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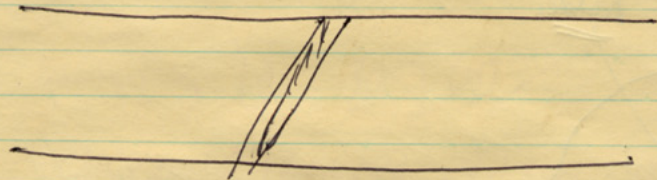
North Rampart Outer Section

Section cut appears at right angles to inner rampart
Width of Sect. 110 cms.

Surface indicates inner rampart in 'normal' slate with slow surface evidence of extensive fall on both sides. Obviously some indication of outer rampart at this point. Apparently stepped down hollowed as large fan of material below. Section established.

- ① To prove above hypothesis
- ② To test if outer rampart existed & if so nature
- ③ If possible to give relationship between ramparts.

At depth of 113 cms. wall.
Runs diagonal across trench.



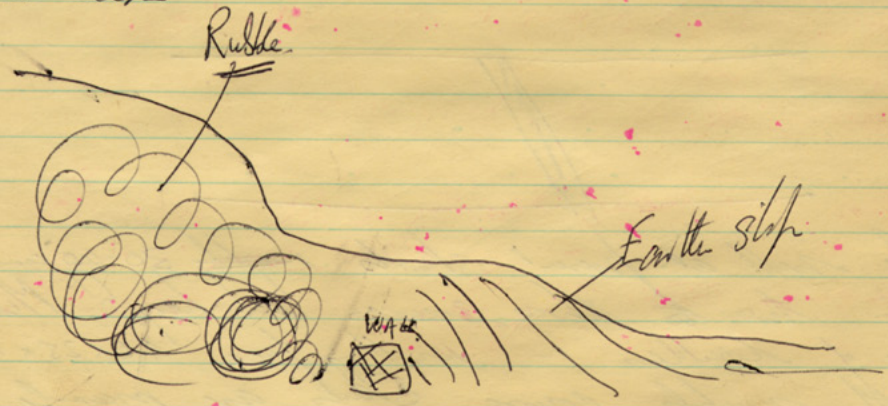
The wall at present stands ~~roughly~~ 30-40 cms high two to three courses in height. Max size of boulder in setting face 46 x 25 x 12 cms. Wall roughly course. Stones are mainly gneiss. Shows difference in character to setting face of inner rampart. They differ in rock type, size of material and so much sparser in quality of building.

Radio-carbon DATES REQUIRED

- Inns
- ① Rampart Construction 179ms. — BAG (130)
 - ② Inner Rampart Destruction 3384 — BAG (128)
 - ③ Outer Rampart E end 1419 — BAG (114)
 - ③A " " W end — BAG (133)
 - ④ Lower Occupation Layer 124 — BAG (117) NO45
 - ⑤ Between Occupation layers 126 — BAG (25) NO6
 - ⑥ Upper Occupation Layer — BAG (107) NO45
(See also BAG (86) NO45)

Cross from previous page

The Sock



The slip is remarkably free from stones though the few stones there in all show signs of intense heating. Beyond the rubble is all about

LEAVING SITE

- ① Collect Quern
- ② Notes on
 - ③ NO6N
 - ④ NO7
- ③ Cut Barrels NO6N NO45
NO7 NO45
- ④ Bar beneath wall NO4
- ⑤ Photograph pavements
- ⑥ Draw pavements
- ⑦ Photo Outer Rampart with lane stake
- ⑧ Check stratigraphy of BAG (117)
- ⑨ Photo take Outer Rampart W end outer face W.B. level layer
- ⑩ Charred sample from outer rampart W end of proven part of rampart
- ⑪ Samples of all natural rock for Sheldon.

totally stone all intensely heated with occasional pieces of vitrification. The wall though sunk to

most outer sections of the outer rampart is remarkable for its poor formation. In some way it looks like something built to stop the fall from the inner rampart going any further. A sycamore supported by the left of stone outside.

