'shadow' effect and is a response to the strength of the positive anomaly. The anomalies are regularly spaced at c.6m intervals and are of a flattened S-shape. This pattern is typical of ridge and furrow; strip fields which are almost certainly medieval in date. Although very slight, the remains of these earthworks can still be discerned in some parts of the airfield.

In areas of visible earthwork ridges the positive magnetic anomalies reflect the greater concentration of high magnetic susceptibility topsoil within the ridges, whereas in areas where the ridges have been levelled by later activities the positive anomalies reflect the displaced topsoil that has accumulated in the furrows.

The ridge and furrow system of farming may have originated in late Saxon times and is likely to have survived here until enclosure, probably in the early 18<sup>th</sup> century and certainly before the first available detailed map of the area in 1739. The length of the ridges here (surviving to at least 450m), and elsewhere in Yorkshire up to 1000m, is

quite unusual compared with much of the rest of England and is considered to be a regional variation (Hall 1998), perhaps due to the excellent natural drainage afforded here by the gravel subsoil, and similarly by the chalk subsoil of the Wolds.

Other smaller areas of ridge and furrow have also been detected elsewhere on the airfield. At 5065, the former earthworks are evident aligned north-west/south-east, spaced at c.5m intervals, with a headland along their northern edge where they abut the ridge and furrow described above. It is assumed that the earthworks here were still of some prominence when the road heading northwest from Oran House (discussed below) was built, since the road respects the orientation of the ridges as far as the headland and then turns north. This headland appears to have served as a field boundary after enclosure, until c.1850, as it is shown as such on the tithe map of 1842, but is absent from the 1<sup>st</sup> edition OS map of 1857.

Ridge and furrow remains are evident in the north-eastern corner of the survey area at 5269. These are oriented broadly east-west at 10m intervals and could be discerned on the ground at the time of survey. Further possible remains oriented north-south may lie immediately north of this group. Another possible group of ridge and furrow remains at 5267 are aligned north-east/south-west at 8m intervals, with a possible headland at their south-western limit. However, other anomalies at the same location but perpendicular to these are more typical of later landscaping activities and so the interpretation of these features remains unclear.

Perhaps the most significant group of anomalies, in terms of the archaeological resource and possible future development of the airfield, has been detected near the centre of the airfield to the south of the runway, centred on 4866 and 4867. This complex of positive magnetic lineations almost certainly reflects the remains of double-ditched trackways and enclosures with possible roundhouses. One such track can be traced almost continuously from 4964 northwest and across the runway to 4569. From a T-junction in 4866, another track heads east-north-east into a series of rectilinear enclosures or paddocks, some divided by more tracks. Although relatively weak, there is also evidence for several circular and sub-circular anomalies in this area measuring 10-15m in diameter, which could reflect the remains of roundhouses. These track and enclosure features appear similar to those excavated by GeoQuest Associates in 1994 and could be of Roman, or perhaps Iron Age, date.

Two gradually diverging positive magnetic lineations are evident heading south-east from the west end of the runway. Similar to the anomalies described above, these anomalies also reflect concentrations of high magnetic susceptibility soil in former ditches. The southern of the two ditches turns a right-angle to the south-west in 4666, while the northern ditch can be traced almost continuously across the airfield towards Oran House. The northern ditch may also have a branch turning to the south-west in 4666. If contemporary, these ditches could have formed a driveway leading to/from a farmstead on the site of the present Baines Farm.

Similar ditch features have also been identified in other parts of the airfield: two have been detected near the western limit, south of the runway, at 4567/4568 and 4667/4668; others near the eastern limit, south of the runway in 5167 and 5267; another at 4770, north of the runway, heading south-east to 4868, and an arcuate ditch in 5169 and 5269. The functions of these features are not known but they do not

correspond to any former field boundaries shown on early maps and consequently are also likely to pre-date the ridge and furrow features.

A circular positive magnetic anomaly measuring 20m in diameter in 4964 could reflect an archaeological ring-ditch, such as might be expected around a large roundhouse or barrow. The near-perfect circular form of this feature, however, suggests that it could be of more recent origin. No comparable feature has been identified on old military plans of the base or maps and so the interpretation of this feature remains unclear.

Numerous sub-circular and amorphous positive magnetic anomalies, identified in various parts of the airfield, are most likely to reflect pits of one sort or another. Smaller examples, up to 2m in diameter, may reflect storage or rubbish pits, while larger ones (such as at SE 489 640) may reflect small-scale quarrying.

Two parallel, curvilinear geomagnetic anomalies head north-west from Oran House for a short distance before turning north across what is now the airfield. The anomalies reflect either former banks or ditches, which flanked a road as shown on early maps. This road formed part of the 'Great North Road' until the construction of 'Leeming Lane' (now the A1) along the western side of the study area, sometime between 1822 and 1842. Although the latter had originally been a major Roman road (Dere Street) it had fallen into disuse, perhaps due to new landownership during the medieval period, and, for a considerable time, the main north road turned abruptly north-east (at NGR SE 477 628) to Oran House and then northward and through Catterick Village.

### ***5.3.3 Landscaping features***

One of the most prominent features in the survey data is a broad (5-6m wide), curvilinear positive magnetic anomaly aligned north-west/south-east in the eastern part of the airfield. This anomaly reflects a relative increase in high magnetic susceptibility material, such as topsoil, and corresponds almost exactly to a landscaping activity undertaken in the late 1930s. Prior to the upgrading of the runway in 1940, two substantial areas of the airfield were broadly levelled by means of cut-and-fill operations. The locations of the works, together with existing and proposed levels, are shown in Air Ministry drawings CK425, CK426 (dated 1935) and CK664 (dated October 1937).

The information has been converted into a colour-coded plan (Figure 3) and it can be seen that the broad anomaly described above corresponds to the eastern boundary of the 'cut', being also the western boundary of the 'fill'. It seems likely that this was originally a river terrace, over which spoil was pushed in order to level the area. Up to 1.5m of earth and gravel were removed from the highest parts of this area, the majority of which was deposited to the east of the terrace although some was used to fill a broad shallow depression to the west, around square 4769. The geomagnetic image reflects all these activities. The areas of cut are geophysically 'blank' with remarkably consistent, smooth data both north and south of the runway. The areas of fill on the other hand are reflected by relatively intense positive and negative magnetic lineations, some of which are parallel and some oblique. These are believed to have arisen due to the movement of machinery backwards and forwards, pushing and compacting the spoil.

An irregular array of broad positive magnetic anomalies is apparent beneath the striations, which may represent lenses of redeposited topsoil beneath the new, levelled surface. A positive magnetic anomaly near the eastern limit of the airfield (5169 to 5367) corresponds to the eastern edge of spoil redeposition and probably reflects a concentration of topsoil along that edge.

The other levelling operation was carried out in the southernmost part of the airfield and this is again reflected in the magnetic survey. In this case up to 0.65m of earth and gravel were removed from the highest points and redeposited to the south-west. The ridge and furrow remains are still detectable here, although the anomalies are considerably weaker. An irregular band of positive magnetisation separates the cut area from the fill. The redeposited material again provides magnetic striations with bands of buried topsoil within the gravel.

#### 5.3.4 Other features

There is a generally low concentration of small dipolar magnetic anomalies across the airfield. These anomalies almost certainly reflect small items of ferrous debris, such as horseshoes and chain links, and only a sample have been included in the geophysical interpretation drawing.

