TUTORIAL 13: Built Component

Archaeological Features and Structures are made of different structural and architectural components, such as walls, doors and windows, courtyards, decorative elements, etc. In the EAMENA database, these individual parts that make up structures are named Built Components.

In the EAMENA v3 database, it is now possible to create individual records for each of these components, if they have specific characteristics which you feel it is important to record and is not captured well enough in a normal Heritage Place record. This is also particularly useful and important because sometimes, you may then wish to do a Detailed Condition Assessment of a just one component of a feature of structure which does not necessarily affect the entire site, feature, structure, recorded by the Heritage Place record, for example, if just one wall of a structure is suffering water damage, or the decorative architectural elements are degrading.

In this tutorial you will learn how to create a new Built Component record or edit an existing one. It is very important to relate the Built Component to its corresponding Heritage Place record and there are two methods that should be highlighted here. For example, if you need to record a Gate (I.e. Built Component) of a Castle (I.e. Heritage Place):

- Method 1: You can create and relate the Built Component record for the Gate directly from within the Heritage Place for the Castle, specifically from the Site Feature card which records the Castle, and then use the instructions in this tutorial to edit and add more information about the Built Component. See **Section 2.5.4** of **Tutorial 7: Archaeological Assessment** for instructions how to add a Built Component record from a Heritage Place record.
    - Method 1 is the recommended and preferred method.
- Method 2: You can create a new Built Component record for the Gate and then relate that record to the Heritage Place which records the Castle from the Assessment Summary Card. See Section 6.2 below for instructions on how to do this.
    - You should only use this method, however, when the Heritage Place in question records ONLY the feature, i.e. the Castle in this example. as opposed to where the Castle is being recorded as just one 'Site Feature' of another record, which records for example an entire settlement.

1   Getting Started

To create a new Built Component record, click on the 'Resource Manager' button on the left side of the screen to go to the Resource Manager page.
- Then click on 'Create Resource' under 'Built Component' (Figure 1).
- Alternatively, you can go directly to a new Built Component record by hovering over the Resource Manager icon on the left side, then choosing 'Built Component' from the list that appears (Figure 2).
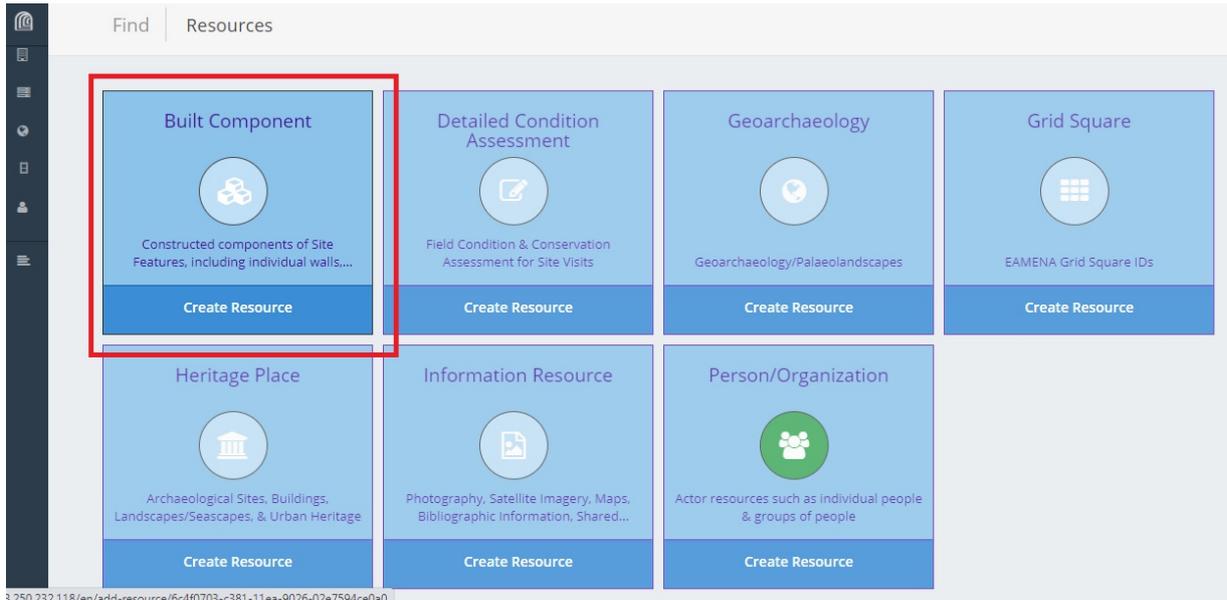
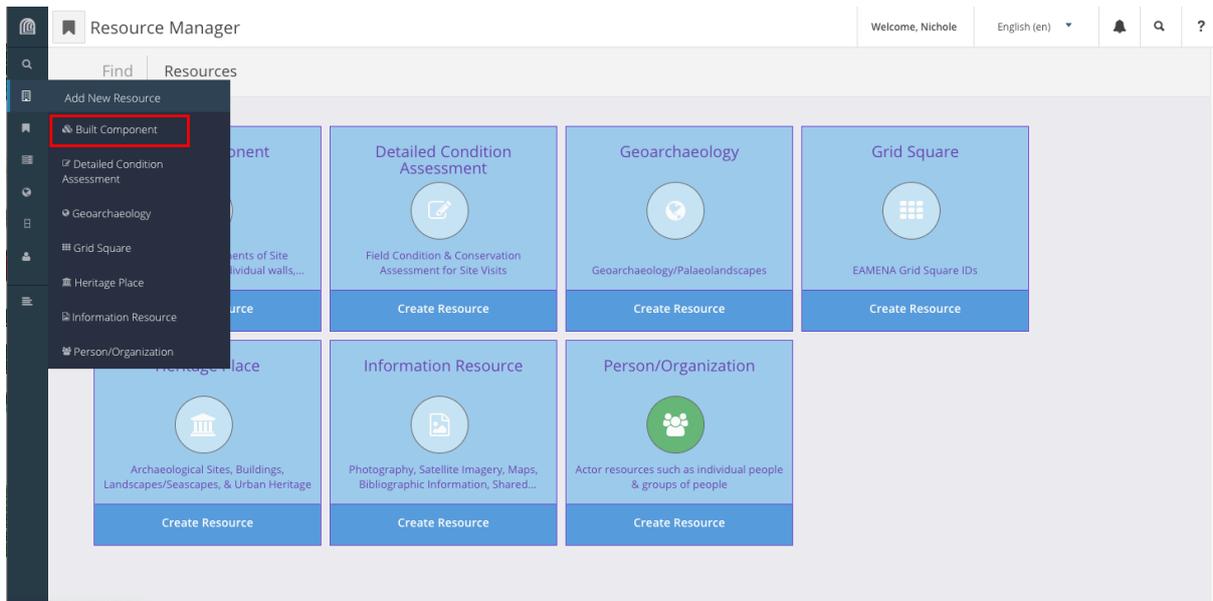*Figure 1: Adding a new Built Component from the Resource Manager page.*

