

Guidelines for the Digital Recording System

0. Introduction

The Vulci 3000 Project uses the **single context method** recording system: it means that each excavated stratigraphic unit (context) is given a **unique ID number** and it is recorded by:

- Unit Sheet
- Photos
- Plan and/or section drawings; height above sea level

The finds from each unit are bagged and labeled with their unit number for later cross reference work carried out in the post excavation. Samples of deposits from contexts are sometimes also taken for later environmental analysis or scientific dating.

At Vulci, the conventional documentation integrates digital 3D data recorded by photogrammetric techniques or by laser scanning. In general, photogrammetry is systematically used in micro-scale (layers) and 3D laser scanning in macro-scale (large-scale survey).

1. The Unit List

As soon as the unit is recognized, you have to choose a unique ID number from the master unit list, available on the tablet.

Before recording, check the list and assign to your unit the first untaken number on the list. Avoid duplicate numbers because they cause endless problems and result in loss of information. Two different units cannot have the same number so verify and record the number of the unit in the **Master Unit List**.

UNIT LIST		Toponym:			Check List				
Number	Definition	Area/Trench/Sector	Date	Name	Unit Sheet	Plan	Photo	EMB	Dat&Sk.

Specifically, the Master Unit List consists of:

- **Number:** enter the first untaken number of the list; that will be the ID number of your unit
- **Definition:**
 - Enter the type of the unit, **positive** (layer or fill) or **negative** (cut)
 - Provide a more specific interpretation of the unit:
 - for positive unit: *posthole fill, floor/trodden surface, remaking surface, rubbish dump, hearth, oven, wall, etc.*
 - for negative unit: *burial cut, posthole, foundation cut, pit cut, retrieval pit cut, etc.*
 - Define the position within the trench by geographical coordinates or other system.



- **Area/Trench/Sector:** Enter the relevant area/trench/sector
- **Date:** Insert the date Day/Month/Year
- **Name:** Enter your own initials

These fields should be filled immediately, during the excavation.

During the lab work, you should fill the other fields under **Check List**:

- **Unit Sheet:** If the unit sheet is not yet totally completed (i.e. if the unit is still under excavation or all the physical or stratigraphic relationships are missing etc.), insert “**in progress**”. Instead, if the unit is completed, enter “**done**”.
- **Plan:** If the plan is not yet completed in every each parts (shapefiles), insert “**in progress**”, otherwise “**done**”.
- **Photo:** Insert the numbers of the all unit photos, as well as renamed in the lab-work.
- **IMB:** Insert the number of the relevant 3dModel
- **DailySk:** Insert the name of the relevant Daily Sketch

2. The Unit Recording Sheet

- **Località (Toponym):** Enter the acronym of the site name
- **Anno (Year):** Enter year of excavation.
- **Area:** Each area under excavation has a name for location purposes. Enter the relevant area.
- **Saggio (Trench):** Enter the number of the trench
- **Settore (Sector); Ambiente (Space); Quadrato (Square):** Enter the number of the sector and/or space, if present. Do not fill the entry “Square” because the Vulci 3000 Project adopted the open-area excavation strategy and not the Wheeler box-grid.
- **Quote (Elevation):** Enter the minimum and the maximum elevation of the unit.
- **Unità Stratigrafica (Unit number):** Enter the ID number of the unit.
- Every strata is given a unique number, to be taken and recorded in the Master Unit List, present in the field. **Always fill out this list carefully!** Avoid duplicate numbers because they cause endless problems and result in loss of information.
- **Natural, Artificial:** Mark the formation mode of the unit, artificial if it is originated by anthropic action or natural if it is caused by a natural event.
- **Pianta (Plan):** Enter the graphic number. Every unit must have digital drawn plans: for the graphic number, use the unit number + the shape file name.
- **Sezione (Section); Prospetto (Perspective drawing):** Enter the number of section and/or perspective drawing, if present. Not every unit has a section or a perspective drawing.
- **Foto (Photo):** Enter the default number of the site camera (the four digit photo number you see in the camera screen for each of your photos), in the field. Every unit must have a record photo. Do not forget to take photos! After, during the post-ex lab remember to rename each single photo in this way: US[id].[n] depending on how many photos you took for the unit (i.e. US7230.1, US7230.2, US7230.3, US7230.4, etc.).
- **Definizione e Posizione (Definition and Position):**
 - Enter the type of the unit, positive (layer or fill) or negative (cut)
 - Provide a more specific interpretation of the unit:

- For positive unit: posthole fill; floor/trodden surface; remaking surface; rubbish dump; hearth; oven; wall; etc.
- For negative unit: burial cut; posthole; foundation cut; pit cut; retrieval pit cut; etc.
- Indicate the position within the trench by geographical coordinates or local system.
- **Criteri di distinzione (Distinction criteria):** Enter the criteria usually used to distinguish the positive and negative unit in order of importance for your unit.
 - For positive units: Color, Composition and Consistency
 - For negative units: shape or edge cut
- **Modo di formazione (Formation):** regarding the previous item (natural or artificial), enter a more specific indication about the proper action that caused your unit to be generated. In case of anthropic unit like:
 - foundation, mudbrick or stone wall, floor, floor makeup, tough bed enter “**installation and setup**” or “**laying**”
 - roof (tile) or wall (bricks or stones) deposits enter “**collapse**” if casual (caused by the simply abandonment and the deterioration of the building) or “**dismantling/demolition**” if intentional (caused by a planned demolition)
 - dump, infill etc. enter “**addition**” or “**accumulation**”
 - foundation trench, pit cut, burial cut, rubbish cut enter “**removal**”

In case of natural unit, specify the natural agent, for example flood or wind deposit or river erosion.

- **Componenti (Inclusions); Inorganici (Inorganic); Organici (Organic):** enter a brief list of the elements within the unit, distinguishing between inorganic (glass, pottery, tiles shards, stones, mortar or baked clay lumps, flint etc.) and organic (charcoal, wood, seeds etc.).
- **Consistenza (Consistency):** When excavating, the strength of a deposit is one of the first things that is noticeable. This can indicate the processes that have created or affected the deposit. It is important to note changes in compaction or moisture throughout the deposit. The following terms you should use are based on the amount of effort needed to excavate the layer.
 - **Loose** - requires no pressure (e.g. ashy deposits), trowel or hoe
 - **Soft/Friable** - requires some pressure, trowel or hoe
 - **Firm** - requires heavier pressure, trowel
 - **Strong/Compact** - requires a mattock
- **Colore (Color):** When you describe a color, keep your description as simple as possible. Use graduations of ‘light’, ‘mid’ and ‘dark’ and hues and colors of pink, red, yellow, brown, green, blue, white, grey and black. Note the range of variations with annotations e.g. compound layers of mid yellow brown at the top turning to dark brown at the base with a lens of light grey brown in the center etc. Note color variations within a deposit, and which color is dominant. Color should be recorded when the deposit is moist, i.e. when freshly excavated.
- **Misure (Dimensions):** enter the Length (NS)-Width (EW) -Depth/Thickness: Record the maximum extent of the unit in plan (in meters) e.g. 1.2m x 0.4m x 0.1m thick or 0.15m x 0.08m x 0.2m deep. Note that this is the only place where the depth or thickness of the unit is recorded. (Depth is recorded for cuts; thickness is recorded for layers.) Also, note that it is not possible to calculate the depth or thickness of the unit by subtracting the lowest height from the highest if the unit is situated on a sloping surface. It is necessary to measure on site in order to get an accurate reading.