There is, however, a relatively high concentration of slightly larger dipolar magnetic anomalies in the central southern part of the airfield, around 4866. Although these anomalies are also likely to reflect buried ferrous materials, their grouping does not suggest a random scatter of litter or loss of objects. This group of anomalies could have resulted from various different activities. One possibility is that the anomalies reflect metal goods within graves or within *Grubenhauser*. It is equally possible that the anomalies could have resulted from aerial target practice; a circular feature shown on Francis' reproduction of Air Ministry drawing 550/35, dated February 1935 (Francis 2001, fig.3) represents a 'bombing circle'. The exact location of such a feature is not known, but it could have been in the area of this group of anomalies. Another possibility is that the anomalies reflect the locations of 'smoke puffs'. These were smoke canisters which were detonated on the ground as planes flew over, the idea being to test the pilot's ability to accurately report the locations of where their bombs had dropped (pers. comm. P Francis). It is not known whether or not the canisters were made of ferrous materials, and simply discarded on the airfield after use, or in fact if they were of a cardboard construction similar to modern fireworks. As far as the author is aware, the airfield was never actually bombed, unlike the one at Scorton just to the north, and so it is unlikely that the anomalies reflect spent ordnance. On the 19<sup>th</sup> August 1941 the Forest Farm satellite airfield was attacked and c.200 incendiary devices were dropped. This sort of attack could result in a group of anomalies such as the group at Catterick. Quite simply, the origin of these anomalies may not be established without the use of targeted excavation.

Relatively large dipolar anomalies have been detected across the airfield. To the south of the runway, and parallel to it, at least some of these anomalies appear in pairs at fairly regular intervals. These anomalies reflect buried ferrous objects, almost certainly associated with runway lights. These could be the early type of paraffin lamps, known as 'glim' lamps (pers. comm. G Bennions), although these were often moved around on trolleys, or a later type of runway lighting system (as shown on the 1952 APs). These lights were certainly installed after the levelling of the airfield and

probably date to c. 1940. Other relatively large dipolar magnetic anomalies almost certainly reflect larger items of ferrous debris, possibly including ordnance.

Another very prominent geomagnetic feature comprises an intense, rectilinear dipolar anomaly in the north-eastern part of the airfield, which encloses over 2ha of land and respects both the runway and the airfield perimeter road. This feature is therefore presumed to post-date both the runway and perimeter road i.e. post-1940. The anomaly almost certainly reflects buried ferrous materials, either iron reinforcing bars in concrete or an iron pipe, for example. However, there does not appear to be any record of this feature on either airfield plans or service plans. The feature does not appear to be continuous, as would be expected from a pipe; there are at least four breaks or 'openings' in the anomaly. Although this feature remains an enigma, it is at least of recent origin.

Two rectangular groups of anomalies have been detected north and south of the runway in 4669 and 4667. The northern group comprises six parallel magnetic lineations, each comprised of chains of discrete, intense anomalies. The southern group is similar in nature but considerably smaller. Dr Sam Lucy has pointed out (pers comm) that the size and shape of this anomaly (c. 12 x 6m) is consistent with that of a typical Saxon halled building. The regular forms of these features, and the intensity of the anomalies suggest that these may be the remains of building foundations, although no corresponding structures have been identified on old airfield plans.

A few buried services have been detected around the edge of the airfield. One buried pipe, or possibly a group of cables, enters the airfield in 4870 and follows the perimeter road clockwise as far as a point just west of Oran House. Another pipe enters the airfield at the same point as the first but is confined to the northern part of the airfield.

## **5.4 Topographic survey**

### **5.4.1 General**

The numbers in square brackets refer to the features as labelled in Figure 7 (inside back cover). A computer-generated contour map comprises Figure 8, and a relief map is provided in Figure 9.

The general area of Castle Hills motte and bailey castle provides a naturally defensible position, utilising the natural high ground of a hill and river terraces and the River Swale to the east. In the medieval period the River Swale was closer to the castle than at present, possibly at the base of the hill slope [8]. A former course of the river can be identified here on aerial photographs (e.g. 1933 & 1998). The original purpose of the earthworks here may have been to overlook a river crossing or ford. Indeed, in earlier times the Swale may even have been navigable by shallow-draught vessels up to this point.

Although the motte and bailey castle here is of Norman date, the earthworks may have earlier origins. As well as the River Swale, the defended site here would also, at least in post-Roman times, have afforded good views of movements along Dere Street (Plate 5).



Plate 5: View from Castle Hills to Oran House and Dere St (A1)

Today the floodplain [40] lies between the castle and the river. To the north of the castle site two old river terraces are visible. The smaller terrace [33] aligns with the base of the main hill, along [8]. The larger terrace [34] aligns with the motte [1]. The hill/escarpment slopes down to both the west and south, to relatively large flat areas. To the west lies the current airfield. This is still largely how, topographically, it would have been in the Norman period, as the geophysical results and landscaping aspects of the desktop assessment have shown. The surviving alignments of ridge and furrow may be broadly contemporary with the castle, or slightly later.

Motte and bailey castles, constructed with earth and timber, were introduced into England by the Normans as part of their conquest strategy of Anglo-Saxon England. They were designed as military strongholds from which offensive operations could be made. Most were built immediately post-Conquest (1066) for this purpose, but others were built as part of the civil war between Stephen and Matilda (c. 1138-1153). They could be occupied for varying lengths of time, some up to 150 years. However, none were built after the 12<sup>th</sup> century when stone castles became the preferred stronghold.

The natural Boulder Clay outcrop topography at Castle Hills has been utilised to form both the motte [1] and bailey [3], with large-scale landscaping of the highest area of the escarpment to form the castle; the cutting of ditches through the hill; shaping of the natural slopes; and building up of earth mounds (particularly the motte).

#### **5.4.2 The motte**

The motte [1] slopes vary in both height and length. On the east, the motte ditch [2] cuts through the natural slope of the hill providing a much longer slope to the motte than compared to the western side. There is no evidence for the motte ditch around the far east side, where it would presumably have met the river. In recent times part of the north-eastern section of motte ditch has been used by vehicles as a track (Plate 6).

The function of the earth mound [32] at the bottom of the slope of the motte ditch at the south-east end is difficult to determine. It may have been to contain water within the ditch, but the gradient of the ditch (south-west to north-east) currently appears too steep to have contained much, except in the lowest places. It may be that this is a later addition by the military to prevent access up the ditch to the protected monument (as is evident at the northern end, where tyre tracks are visible cutting into the ditch bottom). A fence around the monument now prevents this, however, so the exact function of [32] is still unknown.

The ditch on the west side is broader than on the other sides, and still holds standing water, perhaps indicating that the moat on this side was designed to contain more water for extra defensive capability, especially since the motte was less formidable in itself from this side.



Plate 6: Motte ditch showing former use as track

The soil excavated from the natural hill to form the moat was probably used to further heighten and shape the conical motte at the top. To the north of the motte the terrace escarpment [34] shows evidence of further landscaping [31].

The top of the motte would have been surrounded by a palisade with a central tower constructed of timber. It is unlikely that much, if any, evidence for these (in terms of postholes) will survive at Castle Hills because of the substantial military disturbance that has taken place here.

#### **5.4.3 The bailey**

The bailey [3] is to the south of the motte. It is separated from the motte by the ditch [2], which is relatively shallow on this side compared with the west, north and east sides. A substantial, deep ditch would not have been as essential here. This segment of ditch can also be classified as the north ditch of the bailey.