Again suggestion of rapid recession of face into the inner rampart collapsed. There is practically no sign of being in the relevant section of the rampart close to the face.

The stone work behind the cutting face all show signs of very intense heating with extensive shattering apparently in places. Just occasional small pieces of ~~bedrock~~. By angle of rest with a thin vein has all come from inner rampart.

If an outer rampart exist here it must have been completely inundated by the fall.

Probably that the steepness of the ~~bedrock~~ fall from inner rampart made no need for an outer rampart. Only the small cutting wall to hold it back.

Presence of the wall means absence of any value for radio carbon dates - NOT retained.

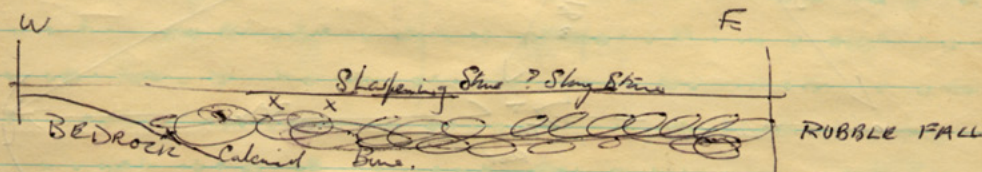
Intervallate Square

Shrapnel Stone in Sandstone with narrow groove. Probably for sharpening needles etc. NW corner of Square where only 3cm of turf was behind the face reconstructed.

BAQ 234

Intervallate Square

Site so far on basis of N face



BAQ (235)

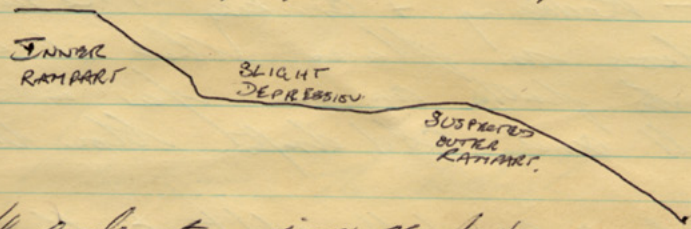
2 Shrapnel Stone - Post rubble fall in stratigraphy no other dating possible. Shrapnel stone bagged separately X 1716 235A

Shrapnel Stone - Post rubble fall as shrapnel ^{OK} (236)

Calcareous + Bent Bone. Between rubble fall and bed rock. ∴ Stratified to full period (BAQ. 237)

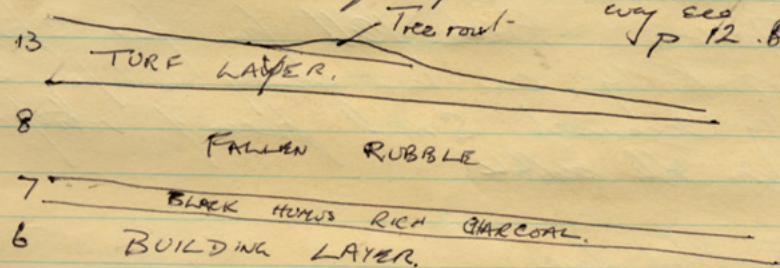
North Rampart: Outer Section 2

Section one meter wide cut at a point where there was great a suspicion of an outer rampart. Surface section showed a profile as below. Section cut-



at right angles to inner rampart.

Section to date Horizon closely match those encountered in the fort interior and consequently are marked in same way as



13 Turf layer. The modern turf layer overlying the rampart fall is entirely that being an average 32 cms through rough more c. 30 cms where the tree root appears.

8. Fallen rubble.

The upper surface of the fallen rubble is much more horizontal with a slight slope towards the North than the surface indicated suggest. Certainly there is no evidence of a rampart. Very slight after the fall of the rubble. The rubble itself is of

Soft angular material of a large variety of rocks including Sandstone, schists etc. and all apparent from the local glacial drift. The largest stones measure 60x30x48 cms. All are characterized by signs of intense heating - Reddening & cracking. The rubble is so loose in places that it is possible to push an arm far into the wall and cold drafts blow through it.