- **Stato di Conservazione (Conservation):** Describe the condition of the units:
 - **Boundary:** specify if the unit has all original boundaries and, if not, which boundary is not original and why (for example if the unit is cut by a pit, entry i.e. “the NW boundary is cut by the pit 1984”; or if part of the unit goes more than the limit of excavation, entire i.e. “the SE boundary is not visible because is beyond the limit of excavation”).
 - **Post-depositional features:** specify the alterations of the unit after its deposition. They can be natural or the result of human activity: **Natural:** e.g. salts, secondary carbonates, disturbance by roots, insects or animals burrows. **Human:** trampling, truncation, leveling, burning, compaction below matting.

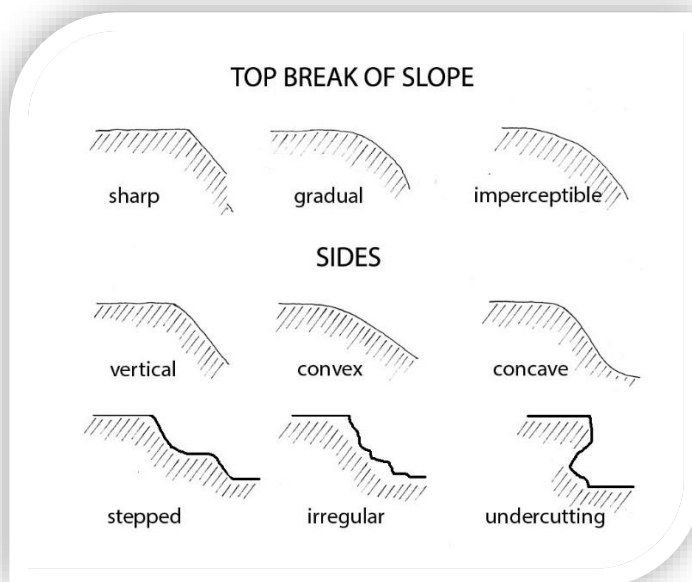
- **Descrizione (Description):** Your aim is to describe the unit.

For the **positive layers** you have to specify:

- Position in the trench and in the space/sector
- Color, Shape (circular, oval, rectangular, square, triangular etc.) and direction (extended towards ...)
- Surface: plane; smooth (surface is a plane with few irregularities), wavy (broad shallow relatively regular pockets), pitted, irregular (the pockets are deeper than they are wide), rough (much discontinuous s), sloping (towards?)
- Components visible on the surface and their distribution (if spread uniformly on the surface or if concentrated in a specific area of the unit and in which area)
- Texture and structure: The proportions of sand, clay and silt in a deposit should be recorded here. Your description will never be definitive so do not worry. Usually the layers are not made just by a unique component, but by a mixture of sand, clay and silt: enter first the dominant component, for example if the unit is a mix of clay and sand and the sand has the highest percentage, the texture of the unit will be sandy-clay or, on the contrary, clay-sandy.
- In order to recognize the texture of the unit, bring a lump of the unit and rub it between your hands:
 - If it crumbles, the texture is sandy
 - If it makes tiny plastic balls, the texture is clay
 - If it dirties, the texture is silty
 - When the sand is prevalent, the structure is granular
 - When the clay is prevalent, the structure is lumpy
 - When the silt is prevalent, the structure is laminar
- Finds: record all the finds within the unit
- Thickness: enter the measure of the thickness in meters/cm; specify if it is uniform or not. If it is not homogenous, specify where it is thicker or thinner.
- Basal boundary: this is the base of the unit under excavation (not the base of the unit above). The transition from one deposit to another may be very sharp, abrupt, gradual, or diffuse.

For the **negative layers**, you have to record:

- Position in the trench and in the space/sector
- Shape (circular, oval, rectangular, square, triangular etc.) and direction (extended towards ...)
- Edge (regular or irregular)

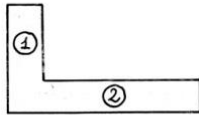


- Top Break of Slope. Describe the junction at the top of the cut:
 - sharp (almost right, 90°, angled)
 - gradual (approximately 45°)
 - imperceptible (curved or very shallow)
- Sides. Describe as vertical, convex, concave, stepped, irregular or undercutting in terms of angle in degrees. Record each side if different.
- Base Break of Slope. Describe the angle at which the sides meet the base, using the same terms as for top break of slope.
- Base. Record whether the base is flat, irregular, concave, convex, sloping in a particular direction, pointed etc.
- **Relazioni Fisiche (Physical Relationships):** Enter all the physical contacts between your unit and the adjacent units in terms of:
 - Contemporaneity (equivalence): **same as** (for positive and negative units) – **bonded with** (only for walls). Enter all unit numbers that describe the same deposit or event.
 - Anteriority: **abutted by** (only for walls), **below** (for layers), **cut by** (for walls, layers and cuts) and **filled by** (just for negative units)
 - Posteriority: **abuts** (only for walls), **above** (for layers), **cuts** (for negative units), **within** (just for fills of pit)
- **Relazioni Stratigrafiche (Stratigraphic Relationships):** Enter only the stratigraphic relationships between your unit and the undermost of all units that lie above it and the uppermost of all those units that lie below it, in order to reconstruct the stratigraphic sequence.
 Note: all the stratigraphic relationships are physical, but not all the physical relationships are stratigraphic! The stratigraphic relationships deal with relative chronology and empirical contextualization.
 - Later than: enter the unit immediately below/under your unit (the same number inserted in the field “above”)

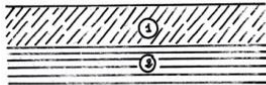
- Earlier than: enter the unit immediately above your unit (the same number inserted in the field "below")