The west slope of the bailey [7] is much steeper than the eastern side [8] and shows more evidence of having been landscaped, particularly the digging of the substantial ditch [4], with an outer bank [42] providing a further defensive feature. This bailey ditch [4] rises up at the north to form a relatively shallow ditch [9], which may be indicative of an entrance to the north-west corner of the bailey in the medieval period.

The slope on the south of the bailey varies from quite steep but relatively short at the top [5], to a less steep, but longer, gradient [6] further south. The area around [5] could be the location of the excavation mentioned in MacLauchlan (1849). The natural escarpment here [16] slopes down to the general level of the surrounding land (similar to the floodplain).

It is at the top of this slope, but outside the bailey itself, that a possible early mound has been identified [14], bounded to both north and south by a ditch [15] with a possible entrance at the west side. It is possible this is an earlier defensive structure than the Norman earthworks. It would be unusual for the Norman motte and bailey castle to have such a feature located outside the bailey, especially since there appears to be another one [12] located for this position (the south-east corner of the castle) at the top of the bailey. There has been discussion of British or Anglo-Saxon use of the site prior to the Normans (see above, and Wilson *et al.* 1996, MacLauchlan 1849). It is possible that the '*ramparts of the stronghold*' described by Aneirin in his poem *Y Gododdin* are in fact the earthworks at Castle Hills rather than the walls around *Cataractonium*. However, it remains possible that this external mound was an additional defensive feature for the castle, or that the plans for the castle were altered part way through the construction. Another probable Norman earthen mound can be seen at the west side of the bailey [10], at the top of the slope [7].

The eastern mound [12] is currently topped with a WWII pillbox [13] (Plate 7), and the western mound [10] is occupied by a WWII Bofors gun emplacement [11] (Plate 8). It cannot be determined from the survey whether these mounds already existed to their present heights, or if they were enhanced by the scraping up of extra soil from inside the bailey, in order to achieve greater prominence.

There is evidence for other mounds at the north-east ([17] and [18]) and north-west [21] corners of the bailey, but whether these are part of the original fortifications or the results of modern military activity is difficult to determine since there has been considerable disturbance over the whole bailey area. However, these mounds are located at areas of strategic defensive importance for the castle: [21] for the possible north-west entrance via [9], and [17+18] overlooking the platform [29] in the slope of [8] on the north-east corner of the bailey.

It is difficult to determine the purpose of the platform [29], but it is fairly substantial (in comparison with the slight platform [28]) and does look as if it is part of the original design of the Norman castle. An earthen bank along the top of the east side of the bailey [19] could also be Norman, possibly part of a palisade bank, or the result of modern military activity.

In the Norman period the bailey would have contained various structures, such as storerooms, stables, a hall and kitchens and possibly a chapel. The topographical survey indicates substantial disturbance to all areas of the bailey (especially in the



Plate 7: Pillbox at Castle Hills



Plate 8: Gun emplacement at Castle Hills

centre), but there may be some intact features surviving towards the edges. The dirt trackway [27] has probably caused minimal damage.

Outside the main castle area to the south there is evidence for more ditches, [38] and [39]. These may be outlying defensive features for the castle, perhaps originally containing water.

#### 5.4.4 Modern features

There is much evidence for recent military activity in the area. The most common features are slit trenches, particularly evident on the eastern slope of the bailey [8] and on the motte top [1]. There are also two slit trenches near to the gun emplacement [11] on the top of the slope [7]. A large slit trench is dug into the south side of mound [14] outside the bailey, with further slit trenches further south down the slope of [6] at the top of the southern escarpment [16].

The motte top also contains the dug-out remains of a more complex bunker-type structure where brick rubble survives [43]. Other intact structures include a pillbox [13] and gun emplacement [11] built to protect the RAF airfield to the west during the Second World War.

Various mounds ([20], [23], [26]) can be attributed to modern military activity on the bailey, as well as a small square concrete structure surviving set in the ground [24]. A mound of earth seeming to be a causeway across the ditch from the bailey to the motte [30] can also be interpreted as modern. Evidence from the Norman period (based on other motte and bailey castles) suggests access across this part of ditch would have been via a wooden bridge, postholes for which may still survive below ground.

Other areas outside the main castle complex showed evidence of modern military activity. A bank of large blocks of concrete rubble and soil [37] indicates that some sort of modern structure was probably located nearby and subsequently demolished. The floodplain [40] has also been extensively used by the military and is traversed by numerous tracks and other structures.

There is also evidence for recent attempts to protect the monument from further damage, since scheduling, with the dumping of earth across the dirt tyre track [27] at the north-west corner entrance [41] and [44]. This is presumed to have been dumped to deter the driving of vehicles into the bailey area.

#### 5.5 Auger survey

The auger survey was undertaken in the northern, built-up area of the base but was severely hampered by the nature of the deposits encountered, being largely gravel and often with cobble inclusions. Each borehole was continued until either impenetrable gravel or stone was encountered. A total of 32 boreholes were undertaken over a three-day period. The locations of the boreholes are shown in Figure 3 and the borehole descriptions are provided in Appendix IV.

Although it has been possible to examine Air Ministry drawings showing the extent of landscaping on the airfield, we do not have similar information for this part of the station. Unfortunately, beneath the topsoil layer the nature of the undisturbed deposits on site is similar to that of the material which was reportedly imported from the River Swale during the 1930s (Francis 2001, 39), and so even though we have some variation in borehole information across the site the interpretation of that data is very problematic. The survey has not been able to distinguish between natural and imported deposits. Although occasional charcoal fragments were observed in augered deposits, no archaeological remains *per se* were identified. As a result of these factors it has not been possible to precisely determine the likely depth of potential archaeological deposits.

Layers of redeposited material may be present in BH22, BH28 and BH31, where bands of gravel have been identified in between layers of 'topsoil'. BH28 and BH31 both lie to the north of the cookhouse, while BH22 lies to the south of the cookhouse and NAAFI.

Further evidence for the dumping of material, or at least ground disturbance, has been identified in BH11, BH12 and BH19, where a nail, a brick fragment and a glass sherd (all recent) were identified in the auger at depths of 0.43m, 0.50m and 0.43m below ground level respectively. BH19 was located to the rear of the Roman Catholic chapel, close to Cramp's 1966 excavation in which disturbed topsoil was recorded (Wilson *et al.* 1996, 30).

The deepest penetration (0.95m bgl) was achieved in boreholes 31 and 32, located to the north of building 158 (cookhouse) and building 114 (QM 8 Regt) respectively. Most of the other boreholes in this relatively open area of the site achieved depths of *c.*0.75m (e.g. BH1 & BH6). The shallowest boreholes (BH17 0.10m and BH3 0.12m) were located between Fuller-Good Road and 157 (car park), and in the low-lying ground to the north of 16 (Officers Mess garages) respectively.

## **6. The archaeological resource**

The periods and locations of known archaeological features at the Marne Barracks site are summarised in Figure 10. However, the extents of all these classes of evidence are currently unknown. Consequently, areas of high, medium and low archaeological potential are shown in Figure 11.

