

Condition Survey for the Existing Stone House and Pill Box at DIH CDA Site on 5 February 2009

Preliminary Finding

A) Stone House (Tai Koon Yuen) (Graded 3 Historic Building)

- 1) The Stone House is a two storey building (7m high) with some temporary squatter structures built on top of the roof of G/F(3m high) and 1/F (3m high). A balcony is found locating on the G/F roof (**Photo 1**). The balcony is the access to the temporary squatter structures. Steel pipe railing is constructed along the perimeter of balcony and a few pieces of timber posts to support corrugated steel sheeting as the shelter alongside the balcony (**Photo 2**). The external wall of the Stone House is built of granite stone. The granite stone is bonded together by chunam mortar (**Photo 3**). The roof top of G/F and 1/F is a reinforced concrete slab with some rusted reinforcement round bars found under the roof of G/F and 1/F (**Photo 4**) during the visit. In addition, the footprint of the stone house is about 13.6m (L) x 9m (W) and height of the 2 storey building is approximate 7m, the sketched floor plans for G/F (**Figure 1a**) and 1/F (**Figure 1b**) are attached in Appendix for reference.

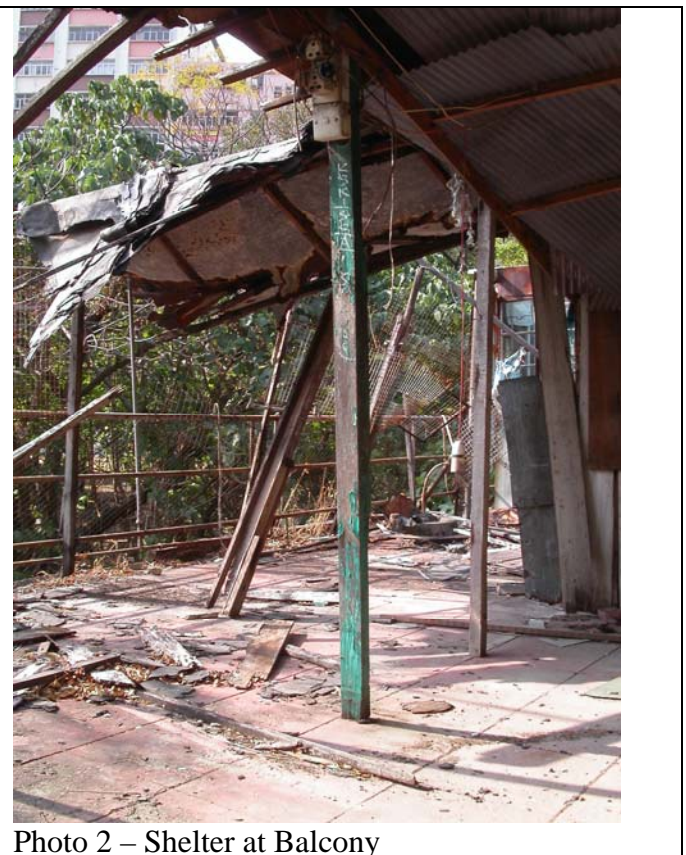
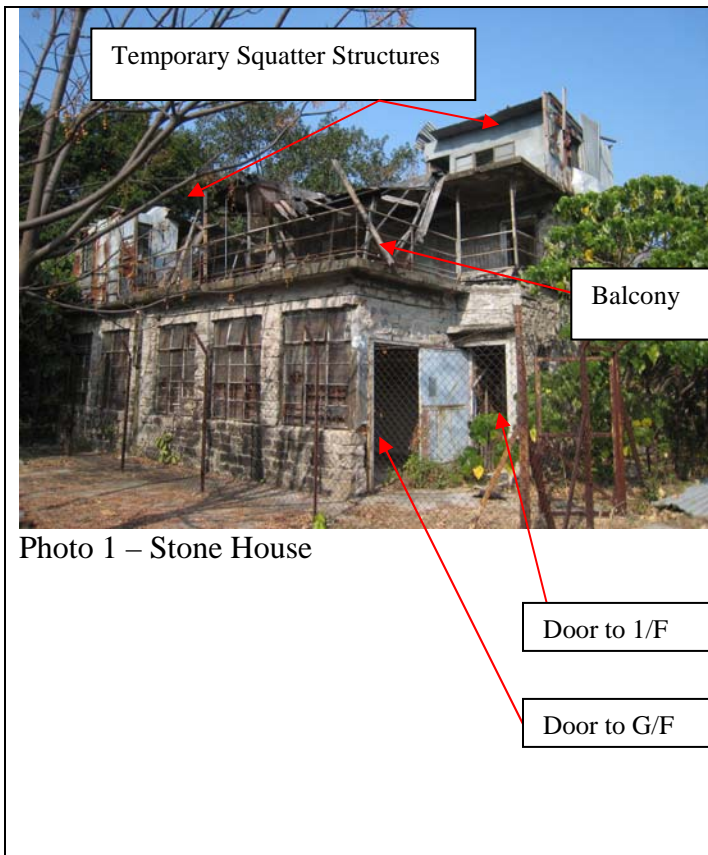