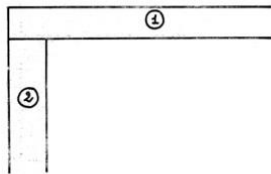
1 is the same as 2 and viceversa
3 cuts 1=2
1=2 cut by 3



1 bonded with 2 and viceversa



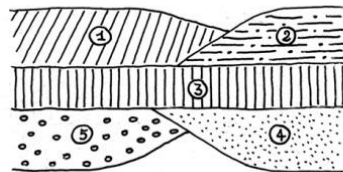
1 is above 2
2 is below 1



2 abuts 1
1 abutted by 2



4 is within 3
3 is filled by 4
1 is the same as 2 (and viceversa)
3 cuts 1=2
1=2 cut by 3



3 is physically below 1 and 2,
but the only stratigraphic relationship is with 2:
3 is below 2
because 2 is the latest unit excavated before 3
and so the earliest of the units laid above 3.
3 is physically above 4 and 5,
but the only stratigraphic relationship is with 4:
3 is above 4
because 4 is the first unit excavated after 3
and so the latest of the units laid below 3

- **Osservazioni (Remarks):** Indicate if this unit has been just uncovered, excavated or only partially excavated. If excavated, indicate with which tools (trowel, pick, hand pick) and when/how long.
- **Interpretazione (Interpretation):** Discuss and elaborate your thoughts on the origins of the unit, how it was formed and its relation to surrounding units. Discuss the type of depositional event the unit may represent by considering the following:

Is there any evidence that the deposit was deliberately created in a single episode? This may apply to pit fills and make-up/levelling/infilling deposits or demolition debris, or to a fire event.

Is there any evidence that the deposit was accumulated over a period of time, as multiple episodes, such as within pits, midden areas, silt laminations? Are these the same types of episodes or are they different with compound layers of plaster and ash, sediment and ash or different types of ash.

The distribution and orientation also provides information on the nature of accumulation. Are there therefore, concentrations of artifacts or they evenly distributed throughout the deposit?

Is there evidence to indicate the deposit was wind or water-laid? This may take the form of fine lenses of silt or sand.

Record how and why you have reached certain conclusions and what evidence there is to support your analysis.

Discuss what type of activity or activities the unit may represent, the reasons for your interpretation and the events that may have led to the presence of the unit. Give general thoughts on the unit's location within the space, building or feature.

Note any contemporaneity with closer units under excavation and discuss any additional details on artefacts, including any clusters within the unit. Any change or variation in the deposit composition across the unit must also be noted.

What post-depositional alterations are there? How have they affected the nature or preservation of the unit?

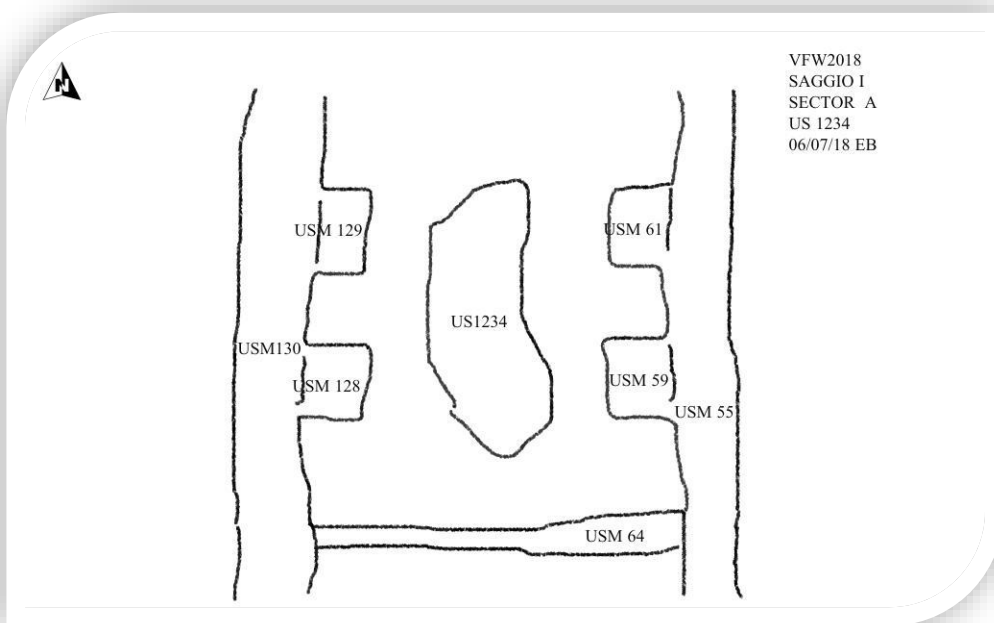
- **Elementi datanti (Dating Finds)** These are filled during post excavation.
- **Cronologia (Chronology)** These are filled during post excavation.
- **Periodo o Fase (Period or Phase)** These are filled during post excavation.
- **Quantificazione dei reperti (Finds Quantification)** These are filled during post excavation.
- **Campionature (Samples); Flottazione (Flotation):** All samples taken from the unit during excavation are listed here. Enter the type of sample taken.
- **Setacciatura (Dry Sieve):** all the deposits may be dry sieved on site and the volume recorded. Make sure you know how many liters your buckets contain. Keep a tally of these buckets and at the end of the unit calculate the total number of liters (dry sieved) and record the total. This is extremely important information, so please keep an accurate tally of buckets and liters sieved. It is important to measure the total volume of the deposit. Enter the volumes in liters, if possible. If you are recording a cut, please make sure the field for total volume of deposit is left blank.
- **Affidabilità stratigrafica (Stratigraphic Reliability):** Evaluate the reliability degree of the unit: low, sufficient, good, or really good. The stratigraphic reliability depends on the conservation of the unit: if the unit has all original boundaries and no one post-depositional features, the reliability is really good; instead if the unit has one or more not original boundaries or the post-depositional features are heavy, the reliability will be low.
- **Direttore (Director); Responsabile (Editor Name):** Insert the Director's name and the name who recorded the unit sheet.

- Draw a **digital sketch of the unit**, open the template in the folder “VFW2018_USK” on your tablet and save as “VFW18_US1234_INITIALS_USK” (use Artweaver software)
On the sketch:

- Fill the caption on the top right:

**VFW 2018
TRENCH 1
SECTOR (A or B),
UNIT NUMBER
DATE and your INITIALS**

- draw the sketch with the **North** located **on the top left**
- draw the unit in the center of the sketch and all the surrounding features, with their unit numbers
- Only at the end of the work, save the file with the same name and in the same folder but as a jpg file!



3. Photography on site

Each unit should have at least two records:

- one shot of detail for the unit in exam
- one wider shot to show the context.