Figure 2: Adding a new Built Component from the left side menu

To add information to an existing Built Component, search for it in the database and click on 'Edit' below its COMPONENT-number in the search results.

- Refer to **Tutorial 1: Searching the Database – Basic**, for detailed instructions about searching.

When the new or existing record opens, on the left side of the page you will see the resource's Card Tree. You can navigate between different sections of the record by selecting a card (for example Built Component Observation card or Material card) (Figure 3).
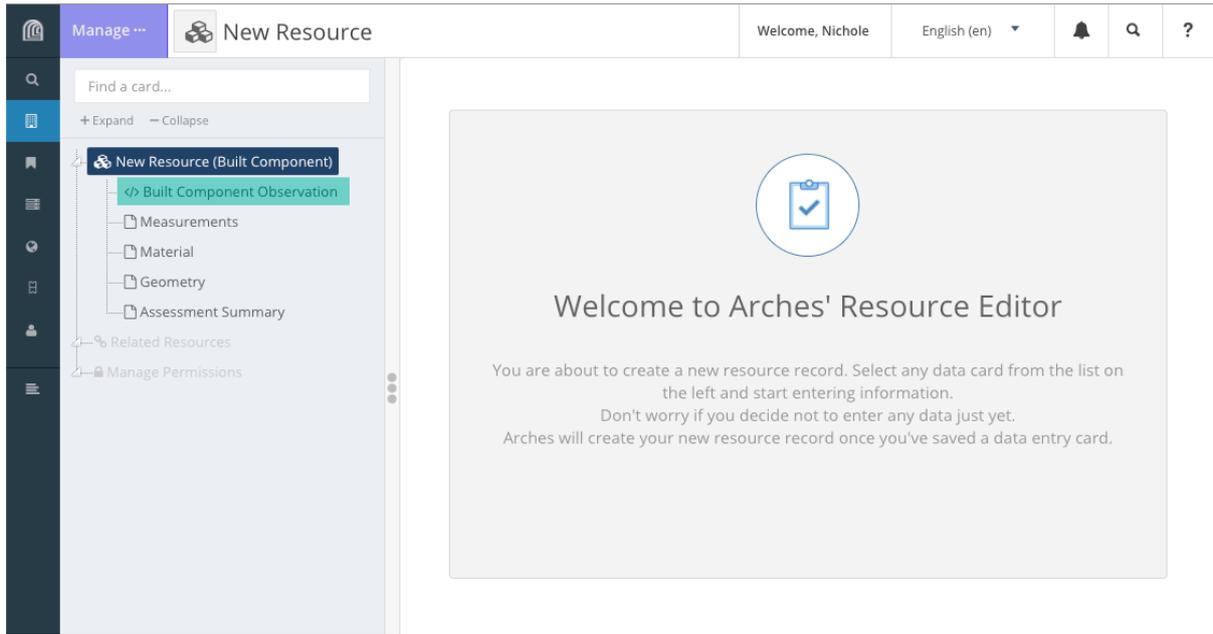
Figure 3: A new Built Component record with Card Tree on the left

2   Built Component Observation

In this card you will enter information about the type and orientation of the Built Component(s) you are recording. Images and descriptive texts also could be added using this card.