Photo 3 – Chunam Mortar & Cement Sand Plaster



Photo 4 – Rusted Reinforcement under the 1/F Roof

- 2) According to the notice of Hong Kong Housing Authority posted at the entrance of house (**Photo 5**), the occupant of this house has already moved out under instruction of the Phase 8 of Diamond Hill Demolition Squatter House Scheme in December 2000. Due to lack of maintenance, the condition of house is in poor condition and not suitable for living. It is noted that part of the temporary squatter structure at the roof of G/F and 1/F were collapsed and fallen to the house's backyard (**Photo 6**). The fallen structure is made of timber and steel sheeting. In addition, part of the balcony shelter has also collapsed (**Photo 7**). Spalling and exposed reinforcement are found under the roof of G/F and 1/F (**Photo 8**). The interior face of the granite stone wall is built of 2~3mm cement sand plaster with wall painting finishing. With the poor condition of the paint, large area of the paint has been peeled off or with damped patch marking (**Photo 9 & 10**). Some loose plaster, timber rods and boards are easy found on the floor of the house (**Photo 11**). Partition wall inside of the stone house are built of timber frame and insulation board or plywood, which is typical room partitioning material of the time when the house was built (**Photo 12**). During the visit, it is observed that most of the chunam mortars are fallen from the interior face of the granite wall with some location where the mortars fallen or degraded which reaches the exterior face of granite stone (**Photo 13**). In addition, a major crack is found at the external wall near the toilet extended from the roof to the ground (**Photo 14**). If no proper repairing of the granite stone wall the crack will be further expanded and the toilet will be damaged.



Photo 5 – Notice at the entrance door



Photo 6 – Part of temporary squatter structure were fallen down to the backyard of Stone House



Photo 7 – Part of Shelter has collapsed



Photo 8 - Spalling and exposed reinforcement at 1/F



Photo 9 – Poor condition of internal wall



Photo 10 – 2 ~ 3 mm thick of cement sand plaster



Photo 11 - Loose plaster, timber rods & boards



Photo 12 – Timber Frame Partition

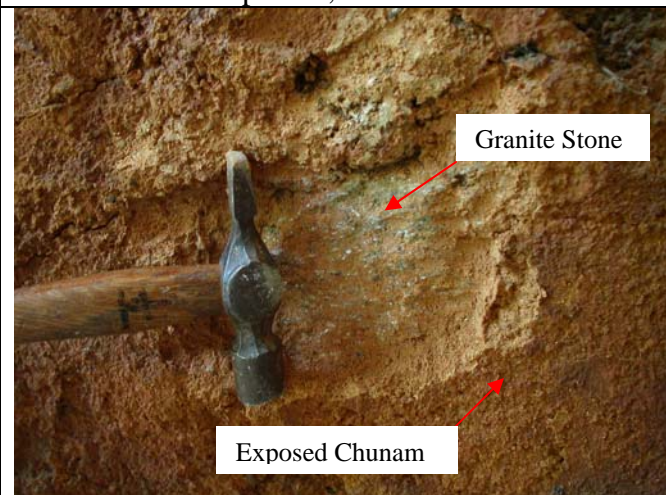


Photo 13 – Exposed Chunam mortar at external wall and granite stone can be seen.



Photo 14 – Crack at G/F Toilet

- 3) Regarding the drainage of the house, it is noted that the modern toilet seat is found at the toilet of G/F (**Photo 15**) and 1/F and drainage pipe (**Photo 16 & 17**) was connected from the 1/F to the G/F toilet. With this Tai Hum Village is full of illegal squatter houses, it is believed that there is no proper foul drainage system constructed this location; thus it is suspected that a septic tank may be built underneath of the House as part of the foundation.



