

The shafts located during this assessment have been graded according to the above scale in the SITE GAZETTEER (6).

### **Shafts at Higher Carnkie.**

Detailed recommendations for the treatment of shafts are given in the Site Gazetteer (6.0).

In addition, other shafts may exist which are no longer visible at surface. The lack of documentation for earlier workings on this site are no guarantee that unmapped or otherwise recorded shafts or unstable areas will not lie within the site boundary. Exploration work for (and subsequent safety works to) such shafts must be designed and specified in consultation with the County Archaeologist where they fall within an Archaeological Constraint Area (section 5.1).

## **5.5 Archaeological Potential Below Ground**

- ◆ Sub-surface disturbance (by trenching, drilling, or shaft-capping operations) almost anywhere on the site might encounter or reveal historic features from a working period before the development of the site in 1922.
- ◆ Contingency funding must be made available as part of any such development, such as to allow for the making of a proper archaeological record of any features revealed during the course of the development.
- ◆ Area C1 must be protected from any form of development which would involve below-ground disturbance, except as a component of works to remove the rubbish which has built up in this area since the abandonment of the mine.

## **6.0 SITE GAZETTEER**

The features within this section are located on Plan 1 (end of report).

### **No: 1 Site of Whim engine house (SW 6827 3938)**

Feature: site of winding engine house

Both the 1880 and 1908 Ordnance Survey maps show a small winding engine (Broad's Winder), with boiler house, chimney and loadings in this position. Although the engine was at work in 1880, the boiler house had become un-roofed by 1908 and according to Palmer and Neaverson (1987, 39) the engine house had been demolished by 1909. The winder worked more than one shaft: Marriott's, Broad's and Richards' were not far away, but Pascoes' was nearly 1,800' to the south-west. This was, it seems, one of the pioneering sites for the use of wire rope

for hauling (Morrison, 250). The site of the engine house is now marked by a rather hollowed area where rabbits bring up coal dust and cinders, on the edge of a piece of disturbed ground that has been incorporated into a nearby garden. There is some possibility that the foundations of this structure survive beneath the material which has been dumped over the site.

#### Condition

Demolished and buried.

#### Recommendations

Management work on this site may reveal the remains of the engine house. If structural remains are encountered, they should be excavated under archaeological supervision.

#### **No: 2 Leat (SW 6827 3936 to SW 6833 3944)**

Feature: Leat

Although the Basset mines were notably wet, water management was an important feature of surface organisation, and leats ran long distances across the landscape between individual sites. Most of the courses of these leats have been destroyed in the course of agricultural improvement, but fragments of one such system that formerly connected a shaft to the north of Filtrick Farm with Broad's whim engine house (1), ran near Carnkie Shaft to the north and on in the direction of Carnkie Village and West Basset Stamps have survived adjacent to the northern hedge of Ordnance Survey fields 2930 and 3838. The leat is defined by a large linear dump of material on its northern side, and by a shallow and vegetation-choked hollow next to the hedge. At its western end, the course of the leat was not investigated, though it may still survive; to the east, the leat ran across the course of Filtrick Lane, across an area overdumped with rubbish, and into the fields beyond, though the whole of this section seems to have been destroyed.

#### Condition

In poor condition - rather damaged by ploughing in the field upslope, and truncated at its eastern end.

#### Recommendations

Do not destroy if landscaping the adjacent land, but retain as a site feature.

#### **No: 3 Building (SW 6833 3944)**

Feature: Probable mine building

The 1880 Ordnance Survey showed a small roofed square building tucked into the corner of the field at this point, partly enclosed within a small section of walling set a little to the north. By 1908, this feature was not surveyable, although the short section of walling had survived and was noted. The identification of this building is uncertain. Whilst it could have been a small, remote, explosives magazine, it is more likely to have been a store shed of some sort. The nearby walling has been destroyed (perhaps buried beneath the rubbish tip here, but more likely destroyed during dump removal), but parts of the structure survives in the field corner as well-built masonry walls up to 1.5m high.

#### Condition

Poor. Interior of building destroyed, probably by dump removal. No diagnostic features on building wall faces.

#### Recommendations

Retain surviving walling.