### **6.1 Prehistory (to AD 43)**

There is no evidence for the presence of people in the area during the Palaeolithic (Old Stone Age, up to *c.*8800 BC), during which time Catterick would have been right on the edge of the Devensian ice sheet. The first limited evidence for human activity around Catterick is during the Mesolithic (Middle Stone Age, *c.*8800-4000 BC), the early post-glacial period. People were hunter/gatherers, largely nomadic and leaving little trace of their activities with the exception of flint tools. A few such tools have been found during fieldwalking along the west side of the A1, north and south of Baines Farm, which would originally have been lost or discarded perhaps at a temporary camp or while following a herd of migrating animals such as red deer.

There is considerable evidence for the presence of people in the Catterick area later in prehistory. In the Neolithic period (*c.*4000-1800 BC) people started to cultivate crops and practice stock husbandry, and so began to lead a more sedentary life with more permanent settlements and more tangible archaeological remains. Although there is currently no direct evidence for occupation sites in the area, substantial monuments built by Neolithic and Bronze Age (*c.*1800-750 BC) people have survived, to some extent, to the north of the barracks. While the precise function of some of the monuments remains unclear, the manpower and social organisation required for such constructions indicates the significant role that beliefs and ritual played in the lives of these people.

The presence of a *cursus* at Scorton has been known for some time. This is a huge earthwork comprising two parallel ditches running across the landscape for some 2 km, forming a ceremonial avenue. Just to the south-west of the *cursus*, ring-ditches and pit alignments of late Neolithic/early Bronze Age date were discovered in 1997. To the south of the River Swale, at Catterick Racecourse, a huge late Neolithic/early Bronze Age mound of stones was revealed by excavation in 1995. The cairn was surrounded by a kerb of large boulders and contained eight small, empty chambers, also made of large river boulders. These chambers are believed to be the graves of important people, whose bones had decayed in the dry, aerobic burial conditions. Several nearby pits were found to contain Neolithic decorated pottery vessels, a stone axe and various flint tools, together with many burnt animal bones and evidence for other types of food including hazelnuts and apples, perhaps the remains of feasting.

During the Iron Age (c.750 BC-AD 43) Catterick was part of the territory occupied by a tribe called the Brigantes, a main centre for whom lay some 15 km to the north at Stanwick. A settlement dating to this period was identified from the air in the 1970s at Catterick Racecourse and excavated in 1995 prior to mineral extraction. A similar, early Iron Age site was identified in Pallett Hill Quarry, just to the south, in the 1980s. These sites typically comprise a rectilinear enclosure defined by ditches, within which were roundhouses, again enclosed by ditches, and areas for storage and stock. These are precisely the types of features that have been identified in the geophysical survey of the airfield, and which could even date to the Bronze Age. In contrast to earlier periods, for which we have burial and other ritual evidence but no occupation sites, the Iron Age in the Catterick area is characterised by small settlements but, as yet, no evidence for burials.

The potential archaeological resource for the prehistoric period at Marne Barracks therefore comprises:

- possible small Bronze Age/Iron Age settlement and associated features, of uncertain extent

## 6.2 Roman (AD 43-410)

In AD 43 the Roman army invaded Britain. Within a few decades most of the local tribes had been subdued, a network of roads had been established and towns had started to develop. The native Brigantian stronghold at Stanwick fell to the Romans in AD 72. This is the earliest period for which we have definite archaeological remains on the Marne Barracks site.

*Cataractonium*, the Roman town at Catterick Bridge, lies strategically at the point where the low ridge that carries the Dere Street Roman road crosses the River Swale. Dere Street was the main north-south highway connecting the legionary fortress at York with the forts of the Hadrianic frontier. The numerous excavations which have been carried out in this area have demonstrated the development of this major Roman site from an Agricola fort, established in c. AD 80, to a prosperous small 4<sup>th</sup> century town, making this one of the most important Roman sites in northern Britain.

With the construction of Hadrian's Wall in the 120s came the abandonment of many of the forts to the south. This appears to be the case at Catterick. The *vicus*, a civilian settlement outside the fort, however, grew and a timber *mansio* (posting station for official travellers) was soon built at the core of the developing settlement. The fort

was re-occupied in c. AD 160 and the civilian settlement flourished around a new, larger, stone-built *mansio*. A possible amphitheatre was also constructed to the south of the town at this time. Excavations on the north side of the Swale have demonstrated the presence of a possible temple and civilian settlement there in the later 2<sup>nd</sup> to 4<sup>th</sup> centuries. An extensive roadside settlement had also been developing to the south of the town, culminating in a Roman 'village' centred on Baines Farm. The settlement had begun in the 1<sup>st</sup> century and flourished in the 2<sup>nd</sup>, when earlier timber buildings were replaced in stone.

By c. 300 a major system of defences had been built around Cataractonium. At about this time, much of the Baines settlement had been abandoned and a possible villa appears to have been established within the Marne Barracks site. This would probably have been at the centre of a large agricultural holding. There is the potential, during intrusive works at the site, for completing the plan of the possible villa buildings at Marne. The remains of parts of a 4<sup>th</sup> century Roman field system have been found on the former airfield at Marne and other Roman field systems have been identified to the west of the A1. The geophysical survey for this project has also identified tracks and ditched enclosures to the south of the runway, which could be Roman in date. (These remains could equally reflect a small Bronze Age/Iron Age or even post-Roman settlement.) The extent and character of this site remain largely unknown. A later survival of the Baines village is a pottery kiln, discovered just within the Barracks site in 1994. This is the first kiln from Roman Catterick and pottery found within it dates to the late 3<sup>rd</sup>/early 4<sup>th</sup> centuries. Roman burials have also been identified outside the main entrance to Marne Barracks.

The fort at *Cataractonium* was again occupied from c. 370-400, after which it was abandoned for the last time. (Recent evidence indicates that there may not have been any discontinuity in the Roman military occupation of Catterick, with the exception of c. AD 120-160 – pers comm Pete Wilson). Many of the civilian buildings are by now built in timber, perhaps indicative of a general decline in the town, which appears to be abandoned shortly after c. 400. Occupation of the possible villa at Marne may have continued into the 5<sup>th</sup> century, but by the 6<sup>th</sup> century it was almost certainly in a ruinous condition, since Anglian burials cut through the walls.

The known archaeological resource for the Roman period at Marne Barracks therefore comprises:

- late 3<sup>rd</sup>/early 4<sup>th</sup> century buildings, perhaps part of a large villa complex of unknown extent
- remains of 4<sup>th</sup> century enclosures and field systems of uncertain extent
- a late 3<sup>rd</sup>/early 4<sup>th</sup> century pottery kiln
- miscellaneous Roman ditches and possible pits near the kiln, being part of the Baines Farm settlement

The potential resource may also include:

- at least a second pottery kiln, as these were usually built in pairs
- Roman burials
- further field systems, including tracks, enclosures and possible roundhouses, of uncertain extent

### 6.3 Post-Roman/Anglian to Norman Conquest (AD 410-1066)

In recent years a convincing argument has been made for the existence of small British kingdoms in the north of England during the immediate post-Roman period. Although there is no definite evidence for such a kingdom being centred on Catterick, its status as an important estate centre in the early Anglian period would not be inconsistent with such an origin. A considerable body of evidence for Anglian presence in the Catterick area has been amassed over the years.