Photo 15 – Toilet Seat



Photo 16 – Toilet Seat & Foul Drainage pipe at 1/F roof

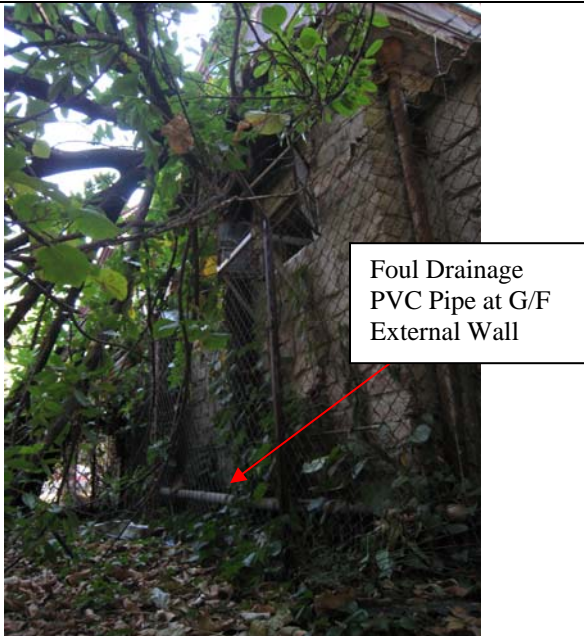


Photo 17 – Foul drainage PVC Pipe

- 4) For the other fitting of the house, typical steel frame window (**Photo 18**) are found at all window opening except one Chinese style greenish ceramic window frame (**Photo 19**) installed near the entrance of staircase to the 1/F. From the information provided by the Archaeological Review Report (Nov 2008), one of the room on the G/F was an audio room for film production with all four sides of the wall were installed with installation foam board, but most of the boards were damaged or in poor condition (**Photo 20**). A wooden gate was found at the 1/F of staircase (**Photo 21**) and in good condition.



Photo 18 – Steel Frame Window



Photo 19 – Greenish Ceramic Window Frame



Photo 20 – Audio Room for Film Production at G/F



Photo 21 – Wooden Gate at 1/F of staircase

- 5) On other hand, two trees are found at the external wall of the house. One is growing from the north-west side of the house near the roof of G/F (**Photo 22**) but not in good form as it has already fallen down but is still alive. Another one is growing from the south-east side of house near toe of the exterior wall of staircase entrance to the 1/F (**Photo 23**).



Photo 22 – Tree at North-West side of House near roof of G/F



Photo 23 - Tree at the South-East side of House near staircase entrance

- 6) In consideration of the current condition of the house, if it is not properly repair, the condition of house would be worst and would run the risk of collapse.
- 7) If relocation of this house is considerable, it is noted that this house is in poor condition. It is not easy to move each piece of granite stone hence sufficient design planning is necessary to fix and record each members of the house before dissemble into small piece for relocation and later reassembly. The bonding material – chunam mortar is not commonly use nowadays, therefore a suitable replacement material such as reinforcement concrete would be needed to reconstruct the Stone House. For the temporary structures at the roof (timber rod and steel sheeting) of G/F and 1/F, reuse is not recommended. Materials for temporary structure are inexpensive and readily available in today's market. As mentioned before, the underground of the house may have a septic tank and therefore the details ground investigation around the house is recommended.

B) Old Pill Box (Graded 2 Historic Building)

- 1) The Old Pill Box (**Photo 24**) is a single storey building with a dome-shape roof (internal diameter of 3.9m) and part of external wall is built below ground, approximate 1.7m. The perimeter wall is built from hollow masonry unit/block (HMU) (6”(H) x 9”(W) x 18”(L)) (**Photo 25 & 26**) with the cement sand mortar infill and total wall thickness is approximate 700mm thick. The roof is made of reinforcement concrete (**Photo 27**). The outlook of Pill Box is shape like a “igloo house” by the Esquimaux in the polar region. In addition, a hand sketch (**Figure 2**) is attached at the **Appendix**.