? Creates a considerable addition to the ground fire danger. - Should the forestry Commission be advised. Depth of rubble, 85 cms. The rubble is Rubble flint from peat & put out naturally over a gently sloping surface. Very occasional small pieces of vitrification appear in the rubble.

7. Black layer.

A very narrow charcoal black layer of thickness 0 to 3 cms exists at the bottom of the rubble. This consists of a humus like earth flecked with small pieces of charcoal. One fragment of charred bone. Suggest - Burnt turf layer.

6. Building layer.

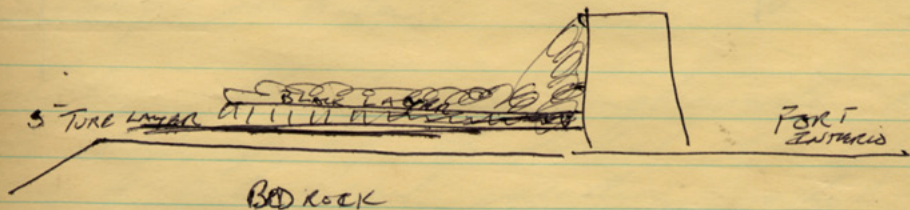
Pale brown gravelly horizon containing some sandstones and occasional larger boulders. One the variety of pieces of vitrification lying on the layer than most. Also the related to

fall rather than being a bedding layer. Therefore it is due to being completely shattered sandstone from main deposit. A small feature was noted at base of some of Middle form.

5. Burnt Tuff Layer

4. Silt

1. Bedrock. — The bedrock is almost level.



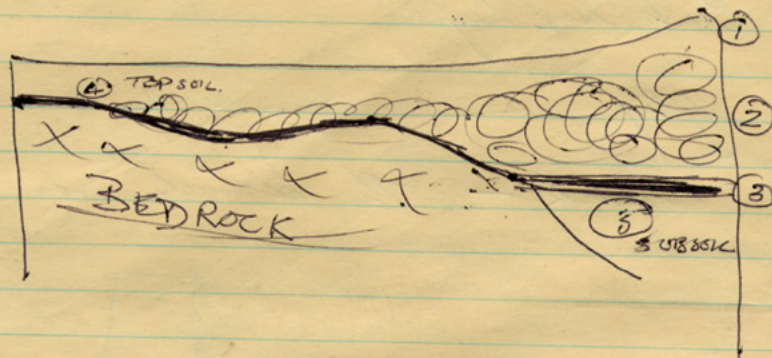
Outer Rampart North Sect. (2)

Sample of Carbon taken from top of bedding layer 7/6 grain. This seems to be part of a small branch. Suitable for R.C.D. BAG 238
238A

Some fragments of calcined bone from same layer BAG 239M

Intervallate Squire (1)

See BAG (234) In Section of the book. Stratigraphically now reads.



(1) Tuff layer

(2) Fallen Rubble

(3) Burnt Tuff Layer — This layer is thin and black with flecks of charcoal at the top, becoming grey as one goes down getting almost white at the base. Flecks of charcoal — odd pieces of burnt bone. No small finds. This burnt tuff layer is very clear in the eastern half of the square where it slopes almost imperceptibly to the west.

(4) In the western half of the square a modern post passing through had accumulated between the deposits. This is very sandy