Certainly there seem to have been strong British chiefs in the north who resisted the flow northwards of Anglo-Saxons for over a century. Historical references to *Catraeth* (probably Catterick) in the poem *Y Gododdin*, by Aneirin, may be the earliest post-Roman records relating to Catterick and the British resistance. The poem records that 300 British warriors, led by Urien of Rheged, were killed by Angles in a battle at *Catraeth* in c.600. It is possible that the 'ramparts of the stronghold' described by Aneirin are in fact the earthworks at Castle Hills. The topographic survey of these earthworks, undertaken as part of this study, have identified the remains of other earthworks outside the Norman motte and bailey castle, which could indeed have an earlier, post-Roman origin. The attribution of an Anglian royal burgh or vill to Castle Hills remains largely conjectural, based on both historical accounts and the topographic factors. The site is believed to have been a high point in the landscape since the start of the post-glacial period and the central places in northern British estates typically used such high points. There is also evidence for the adoption and adaptation of such native British sites by the Angles, such as at Yeavinger.

Several historical references also cite Catterick as an important centre in the early Anglian period; a place where royal weddings and baptisms took place. The location of the main centre of Anglian occupation remains largely conjectural, but is presumed to be under the present village of Catterick. Nevertheless, *Grubenhauser* have so far been identified at four locations in the Catterick area. These sunken-featured buildings of 6<sup>th</sup> century date have been excavated amongst the ruins of 4<sup>th</sup> century Roman buildings on the north side of the River Swale; in the southern part of Pallett Hill Quarry; at the former coal depot in Catterick village; and on the former RAF airfield, now under the REME workshop. The function of *Grubenhauser* is still not clear. In some cases the evidence indicates use as dwellings, but typically they appear to have been used for storage or as workshops, such as for weaving. Almost invariably, the last phase of use of these structures seems to be for rubbish disposal. The discovery of further *Grubenhauser* at Marne Barracks would potentially help to establish the function of these enigmatic features. Nevertheless, their presence together with contemporary ditches, gullies and postholes is taken to be indicative of occupation. A rectangular geophysical anomaly to the south of the runway is consistent with the size of a typical Saxon hall, and warrants further investigation.

Despite the paucity of settlement remains, there have been numerous discoveries of Anglian burials throughout the Catterick area. Cemeteries, or parts thereof, have been identified during investigations at Scorton Quarry; immediately north of Catterick Bridge; at the southern end of the Racecourse; at two locations to the north of Baines Farm; outside the entrance to Marne Barracks; and cut into Roman buildings at two locations within Marne Barracks. The burials in and around Marne and Baines could all be part of an extensive cemetery extending over 1 km, however, it seems likely that two or more discrete cemeteries are represented. The remains of

Anglo-Saxon burials are also indicated on the 1<sup>st</sup> edition OS map of 1857 immediately south of Marne next to the A1, although no evidence for this has been produced in recent times. The majority of these burials have been dated to the 6<sup>th</sup> century, however, some from the Racecourse cemetery and possibly from the CAS Site 46 excavation, may be 5<sup>th</sup> century in date. The orientation of most of the burials at Site 46 appears to be deliberately related to the alignment of the underlying Roman buildings, indicating that they were recognisable either as ruins or earthworks when the site was used for burial. Burials offer huge potential for the study and understanding of past societies. The study of discrete burial groups for this period is still in its infancy. Are different sections of society in life reflected in death by different burial practises, and does this vary from one region to another? The positions of bodies in graves can differ, e.g. crouched/extended, as can the inclusion, variety or absence of grave goods. All of these factors can help to determine social identities.

The later Anglian (after the late 8<sup>th</sup> century) history of the area is undocumented. A few Viking artefacts have been found in the Catterick area. It seems likely that Catterick remained at the centre of an important estate, since at the time of the Domesday Survey it was one of the two largest manors in Richmondshire. It is possible the ridge and furrow farming system, evident over much of the airfield, may have pre-Conquest origins. No ridge and furrow remains have been identified by a walkover survey of the grassed areas in the northern part of the barracks.

There is great potential in the Catterick area to investigate the late Roman-early medieval interface, a period for which little is currently known. The opportunity for such studies at Catterick was missed during the large excavations of the 1950s and 1960s, when much material was bull-dozed away in order to reveal the Roman buildings.

The known archaeological resource for the post-Roman/Anglian period at Marne Barracks comprises:

- one or more cemeteries, of unknown extent
- a *Grubenhäuser*

The potential resource may also include:

- more burials
- field systems, including tracks, enclosures and further *Grubenhäuser*, of uncertain extent
- British or Anglian earthworks at Castle Hills
- ridge and furrow cultivation

#### 6.4 Post-Conquest (AD 1066-1485)

The evidence for post-Conquest archaeological remains at Marne currently comprises the Norman motte and bailey castle at Castle Hills. This is a Scheduled Ancient Monument (NY 299) and as such enjoys statutory protection. The location of the castle provides an easily defensible position, using natural high ground and the River Swale to the east. The Swale was closer to the castle in the medieval period, possibly at the base of the motte on its eastern side. A former course of the river can be identified here on aerial photographs (e.g. 1933 & 1998). The original purpose of the

earthworks here may have been to overlook a river crossing or ford. Indeed, in earlier times the Swale may even have been navigable by shallow-draught vessels up to this point. Although the motte and bailey castle here is of Norman date, some of the earthworks may have earlier origins. As well as the River Swale, the defended site here would also, at least in post-Roman times, have afforded good views of movements along the former Dere Street.

The known archaeological resource for the post-Conquest period at Marne Barracks comprises:

- motte and bailey castle
- ridge and furrow cultivation

### **6.5 Post-medieval (AD 1485-1900)**

The main north-south road through the area at this time did not follow the course of the present A1 road. At the southern limit of the Marne Barracks site the 18<sup>th</sup> century road turned abruptly to the north east, to Oran hamlet, and then north-west and then north through Catterick Village. This road traversed what is now the airfield and is evident both in the geophysical survey image, old maps and on aerial photographs. Leeming Lane, along the western limit of the study area, is first shown on the tithe map of 1842, and will have taken the vast majority of traffic that had previously used the Oran road.

There are eight listed buildings in the study area, all dating to this period and all within the Oran House building group on the south side of the airfield. The buildings are all Grade II listed and as such enjoy statutory protection. Parts of these buildings are currently in need of repair. The existing Oran House and all but one of the outbuildings date to c.1830. The barn is believed to date to the 18<sup>th</sup> century and was presumably associated with an earlier house and outbuildings shown on maps as early as 1739.

Early maps indicate the surrounding land had already been enclosed by this time and the study area comprised a series of north-east/south-west fields, for which no further evidence has been found. Field boundaries were progressively removed until about 1900.

The known archaeological resource for the post-medieval period at Marne Barracks comprises:

- Oran House and outbuildings
- former road north from Oran House
- old field boundaries

### **6.6 Modern (AD 1900-present)**

In the early part of the 20<sup>th</sup> century the study area became Catterick Aerodrome and this resource has been assessed in the companion report on the history and development of RAF Catterick (Francis 2001). There are currently some 122 buildings not including the Oran group and 84 Service Family Quarters. Although a few buildings of WWI origin survive, the majority of the buildings date from 1925-1944. It is understood that the listing of Buildings 68, 54, 31, 46 and 124 will be

recommended by English Heritage to the Secretary of State in a report to be submitted in 2001.

Many of the geophysical anomalies detected on the airfield are associated with activities undertaken in this period, such as levelling, runway lighting and other services and possible buildings or compounds.

## 7. Potential impact on the archaeological resource

This section discusses the potential impacts of the possible developments in the EDP (GVA Grimley 2000) upon the archaeological resource at Marne Barracks.