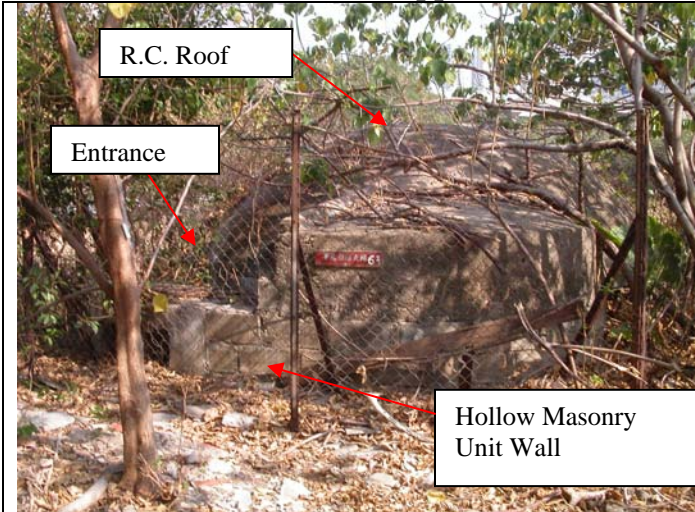


Photo 24 – Old Pill Box



Photo 25 – Hollow Masonry Unit



Photo 26 – Reinforcement Concrete Roof Slab

- 2) The entrance of the Pill Box (**Photo 27**) is 6’(H) x 3’(W) with 5 steps of staircase from the ground to the box. Pillbox interior is a circular room and with 5 small openings (**Photo 28**). One of the openings is blocked with brick wall (**Photo 29**) and it is suspected to be a storage area or emergency exit as it can reach the ground level from this opening. A photo (**Photo 30**) is taken from the other side

of opening at the ground. The size of storage is 2m(L) x 1.7m(W) x 0.9m (D). The wall has no plaster finishes but with only white paint on it. The floor is made of concrete. Some debris, damaged timber boards and rods are found on the floor and on the roof (**Photo 31**). With reference to the timber name board mounted at the entrance of Pill Box (**Photo 32**), this box has been reused as the Fire Fighting Team Office of Ha Yuen Leng Village before the demolition of Ha Yuen Leng Village. It is observed during our visit that some modern fixtures such as cloth hanger, telephone joint box of Hong Kong Telephone Co., telephone line and electricity wire were installed on the wall and ceiling (**Photo 33**) of the Pill Box as well as water pipe line connected from one of the opening (**Photo 34**). The internal structural condition of the Pill Box is considered satisfactory.