These images may be used in lectures and reproduced in publications: so think about what you are photographing, think about the framing of the photograph and what you intend as the end result.

When taking documentation photos:

- clean carefully the area within the shot;
- take care to define all the elements within the photo but DO NOT scribe lines between units either in plan or section, do not leave trowel marks, smears, or footprints
- remove distracting objects (tools, equipment, personal belongings) and pay attention to the background and ask people to move if they are not part of the photograph.
- be aware of shadows and eliminate if possible. However, photos of the work process may include all of the above. Also remember to take photographs of objects in situ. You only get one opportunity to record photographically and these can convey complex visual information to compliment your written and drawn records.

Each photo must have:

- the blackboard, to be put next to the unit, but immediately outside its boundaries: on the blackboards there should be a few, but important information:

Toponym and year
Area or Trench Number
Sector
Unit Number
Date (day-month-year)



- the scale, next to the unit, but immediately outside its boundaries
- the North arrow, next to the unit, but immediately outside its boundaries.

The blackboard and the scale should be horizontal and parallel with the horizontal side of the frame. Check the image after each shot and be careful to the orthogonal arrangement between elements.



List the photos on the **Photographic Sheet**:

- **Number:** Write down the four-digit photo number you see in the camera screen for each of your photos.
- **Unit number:** Insert the unit recorded
- **Area/Trench/Sector:** Enter the number of the Area or Trench or Sector
- **From:** Record the direction from whom you take photos (N, NW, W, SW, S, SE, E, NE)
- **Date:** Insert the date (dd-mm-yy)
- **Name:** Enter your name

Photographic Sheet			Toponym and year:		
Number	Unit Number	Area/Trench/Sector	From	Date	Name

During the lab-work, all the photos should be renamed:

US UnitNumber.1,2,3 or 4 (depending on how many photos you took for the unit)

i.e. US7230.1, 2, 3, 4 etc.

4. Planning on site




Each unit must have a plan with elevations, made by Total Station.

- Put pins all around the boundary of the unit in order to mark on the ground surface the points to be recorded by total station. The pins have to follow the actual shape of the unit: if the unit has a square shape, put pins just at the corners of the layer. If the unit has an irregular shape put an number of pins suitable to well outline the edge of the layer.
- Draw a **digital sketch of the unit**, open the template in the folder “VFW2018_TSK” on your tablet and save as “VFW18_US1234_INITIALS_TSK” (use Atweaver software)

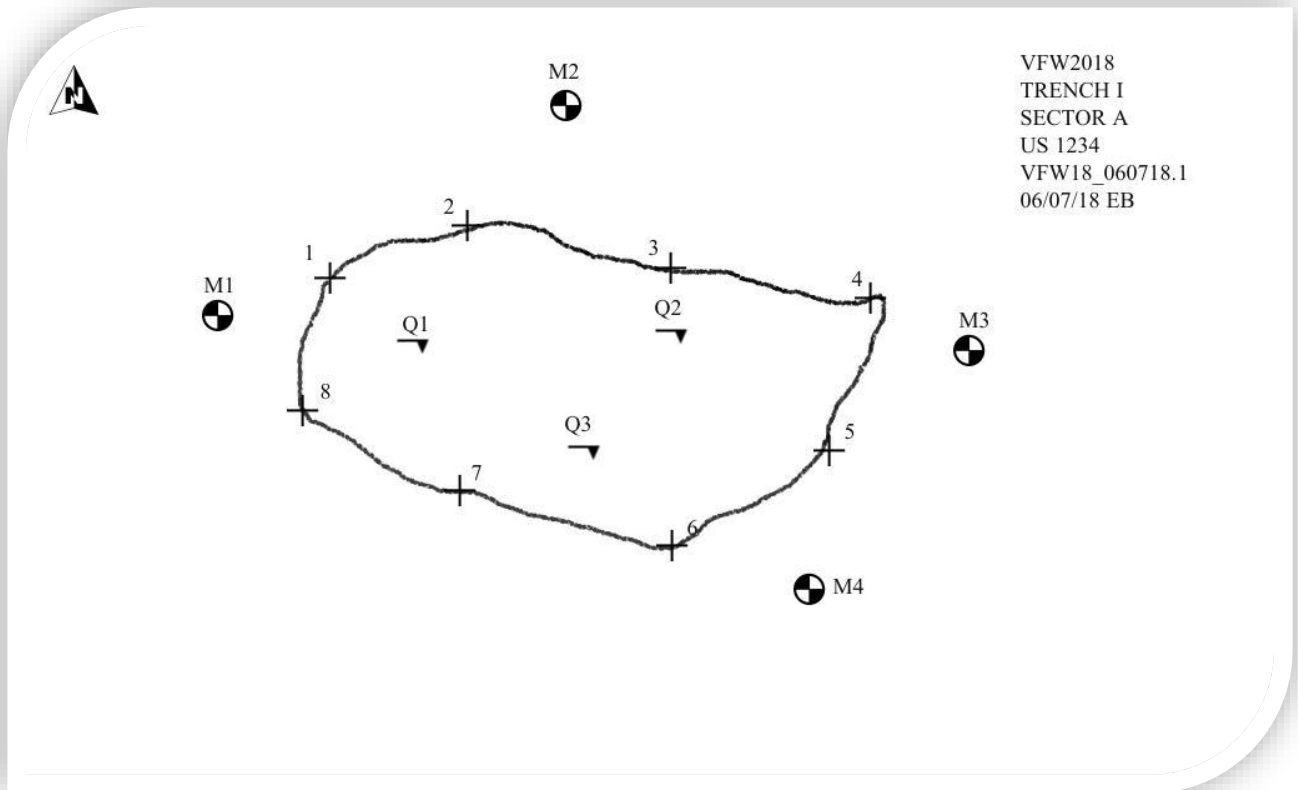
On the sketch:

- Fill the caption on the top right:

VFW 2018
TRENCH 1
SECTOR (A or B),
UNIT NUMBER
JOB TOTAL STATION NAME (ask Nevio or Elisa)
DATE and your INITIALS

- draw the sketch with the **North** located **on the top left**
- mark with the **cross** symbol  the pins around the layer. The cross=pins must have a progressive numeration (1,2,3 etc.), that must be strictly followed during the recording phase by means of the total station. Duplicate the layer “Vertex” based on the number of pins all around the unit surface and join the vertices with the tool “pencil”.
- mark with the **inverted triangle** symbol  the elevation points of the unit. The inverted triangle must have a progressive numeration (Q1, Q2, Q3 etc.), that must be strictly followed during the recording phase with the total station. You should take elevation points as many as needed to accurately reflect the profile of the layer.
- mark with the **checker board** symbol  the photogrammetry markers, annotate their position and their number (M1,2,3 etc. **READ THE NUMBER WRITTEN DIRECTLY ON THE MARKERS IN THE TRENCH!**)
- Only at the end of the work, save the file as jpg with the same name in the same folder!