The EDP explored six scenarios as follows:

- **Scenario 1:** Do minimum whereby there are no significant changes to existing activities at Marne Bks. 645 VGS would remain in situ but there would be limited space to meet the military's requirement.
- **Scenario 2:** Modified do minimum whereby 645 VGS is relocated to the south side of the airfield. This would provide some additional land, but still far short of that required to meet the military requirement;
- **Scenario 3:** Expansion of technical accommodation on the airfield. 645 VGS would relocate to another airfield, thereby freeing up all the airfield to meet planned changes in the military requirement;
- **Scenario 4:** Development of technical and single living accommodation on the airfield. This scenario is achievable, but is likely to be more expensive than Scenario 3 and is unlikely to be acceptable to the LPA;
- **Scenario 5:** Development of technical accommodation and NAM (North) on the airfield. This is similar to Scenario 3, but provision would be made in terms of land use and traffic planning to facilitate the location of NAM (North) to Marne Bks and possibly also a permanent Army Exhibition Site. This scenario is considered to be in line with LPA's policies to promote tourism development in the district, and may therefore be more acceptable than Scenario 4;
- **Scenario 6:** Redevelopment on a greenfield (or brownfield) site. This scenario involves reproviding technical and single living accommodation for 5 Regt RA and 8 Tpt Regt RLC at a vacant barracks site at Catterick Garrison. The concept of purpose designed barracks accommodation could fully reflect the requirements for unit integrity and provide long term flexibility, but would be significantly more expensive than the other scenarios.

These scenarios were discussed at an EDP Steering Group Meeting which took place at Catterick Garrison on 11 October 1999. The conclusions of the Steering Group Meeting were:

- **Scenarios 1 and 2** should be discarded as they do not allow the military requirement to be met;
- **Scenario 4** should be discarded on the grounds of risk and affordability;
- **Scenarios 3 and 5** are compatible with each other. They fully meet the military requirement and provide sufficient flexibility to cope with possible future changes. As NAM confirmed its intention to locate NAM (North) to Marne

Bks at the meeting it was agreed that Scenario 5 should form the basis for the EDP;

- **Scenario 6** represents an attractive alternative to Scenarios 3 and 5 in meeting the military requirement. In order to provide a cost comparator it was agreed that the Consultant should also assess the cost of pursuing this scenario.

Consequently, it is the potential impact of Scenario 5 upon the archaeological resource that is discussed here. Figure 12 shows the proposed landuse framework as presented in the EDP.

**Zone 1 Family Quarters.** This will entail the upgrading of accommodation and the enhancement of the provision of play areas, other amenity areas and car parking. Buildings with non-conforming uses (125, 7, 159 and 134) will either be used as community buildings and/or demolished and the sites landscaped as amenity space, local recreation or car parking areas. There is also a possibility of private sector infill housing development.

The archaeological resource in this area remains largely unknown, although it is likely that it may include part of an Anglian cemetery. Construction of the existing buildings will have damaged/removed any remains in those areas and upgrading of those buildings is unlikely to further impact upon the resource there. Four potential greenfield development sites are identified in the EDP for this zone – development of these areas may impact upon archaeological remains.

**Zone 2 Single Living Accommodation.** This will entail the upgrading of existing accommodation and/or new build. The archaeological resource in this area remains largely unknown, although it is likely that it may include part of an Anglian cemetery. Construction of the existing buildings will have damaged/removed any remains in those areas and upgrading of those buildings is unlikely to further impact upon the resource there. New build could impact upon archaeological remains. Five potential greenfield development sites are identified in the EDP for this zone – development of these areas may impact upon archaeological remains.

**Zone 3 Community and Recreation Areas.** Possible developments in this area include an all-weather sports pitch, permanent sports pitches and associated structures on the airfield, a pedestrian/cycle path, a biathlon track and a cross-country track.

The archaeological resource in the built-up, northern area is known to include the remains of Roman buildings, possibly a villa complex. This is of unknown extent but the building complex could cover up to 1 ha. An Anglian cemetery is also known in this area, again of unknown extent. The known resource on the airfield within this zone includes medieval farming remains and a former road. Further *Grubenhauser* may also survive in the area of the REME workshop. It is also likely that there may be remains of field systems and enclosures associated with the villa, and other archaeological ditch features of unknown date and function.

**Zone 4 Regimental Offices, Classrooms and Stores Area.** Possible developments in this area include the upgrading and/or redeveloping buildings either side of Sanders Way. One potential greenfield development site is identified in the EDP for this zone – development of this area may impact upon archaeological remains. The part of this

zone near the Roman Catholic chapel may well contain remains of the possible villa complex, as well as Anglian burials. Parts of the villa field system and *Grubenhauser* may survive in parts of this zone.

**Zone 5 Main Technical Area.** Proposed developments in this zone include new garaging facilities, workshops, stores, offices, roads and hardstanding areas. The known archaeological resource of this zone, which covers most of the northern half of the airfield, comprises Roman field systems, a Roman pottery kiln, medieval field systems, a post-medieval road and other archaeological ditch features and tracks. It is possible that the remains of further *Grubenhauser* or Roman structures also survive. An area of land adjacent to Zone 3 is believed to be devoid of archaeological features due to landscaping in the 1930s.

**Zone 6 Backdoor Training Area.** The EDP does not recommend significant development of this zone. The existing Sewage Treatment Works may be relocated to a site in the south of the zone. The known archaeological resource here mainly comprises the Castle Hills motte and bailey castle and its immediate environs, constituting the Scheduled Ancient Monument area, which enjoys statutory protection. Medieval farming remains have previously been noted in this area although these are now largely obscured by recent tree planting.

**Zone 7 National Army Museum (North).** This large area to the south of the runway is reserved for the probable development of NAM (North). The known archaeological resource in this zone includes a complex of tracks and enclosures, with possible structural remains also (of unknown date and uncertain extent), miscellaneous archaeological ditches and pits, medieval ridge and furrow cultivation and a post-medieval road. A concentration of intense geophysical anomalies in this area may be of archaeological significance. Eight of the buildings within the group at Oran House are listed, and as such enjoy statutory protection. Two areas of land in this zone are known to have been landscaped in the 1930s, at least one of which is believed to be devoid of archaeological features.

**Zone 8 An Army Exhibition Site.** This area to the south of the runway is reserved for an exhibition site. The known archaeological resource in this zone includes a complex of tracks and enclosures, with possible structural remains also (of unknown date and uncertain extent), miscellaneous archaeological ditches and pits, and medieval ridge and furrow cultivation. A concentration of intense geophysical anomalies in this area may be of archaeological significance.

## 8. Conclusions and recommendations

A key recommendation of the EDP for Marne Barracks was the need to undertake a programme of non-intrusive and intrusive archaeological investigations at the Barracks. The aims and objectives of the first phase of those investigations have been achieved by implementation of the approved scheme of works. The Phase 1 works have included: a comprehensive desktop assessment of the archaeological resource both at Marne and in the broader Catterick area; a geomagnetic survey of 41ha of airfield; a topographic study of Castle Hills Scheduled Ancient Monument and its surroundings; and an auger survey of the northern part of the base. The information

gathered during these investigations has been collated and discussed. An appraisal of the archaeological resource at Marne has been provided, both by archaeological period and by reference to the proposed development zones identified in the EDP.