Photo 27 – Entrance of Pill Box



Photo 28 – Internal of Pill Box

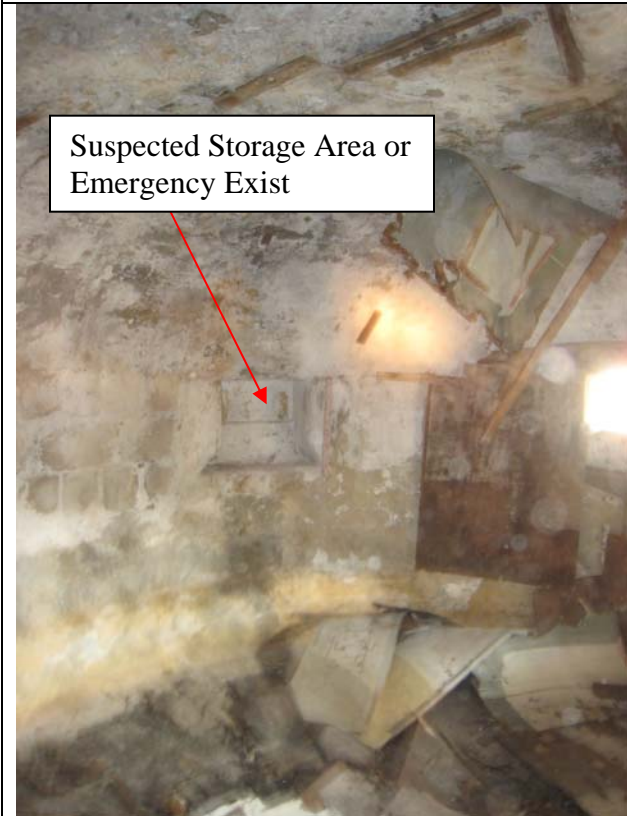


Photo 30 – View from outside of suspected storage

Photo 29 – Suspected storage area or emergency exit



Photo 31 – Some debris, damaged timber boards and rods are found on the floor



Photo 32 - Timber name board mounted at the entrance of Pill Box

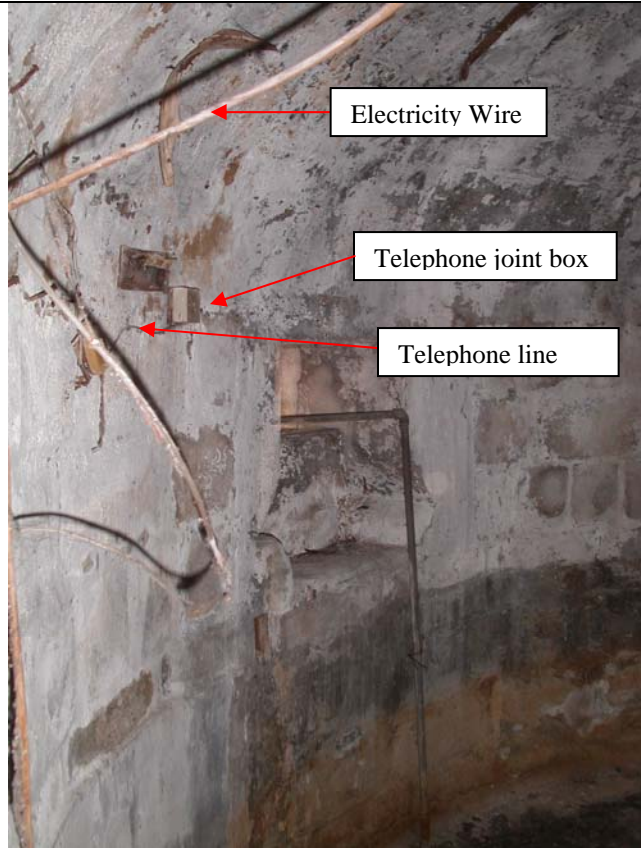


Photo 33 – Fitting in Pill Box

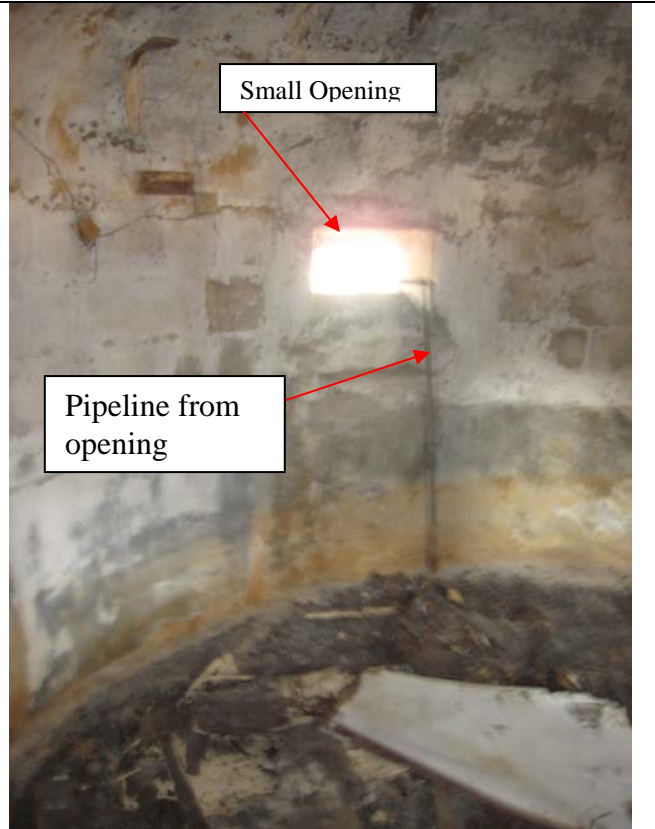


Photo 34 – Pipe line from opening

- 3) For the external wall of the Pill Box, some of the HMUs are found to have different level of damage including broken, disjointed and chipping of small pieces of brick (**Photo 35**). Delamination are found at the roof top and distributed from the top to the wall edge (**Photo 36 & 37**). The delamination is possible on the cement plaster layer as no visible crack is found from inside of the reinforcement concrete roof.



Photo 35 – Damaged HMU



Photo 36 – Delamination at roof top

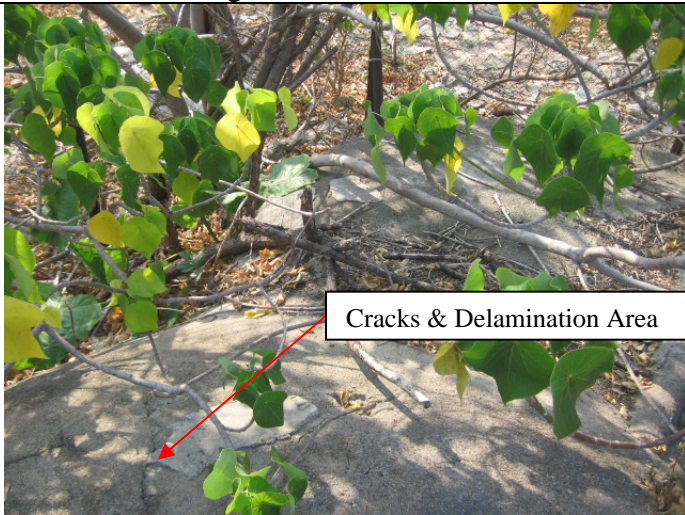


Photo 37 – Delamination at roof top

- 4) This Pill Box is also one of the recorded historical structures of Hong Kong during the Japanese occupation, the overall condition of the house is considered satisfactory except for the delamination of plastering at the roof and some broken pieces of brick works.

