During my recording I came across some projectiles that were not in the central chipped stone database. After discussing this with Sarah Jones and Lisa Guerre we decided that I was to give them an arbitrary A number which would start from A500 for each unit and create an entry for them in the database. This number however was not written on the artefact itself, only on the label and the bag. Others had an A or X number already, but there was no record of them in the database. I also created an entry for these in the database. In all the entries I made, I filled in the following fields: Bag #, Unit #, A/X #, **Raw Material, Interpretative Category, and Crate Location**. Entering these data was done as much as it was possible, but due to lack of time not for every projectile.

Work at the Konya Archaeological Museum:
The *Envanter* portion of the material, kept at the depots of the Konya Museum, was studied in three days, from August 9 to 11, 2011. I studied 91 artefacts in total from the Envanter years 1994-1999. Every artefact was given a Proj. Number (I did not use any stickers), recorded, and photographed.

aDNA Samples:
Four projectile points found during the 2011 excavation season have been packaged accordingly. These projectiles will be the focus of a smaller component of my research, which examines the use of projectile technology. The artefacts, along with five soil samples for each, are stored in the lithics lab on site. They will be rinsed off in an ultrasonic tank in the 2012 field season and the solutions shipped for aDNA analysis. The analysis will be conducted by Prof. Hendrik Poinar at the aDNA laboratory at McMaster University in Canada. After the projectiles have been rinsed, they will remain at Çatalhöyük to be studied and stored. None of the said artefacts will be exported, and they will not undergo any destructive procedure.

Late Neolithic Architecture Of Çatalhöyük - Marek Z. Barański

Team Poznań

The technical aspects of architecture and construction of late Neolithic Çatalhöyük are investigated in the course of a PhD project, which eventually will be conducted at the Institute of Archaeology at University of Gdańsk (Poland). The main focus of this research, supervised by Prof. Dr hab. Lech Czerniak, is to analyse building techniques and strategies as well as the structural character and quality of the buildings that were unearthed within the upper sequences of East Mound.

In particular, I intend to tackle the following issues: (1) preparation of the building development area with regard to foundation works, (2) technical and structural aspects of the buildings including geometry and strength durability of the mud-brick walls, (3) experimental structural analysis of the mound in terms of its stability and bearing capacity, (4) social context of the architectural and construction process. Despite the fact that the process of designing and erecting mud-brick buildings at Çatalhöyük has long been a subject of intense debate (Mellaart J. 1967; During B. 2000; Hodder I., Cessford C. 2004; Cutting M. 2005), the problems, such as those above, have been relatively weakly recognised. Normally, a multidisciplinary team discussion does not involve architecture in the late Neolithic sequences. One of the main causes of this situation is a small-scale excavation area of the upper sequences (Mellaart J. 1962; Hodder I. 2001). In my opinion another important reason is a questionable archaeological phasing used by James Mellaart resulting in difficulties in analysing and interpreting the architectural remains from the problematic period. Therefore, in terms of spatial organization of the settlement, the theory based on horizontal levels of contemporary buildings seems to be very misleading. Over a dozen of years or so, with the exception of TP Area, very few structures have been considered equivalent to the buildings unearthed in the 1960s within what was labelled by James Mellaart as Levels 0-II (Hodder I. 2001; Czerniak L., Marciiak A. 2011). What if the late Neolithic buildings were built not only at the top of the mound but also in many different places down the slope? Is it still possible to trace them even though they are heavily affected by the post-depositional processes?


Figure 3. (left) Foundation ditch of Sp.327 (TP Photo Archive). Figure 4. (right) Stepped foundation of B.74 (TP Photo Archive).