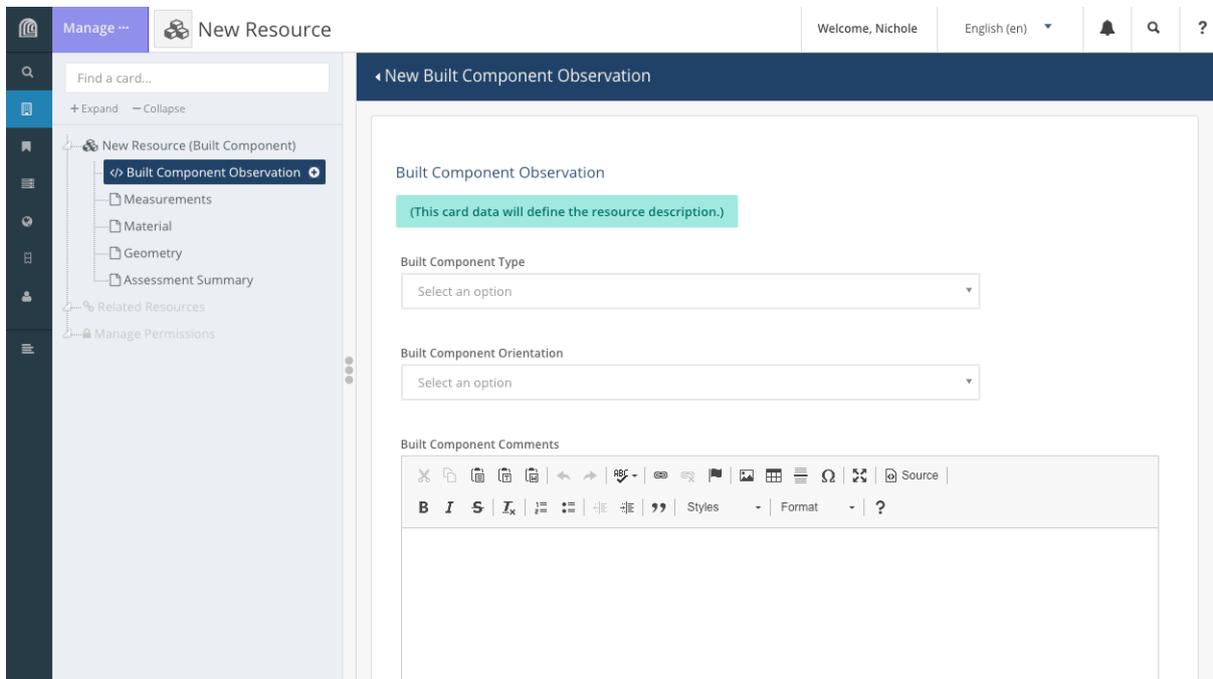- Click on 'Built Component Observation' in the Card Tree to go to that card (Figure 4)

Figure 4: The Built Component Observation Card

2.1 Built Component Type

In this field you will enter the type of Built Component that you are recording. For example, structural components such as floor and roof, openings such as door and windows, etc. can be recorded here.

- Click on the field and select the appropriate term from the dropdown list.
- Refer to the Glossary for detailed definitions of different types of components.
  - o You can record some parts of the building's components together if the purpose is to assess them together, for example all exterior (or interior) components of a structure together (as opposed to individually).

2.2 Built Component Orientation

This field is used to record the geographical orientation of the Built Component that is being recorded and assessed. For example, for a Built Component Type recorded as a 'Wall', if it is the north wall of the structure, you would select 'North'.

- Click on the 'Built Component Orientation' field and choose from the dropdown list.
  - o Note that not all components have orientations. For example, if you are recording a whole ceiling, choose Not Applicable.

2.3 Built Component Comments

In this field you can add any comments about the Built Component, e.g. about its significance, architectural details, etc. if you cannot capture that information in the other fields of the record.
- Type the Comment in the free-text box.
  - o Note, do not use copy-paste from other documents or the internet, because this can affect the database.
- If you have no other comments, leave this field blank.

2.4 Built Component Image

You can use this field to upload images to the Built Component record, or any other relevant documents (written reports, videos, etc.).

- Drag and drop the document onto this panel to upload it or click 'Select Files" and navigate to the file you would like to upload from your computer. Choose the file and it will be uploaded and appear in a list below (Figure 5).
- Click on the X beside the file name to delete the selected file or click on 'delete all files' to delete all uploaded files.
- Click on 'add more files' to navigate to your folders on the computer and choose another document to upload for the built component.
  - o Note that your document is not saved on the database until you click the 'Add" button.
  - o You may upload as many documents as you need; however, the maximum size of any single file is 200MB.

Figure 5

2.5 Add

Once you have finished entering your data for this card, click '**Add'** at the bottom of the page to save.