- 5) In consideration of the relocation of Pill Box, this structure is built of HMU and reinforcement concrete in comparison with the stone house and aircraft hangar; it is in more satisfactory condition. However, the relocation of this structure is better by lifting it up in one piece instead of chopping into small pieces as the concrete block is not easy to reassemble after breaking into small pieces. In addition, because of the military nature of this structure, the surrounding soil may have other underground features or materials in its surrounding. Before carrying out the relocation work, it is recommended to conduct a detailed ground investigation around the Pill Box such as ground utilities detection and trail pit to expose the details of foundation of Pill Box. Proper recording each member of the structure is recommended and with temporary works to protect the structure should be planned and designed for the relocation.

Appendix

Figure 1a – Stone House (Ground Floor Plan)

Figure 1b – Stone House (First Floor Plan)

Figure 2 – Old Pill Box

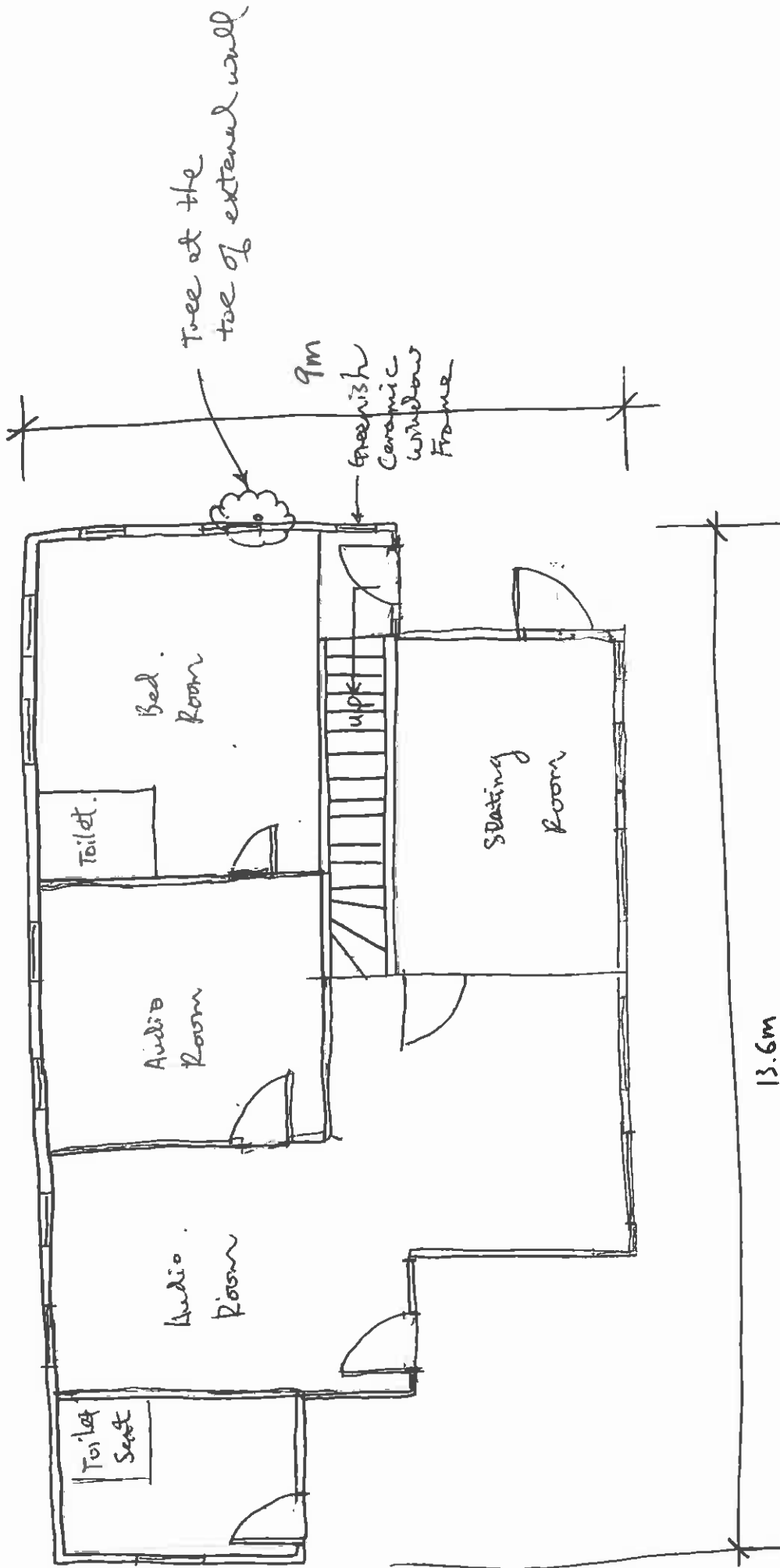
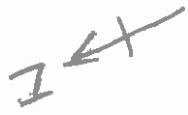


