



## 1 APPENDIX TWO

### 1.1 Quarry Area Table (quarries outside of the main Byfield and Firsfield mine complexes)

**Table 1: Shaft Road Quarry, Mount Pleasant Quarry, Springfield Quarry and HorseCombe Vale Quarry**

Location Archaeological Area and Plan No.	Quarry Area	Time Phase	Components Present Pillar type – morphology - typical plan-size Features on pillar - Method of working Room size variation and other features	Brief Summary of Archaeology
Shaft Road Quarry  Plan 89	2372	VI		<p>Quarry area with direct boundary pillars throughout within narrow long room developments with only the beginnings of separate pillars being formed in between rooms as larger blocks of un-quarried stone are exploited. The rooms were up to 5 m in height and were on average 6 m in width. Each of the long rooms has a single length of railway, represented by the presence of sleeper voids, although the rails themselves have been salvaged/removed.</p> <p>The railway lengths have flanking vertical stone packs used to retain discards against the boundary pillars through which the railways run.</p> <p>The railways link two or more crane positions indicated by the location of chog holes in the roof which would have been employed for both vertical lifting of the quarried stone and for the lateral haulage along the railway lengths. Single lewis slots in the roof besides each of the chog holes were used to initially erect the mast of each crane. Timber sprags and short vertical props are used throughout, with both squared and natural round timber being employed. Several horizontal timber sprags, wedged between pillars to support separated roof beds above are evident, similar to those used in the contemporary 'Riddle and Son' quarry [518] in the Byfield mine and in the Mount Pleasant Quarry' [2373].</p>
Lawns Quarry (western side of Shaft Road)  No archaeological survey was undertaken, electronic plans of the area included.	2377	VI	<p>Long rooms, with widths of about 6- 10 m and heights of 6-7 m were developed for 40- 60 m in length. Lengths of railway, indicated by sleeper voids, were constructed along their lengths with chog holes marking the former crane locations. High Jad cuts for creating the initial access for frigbob saws. Large sawn areas along the lengths of the rooms.</p>	<p>The former 'Lawns Quarry', which is not to be mistaken with the currently operating open surface quarry known as 'Upper Lawns Quarry' that is still operated by the Hancock family, is located on the western edge of Shaft Road, and was accessed and monitored briefly on one or two visits when the quarry was opened for the construction of a cut and cover tunnel to enable the migration of bats from the Shaft Road quarry to the 'Lawns Quarry' quarry. The two quarries are not thought to have been historically linked.</p> <p>The quarrying workings were very similar to the workings accessed from the Shaft</p>

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			Timber sprag and props for roof support. Graffiti soot marks on the roof, no actual graffiti noted on pillars but survey time was limited.	Road Quarry area [2372] and are thought to be contemporaneous, but developed under separate quarry leases; More historical research is required. The long rooms have widths of about 6- 10 em and heights of 6-7 em, and were developed forwards, with lengths of railway constructed through them. The rooms were markedly higher than those within the Shaft Road development. The location of chog holes in the roof marked the former locations of cranes for both vertical lifting of extracted block stone and for horizontal haulage along the railways themselves. The stone was extracted by exploiting the natural joints and through the use of sawing. One saw cut example was cut into the pillar at right angles to the long room, to leave the cut of the angled front part of the saw blade in the pillar face. Three individual frigbob saws, a length of haulage linked chain and a single length of iron rail were recovered on one of the two site visits. Several photographs were taken on another visit by Lynn Willies which show the general character of the quarry and more details of soot mark graffiti and the aforementioned saw cut.
Freylings Shaft Quarry (Mount Pleasant Quarry)  Plans 205 & 208	2373	VI	Direct pillars 10 m x 6 m and up to 16 m x 11 m, with spacing of average 10 -12 m. Solid boundary pillars. Sawn faces are numerous. Higher jads slots are noted above the sawn faces to allow the initial access for the saws. The natural joints in the quarry have also been exploited leaving natural faces on many of the pillars. In the roof, areas of picking are noted associated with the occasional wedge pits. There are numerous crane anchorage slots, lewis slots, in the pillars and several square 'Chog holes' are noted in the roof. Barrow-way routes are numerous with low lateral tips of waste fines and rubble. Some stone packs for the retention of waste stone and to give additional roof support. Timber sprags and vertical timber noted.  Numerous graffiti on sawn faces attributable to the late C19th and early C20th.	In the former Quarry, in the area around the stabilisation scheme access shaft known as 'Freylings Shaft', the workings attributable to the mid C19th and the early C20th. The Mount Pleasant Quarry was owned and worked by the Sumsion family and again during the 1870's continued to be worked by the Stone Brothers. Peter Addison (Addison 1998, p51) reports that the quarry was closed by the Bath Stone Firms Ltd in 1914, and was again in operation again in 1929- 30, owned by Bathite Ltd; and was Re-opened around 1980 and closed in the mid 1980's. The pillars are mainly direct in form, with only a few isolated corbelled pillars reflecting localised instability in the roof or to catch roof blocks. The western limits of the quarry have been defined by a continuous boundary pillar dividing this quarry from that of the Mount Pleasant Quarry to the west. The northern area of the quarry extends beyond the visible survey limits and the southern limits of the quarry are suggested by the surface quarry infilling materials. The quarry has been worked in a series of long rooms which have subsequently been joined to form more open room workings. The stone has been extracted using stone saws with few of the visible faces having been fashioned with the pick. Higher jads slots are noted above the sawn faces to allow the initial access for the saws. The natural joints in the quarry have also been exploited, as would have been expected, leaving natural faces on many of the pillars. In the roof, areas of picking are noted associated with the occasional wedge pits, but overall there is little evidence of working on the roof. There are numerous crane anchorage slots, lewis slots, in the pillars and several square 'Chog holes' are noted in the roof which would have held the top of the post- type