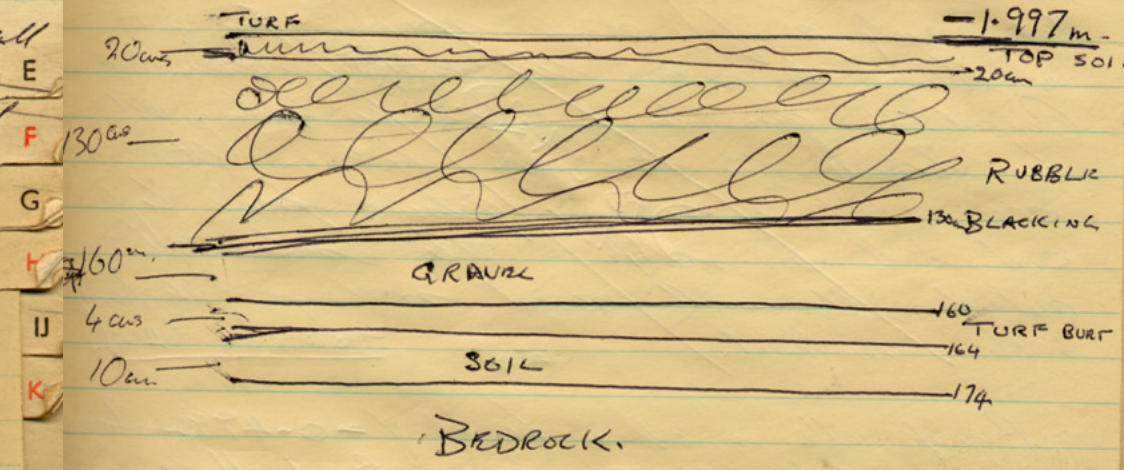
in color and seems to be largely of wind blown origin though it has now been displaced by human.

⑥ Subsoil A very hard packed stony outsoil with extensive iron staining fills all the hollow in the bedrock. Though this would appear to have offered a useful. detail defense in front of the main rampart the builders do not seem to have been aware of it as the soil is undisturbed. and the primary burnt turf layer completely unbroken.

Bedrock Most ORS engagements. All the steep part of the bedrock show extreme signs of sub-ceramic weathering. while the lower part is somewhat but generally polished. Suggesting that the lower layers of compacted subsoil has protected it from weathering since very early times.

Note The impression is then that when the main rampart was constructed, a level turf platform with occasional pieces of bedrock appearing through it. How does the idea of a horn fit into this? A wall down the steep slope covering a stubs area front the main rampart.

North Rampart Outer Section 2



Note bedrock level here. ? Platform outside the north rampart the same as at the W end

Outer Rampart West Section 1

Outer retaining wall

This can hardly be described as a wall but merely a few stones roughly ^{laid} into a bank to retain the ~~material~~ ^{soil} behind it. Considerable quantities of ~~soil~~ ^{SPD} ~~including~~ ^{material} ~~is~~ ^{is} behind the ~~face~~ ^{face} but in the ~~section~~ ^{section} outside ~~is~~ ^{is} ~~nothing~~ ^{nothing} but ~~loose~~ ^{loose} soil with ~~no~~ ^{no} ~~material~~ ^{material}. The side section outside the wall reveals nothing but ~~loose~~ ^{loose} ~~material~~ ^{material}.

PHOTOGRAPH 4156

Base of wall is at a height of $\approx 0.499m$ below central post tree stump. Base of upper corner 2 of wall at E end

After the heavy loose settlement or bank of stone and earth had been removed a further and much more massive wall was located on the outer face. The face consists of up to ^{5 courses} ~~4~~ courses of masonry using blocks up to 30×30 cms. Total height of wall roughly ¹⁰⁵ ~~100~~ cms. ^{Base of the stones} ~~is~~ ^{is} ~~show~~ ^{show} signs of heating eg vertical cracks etc. The wall shows considerable signs of ~~burning~~ ^{burning} and appear to have been ~~inter~~ ^{inter} ~~courses~~ ^{courses} with ~~plut~~ ^{plut} \rightarrow ~~orange~~ ^{orange} ash cont. Charcoal. Preliminary investigation suggests that the wall is ~~partly~~ ^{partly} ~~on~~ ^{on} rubble but this not yet certain. ^{No} ~~is~~ ^{is} ~~no~~ ^{no} evidence to suggest more than one period of building.