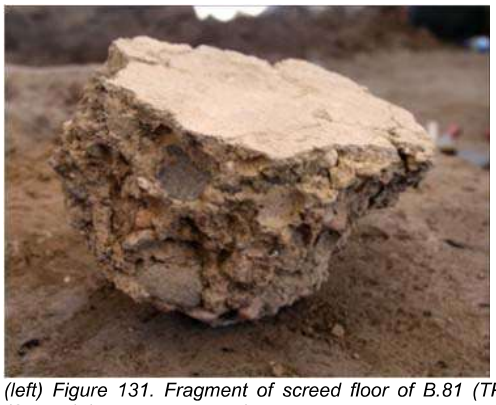

(left) Figure 127. Solid one-brick-thick walls of B.74 (TP Photo Archive).
(right) Figure128. Solid one-brick-thick walls of B.74 bonded with each other (TP Photo Archive).

I believe that the structural analysis might be one of the key factors in chronological identification of architectural elements and features from the upper sequences. It can add another layer of complexity to the history of Çatalhöyük and may represent a valuable contribution to the discussion on the changes in building techniques and strategies as well as on the reasons of the end of the settlement at the turn of the 7th to 6th Millenium. The excavations carried out by Team Poznań that focused upon the latest phases of mound occupation, support the thesis outlined above. There were several buildings dating 6 400 to 5 900 cal BC brought to light within TP Area (Czerniak L., Marciniak A. 2011). In terms of architecture and construction they all varied in comparison to the architectural remains from the lower sequences in a wide range of characteristics (Marciniak A., Czerniak L. 2007).

In the 2011 season, with the help from Shahina Farid and Roddy Regan as well as Peter F. Biehl and Mira Stevanović I carried out an initial research outside of the TP Area to find mud-brick walls and other structural elements that might fit within the frame of a typical TP architectural form. From that point of view I also analysed the archive reports and field drawings of many different teams that had worked at Çatalhöyük in different seasons and times. That was not an easy task to do, partly because, in my opinion, the information included in the database does not allow architectural queries that might be considered efficient enough. For example, it was not possible to trace all the unearthed one-brick-thick walls or screed floors. Therefore, a new sheet category relating to the mud-brick walls might be very useful in all sort of architectural queries. The results of this season's research however are very encouraging. A fair number of solid structures that might be an interesting point of reference for the TP buildings have been traced. It surely gives me more options for a more detailed cross-analysis. The following outline of the comments and remarks on the late Neolithic building sequence can be presented at the present stage of my research, which is based on the TP architectural analysis.

First of all, one of the most striking aspects of the TP architecture is one-brick-thick walls that were bonded with each other (Figure 127 & Figure 128). These solid structures made up of alternating courses of stretchers and headers, which not only delineate the building and / or support its superstructure but also separate many spaces of different character within what seems to be one building or one contemporary building complex. Secondly, the TP mud-bricks in a vast majority of cases are quite uniform in structure and composition. The size of the bricks fluctuated to a very small degree, which might be a sign of ongoing standardisation

of brickwork at the time. This is something that has not appeared to be true at Çatalhöyük (Love S. 2010). Another important structural element that came to light in the TP trench are foundation ditches (Figure 129) that cut through the layers of middens, infills as well as parts of the older structures such as walls, platforms and solid screed floors (Figure 131). In many cases stepped foundations (Figure 130) or layers of consolidation made of mud-brick rubble were observed. As far as the building sequence is concerned most of the TP buildings were built one upon another but in a relatively widely spaced and inconsistent manner. The location of what seemed to be interior as well as open spaces changed within different occupation levels. This is unusual for the buildings from South and 4040 Areas (Hodder I. 2006). Also, in terms of building cubature and the size of covered area, the TP architecture varies in comparison to architectural remains from the lower sequences in a wide range of characteristics. Another important factor are grave chambers (Figure 132 & Figure 133) that in all respects replaced the burials under floors and platforms. The two unearthed structures of that type are good examples of elaborate preparations of the building area and carefully built up and plastered mud-brick walls. There is also an intriguing issue of wall tilting, landslides as well as partial dismantling and reassembling of the buildings.



(left) Figure 131. Fragment of screed floor of B.81 (TP Photo Archive). (right) Figure 132. Grave chamber (Sp.248) (TP Photo Archive).

Figure 133. Grave chamber (Sp.327) (TP Photo Archive).

