Site Diary for Summer 2014: Experimental reconstruction of two

Neolithic/Copper Age houses in Nebelivka village, Kirivohrads'ka oblast, Ukraine

**Monday 14th July (DAY 1)**

Morning (7:00 am to 2:00 pm): Meeting between Professor Chapman, Mayor Bobko, Professor Videikoand I to discuss the location for the construction of the houses. Mayor Bobko offered the area of unused ground next to the Trypillia Project laboratory which was gratefully accepted.

I later met with Professor Videiko to discuss house designs who made the following recommendations:

- Alterations to the design of the two storey house in light of research by Natalia Burdo (Burdo, 2011).
- To use oak for the timber framing as it was also available to people in prehistory.
- To source and cut the wood for the construction project "in the forest" instead of buying it commercially.

Clearing of the site by local labourers took place throughout the rest of the morning.

Afternoon (2:00 pm to 4:00 pm): I redesigned the houses and made alterations to the quantities of materials required in the light of Professor Videiko's suggestions. Professor Chapman and I met with local villagers at various points through the day to arrange supply of hazel for wattle weaving, reeds for thatching and wooden dowel for pinning timbers in place.

Evening (4:00 pm to 6:00 pm): After supervising the first stage of the site clearance, I had an informal discussion with Doctor Gaydarska about the outcomes of the meeting with Professor Videiko andvoiced my concerns over the practicalities of his recommendations in the time frame available;

- The suggested alterations to design and subsequent changes to quantities of materials had been carried out. From a discussion with Igor R, oak timbers would be limited to 3m lengths and so the building footprints were revised from 4m x 4m to 4m x 3m.
- Sourcing wood from the forest was not feasible in the timeframe available.
- The use of oak as a building material would depend on what was commercially available.

These concerns were later discussed with Professor Chapman who agreed that some compromises might be necessary in order to deliver the construction project in the time available.

**Tuesday 15th July (DAY 2)**

Morning: Clearing and levelling of three plots with the assistance of local labourers, Andre and Roman. Two plots were cleared for the construction of experimental houses and one for the eventual construction of a museum-quality house for the display of Trypillia artefacts.

Afternoon: travelled to Novoarkhanhel's'k, the nearest large town to Nebelivka, with Doctor Gaydarska, Professor Chapman and Svetlana, our interpreter, to source and procure construction materials from a builder's merchant. No oak was available but there was a sufficient quantity of pine for use in the project. Since pine would have been available on the forest steppe in prehistory, after discussion with Doctor Gaydarska and Professor Chapman, it was agreed that pine would be used for the timber framing of the buildings (Pashkevych, 2012).

Evening: I travelled to a sawmill at Novoarkhanhel'sk with Igor R and Svetlana to source sawn half round timber for floors and ceilings. Timber was selected and ordered for delivery later that week.The timber delivery arrived from the builders merchants at around 9:00 p.m.

**Wednesday 16th July (DAY 3)**

Morning:  I met with the Ukrainian members of my construction team; Igor R, Igor Bobko and Vlad Litkevych.  Work began on cutting timbers to required lengths for framing and cutting and shaping half-lap and mortice and tenon joints and to level the edges of the plots to accommodate horizontal sleeper beams acting as the foundations of the wattle and daub structures.

Afternoon:  Travelled to Novoarkhanhel'sk with Doctor Gaydarska, Professor Chapman and Svetlana to purchase materials and tools.

Evening: Work continued with cutting and shaping wood for elements of the timber framing.  The half round timbers ordered from the saw mill arrived on site.

After discussion with Igor R, it was agreed that the timber for the upper floor of the two storey house should be of thinner dimensions for ease of handling.

**Thursday 17th July (DAY 4)**

Morning and evening: Work continued with cutting and shaping wood for elements of the timber framing.

Afternoon: Travelled to Novoarkhanhel'sk with Doctor Gaydarska, Professor Chapman and Svetlana to purchase materials and tools.  200 brush handles were ordered to act as uprights in the woven wattle panels.