- If you are adding a new Built Component, once you have clicked on Add, your record will be automatically saved and a unique COMPONENT-number will be automatically assigned to your record. This number will appear on top left corner of the page in place of 'New Resource' (Figure 6)
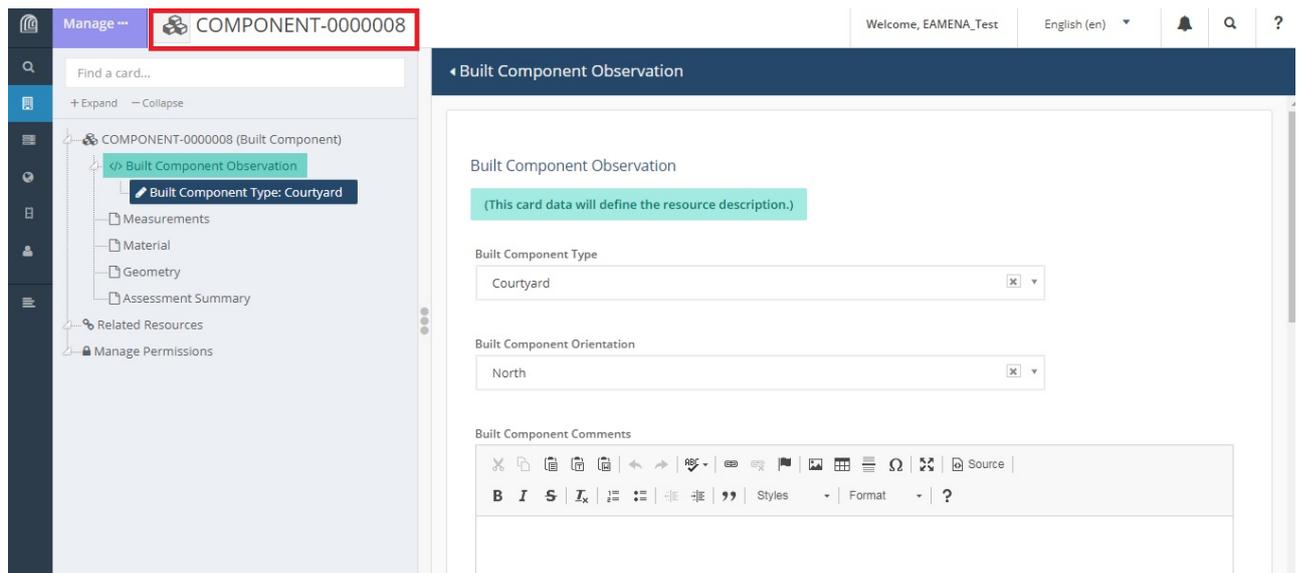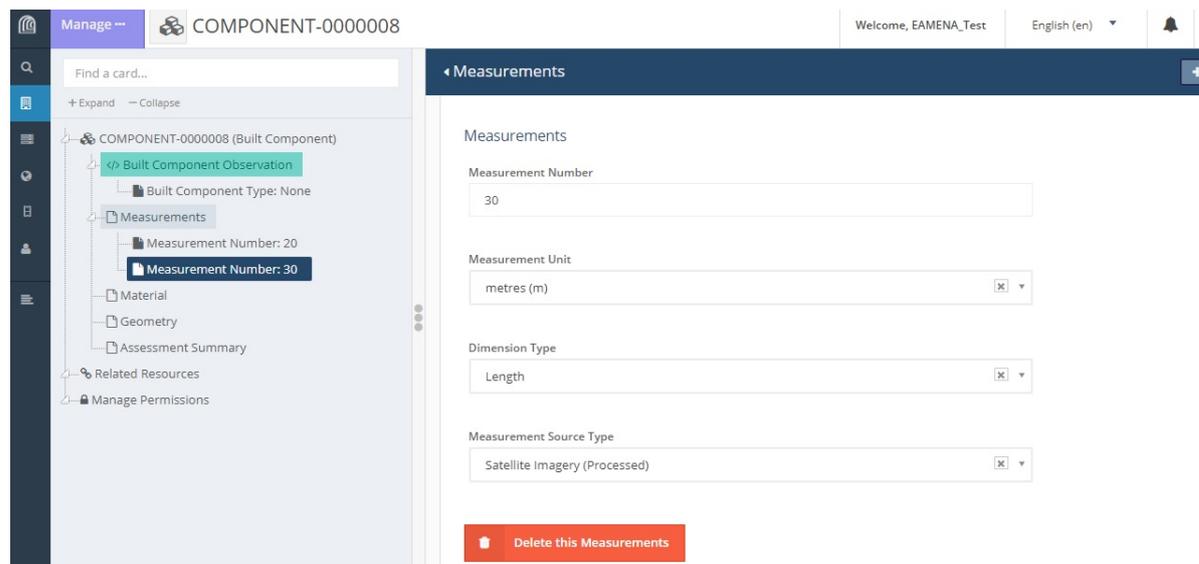

Figure 6

3 Measurements

In this card you will enter the measurements of the Built Component. This card is used when the measurements are known, usually from a site visit. Each known dimension, e.g. length, area, etc. should be entered separately. If you do not have any measurements, you can leave this card blank.

- Click on 'Measurements' in the Card Tree.
- Click on the 'Measurement Number' field and enter the number.
- Click on the 'Measurement Unit' field and choose the correct unit from the drop-down list.
    - Refer to the Glossary for detailed definitions of the terms that appear.
- Click on the 'Dimension Type" field and choose the correct measurement type (length, area, etc.) from the drop-down list.