Don't worry about the accuracy of the sketch: this is just needed to mark the points and to draw the unit roughly. During the postprocessing phase, we are going to use the orthophotos for the outline in the GIS.



- Measure all the points (pins, elevations and photogrammetry markers) by means of the TS, following the same numbering order marked on the sketch. Don't skip any point!

1. Select **Measure/Measure topo**.
2. Enter the appropriate name:

Point name: "US[id].[n]" (e.g. US1234.1) for polygon vertices.

Point name: "US[id].Q[n]" (e.g. US1234.Q1) for elevations.

Point name: "US[id].X[n]" (e.g. U1S1234.X1) for X finds.

Point name: "M[target n]" (e.g. M291) for photogrammetry markers

3. **Measure**.
4. **Store** and continue collecting points
5. To download the job files ask Nevio or Elisa

5. FINDS GUIDANCE

On-Site

- All finds are sorted by material/form and bagged **ON SITE** with a legible label inside.
 - Make sure the label is visible from the outside of the bag and not buried under the dirty finds.
 - Use appropriate sized bag, i.e. **DO NOT** use an extra large bag for a small bead
- Reuse **OLD** bags for your finds.
- Try not to leave your finds out in the sun during the day, they will sweat and get damaged.
- The main materials and forms you will recover are:
 - **Pottery**
 - **Glass**
 - **Metal objects** (iron, bronze, lead)
 - **Animal or Human Bone**
 - **Building Material** (brick, tiles etc.)
 - **Botanicals** (charcoal, seeds, etc.)
- **If you are unsure of a material or object please ask**
- If necessary, **SAMPLES** are collected in new bags to reduce the risk of contamination
 - Labels should not be placed directly in contact with the soil. Place the label in a small bag first and then in the larger bag with the sample.

Writing Labels

It is absolutely essential all labels are neat and legible to make certain that important contextual information is not lost.

On the label, you have to write:

- **Toponym and Year**
- **Area/Trench/Sector**
- **Unit number:**
- **Material**
- **Initials and Date**



- **PRINT** clearly in your **NEATEST** handwriting.
- Always write labels with a Fine or Ultra Fine **BLACK** Sharpie.
- You should also use the British date convention of **DAY/MONTH/YEAR**.

- Always write the **MATERIAL** type on the label. This helps when separating out finds that do not get washed.
- If an item is not to be washed, please write **DO NOT WASH** on the front of the label (this may apply to groundstone, fragile bone and unfired clay objects/pottery, and items for residue analysis)
- Please try to use the following conventions of writing numbers, so that they are easily recognisable:

The number seven should look like this: **7** NOT like this: **7** Or this: **7** Or this: **7**

The number one should look like this: **1** NOT like this: **1** Or this: **1**

The number four should look like this: **4** NOT like this: **4** Or this: **4 or 4**

The number nine should look like this: **9** NOT like this: **9**

End of the day

- **ALL** Finds must be brought down from site everyday.
 - Bring your finds down from site in buckets, not your pockets or bags. **Please do not place fragile objects at the bottom of the bucket.**
 - Finds belonging to closed units have to be brought to the Finds Lab staff for processing
 - Open units will be kept together and deposited for the night in the Finds Lab; they will be retrieved in the morning.
 - Each excavation area must designate a person who will be responsible for bringing down the finds at the end of the day and retrieving the finds the next morning.

6. THE DAILY SKETCH PLAN INSTRUCTIONS

At the end of each workday, you should sketch a plan onto the photo (made with the site camera). Digitally draw and write directly onto the photo in your tablet what you have done during the day and how you interpret the contents of your space.

- open the template in the folder “VFW2018_DS” on your tablet and save as “VFW18_US1234_INITIALS_DSK” (use Artweaver software)

On the sketch:

- Fill the caption on the top right:

**VFW 2018
TRENCH 1
SECTOR (A or B),
DATE and your INITIALS**

- Insert the photo
- Describe your work during the day by text and drawings
- Only at the end of the work, save the file as jpg with the same name and in the same folder!

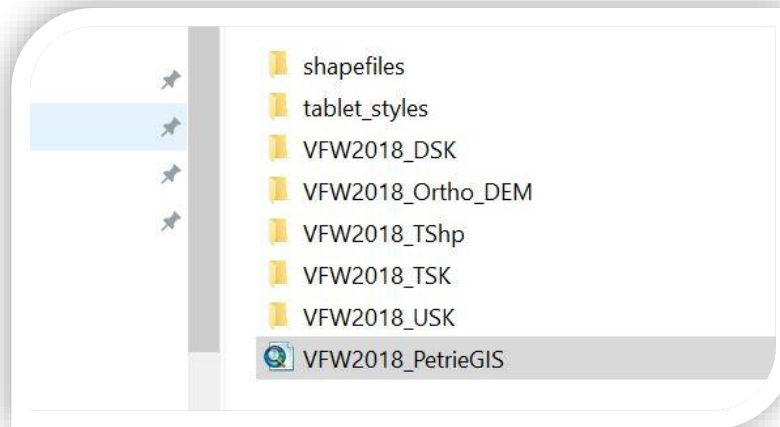
There are two aims of the daily sketch:

- It will be a visual multi context record of interpretations of relations between various units/features etc. This will ensure a record of the thought process behind the relations that later will be recorded in the matrix.
- It will also be a day by day record of the work process in a certain space. This will give you a daily overview of your work as well as an overview of the work carried out in a space over time.

