	SIMPLE 3D PHOTOGRAPHIC MODELLING
BELIEF in the NORTH EAST	

For the Belief in the North-East project you have two options for helping to make a 3D digital model of the monument you are looking at

TWO OPTIONS

[1] You take the photos and make the model with an app

[2] You take the photograph and we make the model in the Department
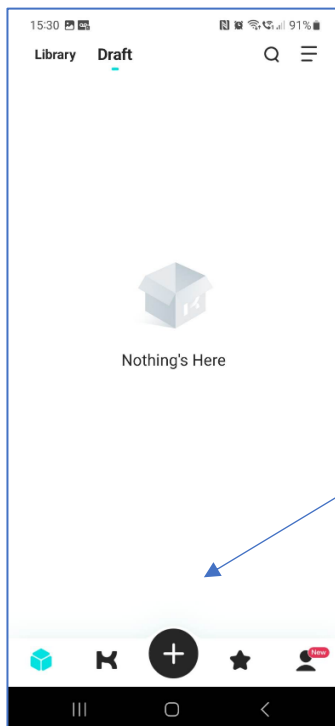
OPTION 1

We are using a simple phone app called Kiri Engine to make the models – this can be downloaded to both Android and Apple Phones - find the app using the App Store or Google Play

When you have downloaded, set up an account (you'll need to provide your email and create a password). For basic usage, the free version will be fine – although if you get enthusiastic you can subscribe to be able to access more features.

a) **To make the model**

On the home screen press the + symbol

b) You will have two options **Upload from local photos** or **Take photos**

Select **Take photos**

Make sure the 'click ● to take photos manually' option is selected

Stand back and ensure you can capture all the monument on screen.

c) **Start taking photos**- slowly circle the monument taking overlapping images of it; ideally each photograph should overlap with the previous image by around 80%. Try to keep the same distance where possible for each image.

Once you have done and initial circuit round the monument – think about what hasn't been covered.

If it's a cross-base you may want to take additional images facing downwards onto the top of the object to capture details of the socket and any decoration on the top.

If it's a standing cross you may want to take more images to capture the top of the cross and any associated features.

The very minimum number of images you should take is 20 – but you may need many more (up to 70) to capture a larger monument. The more images, the more accurate and detailed the final model will be.

d) **When you are happy that you have enough images press the right arrow [>]**

In the next screen you will need to ensure all the setting are correct

- Click on Name: and enter the word Cross followed by the name of the cross

- The store Raw Data setting should be turned on (ie blue with the switch to the right)
- Face Counts- High
- Texture Quality – High
- File Format – click on OBJ
- AI Object marking – click on (blue and switch to the right)
- Visibility - click on (blue and switch to the right)
- Label – Arts and Heritage

Once all settings have been set you can proceed

IF YOU <u>DO NOT</u> HAVE WIFI CONNECTION

Save as a 'draft'

IF YOU HAVE WIFI CONNECTION

Press UPLOAD – it will start the process of uploading the photographs – **do not close the window/app** until all the images are loaded

e) For the next stage it is easiest to work on a laptop/PC

In your browser – go to https://www.kiriengine.app/web-version/

Log-in using the User ID and password you created for the app

Click on the smiling face on the top right of the screen – then click the "Model" icon

Click on the "My Model" icon on the left-hand side of the screen

This will allow you to see your models – it may take some time for them to queue and be processed.

Click on your model to open it up – if everything has worked properly you should be able to see a 3D rendering of your model!

However, you may want to try to edit it to remove background content – for example you may also have captured surrounding vegetation. There is a **crop** option once you open the model. It's a little fiddly – but play around with it and see how you go. If you struggle don't worry, just leave the model as it is and we can deal with it.

Once you are happy with your model you need to download it and send it to us.

Come out of the model by clicking the arrow at the top left of the screen- this will bring you back to the main screen.

At the bottom right hand of the small image of your model are three dots – click on them – it will bring up a list of options and click on 'Download' – this will download your model as a Zip file. Usually this will go to your *Download* file on your computer

Send the Zip file to d.a.petts@durham.ac.uk - it will probably be too large to send as an attachment on an email, so please use WeTransfer or whichever other service you prefer (e.g. Dropbox; Google Docs)

We will then check the models- tidy them up if necessary and post them online to our Sketchfab page

OPTION TWO

To make the 3D model we will need **lots** of photographs of the monument. As with **Option One** start taking photos- slowly circle the monument taking overlapping images of it; ideally each photograph should overlap with the previous image by around 80%. Try to keep the same distance where possible for each image.

If you are using a camera **don't change the depth of field** – all photographs should have the same F. stop (or it plays havoc with the processing).

HINTS AND TIPS

We strongly suggest that you practice at home with this first – at first perhaps on an ornament or object inside and then graduate to trying it outside . Get used to taking photographs and the following the necessary procedures. See how you get on - and drop us a line if you have nay problems.

Work slowly – don't rush- ensure each image is in focus.

Try to get as much of the monument into the image and minimise the amount of background in each image – it's fine to focus in on details if needed.

Try to avoid taking the photographs in bright sunlight- shadows – particularly sharp ones aren't idea. The ideal weather is a light but cloudy day without direct sun