Outer Rampart West Section 2

Outer Retaining Wall

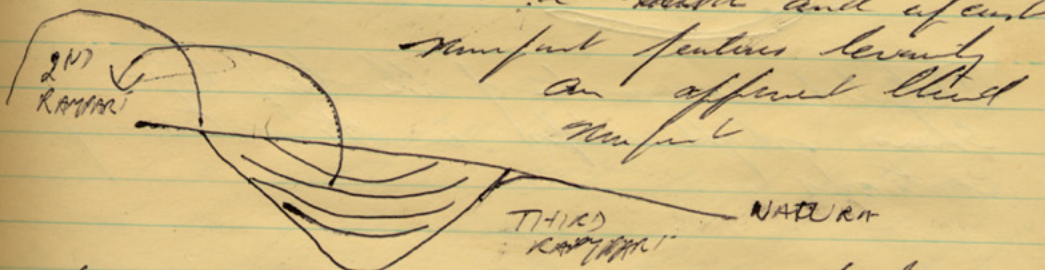
This is extremely similar to the outer retaining wall in ORW Sect 1. It is very roughly built standing to a total height of 4.3 cms. The stones are extremely loose and appear to have been simply piled into a bank of earth. A very rough appearance of coursing is evident. The stones are small and show practically no signs of heating. PHOTOS 1 2 3 The side section shows nothing except the gradual accumulation of earth some wind blown and some slip.

An examination of the many vitrifications in the central part of this section show by its sheer bulk that it is in situ. The idea that it may be a fill from the inner rampart which was incorporated in a secondary fortification was considered. It's altitude relative to the slip levels noted in the area between the inner and outer rampart would suggest that it is improbable that it slipped into this position and that it is unlikely that it could have become into this position without, as long the vitrified masses like this are somewhat fragile and it would have broken up into pieces. The current argument for vitrification in situ is based on a study of the depth of the vitrified materials flow. In this case the stratigraphic depths are vertical conforming to the ^{in situ} ~~in~~ ⁱⁿ ~~the~~ ^{the} ~~position~~ ^{position}.

Onto Rampart South Section 1

The section was designed with a view to ascertaining whether or not there was a ^{third} rampart at this point. Section 1 makes a ^{width} extending ^{South} ^{west} ^{from} ^{the} ^{point}. Drawing & ? photographs. All surface evidence of a third rampart the material grey soil comes over to the surface the slopes steeply downwards to ~~the~~ the second rampart. The gap between the two ramparts is filled by a series of turf layers interspersed with a sandy soil.

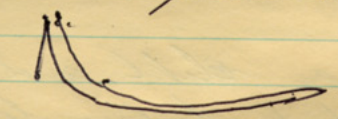
Then a ditch and a second rampart features heavily an ^{apparent} third rampart.



Note The ditch has an ^{asymmetrical} ~~asymmetrical~~ shape being a very steep almost vertical side close to the second rampart and a gentle slope towards the south. The rampart more important than the ditch.

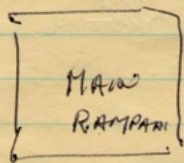
Estimated total height from base of ditch to top of second rampart → ^{to} ^{the} ^{top} ^{of} ^{the} ^{second} ^{rampart} → ^{to} ^{the} ^{top} ^{of} ^{the} ^{first} ^{rampart} → probably about 5m
On fill of ditch → All bottom of ditch

A number of loose stones seem to have accumulated. None were heated or vitrified and all probably come from the ^{up} ^{east} ^{natural} ^{ground}. Indeed the bottom of the ditch appears to have been filled by ^{sluff} ^{off} ^{the} ^{second} ^{rampart} to a depth of 35 cms before the first of the turf layers formed. The sequence is then one of periodic mass slips from the second rampart with significant intervals ^{before} ^{to} ^{allow} ^a ^{few} ^{thickness} ^{of} ^{turf} ^{to} ^{form}. There has also been significant time for the soil to spread fairly evenly away from the ^{first} ^{rampart} up the ^{asymmetrical} ^{slope} ^{of} ^{the} ^{ditch}.



Detailed ^{drawings} ^{of} ^{the} ^{turf} ^{layers} show slight steps in the intervening intervals.