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				<p>cranes. Single lewis slots in pillars are seen adjacent to the crane locations, in many cases only a single slot associated with each crane, and have been used in conjunction with a single lewis slot located besides each chog hole in the roof to erect the mast of each crane.</p> <p>The numerous crane positions, direct pillars with sawn faces are similar to those seen within the Shaft Road workings [Quarry 2372] in 2003 and are almost certainly contemporary with the Mount Pleasant Quarry located to the west, but under separate ownership leases..</p> <p>Unlike the Shaft Road quarry [2372] and the Riddles quarries [518] in the Byfield Mine, of a similar period, there are no notable railways or evidence for them in the form of sleeper voids. The main transport features in the Mount Pleasant quarry are a series of barrow-way routes with low lateral tips of fines and small rubble. The routes are noted between the choghole crane positions in the roof and may be secondary features associated with later tipping, overlying and sealing possible earlier railways. The roof has been supported in places with timber sprags but this is not extensive and otherwise the roof is in fairly good condition. Later stabilisation of the roof beds has taken place where the roof has partially collapsed or has been weakened, and vertical timber props are seen throughout the accessible area supporting individual roof blocks. Some graffiti attributable to the late nineteenth century was also noted close to the roadways , examples include '16-6-88 Taylor, JW Hayward' and 'J Henry October 1893. Other graffiti can be dated to 1892, 1893, 1927, 1939 and 1959 and a digital photographic archive has been catalogued including many more examples.</p> <p>The contemporary quarrying periods in the late C19th and early C20th are associated with the earlier dates, the 1959 date relates to post quarrying graffiti or can be attributable to later pillar robbing. The quarries were accessible to the late C20th century when the southern quarry mouth entrance was sealed with building waste and rubble.</p>
Springfield Quarry  Plans 200 & 207	2374	III &	<p>The pillars are mainly corbelled throughout, measure 6 m x 5 m, with spacing of between 8 and 9 m. Some pillars are also direct as the quarry complex extends both westwards and northwards.</p> <p>The quarry measures 100 m in length SE-NW, with a width SW-NE of 45-50 m and has been driven from the south to the north.</p> <p>There are frequent sawn faces throughout the complex and are associated with the narrow picked Jad slots and not secondary to them. Several of the saw cuts have cut into the pillars faces at right angles to leave the cut from the angled front part of the saw</p>	<p>The quarry complex is thought to have been quarried in the mid-late C18th century and findings during the monitoring and recording programmes seem to confirmed this original hypothesis, although there have been no datable artefacts to absolutely confirm the period of extraction.</p> <p>In the Springfield Quarry the workings have both direct and corbelled pillars, with the majority attributable to the direct form in the northernmost extent with the majority of the corbelled attributable to those in the southernmost.</p> <p>The quarry is defined on its southern and western limits by continuous boundary pillars and on the eastern limits by a pierced boundary with openings onto the surface quarry also known as Springfield. The northern limits of the area are suggested by several closely spaced pillar that have been subsequently pierced, and which separate the workings from what is thought to be later extraction activity in quarry [2375].</p>