- Click on the 'Measurement Source Type' field and choose the correct source of the measurement.
- Click '**Add**'.
  - o The measurement entry will appear in the Card Tree below the 'Measurements' Card (Figure 7).
- Repeat the steps above for each known measurement.
  - o Click on either '+Add new' on top right corner of the page or click on the 'Measurements' in the Card Tree to add a new measurement.

Figure 7: The Measurements section with one entry for the length and one entry for the breadth/width of a site

4 Material

In this card you will enter information about the materials and building construction techniques used in Built Component.

- Click on 'Material' in the Card Tree to go to that card.

4.1 Material Class

In this field you will record the raw material used in the construction of the Built Component.

- Click on the 'Material Class' field and choose from the drop-down list.
  - o Refer to the Glossary for detailed definitions of the terms that appear.
  - o For example, of the component is made of backed bricks, you should choose Clay for the raw material.
  - o Choose 'Mixed' if more than one raw material were used for the Material Type that you are recording.

4.2 Material Type

In this field you record the man-made material of the Class that you have selected in the previous field. For example, if you have selected 'Clay' in the previous field, here you can record 'Baked Brick' as the man-made material used in the construction of the component.

- Click on the 'Material Type' field and choose from the drop-down list.
  - Refer to the Glossary for detailed definitions of the terms that appear.

4.3 Construction Technique

In this field you will select the Construction Technique used in the construction of the Built Component. For example, in the Baked Brick example, the technique could be Brick-laid.

- Click on the 'Construction Technique' field and choose from the drop-down list.
  - Refer to the Glossary for detailed definitions of the terms that appear.

4.4 Save and Add Further Entries

Once you have filled in the fields above, click '**Add**' to save.

- You can add as many construction materials and techniques as needed.
- Click on '+Add New' on the top right corner of the blue banner or the 'Material' card in the Card Tree and repeat the steps above.
- Each recorded material will appear as an entry in the Card Tree below the 'Material' card (Figure 8)
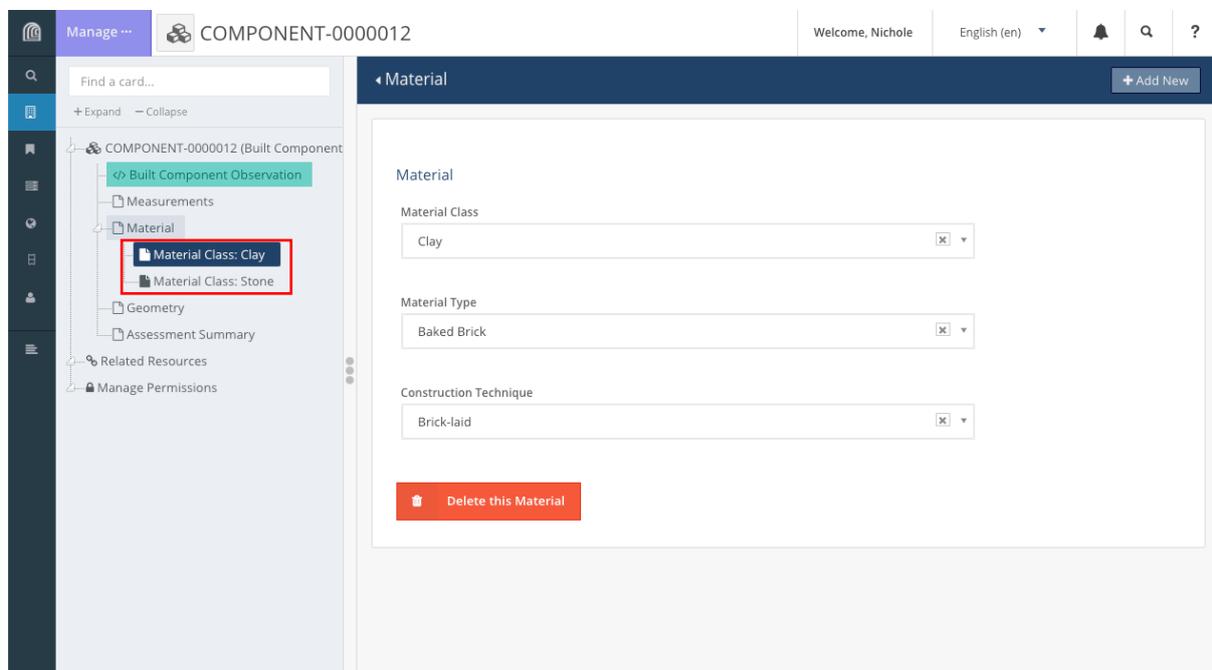-

Figure 8

5 Geometry

This card records details about the geographic location of the Built Component that you are recording. The Heritage Place that your Built Component will normally also have its geographic location recorded. If you want and need to record the specific location of the Built Component, normally, this will be recorded using GPS coordinates taken during a field survey.