**Friday 18th July (DAY 5)**

Morning: Igor R was not available because of other commitments to the Project so the rest of the construction team concentrated on cutting of roofing timbers for both houses as this was slightly less challenging than the preparation of other construction elements.

Afternoon: Travelled to Novoarkhanhel'sk with Doctor Gaydarska, Professor Chapman and Svetlana to purchase materials and tools.  We picked up the previously ordered brush handles from the hardware store.

Evening: Work continued with cutting roofing timbers.

**Saturday 19th July: Rest day.**

**Sunday 20th July (DAY 7)**

Morning and Evening: Work continued with cutting and shaping wood for the timber framing. Manufacture of the roofing timbers was completed and Ukrainian students from the University of Kirovohrad were available to assist in clearing the site and tidying up the area around the laboratory.

**Monday 21st July (DAY 8)**

The timber frame for the single storey house was assembled and uprights for the woven wattle panels were put in place.

**Tuesday 22nd July (DAY 9)**

King posts and rafters forming the gable ends of the single storey house were erected and secured in place using wooden pegs. Weaving of the wattle panels began. Allie Ames and Kris Charmley from Durham University joined the construction team for the rest of the rest of the project.

**Wednesday 23rd July (DAY 10)**

Work continued with weaving wattle panels of the single storey house.

Cutting and shaping timbers for the two storey house continued. I met with Mayor Bobko and Professor Chapman to discuss how we would obtain daub for plastering. Mayor Bobko offered to supply daub from three local sources which would be prepared mechanically and delivered to site. Due to manpower constraints and to save time, Professor Chapman and I agreed that this would be the most effective solution to the supply problem.

**Thursday 24th July (DAY 11)**

While wattle weaving continued on the single storey house, work began on the erection of the timber frame for the two storey house. By the end of the working day, the wattle panels on the single storey house were complete and work had begun on weaving the wattle panels of the two storey house.

**Friday 25th July (DAY 12)**

The last elements of the timber framing for the two storey house were assembled before construction of the timber floors began.

Gaps between the sawn timbers were filled with reeds and off-cuts of hazel to prevent clay falling between during plastering. Three trailer loads of daub were delivered in the afternoon.

**Saturday 26th July (DAY 13)**

The gable ends of the two storey house were erected. Weaving of wattle panels continued while plastering of both houses began.

**Sunday 27th July (DAY 14)**

Plastering of wall panels on both houses continued while work began on the plastering of the timber floors. Chert inclusions were found in one of the yellow clays during plastering. This may have been a source of tool making material in prehistory.

**Monday 28th July (DAY 15)**

Rafters were erected on the single storey house and secured with wooden pegs. Wooden battens were then pegged to the rafters to allow bundles of reed thatch to be tied securely.

**Tuesday 29th July (DAY 16)**

A fourth trailer load of daub was delivered. The first (abortive) attempt was made to thatch the single storey building by the author. The method was abandoned because it was too time consuming and used too much material.

**Wednesday 30th July (DAY 17)**

Igor R and Igor Bobko proved to be far more competent at thatching than the author. Reeds from the previous day were reclaimed and a second successful attempt was made to thatch the single storey house. In the evening I attempted to carry out a survey of standing remains of abandoned buildings in the village but was unsuccessful because of poor light.

**Thursday 31st July (DAY 18)**

Rafters and battens were erected on the two-storey house while the thatching of the single storey house was completed. Using powdered charcoal and curds from sour milk, I experimented with making black paint. In the afternoon I carried out a brief survey of three abandoned buildings in the village.

**Friday 1st August (DAY 19)**

Thatching continued while work went on to finish off the daub plastering. Experiments were carried out with milk curd and clay to produce red and white paint. Tests were made of the three paints on the wall of the two storey house. In the evening a small celebration was held and short presentations were given to the Project Team by Professor Chapman, Mayor Bobko and I about the construction of the house models and the successful cooperation between Ukrainian and British team members.

**Aftermath (DAYS 20+)**

Members of the construction team continued with thatching and decorating to complete the houses.