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	2375	III or IV	<p>blade in the pillar face. No graffiti is noted on any of the pillars in the accessible areas.</p> <p>There are also frequent Jad slots throughout that have been executed with a narrow ended pick.</p> <p>The Jad slots have been executed within the first bed below the roof level, as oppose to the base of the second bed which is more typical, probably to suit the conditions.</p> <p>Wedge and chip impressions are noted in the roof, associated with pick marks, and when further analysed should give an approximate direction of quarrying. Horizontal groups of wedge pits are also noted, often with two pits, and some chip impressions are also recorded.</p> <p>As the quarry extends westwards and northwards the sedimentary beds are less horizontal and increase to almost 45 degrees to the horizontal.</p> <p>Crane anchorage slots, lewis slots, measuring 4" x 1" are noted throughout including smaller examples.</p> <p>Area of quarrying activity on the north-western extent of the quarry close to the Entry Hill quarry mouth.</p> <p>The area measures approximately 60 m NW-SE and width of 25-38 m NE-SW.</p> <p>The area has frequent sawn faces, often within all the faces exposed and often on two faces of the same pillar. The natural joints have also been exploited with many surviving natural faces on pillars throughout.</p> <p>There is a single large shaft on the southern limits filled with intrusive surface waste.</p> <p>Lewis slots have also been employed for haulage or crane locations, they are larger than those seen to the</p>	<p>The direction of quarrying has been from the south, driving westwards and northwards, with tipping platforms and barrow-way routes extending southwards to infill the previously quarried areas.</p> <p>The horizontal sedimentary beds of stone have a 15- 25 degree slant to the horizontal at the southern extent of the workings, increasing to about 40 degrees at the northern end. This has been reflected in the extraction, most notably within the sawn areas of the quarry and must have restricted the amount of block stone that was extractable. Sawn faces are seen throughout the area but are seen within the second, third and fourth beds only and the use of the narrow type of pick has been employed within most of the visible remains. The narrow pick profiles are thought to have been introduced into the quarry complexes in the latter half of the nineteenth century. The pick marks may be evidence of secondary workings and are strengthened by the position of a vertical shaft located towards the northern end of the workings close to Entry Hill open quarry. However the pick marks are too extensive to be attributable to just the later secondary quarrying and it is more likely that the use of this pick is more attributable to the type of stone and localised geological conditions within this quarry and the need to adapt the use of tools to the easiest means of extraction. The picks were probably manufactured specially, straying from the standard 1" size width pick, for the extraction of the localised geological bed formations.</p> <p>Small lewis slots throughout the quarry represent either the locations of cranes or the presence of haulage and are generally smaller and shallower than those seen in quarry [2375] in the north of this quarry complex.</p> <p>Area of quarry at the northern end of the quarry complex close to the Entry Hill quarry mouth. The area has been largely extracted with sawn workings and the exploitation of the natural joint systems. The southern extent of the area is filled with roof collapse while the northern limits are open floors of mixed fines and small rubble.</p> <p>Larger lewis anchorage slots in the area may relate to a crane position near the northern quarry mouth.</p> <p>There is a single large shaft on the southern limits infilled with intrusive surface waste. probably represents an extractive shaft rather than a well or even ventilation shaft, given its large diameter. The full extent westwards is not known. It is currently unclear why a vertical shaft should be located here in such close proximity to the Entry Hill open quarry mouth. There would seem to have been little of a problem with the quarries ventilation if it was open at both extents to surface quarries and it does not appear to be directly associated with later roof collapse. It may have been sunk so to easier extract the stone to the surface or because of land leases and/or for access; more research of quarry leases and historical maps is required.</p>