- Click on 'Geometry' in the Card Tree to go to that card.
- For more detailed instructions about this card and instructions on how to add a 'Geometric Place Expression', please refer to **Tutorial 5: Geometries**, Sections 2.1 and 2.2.

5.1 Geometric Place Expression

In this field you will enter the location of the Built Component into the database.
- To help you find the location, you can change the Basemap (background map)
- To do this, click on 'Basemap' on the right side of the screen, and choose between satellite or streets to change the type of map that appears.

If you know the coordinates of the Built Component:
- In the 'Geometric Place Expression' field, choose 'Add Point' and use your mouse to add a point to the map in any random place.
- Then, click on 'Edit GeoJSON', below the 'Geometric Place Expression' box and the added geometry.
- You now see the GeoJSON code – do not let this put you off. Look for the coordinates and replace these with the correct ones (Figure 9).
    - o NB the coordinates must be entered in WGS84 decimal degrees, with X/easting/longitude first, then Y/northing/latitude.
    - o If your co-ordinates are not already in WGS84 decimal degrees, use the EAMENA converter spreadsheet to convert your coordinates or use your preferred tools (there are many online convertors, or you can look it up in Google Earth by changing your preferences, or use QGIS).
- The point you drew above will automatically move to the correct location.
- Finish by clicking on the green 'Update Features' button.

Figure 9. Adjusting the coordinates in the 'Edit GeoJSON' field.

5.2   Location Certainty

In this field you will indicate how certain you are that the location that you have entered for the site is accurate.
- Click on the field and choose your certainty from the dropdown menu that appears.
- Refer to the Glossary for definitions for each of the terms.
  - Only choose Definite if the location was recorded, e.g. by GPS, in the field (which will often be the case for Built Components).

5.3   Add and Save

Click '**Add** at the bottom of the page to save the geometry.
- The entry will appear in the Card Tree below the 'Geometry' Card.

6   Assessment Summary

The Assessment Summary card records details about the Investigator or Assessor who made the record. This is also where the Relationships between the Built Component and its Heritage Place/Feature and related Detailed Condition Assessment activities can be defined (or created if not already in the database).

- Click on 'Assessment Summary' in the Card Tree to go to that card.

6.1   Investigator Role Type, Assessment Investigator, Assessment Type and Date

The first four fields in this card are the same as for Heritage Place. Refer to **Tutorial 3: Assessment Summary** for more detailed instructions on how to fill in these fields.

In Summary:

- Click on 'Investigator Role Type' field. Choose from the drop-down list.
- Click on the 'Assessment Investigator – Actor' field. Choose from the drop-down list.
  - Often this is your own name, but it can also be the name of the person who did the field-based assessment and whose records you are entering into the database
  - If the person does not already exist, you can choose 'Create a new Person/Organization…' and fill in the fields in the window that appears to create a new record.
  - Make sure to double-check that the name does not already under a different format (e.g. with the last name first or with a different spelling).
- Click on the 'Assessment Activity Type' field and choose an option from the drop-down list.
- Click on the 'Assessment Activity Type' field and enter or choose the date on which the assessment is being/was done.
  - Dates can be entered by clicking on the date on the calendar pop-up that appears or by typing the date in yyyy-mm-dd format (2016-07-14 for 14 July 2016).

6.2   Heritage Place

If the relationship has already been created through Heritage Place Resource Model, you should leave this field blank. This is the preferred method.

- You can check to see if your relationship already exists, by clicking on 'Related Resources' in the Card Tree (see Section 7 below) and checking that the EAMENA-number of the Heritage Place is already in the list.
- The standard relationships added by default between the Component and Heritage Place are :
  - The component 'forms part of' the Heritage Place
  - The Heritage Place 'is composed of' the Component.
- Only in rare cases will you need to change this relationship, click the EAMENA-number to expand the relationship fields.
- Click on dropdowns to change the relationships if necessary.

If the relationship between the Built Component and Heritage Place does not already exist, type in the EAMENA-number of the Heritage Place you want to relate your component to. Click to select it to add the relationship.

- You should only use this method to relate the Built Component to the specific Heritage Place it forms a part of.
  - For example, you have created the following records:
    - EAMENA-0000001 – A Heritage Place recording a settlement, which includes several Site Features, including a temple, some houses and some cairns.
    - EAMENA-0000002 – A Heritage Place recording the TEMPLE within that settlement
    - COMPONENT-0000003 – A Built Component recording a WALL which is part of the Temple EAMENA-0000002.
  - You should therefore relate COMPONENT-0000003 to EAMENA-0000002, the Heritage Place recording the Temple, not to the Settlement record.

If you are recording the component before creating the Heritage Place record for it (not recommended), you can choose the 'Create a New Heritage Place...' option here.

- To create a new Heritage Place, type 'create' or 'new' to bring up the "Create a new Heritage Place..." option.
- Click on it and fill in the Assessment Summary information for this new Heritage Place in the window that appears and click 'Add'.
- Click on the edit (pencil) icon beside its name in the list to go to that Heritage Place and finish completing the record.

6.3 Detailed Condition Assessment

One of the main reasons you might create a Built Component record is so that you can complete a Detailed Condition Assessment (DCA) for it.