West End of Fort



OUTER

PLATEAU
13 RAMPART
OUTER SCOPES

The major break of slope under which an enemy could shelter, would have been clearly visible from the top of the main rampart at its original height. Therefore the outer was not built as a fox-work simply to cover the break of slope.

Secondary works

1. When the masonry wall was built to retain the rubble fall, then gave a steep embankment with a total height of 6.37 m from the base of the masonry wall to the top of the masonry rampart. → Probably sufficient defense without further outworks.

(2) At the west end the height between the summit level and the top of the masonry rampart was only 4.29 m - ? not enough when there was a reasonably flat area outside the west end i.e. Outworks. Note that in the west section (1) above a steep quite smooth contour away from the masonry wall. - All works up idea of no need for rampart.

3. Maximum secondary defense are in the South east - line of descent approach →
V4 MAIN RAMPART - OUTER + DITCH.

Outer Rampart West Section 2

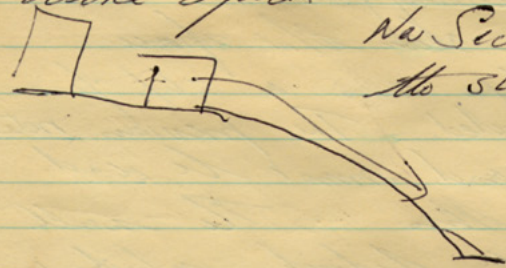
Following the argument previously for an situ
retrograde. Close study of timber impressions in
the in situ retrograde may give clues as to
the lumbering in the wall. In three cases
there are several occasions when the ^{huller} ^{of} ^{the} ^{timber}
of the timbers are preserved in the soil.
These indicated that the timbers had
been in horizontal through beams at
right angles to the inner face. No
evidence so far for timbers in other directions.
One piece of timber gives a very good
impression of bark. Sufficiently good in
fact to suggest that the bark was
thick. A ^{deciduous} type rather than oak.
From the impression the timber would have
been 12 cms in diameter.

Outer Rampart West Section 1

Main primary outer retaining face. On sectioned
and succeeding evidence also that space
of rubble described before was a slip face
and must be described. The previous notes
have been amended and must be read
in conjunction with this. The wall
is founded on the bedrock which in
places was ^{thin} covered 1 to 5 cms. In a ^{vertical}
depression in the bedrock a 4-5 cms depth
of the original brown soil was preserved. This
wall has many apparent similarities to the
outer face of the inner rampart. There is

to basic reddening and heavy covering of the
boulders. The blocky suggests later
coming on after the first ash heap.
Argument the wall. At present no
evidence of beam holes in this face.
The side sections: There here the texture
and character more of sand accumulated
into than may slip from the wall.
Indeed the core of the wall does
not suggest extensive sluffs or soil
infill in the core. If sandstone
deposited in excavations are anything to go
by, sand ^{deposition} ^{accumulation} would
have been quite rapid. Should have
soil have been exposed anywhere on the
hillside.

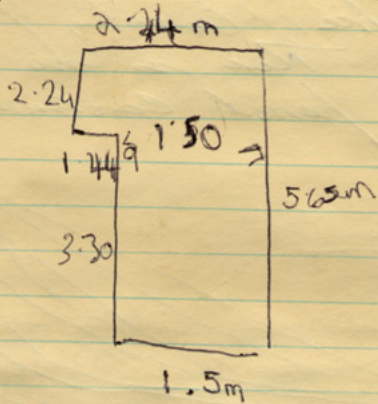
Has contained very few wall stones
→ Suggestive that the wall collapsed before
before the soil accumulated too thick
to be clearly retrograde rampart why
little soil.