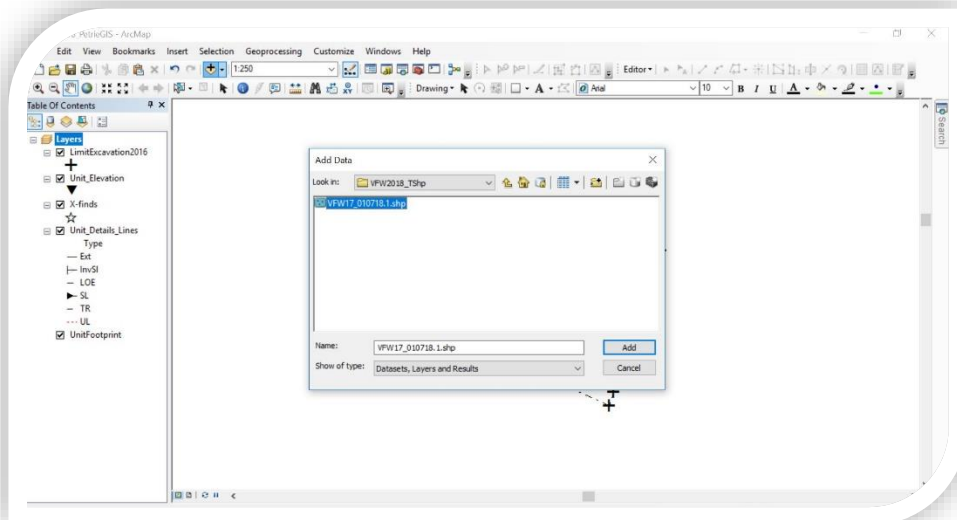


7. GIS EDITING

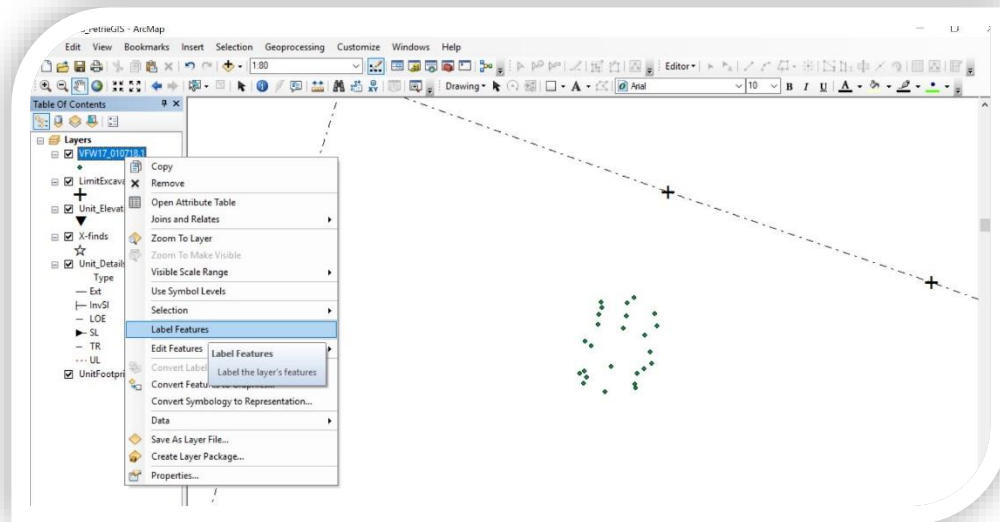
- After downloading the TS job in shapefile format (Nevio or Elisa are in charge for this), open the local ArcGIS Project on the tablet desktop



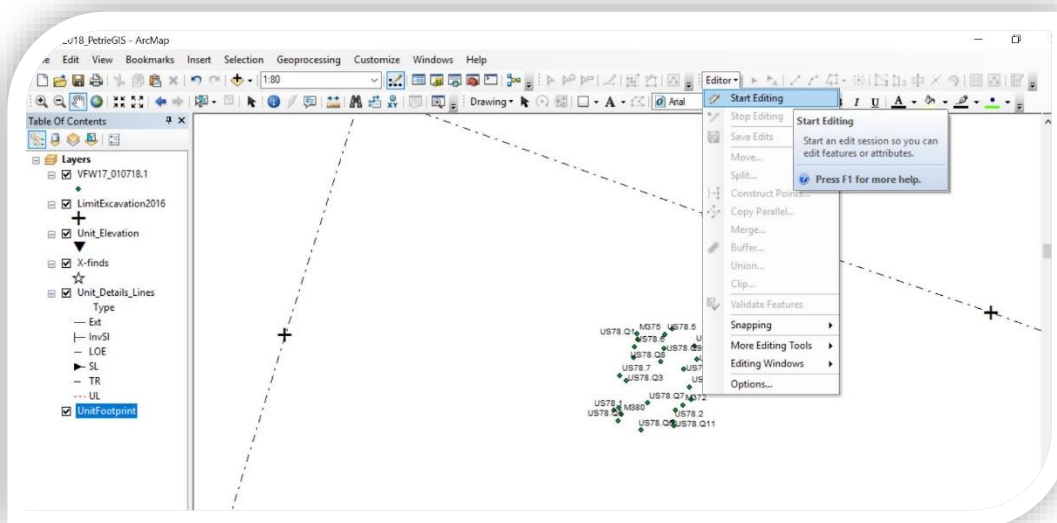
- Import the TS job from the folder “VFW2018_TShp” on the tablet: click on the tool “ADD”, choose the TS job that you need, and click “Add”



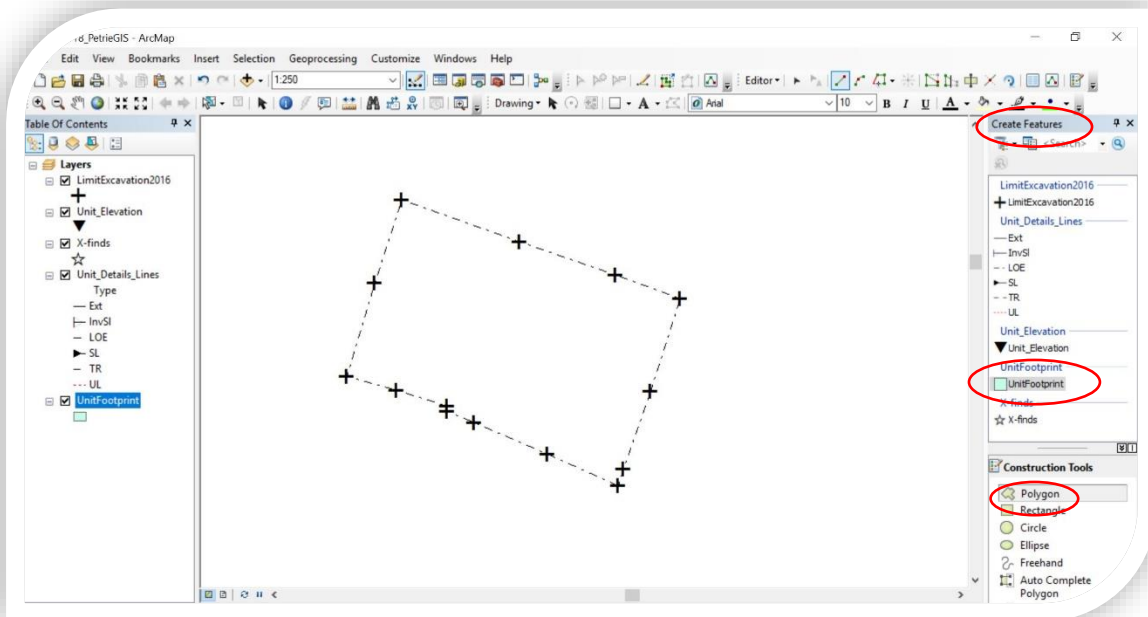
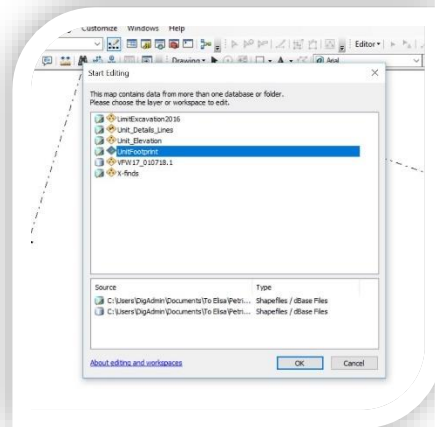
- On your screen you will find the points recorded by TS without name: to label the points, move the mouse over the TS shapefile in “TABLE OF CONTENTS” on the left, right-click and choose “LABEL FEATURES”