### 8.1 Summary of the archaeological resource

The known archaeological resource at the site comprises:

- Roman buildings, possibly part of a villa complex
- Roman building plots, part of Bainesse settlement
- Roman pottery kiln, part of Bainesse settlement
- Roman field system, probably associated with a villa
- Anglian burials, part of one or more cemeteries
- Anglian *Grubenhäuser*, possibly part of a larger settlement
- Medieval ridge and furrow cultivation
- Norman motte and bailey castle, Castle Hills
- Post-medieval road and buildings
- Tracks, enclosures and possible structures (undated)
- Miscellaneous ditch and pit features (undated)

Based on the available evidence it is likely that the following may also be present:

- Further Roman buildings, comprising possible villa
- Further Roman building plots, part of Bainesse settlement
- At least one other Roman pottery kiln
- More of the Roman field system
- Further Anglian burials
- More *Grubenhäuser*
- Pre-Norman earthworks at Castle Hills
- Post-medieval field boundaries

Many of the features above have the potential to be of national or regional significance. The ridge and furrow remains together with the post-medieval road and field boundaries can be considered of local significance.

Given current knowledge, there are no further archaeological features on the site which merit statutory protection (Castle Hills and Oran House are already protected). However, the potential exists for archaeological sites of national importance to be identified during future, intrusive investigations. Although the Roman roadside settlement at Bainesse Farm is considered to be of national importance, few presently known remains extend into Marne Barracks. Despite the Scheduled Ancient Monument status of Castle Hills, the monument is in a poor state. A proposed Management Plan for the site is provided below. The statutory protection afforded to the Castle Hills SAM and the listed buildings at Oran is such that their 'setting'<sup>a</sup> should not be adversely affected by proposed developments. This should be given due

consideration at the design stage of any proposed development within view of such features.

### **8.2 Castle Hills management proposals**

Several factors are currently having a detrimental effect on the state of the monument: access, burrowing fauna and vegetation. Steps should be taken to minimise the effects of these factors. Although it is understood that vehicles are no longer driven across the site and that digging is no longer permitted on the site, it is recommended that a more substantial fence be erected in order to restrict access and erosion of the monument. A significant number of rabbits, and fewer moles, are also active on the monument, causing erosion and possible de-stratification of archaeological deposits. The animals need to be removed and the enclosing fence would need to be sufficient to prevent below-ground access by burrowing animals. Parts of the monument are covered by dense vegetation comprising trees and scrub, the roots of which also disturb sub-surface deposits of archaeological potential. This vegetation also requires managing.

The remains of various military structures on the monument are evident as piles of brick and concrete rubble. Although *in situ* structures should remain, loose rubble could be removed from site as part of a management programme.

### **8.3 Phase 2: Evaluation**

An outline scheme of works for the Phase 2 investigations is also provided, in accordance with the aims and objectives of Phase 1. A spatial strategy for further investigations is provided in Figure 13. Areas where further non-destructive archaeological investigations could be undertaken on site include all of the potential greenfield development sites identified in the EDP, if they are to be used for new build. Areas of the backdoor training area may also be suitable, if new build or landscaping is proposed there. Geophysical survey of those areas could help to identify sub-surface features of archaeological interest. In order to further characterise the nature of some of the features detected geophysically on the airfield, targeted trial trenching should be carried out. Trenching has the potential to determine the depth, age, extent and degree of preservation of archaeological remains. Trial trenching could also be used within the built-up area of the Barracks, and in the backdoor training area, where new build or landscaping is proposed. The extent and depth of archaeological remains in these areas is largely unknown. A services emplacement strategy is required before determining the locations and extents of investigations along service corridors.

It is recommended that the archaeological evaluation be carried out at the same time as any geotechnical or engineering trial excavations, in order to enable the exchange of information for mutual benefit.

Any trenches opened during the week will need to be backfilled by the Friday. It is understood that trenches will not be left open over weekends. This is due to the use of gliders on the airfield each weekend.

The trenches will typically measure 2m in width and 10-30m in length. These may be extended, or some trenches joined together, to encompass other features as appropriate. Trench 11 will cover a larger open area in order to sample the dipolar magnetic anomalies identified during the geophysical survey.

Trial trenching on airfield north of runway:

- 1 ?structural remains
- 2 ditch features
- 3 area of re-deposited material
- 4 ditch/enclosure feature and interior
- 5 double-ditched trackway
- 6 record ridge and furrow profile and investigate beneath
- 7 record ridge and furrow profile and investigate beneath

Trial trenching on airfield south of the runway:

- 1 record ridge and furrow profile and investigate beneath
- 2 ditch/droeway features
- 3 ditch feature
- 4 ditch feature
- 5 ?structural remains
- 6 double-ditched trackway and enclosure
- 7 double-ditched trackway and enclosure
- 8 ditch/enclosure feature and interior
- 9 ring-ditches
- 10 ditch/enclosure feature and interior
- 11 cluster of dipolar anomalies
- 12 ring-ditch
- 13 ?ring-ditch
- 14 pit feature
- 15 double-ditched trackway
- 16 record ridge and furrow profile and investigate beneath
- 17 record ?ridge and furrow profile and investigate beneath
- 18 area of unknown potential
- 19 area of re-deposited material

#### **8.4 Possible programme of further works**

It should be noted that the Phase 2: Evaluation works will not necessarily be the final stage of archaeological investigations prior to re-development of the base. An outline of possible further works is presented below, based on English Heritage guidelines (Management of Archaeological Projects, 2<sup>nd</sup> edition, 1991). Any further works will of course depend on the results of the preceding stage of investigation, and upon discussions between the local authority and the client.

- Evaluation comprising further geophysical surveys and targeted trial trenching
- Excavation of those areas where development may impact upon significant archaeological deposits
- Assessment of the results of fieldwork and production of an updated project design for analysis
- Production of client report
- Analysis of results and production of a publication report
- Publication of results in an appropriate journal, or possibly as a monograph

## 9. Acknowledgements

ASUD gratefully acknowledge GVA Grimley and the Ministry of Defence for facilitating this work, in particular Lt Col Nick Cheesman, Major Jim Bond and Geoff Prince. The following consultees are also gratefully acknowledged for their assistance during this project:

### *Steering Group*

Lt Col (Retd) NC Cheesman	Project Sponsor Team, Catterick Garrison
Geoff Prince	Consultant, GVA Grimley
Robert Shopland-Reed	Defence Estates, Catterick Garrison
Robert Shaw	Defence Estates, Sutton Coldfield
Neil Campling	County Archaeologist, NYCC

### *Academic Advisory Panel*

Dr Pete Wilson	English Heritage/Durham University
Prof Rosemary Cramp	Durham University
Dr Richard Hingley	Durham University
Dr Sam Lucy	Durham University

### *Consultees*

Mrs Beech	Air Photo Library, Keele University
Sqn Ldr (Retd) GH Bennions DFC	Former RAF Catterick pilot
Major Jim Bond	QM 5 Regt RA, Marne Barracks
Mike Brewster	WYG Engineers, Newcastle
Jim Davie	Former RAF Catterick firefighter
Major (Retd) Harry Dennison	G4 Estate, Catterick Garrison
David Edwards	Defence Estates, Catterick Garrison
Paul Francis	Airfield Research
John Harwood	Volunteer, Defence of Britain Project
Major Tim Helps	Wathgill Camp, Catterick Garrison
Col Ian Horsford	Wathgill Camp, Catterick Garrison
Dave Irwin	Works Service Manager
Jeremy Lake	English Heritage
Tim Laurie	Catterick Garrison Conservation Panel
Major (Retd) Derek Markham	Property Manager, Marne Barracks
Graham Nicol	Garrison Works Liaison Officer
Linda Smith	SMR Officer, NYCC
Staff	County Records Office, NYCC
Staff	National Monuments Record, Swindon

## 10. Personnel

The following ASUD staff have been involved in the desktop assessment and fieldwork: P Carne, J Gosling, D Graham, D Hale and D Still. This report has been prepared by D Hale with illustrations by L Bosveld.