The initial analysis of TP architecture serves as a good starting point for my research. As I am both an architect and an archaeologist I would like to put the construction process as well as all the other stratigraphic evidence, such as that above, into a broad social context by addressing a number of questions. The first one is: **WHAT?** What impact did the change in building strategies have on a settlement pattern and organisation? What can we say about the building cubature and the size of covered area? What evidence do we have for two-storey buildings as well as possible mud-brick standardisation? What effect might the exceeding of possible maximum bearing capacity of the mound have had? Then comes the question: **WHY?** Why were new solutions for erection of the buildings applied? Why did people put much more effort to make up foundation ditches and set up walls that were a full brick in depth? Why did building complexes appear? The last set of questions starts with the word: **WHO?** Who were the people that built late Neolithic houses? Who lived within a building complex? Many of these goals are to be achieved by the application of CAD / GIS modelling tools as well as other analytical software (Barański M.Z. 2011).

References
Barański M. Z. (In Press), New Insights into the History of the Late Neolithic Çatalhöyük. The Technical Aspects of the Mound and Building Construction, paper from the Settlement Archaeology Symposium Series IV, Ankara, 12-13.05.2011.

Cutting M. (2005) The Architecture of Çatalhöyük: Continuity, Households and Settlement, in Çatalhöyük Perspectives: Themes from the 1995-99 Seasons (ed.) Hodder I., Cambridge: 151-170.

Czerniak L., Marciniak A. (2011), Çatalhöyük East Towards the End of the 7th Millennium cal. BC , paper from the international conference of the Çatalhöyük West Mound Project: Times of Change. The Turn from the 7th to the 6th Millenium BC in the Near East and Southeast Europe, Berlin, 25-26.11.2011.

During B. (2000), Places, Privacy Patterns and Social Identities in the Architecture of Neolithic Çatalhöyük, Master of Arts thesis at the Faculty of Archaeology, Leiden University: 40-108.

Hodder I. (2001), Introduction, Çatalhöyük 2001 Archive Report.

Hodder I., Cessford C. (2004), Daily Practice and Social Memory at Çatalhöyük, American Antiquity 69 (1): 20-31.

Marciniak A., Czerniak L. (2007), Social Transformations in the Late Neolithic and the Early Chalcolithic Periods in Central Anatolia, Anatolian Studies 57: 117-122.

Mellaart J. (1967), Çatalhöyük, A Neolithic Town in Anatolia, London: 54-71.

Mellaart, J. (1962), Excavations at Çatal Hüyük, First Preliminary Report, 1961, Anatolian Studies 12: 41-52.

The Intuitive Builders of Çatalhöyük - Mary Ganis

The University of Queensland, Australia.

Abstract
The paper discusses the built form of Çatalhöyük from the point of view of an architect with her builder's boots on. Firstly, there is a brief discussion about the notion of intuition from the perspective of cognitive psychology. Next, the discussion offers (a) an interpretation of the built form response to the site context and (b) an analysis of the detailed building construction elements. This discussion argues that despite a 9,000 year gap in building traditions, there are fundamental construction principles that might span time to align Çatal building construction methods with similar modern buildings. The use of such fundamental building construction methods may have enabled the successful design and construction of multiple level buildings and urban form of Çatalhöyük.

Introduction
Çatalhöyük is renowned for its dense, multi-level built form that housed a population in the thousands. The question is, why did the builders of Çatalhöyük make apparently enigmatic design and construction decisions. Although this area of investigation has been covered by others from the seminal work of James Mellaart and from the forensic detail through to the large scale by the Çatalhöyük Teams directed by Ian Hodder (1996; 2005; 2007) this paper attempts to glean further evidence of the building rationale within the context and limitations of construction and urban design analytical approaches. The source for this analysis is based on the author's investigation of the on site built forms and communication with team members during the summer archaeological season of August 2011. A justification of the analysis of construction principles used in Çatalhöyük is framed within a possible alignment with a modern example of a similarly scaled building.