#### **No: 4 Site of building (SW 6831 3947)**

The 1880 Ordnance Survey show a small roofed rectangular structure in this area of the mine, apparently isolated amongst dumps. Its function is unknown. By 1908 the building was roofless, and its site has now been obliterated by the rubbish dump. It is possible that the 20th Century extension to the Basset Tramway destroyed this building.

#### Condition

Apparently destroyed, but buried foundations may survive.

#### Recommendations

The possible presence of building foundations in this area should be noted in the drawing up of any management works which involve ground disturbance. If structural masonry is encountered during site management operations, it should be archaeologically recorded.

#### **No: 5 Pryor's Shaft (SW 6836 3945)**

Feature: Shaft, Grade C.

Pryor's Shaft was noted by the Ordnance Survey in 1880 within an area of diffuse dumps. There are no records of the date at which it was sunk, nor of the depth it eventually achieved. It does not seem to have been served by either a pumping or winding engine, and may have been a relatively early feature of the site. By 1908, the shaft throat had collapsed to such a degree that the Ordnance Survey depicted

the site as a massive and gaping (20.0m to a side) sub-triangular hole in the ground.

The site of this shaft can no longer be found at surface, although there is a patch of ground at about the right location where the vegetation is markedly different from the surrounding (grasses and mosses, rather than high brambles). The shaft seems to have been infilled with rubbish, and its site thoroughly obliterated.

#### Condition

Exact location lost. Assumed to be choked with rubbish and rubble.

#### Recommendations

Locate and treat. This shaft probably requires capping, though the logistics of achieving this, given the enormous size of the collapsed shaft throat shown by the Ordnance Survey in 1908 might present considerable technical difficulties.

#### **No: 6 ?Boundary Shaft (SW 6838 3948)**

Feature: Shaft, Grade C.

A small (un-named) shaft was located (as "Old Shaft") by the Ordnance Survey to the north-east of Pryor's Shaft (5) on 1908 maps (though not on the 1880 maps). This may be Boundary Shaft. There appear to have been no associated structures adjacent to the shaft. The site of this feature has been obliterated by the rubbish dump which covers the area, the only remaining mining features in the area being a pair of small, rather blurred spoil dumps to the south-east and north-east, which may have been associated with it. It must be assumed that the shaft was infilled with rubbish.

#### Condition

Site obscured by later activity.

#### Recommendations

Locate and treat. In view of its proximity to the proposed Mineral Tramways route along the Basset Tramway, this feature should probably be capped.

#### **No: 7 cutting and tunnel (SW 6833 3950 to SW 6842 3956)**

Feature: Railway cutting and tunnel

About 1906, the Basset Tramway which linked East Basset Stamps to its production sites to the west was extended to Marriott's Shaft, formerly on South Frances Mine, to link the eastern dressing floors to the new shafthead being developed in the wets of the sett. In order to get from Samson's Shaft (see below)

past the Four Lanes road, a tunnel was constructed, necessitating the excavation of a deep cutting on either side of the road. Although the tramway cutting on the eastern side of the road has become infilled and can no longer be seen, the tunnel survives intact, though can only be entered from the west. On this western side, the line of the cutting is still visible for part of its length, though has been used for fly tipping, and is now an unsightly and part-infilled mess. From the end of the cutting towards Marriott's Shaft, the line of the trackbed can be made out for a few metres, but has been overdumped, and its route, though it could be projected from fixed points, cannot now be followed on the ground.

#### Condition

Variable. Whilst some parts of the trackbed have been completely obscured, other sections can still be located at surface. Fly tipped rubbish infills much of the cutting, and has become a breeding ground for vermin. The tunnel, though its entrance is buried to the east, can be accessed from the west. Its interior is almost completely free of rubbish, and the structure seems to be in good condition (though this should be checked by a structural engineer).

#### Recommendations

Excavate rubbish and other material from the cuttings to the east and west of the tunnel mouth and reinstate at trackbed level. Consolidate tunnel if necessary, and install surfacing and drainage as necessary to allow the tunnel and tramway trackbed to be incorporated into the Mineral Tramways network linking East Basset Stamps to Marriott's Shaft.