- Use this field to create and relate a new Detailed Condition Assessment record to your Built Component, then refer to **Tutorial 14: Detailed Condition Assessment** to learn more about completing the DCA.

Click on the 'Detailed Condition Assessment' field and type 'create' or 'new' to bring up the 'Create a new Detailed Condition Assessment...' option and click on it (Figure 10).

- Click on it and fill in the Assessment Summary information in the window that appears (Figure 11).
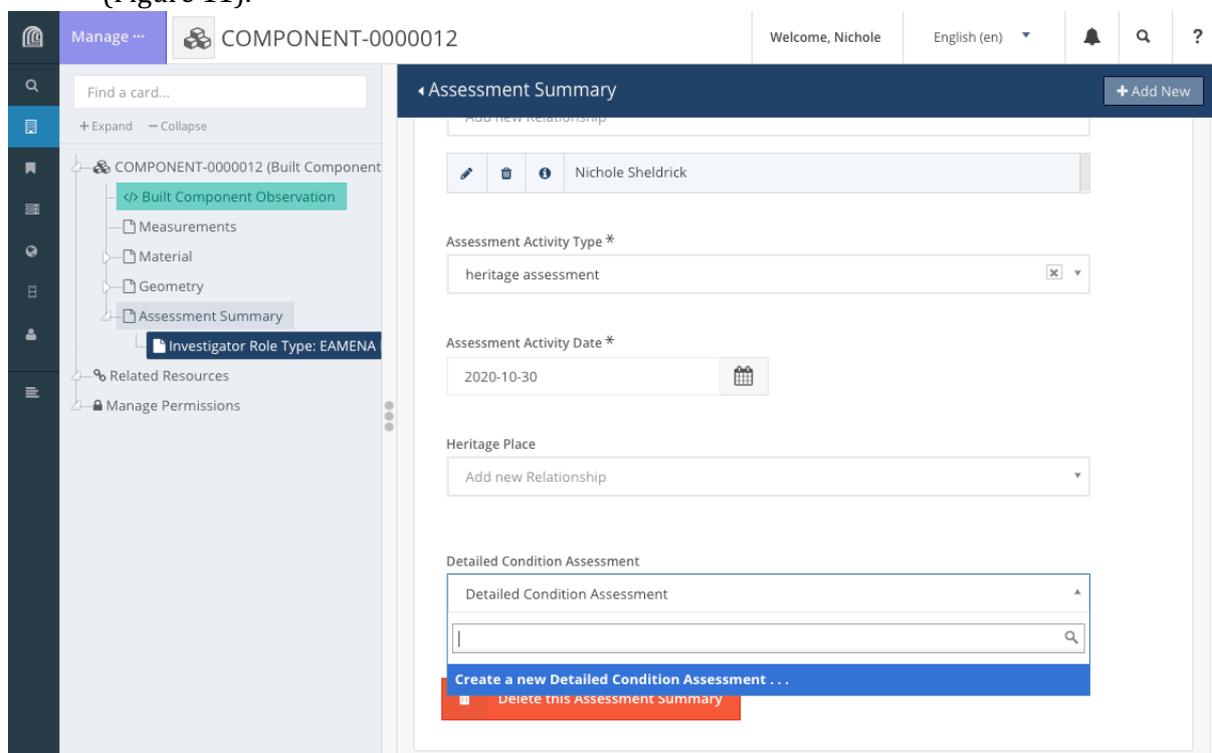

Figure 10

11

Figure 11

Fill out the 'Investigator Name', Investigator Role Type', and 'Activity Type', and 'Activity Date' fields, following the instructions in Section 6.1 above.