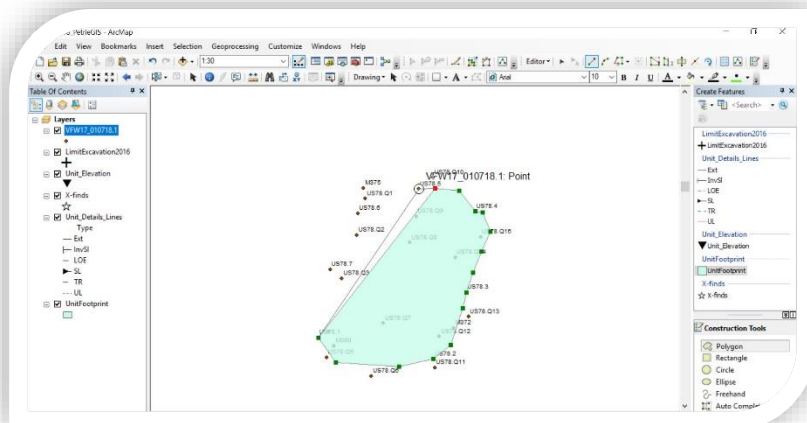
- At this point, you can start the drawing process by clicking on the “START EDITING” option in the EDITOR Toolbar



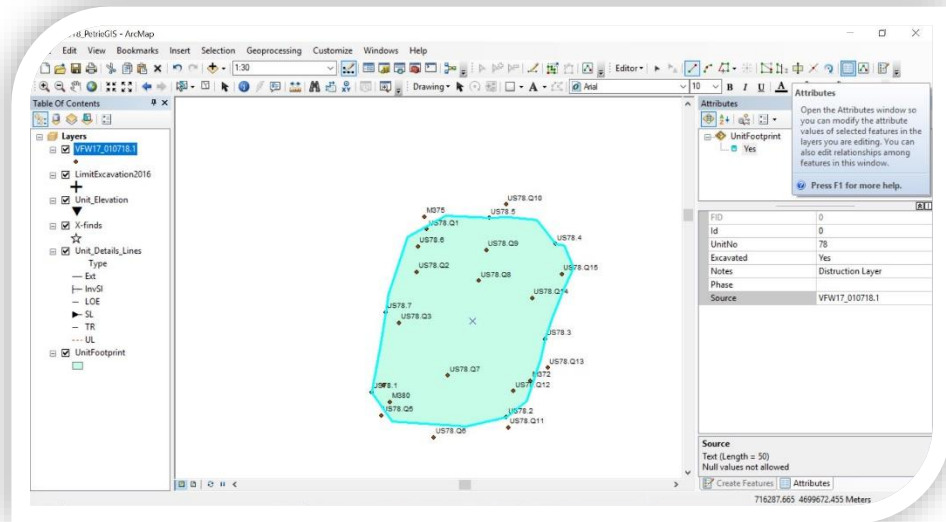
- Choose the layer UNITFOOTPRINT for the outline of the unit and