#### **No: 8 Section of walling (SW 6830 3948 to SW 6831 3951)**

Feature: Boundary wall

Partly buried by rubbish, a short section of stone-faced earth wall (Cornish Hedge) can be seen flanking Filtrick Lane about half way between its junction with the Four Lanes road and the Marriott's Shaft site on the southern side. At its western end, a short section of mortared stone walling projects towards the road at an angle, and can be seen to have been buried by rubbish to the east. Whilst the main section of the wall was probably no more than a boundary hedge enclosing the area of dumps of the former mine workings to the south, the short section of mortared walling marks the point where the Basset Tramway crossed the road, and is important in that it allows the alignment of the buried section of tramway to the west of the tunnel and cutting to be determined. It is quite possible that the remainder of the tramway was similarly bounded by such walling, which could be re-exposed by mechanical excavation.

#### Condition

Part-buried by rubbish dumps.

## Recommendations

Retain. This feature will be an important fixed point during any re-exposure of the Basset Tramway trackbed. Further sections of similar walling may survive beneath the material which has built up in this area. Excavation of built up material should take account of this, and aim not to destroy buried sections of this structure.

### **No: 9 Area of former mine dumps (centred SW 6832 3947)**

Feature: 20th century rubbish dump over 19th century mine dumps

The Ordnance Surveys of 1880 and 1908 show this triangle of land to the east of Filtrick Lane and the south of the Four Lanes Road (like the neighbouring triangle of land to the north of Filtrick Lane) as unimproved moorland whose surface was covered in scattered mine waste deriving from small shafts in the vicinity. There appear not to have been any major dumps of mine waste here, with the exception of a tongue of dump material extending to the south-west of Pryor's Shaft (shown on the 1908 survey), and a small linear dump extending towards Filtrick Lane to the north-west of the shaft.

At some time between the abandonment of the mine and the present day, an extensive rubbish dump was established on the site (possibly originally a refuse disposal site for Camborne or Redruth), cloaking the entire area in over 1.5m of mixed organic and inorganic material. The exact composition of this material is difficult to ascertain, exposures of the core material being few and far between, and thick brambles have grown up over most of the area. Where the material can be examined, however, it seems to consist of items that would point to an origin for this dump in the middle decades of the present century. In more recent times, this site has attracted fly tipping - particularly in the cutting approaching the tramway tunnel on its western side, and along the edges of Filtrick Lane. A chance conversation with an environmental health officer in 1990 on site suggested that rats were breeding in this material, and that these animals carried Weil's Disease.

It is quite probable that any significant accumulations of mine waste on this site had already been cleared (possibly during one of the dump clearance operations during the 1930's noted by Palmer and Neaverson, 1987, 44) before this area was adopted for rubbish disposal. There seem to have been few structures in this area (with the exceptions of those noted above).

## Condition

Wholly buried by loosely consolidated material of mixed content which supports thick brambles and nettles. Extent of survival of 19th century mining features unknown. At least two shafts obscured by this material, possibly more.

### Recommendations

Investigate the stability, content and environmental hazards (if any) posed by this material. Some landscaping of material will be necessary to re-instate the Basset Tramway route, and consideration should be given to the establishing of more suitable vegetation cover. Operatives involved in this management work should be protected against infection by the Leptospirosis bacillus.

#### **No: 10 Area of former mine dumps (centred SW 6846 3960)**

Feature: 20th century rubbish dump over 19th century mine dumps

Like the two areas to the north and south of Filtrick Lane to the west, this area of ground has become cloaked in rubbish over some years. The site history is probably similar. The route of the Basset Tramway in this area has been completely obscured.

### Condition

See (9) above.

### Recommendations

See (9) above.

#### **No: 11 Samson's Shaft (approximately SW 6850 3960)**

Feature: Shaft, Grade C.

Samson's Shaft was the easternmost production shaft on Wheal Basset mine, and lay just to the north of the Basset Tramway, which originally extended only to this point. Palmer and Neaverson (1987, 26) suggest that this shaft was wound from Theager's Shaft whim in 1868 (an astonishingly long distance for the wire rope run), but by 1879, with the demolition of Theager's whim to provide stone for the construction of Lyle's winding engine house, other sources of winding power must have been used, probably the small engine house immediately to the south (12) shown on the 1880 Ordnance Survey, but removed by 1908.