- Leave the 'Heritage Place/Site of Assessment' field blank.
- Leave the 'Built Component Assessed' field blank.
- You can leave the 'Comments on Relationship to Heritage Place/Built Component' field empty or you can use this text box to add any information or notes for the Assessment Summary you just made.
- Click '**Add**'.
- A unique CONDITION-number will be assigned to the record you just made and it will appear in the light blue table below this field (Figure 12).
  - o Make sure to then complete the rest of the DCA record. Click on the 'edit' (pencil) icon to access the new DCA and follow the steps detailed in **Tutorial 14: Detailed Condition Assessment.**
  - o You can also use this number to search for and edit the DCA later, but we recommend doing it as soon as possible after its creation.
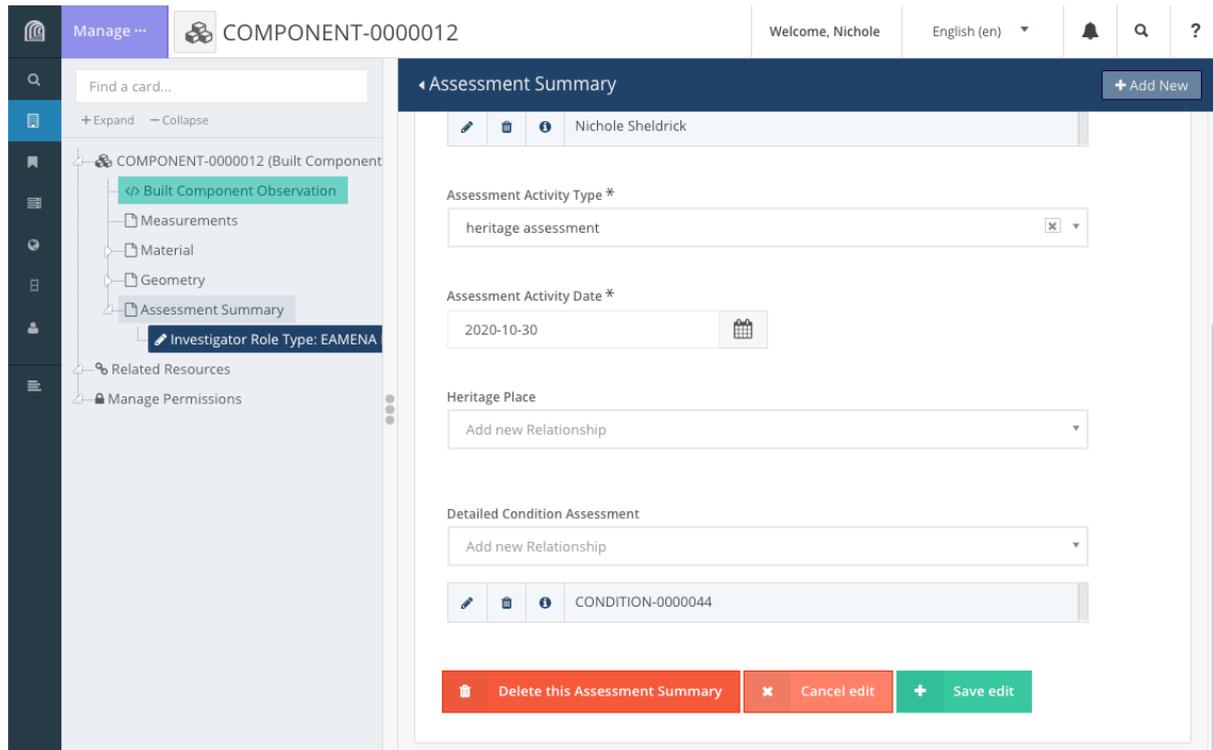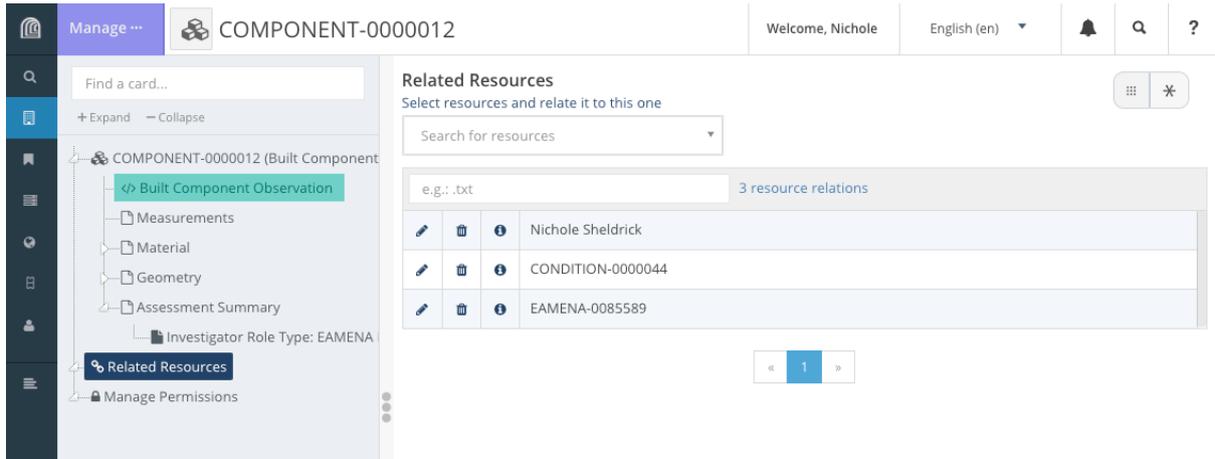
Figure 12

6.4   Add and Save

Click '**Add**' at the end of the page.

- The entry will appear in the Card Tree below the 'Assessment Summary' Card.
- Click on '+ Add New' or on 'Assessment Summary' in the Card Tree to add further assessment summaries if and when necessary.

7   Related Resources

Click on 'Related Resources' in the Card Tree to view a list of the relationships that already exist between your Built Component and other records, whether made previously, or in the 'Assessment Summary' card above (Figure 13).
- Note that this card is only available once the record has been saved.

Figure 13

As mentioned in Section 6.2 above, check here to make sure that all of the necessary relationships have been added to the Built Component record.

- In the example shown in Figure 13, you can see there is one Person/Organization, one Heritage Place and one DCA.

If there are any relations missing, you can add them here using the 'Search for Resources' dropdown. In particular, this might include Information Resources, such as imagery or publications, that you used to create the record.

- For detailed instructions on how to add Related Resources using this card, refer to **Tutorial 9: Related Resources**.