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			<p>south in quarry [2374] and are both larger and deeper.</p> <p>Large roof gulls that have opened up have been supported with horizontal timber props and timber sprags.</p> <p>The floor of the quarry is either open surface of mixed fines and small rubble or has been covered with roof collapse. Rubble has been tipped along the quarry edges and in small spoilbanks.</p>	
<p>Horsecombe Vale Quarry</p> <p>Plan 211?</p> <p>One plan completed and recorded externally from the project in 2001 and updated as part of archaeological survey in 2009.</p>	2376	I or II	<p>Apophygate pillars with some being corbelled pillars. wide gulls have been exposed with insubstantial pillar support on either side, and large areas of the roof have subsequently collapsed throughout.</p> <p>Tool markings include sporadic single wedge pits, chamfered notches and Jad slots. successive wedge pits, executed in horizontal rows. The roof was not surveyed for any corresponding wedge pits at the time.</p> <p>Barrow-way routes with lateral tips of mixed fines and small rubble, outside of the open barrow-way routes the waste rubble has also been stacked to within a metre of the roof.</p>	<p>This quarry was accessed by NRH in 2001 as part of a general assessment of Bath stone quarries to enhance knowledge and understanding. It was not realised at the time of entry that the quarry was part of the stabilisation project. The assessment included general photography and a detailed plan including approximately half the total quarry area. The plan is currently in France, but it is anticipated that it will be included with a selection of the photographs within the post excavation report to form an archive of the quarry that has now been partially infilled with concrete, as part of the stabilisation process, and will also be secured on the quarry mouth with security grills.</p> <p>The hillside or outcrop quarry is potentially the earliest known quarry within the Combe Down area and was possibly first quarried in the late C17th or early C18th based on working features and the type of methods employed to extract the stone. No confirmed datable material has so far been recovered. The quarry overburden on the southern escarpment of Combe Down would have been removed during open quarrying to expose the top of the Freestone beds. These were exploited on the surface to develop the quarry as seen today and to give access to the underground workings.</p> <p>The outcrop quarry at surface surface consists of vertical quarry faces extending for about 70-80 m and is located below a footpath at the ground level above known as 'Shepherds Walk'. Small openings have been made into the quarry face but many have been buried by successive rubbish tipping from houses above, and to the north, and only two entrances are accessible. The quarry face is mainly vertical and has some small areas of bench working. Groups of horizontal wedge pits, executed in horizontal rows are also noted but could represent later extraction.</p> <p>The area has mainly Apophygate pillars with some being corbelled pillars. It has been developed from the natural hillside on the southern escarpment of the Horsecombe Vale and has exploited the natural joint system which runs parallel to the side of the vale. The underground quarry has been driven northwards into the side of the hillside and has then developed laterally to follow the natural joint system. The joint structure has been so closely followed underground that large areas of the roof remain in a poor</p>

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				<p>condition, wide gulls have been exposed with insubstantial pillar support on either side, and large areas of the roof have subsequently collapsed throughout. The natural joints were largely exploited, with chamfered notches and chamfered jaw slots noted. The occasional wedge pit was also seen within the quarry; several successive wedge pits, executed in horizontal rows, were noted on the external quarry face but it is not known if these were later quarrying activity or contemporary with the underground quarry.</p> <p>There were floor areas of mixed fines throughout, with barrow-way routes with lateral tips of mixed fines and small rubble. Substantial amounts of quarry waste had been extracted to the surface, probably in the initial development, to form level terraces of waste material to the south of the quarry mouth. Tipping close to the internal quarry mouth has also taken place, reducing the height for access and has been mixed with more modern surface debris and rubbish. The internal waste stone has been transported from the northern to the southern limits as the quarrying was developed northwards, outside of the open barrow-way routes the waste rubble has also been stacked to within a metre of the roof.</p>
Foxhill Quarry Complex- Quarry (Quarry name not known)	2380		<p>Approximate size of the quarry N-S 49 m, E-W 40 m, with an average height of about 2.5-3.0 m. The pillars are mainly vertical and are approximately 3- 5 m in length and have a width of approx 3 m, the spacing ranges from 4-6m with long rooms having a width of about 4 m.</p> <p>The rooms have been operated and extracted using a variation of the open room method of extraction. Narrower long rooms are noted but reflect the general description of the shape of the workings rather than the working methods. These are generally seen on the northern and the southern extents of the quarry complex where the Freestone beds dip to the south and north of the Down and the beds became</p>	<p>This quarry may indeed be attributable to the Tankfield Quarry workings, located to the west of this area, and the general extraction techniques used for extracting the stone in both these quarries are similar. However, it is likely that the workings are not directly relative to any known historical quarry operations and probably are independent from the quarry workings located to both the east, Tankfield Quarry, and the west, Kelks Quarry.</p> <p>The Kelks workings boundary pillars have been directly pierced or impacted by the western end of Quarry 2380 which suggests a start date for operations after about 1894.</p> <p>Quarry area 2380 has subsequently been impacted by the later Tankfield Quarry area from the west and although the boundary pillar between both the quarrying areas is more diffuse than easternmost boundary pillar with the Kelks quarry, clear stratigraphic relationships between both the quarrying areas exist. The Tankfield Quarry is believed to have operated between 1909 and 1923 from the historical</p>