The position of the shaft can be fairly readily located with reference to field boundaries to the south, but dump disturbance in the field makes a certain identification of its position rather more difficult. A feature visible as a 4.0m diameter x 2.0m deep hollow on the on the eastern edge of an eroded dump is the most likely candidate for the shaft on surface evidence. If this is the shaft, it appears to have no collar, and to be choked near present ground level . It is possible that this hollow is no more than a disturbance feature associated with dump removal, and that the shaft mouth has been buried or otherwise obscured. Morrison reports the shaft to have been 115 fathoms deep.

### Condition

Choked. Position at surface possibly lost.

### Recommendations

Locate and treat. The shaft lies immediately adjacent to a proposed section of the Mineral Tramway network which is likely to be well-used by the public.

### **No: 12 Site of whim engine house (SW 6849 3957)**

Feature: House for a rotative beam engine

Not noted by Ken Brown. From the evidence of the 1880 Ordnance Survey, this appears to have been a small rotative engine house aligned east-west (loadings to the east), with attached boiler house, and the chimney attached to the boiler house northern rear corner. It seems to have had a short life, having disappeared completely by the 1908 mapping (probably as a result of the abandonment of these eastern shafts). The engine house was probably constructed to fill the gap left by the demolition of Theager's whim, which had formerly wound from these shafts, and may have served Carnkie Shaft, Stevens' Shaft, Samson's Shaft and the small shaft upslope to the south. The house was probably demolished to provide stone for other building projects on the Basset Mines during the re-organisation of the late 1890's and early decades of the 20th century.

It is still possible to see a series of stony hollows in the position that the engine house occupied, and so it is probable that most of its foundations still survive. The site lies within a small and rather overgrown paddock to the south of the tramway.

### Condition

Demolished but foundations may survive.

### Recommendations

Retain. The grass in this paddock could be upgraded for grazing. If any below ground disturbance is considered for this site, an archaeological watching brief will be necessary.

### **No: 13 Dumps associated with Samson's Shaft (centred SW 6850 5961)**

Feature: Mine waste dumps

The dumps from Samson's Shaft lay to both east and west of the shaft site, within an elongated area to the north of the Basset Tramway. To the west of the shaft, although the dumps appear to survive, much of their extent is obscured by a rubbish dump (10). To the east, they have been substantially removed, presumably for hardcore, in places down to the underlying ground surface. This area has not

revegetated. At the north-western side of the dump, spoil (presumably from house alterations) has recently been deposited.

#### Condition

Partly dug away and partly overdumped.

#### Recommendations

Sample, and if necessary, remove or landscape existing rubbish dump overlying mine waste (10). Locate Samson's Shaft (11) and treat. Regrade eroded slopes of surviving mine waste dumps to stabilise them. Topsoil and revegetate areas where mine waste has been removed.

#### **No: 14 Site of small building (SW 6854 3960)**

Feature: Probable mine service building associated with Samson's Shaft.

The 1880 Ordnance Survey shows a small elongated structure with an extension to the west adjacent to the field boundary at this point. The building had been demolished by 1908. The function of this building is unknown, but was probably a store shed associated with the nearby shafts.

Little remains of the masonry of this building today, but there is a levelled terrace adjacent to the hedge, and some scattered masonry at surface. The foundations of the structure probably survive below ground.

#### Condition

Demolished, but foundations probably survive.

#### Recommendations

Archaeological evaluation required in the event of any landscaping works being planned for the area which would involve below-ground disturbance.

#### **No: 15 Shaft and dump (Shaft SW 6853 3955, Dump SW 6852 3956)**

Feature: Shaft and associated small area of dumps

This small shaft, marked as "*Shaft*" by the Ordnance Survey in 1880, and as "*Old Shaft*" in 1908 appears to lie along the outcrop of a ENE - WSW aligned lode - visible in fields to the east as a now partly-infilled outcrop working, to the west the lode was probably that encountered in Boundary Shaft and Pryor's Shaft.

There are no indications on available maps of structures or equipment sited adjacent to the shaft, though it may have been wound by whim engine (12) in the

last decades of the 19th century. There was probably originally a horse whim sited to the south of the shaft, but this area has been improved to pasture.

The shaft (which lies immediately outside the survey area) seems to have been infilled with field clearance material. The condition of this blocking material is unknown.