FIGURE 1a - STONE HOUSE (GROUND FLOOR)

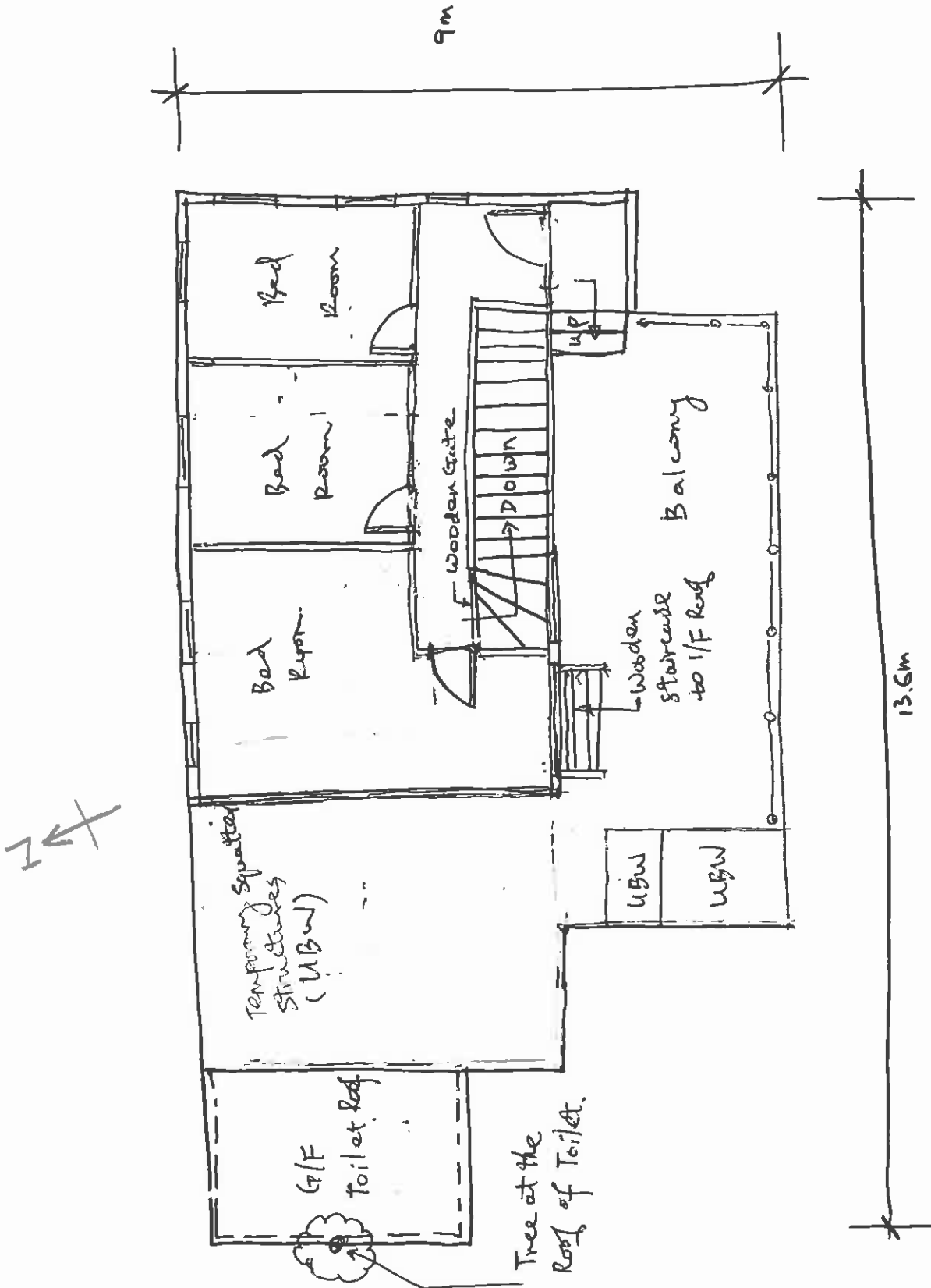
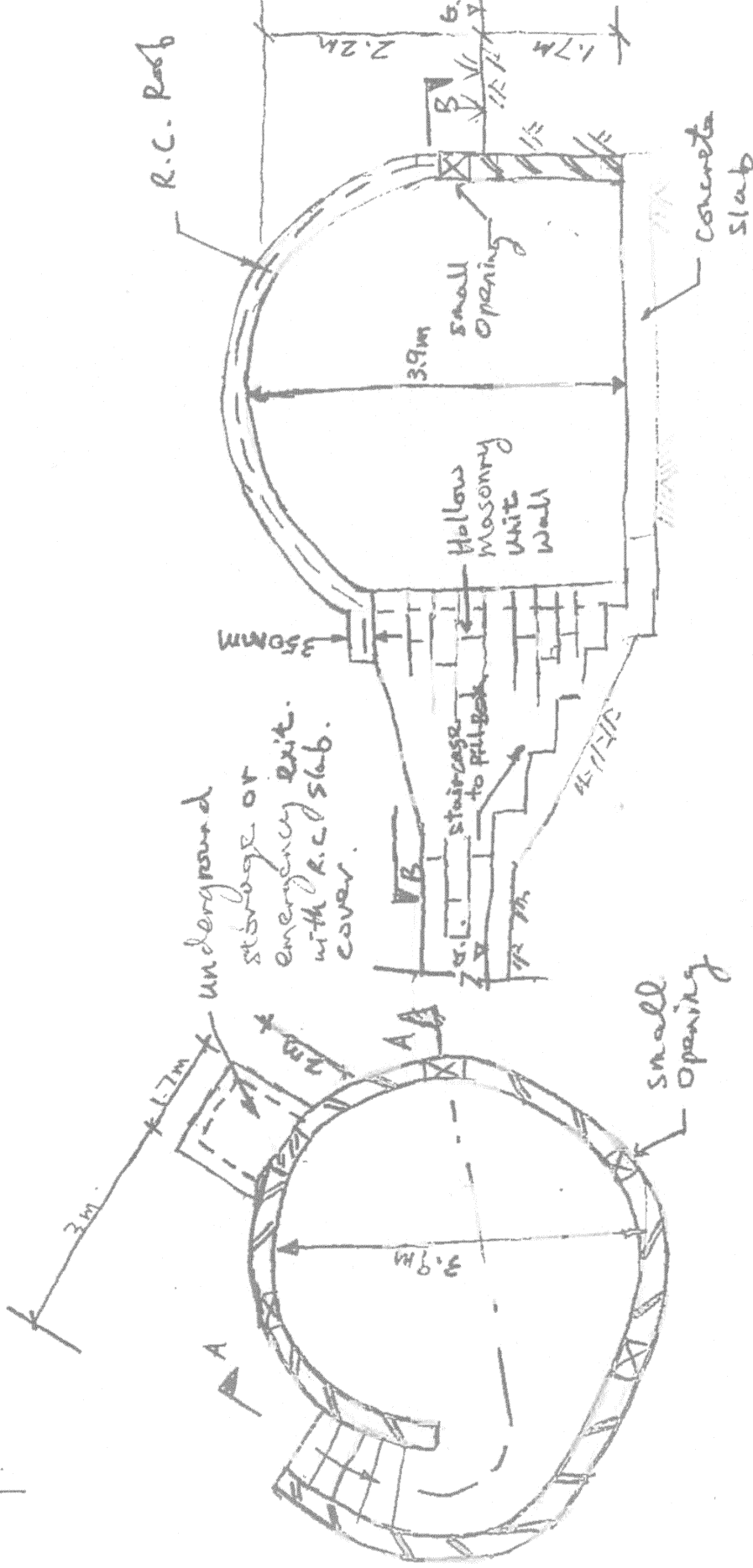


FIGURE 1b.- STONE HOUSE (FIRST FLOOR)



SECTION B-B
(N.T.S.)

SECTION A-A
(N.T.S.)

FIGURE 2 - OLD PILL BOX
(Graded 2 Historic Building)