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			<p>less workable and economic to exploit. The roof is supported with frequent timber sprags throughout the workings areas and the timber sprag recesses were roughly square in form. Several vertical timber props are also noted.</p> <p>A buried Railway with at least three known crane locations, evident from the 9½" square Chog holes surviving in the roof, is evident. One of the locations has been re-used for the location of a secondary chog hole measuring 12" square which is thought to be attributable to the Tankfield quarry 2383 when it re-used part of this quarry.</p> <p>Sawn faces are evident throughout the workings and each of the faces have been offset from each other to allow access to the sawyers hand, features which are known as hatches or hatching.</p> <p>The majority of this quarry is fairly open, with floors of mixed finds .Waste stone being deposited from adjacent quarry 2383, deposited to a depth of about 1.5 m below the roof in the central railway area. An area of linear soot marks on the roof, 19059, was noted and indicated the area and operation of the extraction of the initial picked breach in a small side room, prior to the extraction of the freestone beneath. Frequent quarrying artefacts, mainly made up of spent saw sharpening files and rail spikes, are seen embedded into pillar faces for secondary use as coat or lunch hangers to deter access to rats. Oil lamps for lighting were also recovered, a saw bench and length of wire haulage rope were also noted, 19040, below one of the former crane locations.</p>	<p>information gained from Mines inspectors records and the quarry graffiti dates in this quarry range between 1898 and 1911. A main tipping barrow-way that had developed from the Tankfield quarry and that bought waste stone produced as part of its extraction had deposited substantial material over and within the former railway attributable to the unknown quarry phase.</p> <p>Access to the unknown quarry is believed to have been from the vertical winding shaft 19045, of an unknown diameter, that was previously used by the Kelks Quarry phase and which has been subsequently infilled with materials derived from the surface when the quarry went out of operation making the shaft inaccessible. It is not known when this happened as no datable materials were gained from the shaft debris prior to survey and its subsequent stabilisation.</p> <p>The workings would seem to have expanded from the shaft and generally spread northwards and westwards along the length of a single railway that is thought to have operated on a roughly East-West orientation. The actual railway surface has largely been infilled and sealed by later barrow-way activity and waste stone deposition originating from the Tankfield Quarry from the west. Other main access rooms headed northwards but do not have chog hole features and therefore were not served by crane haulage, winches and pulley blocks may have been employed although no direct evidence of this was noted in the form of lewis anchorage slots.</p> <p>The only prominent features attributable to the railway which survive are the regularly placed crane 'Chog Holes' where the top of the crane was secured in this quarry at the roof level with a 9½" Square recess. At least one of the crane locations seems to have been re-used or superseded by another chog hole with a 12½" recess. Each of the chog holes in the roof are accompanied with a single Lewis slot in the roof to enable the lifting and placement of the crane into the chog hole. The the chog holes were offset on either side of the railway and were on average spaced at 8 m from each other. Located beneath the chog hole 19040 there was a length of wire rope cable abandoned in the waste stone deposit and is likely to have been used to haul wagons along the length of the railway and may also represent the westernmost extent of the quarry.</p> <p>An area of linear soot marks on the roof, 19059, was noted and indicated the area and operation of the extraction of the initial picked breach in a small side room, prior to the extraction of the freestone beneath. The soot marks are not a common feature but are noted elsewhere in the Combe Down complex, and sometimes marked the area of the breach that an individual picker worked and was subsequently paid for.</p> <p>Tally graffiti is noted throughout and other graffiti is mainly located besides the main</p>