The dumps downslope, which lie within a stone-walled enclosure, seem to have been partly removed from site, and near the centre of the area is a sample pit and its upcast. There may never have been much material here, given the restricted area available within the enclosure.

#### Condition

Shaft condition uncertain, though blocked off at surface. This feature lies just outside the survey area. The dumps have stabilised, and heathland vegetation has become established on their surface.

#### Recommendations

Access to the shaft is difficult, but it should probably be treated in the long run, given its relative proximity to the Basset Tramway. The area of dumps should be left undisturbed to revegetate naturally.

#### **No: 16 Carnkie Shaft (SW 6857 3964)**

Feature: Shaft, Grade C

Carnkie Shaft was an important pumping shaft at the east end of the Wheal Basset sett, and was sunk to 115 fathoms below adit. It had no pumping engine of its own, the pumps being worked by flat rods running the 1,080' from Richard's Shaft engine to the east (Palmer and Neaverson, 1987, 25). A mention (*ibid*) of a new skip road installed in the shaft in 1865 indicates that the shaft was also being used for hauling. The power source for the skip road is uncertain. Brown does not mention an engine house at this site, although the 1880 Ordnance Survey certainly show an elongated building (perhaps that for a small horizontal engine) on a site just to the west of the shaft (17). The winding power may originally have been provided by Theagers' whim, which was noted to have worked the eastern shafts (*ibid*), and the small engine house suggested from Ordnance Survey information may have been built after the demolition of Theagers' whim in 1879-80.

By 1908, this structure, too, had disappeared, and the shaft had probably been abandoned. The 1974 1:2500 Ordnance Survey map shows a massive conical depression surrounded by a collar wall.

Since the mid-1970's, the shaft has been infilled from the west with dump material. It is not known whether it has been formally capped. Most of the collar

wall has been destroyed. The infill material is at ground level on the west and a few metres below ground level on the east.

#### Condition

Infilled. Shaft condition unknown. All associated shaft features probably destroyed.

#### Recommendations

Establish whether the shaft has been securely treated and remedy if this is not the case. Provide shaft marker on completion of investigation, treatment and landscaping. Note that there may be some remains of the flat rod angle bob pit on the east of the shaft, buried within the remaining collar material (though it is most likely that this was destroyed by the subsidence of the shaft throat.

#### **No: 17 Site of building associated with Carnkie Shaft (SW 6855 3963)**

Feature: Possible house for small horizontal engine

For history, see (16) above. There is no sign of any structure on this site today - it was demolished between 1880 and 1908, and the infilling of the nearby shaft with material from this area probably removed any foundations that had survived.

#### Condition

No remains at surface. Probably completely destroyed, though fragmentary foundations may survive.

#### Recommendations

Sub-surface remains may be encountered during ground disturbance associated with landscaping in this area. CAU should be notified if this is the case, so that features can be recorded.

#### **No: 18 Mine waste dumps associated with Carnkie Shaft (SW 6859 3967)**

Feature: Shaft dumps

Carnkie Shaft was both a pumping and a haulage shaft. Though all the ore drawn from here was treated at Basset Stamps floors to the east, waste rock which could not be disposed of in stopes underground would have been hauled to surface and would have added to the dumps produced by the development of the shaft itself. That material seems to have been disposed of around the shaft collar, and in a substantial tongue-shaped dump to the east, clearly shown on the 1908 Ordnance Survey map.

Most of this dump survives, and has revegetated, suggesting that its mineral content was too low to warrant its removal for re-processing in the 1930's, though the ground immediately to the east has been scraped clear down to the underlying ground surface (this material may have been used for shaft infill). There are traces of revetting walls on the steep north-eastern end of the surviving dump.

### Condition

Substantially undisturbed, and revegetating well.

### Recommendations

Retain on site. Encourage revegetation of the area to the east of the surviving dump.

### **No: 19 Mitchell's Shaft (SW 6858 3970)**

Feature: Shaft, associated dump and possible structure. Shaft Grade B

According to Palmer and Neaverson (*op.cit.*), Mitchell's Shaft was relatively shallow, only having been sunk to the 50 fathom level, a suggestion that is borne out by the relatively small waste dump which accompanies the shaft. The shaft dump was shown on the 1880 survey, but the shaft was not marked or named. On the 1908 survey the shaft and dump were omitted from the map, though clearly existed, suggesting that this shaft was probably abandoned at a relatively early date in the development of the mine - probably in the 1860's or 1870's.