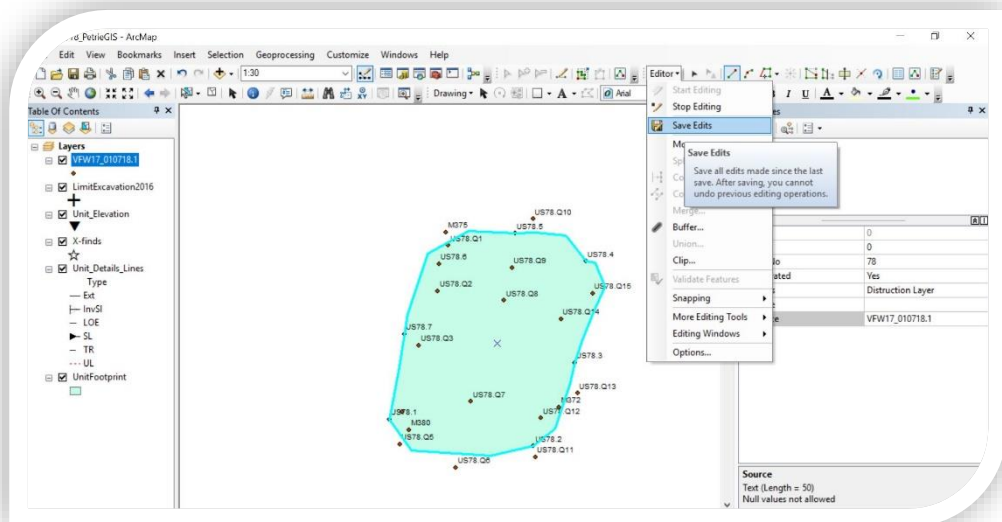
- Start to draw



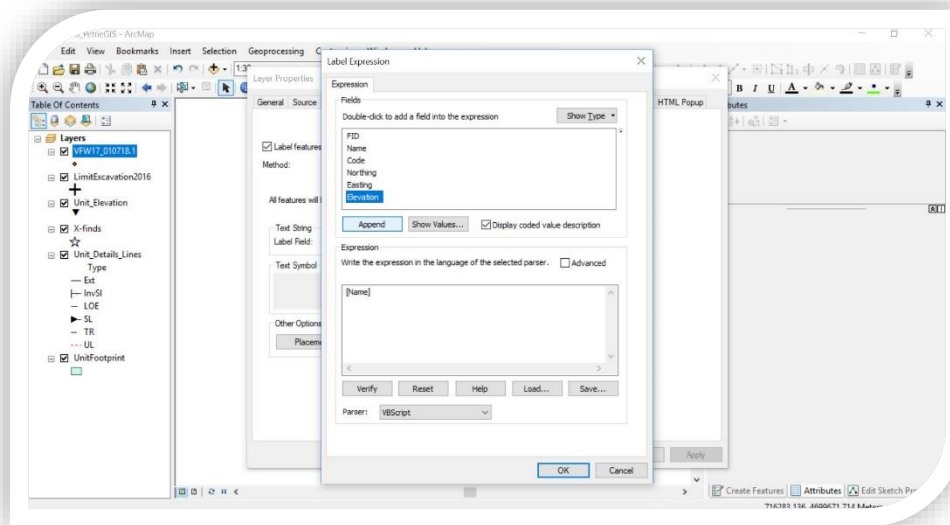
- Double click to finish the drawing and now fill the “ATTRIBUTE TABLE”, with the tool “ATTRIBUTE”:
UnitNo_Insert the number of the unit
Excavated_Yes/No/Partial
Notes_Insert Unit interpretation
Phase_Don’t mind to this field
Source_Insert the TS job name



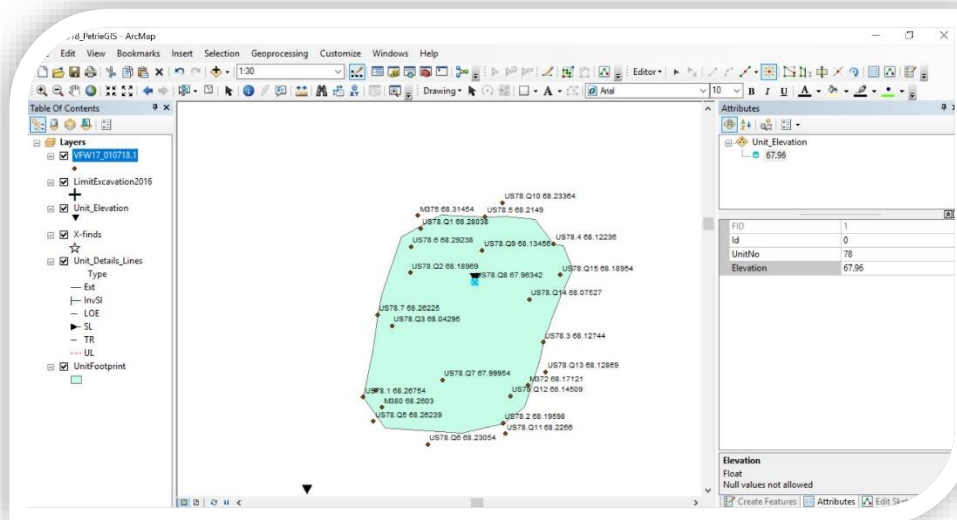
- SAVE EDITS and STOP EDITING



- For the **elevation points**, modify the labelling of the TS job shapefile: move the mouse over the TS shapefile in “TABLE OF CONTENTS” on the left, right-click and choose “PROPERTIES” and “EXPRESSION”. Click on the field “ELEVATION”, “APPEND”, “VERIFY” and “OK”

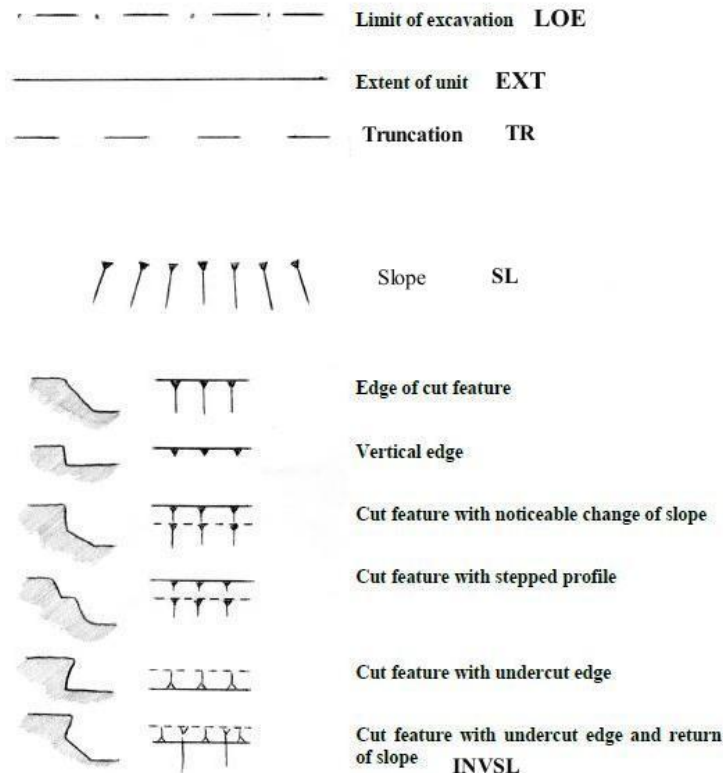


- open EDITOR and choose **Unit_Elevation**; snap the inverted triangle with the TS point Q1,2,3 etc, CLICK, and fill the attribute tables
UnitNo_ Insert the number of the unit
Elevation_ Insert the value of the elevation (e.g. 67.96)



- As a conventional plan, each shape file has a different line style or hachures according to the drawing conventions, in order to describe graphically the boundary of the unit **Unit_Details_Lines**

Plans are drawn using the following conventions:



Open EDITOR and choose **Unit_Details_Lines** and start to draw with the tool “TRACE”: trace the boundary of the unit based on the characteristics recorded on the field “Boundary” of the unit sheet:

- For a unit that has all original boundary, trace the entire outline, double click to stop and fill the attribute table:

UnitNo_ Insert the number of the unit

Type_ Insert the type of the line, in this case Ext

- For a unit that has just one boundary not visible because is beyond the limit of excavation, trace this boundary, double click to stop and fill the attribute table:

UnitNo_ Insert the number of the unit

Type_ Insert the type of the line, in this case LOE

- For a unit that has all or just one boundary cut by a pit, trace this boundary, double click to stop and fill the attribute table:

UnitNo_ Insert the number of the unit

Type_ Insert the type of the line, in this case TR

- For all the cuts, use the hachure denoting extent of slope: CLICK next to the boundary and draw a long line of the triangle if the side of the cuts slopes away and a short line if the sides are square; double click to stop and fill the attribute table:

UnitNo_ Insert the number of the unit

Type_ Insert the type of the line, in this case SL