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				<p>routes of access and the dates in this quarry range between 1898 and 1911, and tally graffiti is also seen throughout. Some of the graffiti is attributable to the name William Bishop, with other graffiti to C Nowell and others. Several images of what is thought to be the sketches of the individual quarrymen who worked in the quarry are depicted on the pillar sawn faces and all have a similar style which would suggest the same individual artist. The name William Bishop that is dated to 1898, appears above one of the sketches, 19019, and it is possible that he was the artist of several of the depictions. The graffiti was recovered with the silicon rubber recovery method, along with another depiction of a quarryman, 19016.</p>
Foxhill Quarry Complex- Kelks Quarry (maybe also Coxes Vertical Shaft)	2381		<p>Approximate size of the quarry NE-SW 64 m, NW-SE 40 m, with an average height of about 2.5-3.5m. The pillars are mainly vertical and are approximately 4 -5 m in length, increasing to 8 m , and have a width of approx 4 -5 m, the spacing ranges from 4 - 6m with long rooms having a width of about 4 m. The rooms have been operated and extracted using a variation of the open room method of extraction. Narrower long rooms are noted but reflect the general description of the shape of the workings rather than the working methods. These are generally seen on the northern and the southern extents of the quarry complex where the Freestone beds dip to the south and north of the Down and the beds became less workable and economic to exploit. The roof is supported with frequent timber sprags throughout the workings areas and the timber sprag recesses were roughly square in form.</p> <p>Sawn faces are evident throughout the workings and each of the faces have been offset from each adjacent cut to allow access for the sawyers hand, features which are known as hatches or hatching. Graffiti is evident throughout and includes graffiti</p>	<p>This quarry is believed to be the 'Kelks' or possibly 'Cox's Vertical shaft' workings as the main vertical winding shaft access is marked with the name 'Kelks' and appears on an 1888 OS map. The name 'Coxes Vertical' shaft has also been used for this part of the quarry but the name is less certain and it could refer to of the individual Quarrymaster who operated the larger open surface quarry to the south of the Bradford Road.</p> <p>The quarry is known to have been operated by Messrs Randell and Saunders and are thought to have been operated between September or October 1875 and April 1885, and these dates would also seem to be paralleled with the noted graffiti dates of 1882, which are especially evident at the base of the main vertical winding shaft access, 19045. The shafts diameter was not established as the shaft was not accessible to survey before it had been consolidated, the miners that undertook the works had identified haulage grooves from wire rope on the rim of the shaft at the roof level and there is no doubt that the shaft was used to extract the block stone to the surface. The shaft was subsequently re-used for extracting stone from the unknown quarry located to the west, [2380].</p> <p>The name Edwin Riddle, dated to 1889, is located at the base of the winding shaft and is thought to be related to A Mr James Riddle who operated a quarry with his son in Church Rd between 1905 and 1911, Quarry phase 912. It is thought that he in fact worked in quarry phase 2380 as the date extends beyond the known final operation date of Kelts Oct 1875</p> <p>Another name of merit is that of JE Dowling and W. Hole, dated to June 11 1882, was</p>

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			<p>depicting the names of individual quarryman and also the sketches of animals and of individuals faces and profiles.</p> <p>The majority of this quarry is infilled with floor to roof waste stone, deposited to a depth of about 1.5 m below the roof.</p>	<p>noted at the eastern end of the workings. It is thought that the two individuals were working in this quarry during its main operation as the graffiti date is within the quarries known operating period, and it is not thought that the graffiti is related to pillar robbing activities that the two quarrymen are known for in both the Firs and the Byfield Quarries.</p> <p>The quarry is thought to have expanded from a main NE-SW orientated railway, heading eastwards from the main vertical winding shaft access. The actual railway surface has largely been infilled and sealed by waste stone. A line of four 10½" square chog holes are evident along its former length and a fifth is thought to have existed at the easternmost end where an area of roof collapse has occurred. The first of the chog holes, located at the base of the shaft, measures 9½" square and may represent the position of a crane which is not thought to have been moved after its initial erection, unlike the other same sized chog holes which were cut to serve crane locations that were probably moved to secondary locations as the quarry extended eastwards. The crane locations tended to be on the northern side of the railway and the distance between each of the crane locations was on average 8 m, increasing to 10 m and 12 m with the final two easternmost locations.</p> <p>Each of the chog holes in the roof are accompanied with a single Lewis slot in the roof to enable the lifting and placement of the crane into the chog hole. This is the standard method used in positioning the cranes and the operation can be seen where chog holes exist.</p> <p>Two accidents, which resulted in subsequent mortalities, are thought to have occurred <b>th</b> within shaft 19045, and these are recorded; <b>Keenes Bath Journal 28 July 1877 p.4, col 2. Saturday</b> On Saturday last – Edward Filo, who was worked by Messrs Randell and Saunders on Combe Down, was crushed by a four ton block of stone. <b>th</b></p> <p><b>Bath Express 11 September 1875 p8.</b> Accidental Death. A fatal accident occurred yesterday at the Combe Down under very distressing circumstances. At the new quarry near the turnpike, James Hillyar, a man of the advanced age of 70, was engaged in raising a stone by means of a windlass, when the handle slipped out of his hand.... The handle first struck the poor man on the right arm and broke the bone and then struck him on the head and killed him on the spot. (see quarryman table..)</p>
Foxhill Quarry Complex-StoneHouse	2382		Approximate size of the quarry N-S 32 m, W -E 46	The main access was through four identified adits originating from a surface open