Access was not possible to the whole of this site, which lies adjacent to a house and garden on the south and west. To the north, it adjoins a public road, to the east, the private lane to Hillhead Farm. Survey was therefore carried out from the north and east, and from the nearest accessible point to the south.

The shaft site lies within a near-circular area of dumps which stand to about 2.0m high. The tops of the dumps are grassy, and there is no sign of the shaft mouth, which appears to have been infilled or to have a buried cap. The sides of the dump are steep and gorse-covered. They appear relatively undisturbed except to the south, where an access way has been cut from the neighbouring garden onto the top of the dump. In the south-western corner of the dump, covered in thick gorse, there appears to be the remains of a stone structure, coinciding more or less with a wall angle shown by the Ordnance Survey in both 1880 and 1908. This could not be examined in detail, but has some of the appearance of an engine house, perhaps one which was derelict by 1880. If so, this structure has not been previously detected, and would constitute the only upstanding engine house remains in the Higher Carnkie survey area - indeed, one of the few sites on which such features remain on the whole of the former Wheal Basset Mine.

The area to the south-east of the shaft dump has been dug into, and is overgrown in gorse and brambles. No significant features were noted within this area.

### Condition

Shaft probably choked or poorly capped. The occupants of the neighbouring house clearly regard this as an extension of their garden, and make use of the grassy dump surface. The dump has not been damaged by waste removal for re-processing.

### Recommendations

Locate and treat shaft. Retain dump. The stone structure should be investigated. If it proves to be part of an engine house it would be of particular importance and should be retained on site.

**No: 20 Basset Tramway (SW 6844 3957 to SW 6864 3967)**

Feature: Mine tramway

In the years before 1906, the Basset Tramway ran from the stamps and dressing floors on the hillside to the south of Carnkie along the contour above Higher Carnkie, serving various shafts along its way, to terminate at Samson's Shaft. Here, there was a small siding - presumably for wagon storage. A second siding lay between Carnkie Shaft and Stevens' Shaft to the east, and there were probably similar arrangements along most of the track, which, at this time would have been horse-hauled. In about 1906, the line was extended, via tunnel (7) to Marriott's Shaft, and a small steam locomotive provided the hauling power (this may have taken place a little later than has been suggested, since the Ordnance Survey of 1908 does not show this feature, though the fieldwork would have been undertaken no later than 1906/7).

On the abandonment of the mine, the track (about 1200m between Basset stamps and Marriott's Shaft), locomotive and wagons were sold off, together with their sleepers and fittings, like all of the rest of the mine equipment. The former tramway was probably used as a means of access to waste dumps when re-processing this material was tried, but otherwise they reverted to rural pathways. Parts were infilled (as the tunnel section), or were lost through agricultural improvement.

The contouring routes of the trackbeds, and the engineering works undertaken to ensure that the route was as near level as could be achieved are, today, the principal indicators of the former function of what has now become a public footpath.