## 11. References

- Alcock L (1983) Gwyr Y Gogledd: An Archaeological Appraisal. *Archaeologia Cambrensis* 132, 1-18.
- Alcock L (1987) *Economy, society and warfare among the Britons and Saxons*. Cardiff, University of Wales Press.
- AML (1981) *Report on Geophysical Surveys by AML at Catterick, North Yorkshire*. Unpublished Ancient Monuments Laboratory report for English Heritage.
- ASUD (2000) *Archaeological Investigations at Marne Barracks, Catterick Garrison, North Yorkshire: Technical Proposal*. ASUD 00.78a. Archaeological Services University of Durham unpublished document for GVA Grimley.
- Babtie Group (2000) *Marne Barracks P & RTC, Catterick Garrison – Technical Note*. Unpublished report.
- Breckon S (1971) note in 'Roman Britain in 1970'. *Britannia* 2, 251.
- Brewster TCM & AE Finney (in preparation) An early Iron Age site at Pallett Hill Quarry.
- Colgrave B and RAB Mynors (1969) eds. *Bede's Ecclesiastical History of the English People*. Oxford.
- Cramp RJ (in Wilson *et al.* 1996, and in preparation) An Anglian burial at RAF Catterick, 1966.
- DoE (1987) *List of Buildings of Special Architectural or Historic Interest, District of Richmondshire, North Yorkshire*. Department of the Environment.
- EH (1995) *Geophysical survey in archaeological field evaluation*. Research and Professional Services Guideline no. 1, English Heritage.
- EH (1996) *County List of Scheduled Monuments, North Yorkshire*. English Heritage.
- EH (2000) *Survey of Military Aviation Sites and Structures*. Thematic Listing Programme, English Heritage.
- Francis P (2001) *RAF Catterick: Historic Aerodrome Survey*. Unpublished report for Archaeological Services University of Durham.
- Gibson E (1722) ed. W Camden. *Britannia*, 2<sup>nd</sup> edition.
- GeoQuest Associates (1994) *Archaeological Excavations at RAF Catterick, North Yorkshire, 1994*. Unpublished report for Trafalgar House Construction Management Ltd.
- GeoQuest Associates (1995) *Geophysical survey of land at Leeming Lane, Catterick, North Yorkshire*. Unpublished report for York Archaeological Trust.

- GVA Grimley (2000) *Establish Development Plan for Marne Barracks, Catterick Garrison*. Unpublished report for Defence Estates.
- Hall D (1998) Medieval fields in their many forms. *British Archaeology* 33. Council for British Archaeology internet journal.
- Halpenny BB (1981) *Action Stations 4. Military airfields of Yorkshire*.
- Hildyard EJW (1955) A Roman and Saxon site at Catterick. *Yorkshire Archaeological Journal* 38, 241-245.
- Hildyard EJW (1957) *Cataractonium, Fort and Town*. *Yorkshire Archaeological Journal* 39, 224-265.
- Hildyard EJW and WV Wade (1950) Trial Excavations at Catterick Bridge. *Yorkshire Archaeological Journal* 37, 402-419.
- Hildyard EJW and WV Wade (1951) Catterick Bridge - A Roman Town. *Yorkshire Archaeological Journal* 37, 521-522.
- IFA (1999) Institute of Field Archaeologists *Standard and Guidance for archaeological desk-based assessment*.
- LUAU (1997) *Old Coal Yard, Catterick, North Yorkshire*. Unpublished report by Lancaster University Archaeological Unit for Harron Homes.
- MacLauchlan H (1849) On the Roman Roads, Camps and Other Earthworks between the Tees and the Swale in the North Riding of the County of York. *Archaeological Journal* 6, 335-351.
- Moloney C (1996) Catterick Race Course. *Current Archaeology* 148, 128-132.
- NAA (1997) *Richardson's Coal Depot, Catterick*. Unpublished report by Northern Archaeological Associates for Harron Homes.
- NAA (1998) *Richmond and Catterick Area (Thubron) Archives*. Unpublished report by Northern Archaeological Associates for the Heritage Unit, North Yorkshire County Council.
- NAA (2000) *Marne Barracks, Catterick: New Sports Hall Development*. Unpublished report by Northern Archaeological Associates for WS Atkins Defence Services.
- Page W (1968) ed. *The Victoria History of the County of York, North Riding*. London.
- Powlesland D (1998) ed. The West Heslerton Assessment. *Internet Archaeology* 5.
- RCHME (1997) *The RCHME: Catterick Project, Cropmarks in the A1 corridor between Catterick and Brompton-on-Swale*. Unpublished Royal Commission on the Historic Monuments of England report for English Heritage.

- Rivet ALF and Smith C (1979) *The Place Names of Roman Britain*. London.
- Solmek (1994) Ground Investigation – RAF Catterick, Proposed REME Workshop. Unpublished report for Trafalgar House Construction Management Ltd.
- Speight H (1897) *Romantic Richmondshire*. London.
- Thubron S (1973) note in 'Roman Britain in 1972'. *Britannia* 4, 280.
- Thubron S (1976) note in 'Roman Britain in 1975'. *Britannia* 7, 314.
- Turnbull P (1981) Catterick, North Yorkshire: The Need for Rescue Archaeology. Appendix in *Summary Report on Excavations at Baines Farm, Catterick*. Unpublished report.
- Wacher JS (1971) Yorkshire towns in the fourth century, in R Butler ed. *Soldier and Civilian in Roman Yorkshire*, 165-177. Leicester.
- Wacher JS (1973) note in 'Roman Britain in 1972'. *Britannia* 4, 278-280.
- Whitaker TD (1822) *A History of Richmondshire*.
- Whitelock D (1955) *English Historical Documents, c.500-1042*. Cambridge.
- Willmot G (1959) information from North Yorkshire County Council SMR.
- Wilson PR (1984) Recent work at Catterick, in PR Wilson, RFJ Jones and DM Evans eds. *Settlement and Society in the Roman North*, 75-82. University of Bradford and Yorkshire Archaeological Society.
- Wilson PR (1994) *A1 Motorway, Leeming to Scotch Corner, Central Sector: Archaeological Assessment Stage 3*. Unpublished report by English Heritage Central Archaeology Service.
- Wilson PR (forthcoming) *Roman Catterick (Cataractonium): A Roman town and its hinterland. Excavations and research 1958-1997*.
- Wilson PR, P Cardwell, RJ Cramp, J Evans, RH Taylor-Wilson, A Thompson and JS Wacher (1996) Early Anglian Catterick and *Catraeth*. *Medieval Archaeology* XL, 1-61.
- Witherow MS (1981) *A Short History of Royal Air Force Catterick*.
- YAT (1996) *Leeming Lane, Catterick, North Yorkshire*. Unpublished report by York Archaeological Trust.