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(Underground)			<p>m at the greatest extent. The average height is about 3 m – 4.30 m.</p> <p>The pillars are mainly vertical and are approximately 2- 4 m in length and have a width of approx 3 m, increasing to 10 m X 5 m. The spacing ranges from 3-5m with long rooms having a width of about 3 m. The rooms have been operated and extracted using a variation of the open room method of extraction. Narrower long rooms are noted but reflect the general description of the shape of the workings rather than the working methods. These are generally seen on the northern and the southern extents of the quarry complex where the Freestone beds dip to the south and north of the Down and the beds became less workable and economic to exploit.</p> <p>Sawn faces are evident throughout the workings especially in the long rooms, and each of the faces have been offset from each other to allow access to the sawyers hand, features which are known as hatches or hatching.</p> <p>In-situ timber sprags are numerous and many still remain supporting the roof, with timber sprag recess evident on the pillars.</p> <p>Graffiti is less evident then in the other quarries within the complex, but includes graffiti depicting the names of individual quarryman, some tally graffiti and more interesting, a graffiti listing a number of required supplies - see brief summary.</p>	<p>quarry located on the northern extent of the Foxhill Quarry complex, in the area of modern Stonehouse Lane, and is attributable to the former Stonehouse Quarry that operated in the mid 19th century and continued till the early 20th century. The location of the external quarry face limits were recorded on the 1933 OS map and would appear to correspond closely to the underground limits surveyed during the archaeological recording process.</p> <p>The main thrust of the workings extends directly southwards, with smaller rooms at the western and eastern ends of the operation branching off, with each room containing a single chog hole crane location.</p> <p>There were two main open long rooms extending southwards in the central part of the quarry; one of which was impacted by the stabilisation works before inspection and the other was unaffected before survey and was open and contained a single length of railway. The railway, 19074, was located approximately 3.70 m below the roof and had regular spaced sleeper voids which would have originally held wooden sleepers, the rail had not survived and had already been removed at the end of the operation possibly for scrap. There was no indication as to the original width between the rails and the railway floor was inaccessible. Two chog 12 ½” square chog holes were noted on either side of the railway and were spaced approximately 9 m apart; the southernmost of the two was located 12 m from the southern extent of the quarry and represented the most southerly of the haulage cranes. It is not known whether horses were employed to haul the wagons along the railway. Stonehouse is the only quarry within the Foxhill complex that had direct access to the surface through level audits, and not via vertical shafts, and is therefore the most likely to have employed horses if the wagons were not hauled by crane. There was no evidence of horseshoe impressions in the railway surface or other horse tracery marks on the pillars to suggest their use.</p> <p>Three other chog holes were noted close to the eastern and western quarry mouths and had similar dimensions. Each of the chog holes in the roof are accompanied with a single Lewis slot in the roof, SF 1026, to enable the lifting and placement of the crane into the chog hole. An in-situ Lewis was recovered from the accompanying lewis slot associated with the chog hole next to the southernmost of the chogs associated with the railway, SF 1026.</p> <p>Graffiti depicting the names of individual quarryman are noted. The name 'P. Long' is written and is dated to 1816. It is believed that the graffiti was actually written in 1916 as the workings are not generally typical of early 19<sup>th</sup> century quarrying enterprises. Another piece of graffiti is particular interesting in the context of the quarrying in general, 19011. The graffiti is located close to the quarry mouth and lists a number of items that were required for the quarry during its operation. The list includes: 7 saws,</p>