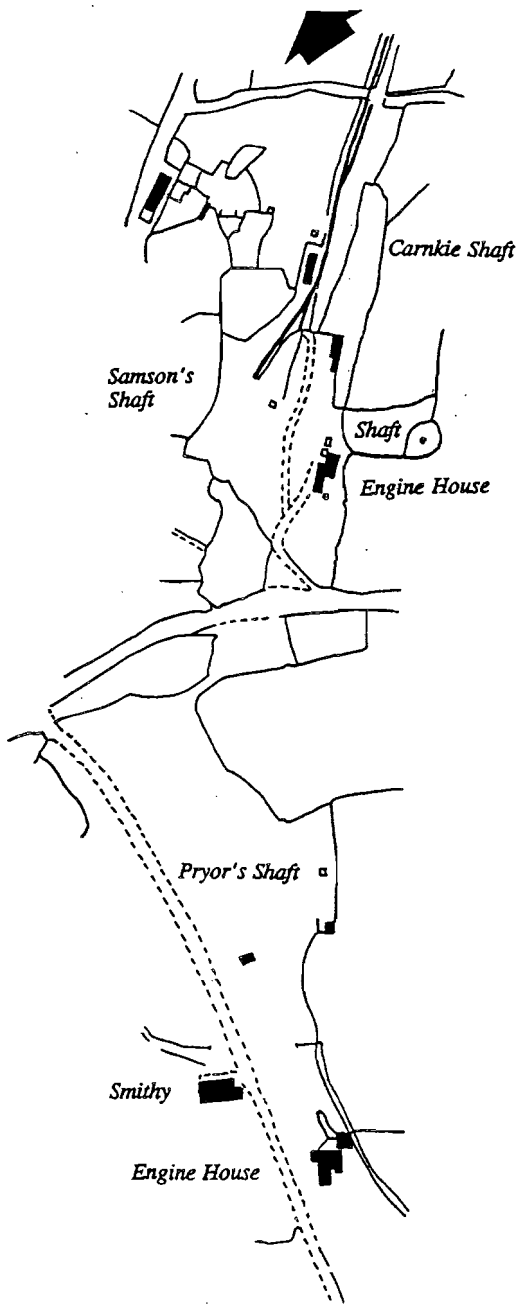
### Condition

The route of the tramway is clear throughout most of this section, though the western cutting has been infilled, and the path now diverts to the south. The sidings and branches can no longer be detected on the ground.

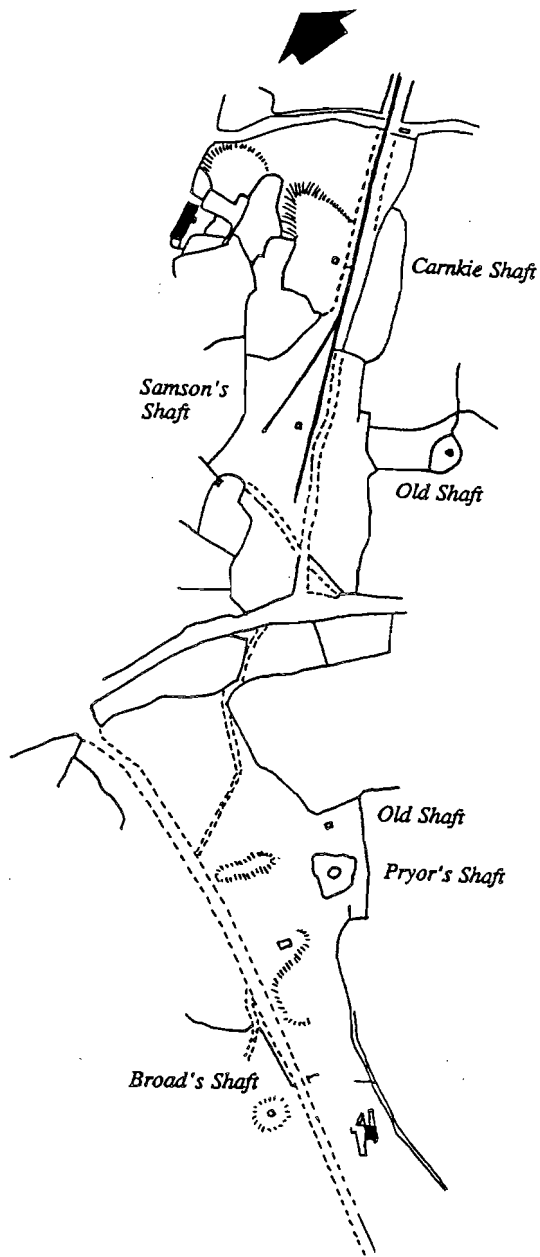
### Recommendation

These abandoned mine tramways, and the larger gauge mineral railways that connected the mines to Hayle, Portreath and Devoran are the basis for the Mineral Tramways Project. This section of trackbed forms a vital link between the Basset dressing floors (and the remainder of the Redruth and Chasewater Railway stretching down to Devoran in the east) and the Marriott's Shaft site (and to the Grenville and Condurrow mines to the west). For this reason this area has been identified as an ACA.