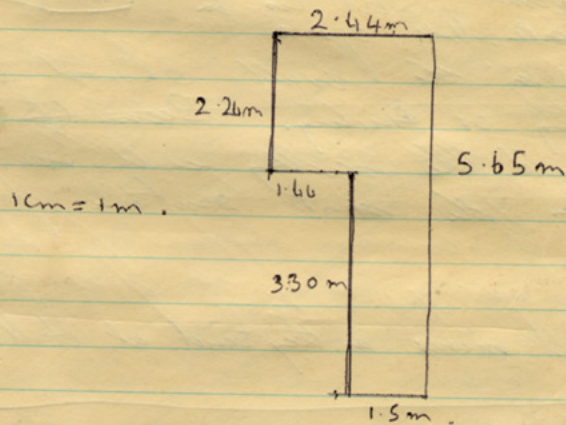
No Section shows major slip down
the slope.

See. BOTTOM CHECK
P. 1

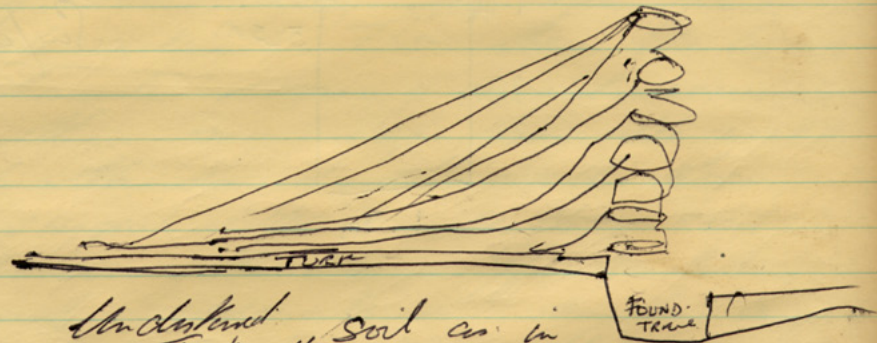
Outer Rampart North Section 1



Surface area



The nature of rubble in the rock outside which is virtually stone-free. Consists of slip and wind accumulation. There is no tangible evidence for this period construction.

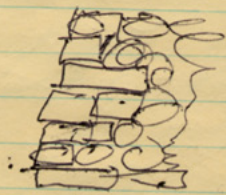


Understand soil as in
Interwall type

None of the stones in the wall showed any signs of intensive heating or cracking. Seemed to have been collected to build the rubble wall rather than merely selected as the most suitable from the rubble itself.

Back to the salt mines on the sand at Hallslett

The rubble wall was broken through to determine the building technique, which seems as indicated in the diagram below.

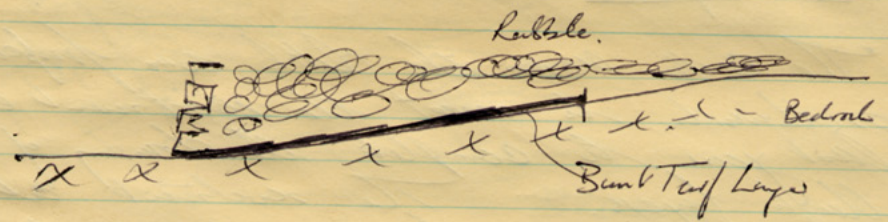


The rubble was carefully packed into the rubble, and was necessarily two courses in breadth. The wall must have been built gradually raising the level of the rubble as the settlement rose. This account for

Outer Rampart: North Side One.

Bedrock rises fairly sharply from the bottom of the outer scree face. To within .40 cms of the present scree level. 9m from the outer scree.

General temperature necessary for vegetation. Rampart originally level in steep on top of hill. In crevices in the bedrock the original soil is maintained.



No trace of the same scree face was recorded probably due to the shallowness of bedrock. On the basis of the rubble fall and the angle at which the rubble lay one might suggest that it lay some few metres from the outer face supporting the idea of a toppling mechanism. The core of the rampart is made up entirely of rubble, being mainly heat shattered. As one approaches the outer scree.