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				<p>Bars - 5 big and 1 small, 2 pair of Lewises, 1 snatch block, 6 planks, 1 crane, 1 Jack and 1 shovel.</p> <p>The components in the list are the standard equipment used during the quarrying operations; the listing of the snatch block is more unusual and it remains the only example of its mention in a quarrying context in Combe Down, even rarer is the noting of a jack which is not known within the Combe Down complex, or indeed in other Bath Stone quarries.</p> <p>Other graffiti in the area are mostly post-quarrying and may have been written by either visitors to the quarry or by two homeless individuals who occupied the quarries in the 1930's and 1940's. One of the pieces of graffiti, 19041, depicts a lady in a 1940's or 1950's style bikini and may be attributable to the character 'Jane' from the 'Daily Mirror'.</p> <p>The other graffiti, 19010, reads BEC 30<sup>th</sup> Dec 1944, and records a visit from the Bristol Exploration Club which have left their mark in the entrance to the Byfield Quarry complex entrance.</p> <p>The workings in Stonehouse were accessed from the west from the other former quarry workings when the stabilisation works cut through a large N-S orientated boundary pillar. It is thought that the only access from Stonehouse westwards prior to this, would have been through a small window and consequently it is thought that most of the workings to the west were not accessed by many visitors after the Stonehouse quarry had ceased to operate in the early 20<sup>th</sup> century. The distribution of underground artefacts would also seem to correlate with this hypothesis. There is a distinct limited number of available artefacts recoverable from Stonehouse quarry in comparison to the high number retrieved from the other quarries.</p>
Foxhill Quarry Complex -Tankfield Quarry	2383		<p>Approximate size of the quarry NE-SW 92 m,NW - SE 44 m at the greatest extent, narrowing at the western end. The average height is about 2.5-3.0 m. The pillars are mainly vertical and are approximately 3- 5 m in length and have a width of approx 3 m, the spacing ranges from 4-6m with long rooms having a width of about 4 m.</p> <p>The rooms have been operated and extracted using a variation of the open room method of extraction. Narrower long rooms are noted but reflect the general description of the shape of the workings rather than the working methods. These are generally seen on the northern and the southern extents of the</p>	<p>The Tankfield Quarry is believed to have operated between 1909 and 1923 from the historical information gained from Inspector of Mines reports and the quarry graffiti dates noted in this quarry range between 1898 and 1911.</p> <p>The Tankfield Quarry was probably named after both the location of a 'Braithwaite' type metal water tank belonging to the Combe Down Waterworks, and which provided water pressure for the to the Combe Down village water supply ; and to the name of the field in which the former was located. The tank was subsequently dismantled in 1975.</p> <p>The approximate location of the tower was on the current Foxhill M.O.D car park and was situated directly behind the current bus stop at the turnaround on the Bradford Rd. Stone pack 19068 was constructed underground to facilitate the support of the water tower on the surface as the quarry workings below extended below the tank..</p>

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			<p>quarry complex where the Freestone beds dip to the south and north of the Down and the beds became less workable and economic to exploit.</p> <p>Sawn faces are evident throughout the workings especially in the long rooms, although not so evident on the isolated individual pillars, and not as prominent as with the other quarries in the Foxhill complex. Each of the faces have been offset from each other to allow access to the sawyers hand, features which are known as hatches or hatching.</p> <p>Several small square recesses, measuring 3 “ X 3 “and 7” deep and located about 1.60 m below the quarry roof,e.g. 19027, have been noted and probably relate to temporary staging or platforms that the quarrymen worked from.</p> <p>Graffiti is evident throughout the workings and graffiti date ranges date from the 1923 to 1925. Frequent quarrying artefacts, mainly made up of spent saw sharpening files and rail spikes, are seen embedded into pillar faces. Oil lamps for lighting were also recovered.</p> <p>Other artefacts include a long wagon break from one of the former railway wagons, SF 981. Several lengths of rail have also been noted in the roof between two adjacent pillars to give additional support to the mine roof, 19062. And another rail was recovered from the mine floor, 1025. A single cast iron barrow wheel, SF 1027, was also recovered from waste stone, deposited in the Quarry 2380, and had a central iron supports and probably represents a 20<sup>th</sup> Century innovation and is the only example of its type recovered from the Combe Down Quarry complex.</p>	<p>The main access was through a vertical winding shaft, 19043, which had a diameter of 3.30 m, and was located 2 m to the south of another shaft thought to be attributable to quarry 2380. Two frig-bob saws were recovered from the base of the shaft on surface derived materials, and were thought to have been deposited down the shaft after the quarry had ceased to operate.</p> <p>A single railway was orientated on a roughly NE-SW orientation, and the railway was developed and expanded westwards from the main vertical winding shaft access 19043. The actual railway surface has largely been infilled and sealed by later barrow-way activity and waste stone. Four 12½” square chog holes are evident along its former length which were used for both hauling and lifting stone blocks to the railway and also possibly for hauling wagons along its length, access for horses would seem restricted. The crane locations tended to be on the northern side of the principle NE-SW orientated railway and on the eastern edge of the shorter length of railway that is thought to have extended southwards. The distance between each of the crane locations along the railway was on average 8 m and the distance extended up to 12 m with the placement seemingly less standard than with the other quarries within the Foxhill complex. A single chog remained in-situ in the chog hole and was subsequently recovered, 1033. Two additional chog holes were located north of the main railway access and a further two were located to the south in another long room to the south of crane location 19040. Two areas of roof collapse along the same long room are thought to represent the former locations other crane locations and which may have been the primary reasons for the roof collapses originally.</p> <p>Each of the chog holes in the roof are accompanied with a single Lewis slot in the roof to enable the lifting and placement of the crane into the chog hole. This is the standard method used in positioning the cranes and the operation can be seen where chog holes exists. There is one exception in this quarry where two Lewis slots have been used close to the Chog Hole, and is noted by chog hole 19055.</p>