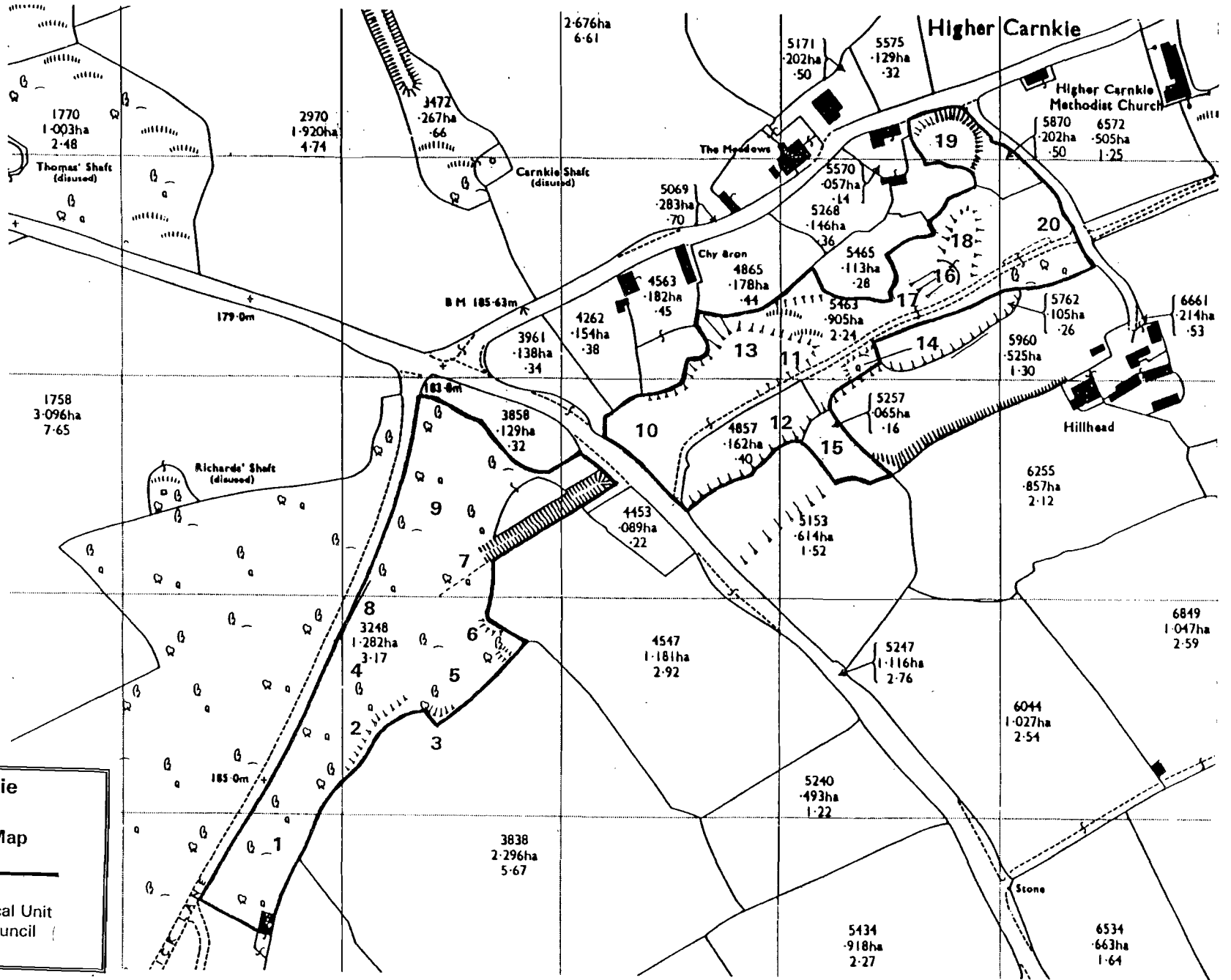
It is recommended that efforts be made to re-open the tunnel under the Four Lanes road. Where damage to the trackbed surface has occurred, this should be rectified as part of the overall management of this section of the Mineral Tramways route network. A detailed assessment of the Basset Tramway as a footpath/bridleway/cycleway will need to be undertaken before any specific recommendations for works can be made.



Source: OS, 1880



Source: OS 1908



**Higher Carnkie  
Plan 1  
Gazetteer Key Map**

Assessment Area: ———

Cornwall Archaeological Unit  
Cornwall County Council  
1992