Indeed the greatest evidence of heat is dense right at the outer face with practically none else to where the inner face angle has been. Most of the material in this section of the wall appears to be of glacial origin and large solid lumps of volcanic rock do not occur. However around 30m N. flat sized lumps of vit were recorded. Again problem of (a) Rock type & (b) Size of structures in relation to the

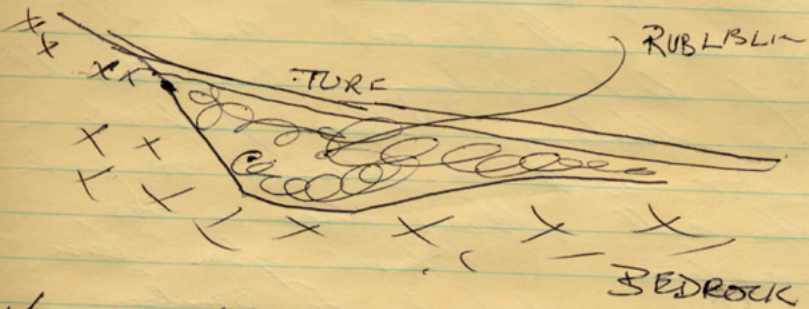
Outer Rampart South

The section across the ditch was projected northward to meet the retirement express that year to complete the closing of the block layers. The retirement at this point was almost identical to that described last year. Mostly the same sect -> Tie up the plan. Note - the sandstone boulders forming the retirement all show signs of intense heating. Some also show the distinct vertical cracks typical of heating -> No doubt secondary & possibly fast fall

Hill Bottom Test Section

The mass of debris on the outside parallel collapse of the matter sects of the horn work created some problems. The hillside slopes precipitously away on the north at this point. Originally on an almost plain rock surface to a piece of almost level ground metres below. A test sect on the level produced an indeterminate evidence with only a few boulders in the 25 cms of accumulation

above bedrock. A narrow bench some 4 m in width lies in above this flat area a section 2m x 1m at the junction of this bench with the base rock face showed.



Maximum depth of rubble 75 cms. The rubble contained some fragments of vitrification. Many heated stones. Much shattered by the fall. And even the thin small areas of large rocks. 30 x 20 x 20 cms which were excellent similarity to those found in the outer horizon. Satisfactory proof that much of this had in fact slipped down the relatively hard rock face.

Outcrop Rampart West Sect 2

Outcrop face. Still stands to a height of 1.10 m. Formed on a turf layer. 1-3 cm thick lying in a grey brown charcoal brown soil. Still stands 4-5 courses. The basal course consisting of large blocks up to 50 x 40 x 20. The next two layers are well coursed. And show some signs of heat cracking above this there is extensive shattering - Beyond that etc in a very loose wall. Blows may be picked the wall. Although there is no further evidence. Height from base to top of cur vitrification is 3 metres.

Core of wall. The core of the wall is extremely and solidly vitrified. Vitrification covering the ~~entire~~ section 30 cms of the outer face.

level to top corner of wall - 1.076 m. from center first tree stump.

| | |
|-------|-------|
| 1.17 | 1.075 |
| 1.21 | 1.05 |
| 81 | 1.25 |
| 85 | 1.20 |
| 80 | 1.26 |
| 72 | 80 |
| 1.00 | 1.12 |
| 1.00 | 1.08 |
| 1.02 | 1.09 |
| | 9 |
| | <hr/> |
| 12.33 | 10.11 |

53.202
3.725
29.977

3-99

0.71 $\frac{3.736}{.71}$
3.02

3.78 above W. lamp post Fix.
 $\frac{3.02}{.76}$

2 m length of wall exposed. Total depth from
top layer 1.10. There is some course of the
structure still exposed at this particular
point. The wall is fairly well covered
with very large blocks at the bottom.

Base of wall is bedrock at 2.245 m
below level of this stamp. A very thin
roof layer separates this base of the
wall from the material beneath which
slopes slightly downwards to the wall.

Here as it does at other points in the
port interior. The wall has a slight
batter inwards suggesting subsidence of
the same case. What about this

Slope of the the bedrock may be
a contributing factor to the the fall
of this structure outwards. To the north
of the section the wall appears to have
collapsed outwards completely. \rightarrow Explanation
of why we had not recorded it at
other points in the section. Sight of
feeling. Wall face almost entirely
Sandstone