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B.15 Architectural Photography Protocol

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This protocol was used to create the B.15 Model Archive

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Abstract

A photography protocol designed as an output from the RLP B.15 Figshare Showcase project. The intent of this protocol is to guide architecture students through a basic process of photographing their own models and then uploading those images to the B.15 Figshare Archive for future preservation.

After following this protocol using the equipment described (or a like-for-like approximation thereof) you should have an output of ~15+ high quality, professionally taken photographs of your architectural model, and guidance on how to upload a selection of those images to the Figshare platform.

Guidelines

Note: This protocol has been developed for use with a specific model of camera and with the assumption that the photos will be exported to a machine running a Windows 11 Operating System. While the process has been kept as generic as possible, some steps may not translate directly 1:1 if using different equipment.

Before start

Acquire the hardcase that contains the B.15 Modelmaking Workshop's camera equipment, shown in Step 1 "Gather Equipment". Access to this equipment is made available upon request to any of the Modelmaking Workshop staff.

Gather Equipment

10m

1 Check your equipment

10m



Ensure that you have all the required items for correctly photographing your model. An example of the required equipment is included below:



If using the B.15 workshop's equipment, your carry case will look like the above.

NOTE: The Colourchecker is optional, but useful for doing colour correction when editing your images.

Camera Setup

2 Battery Check + Charge spare battery

- Briefly turn the camera on and check the amount of battery remaining.
- If there is sufficient battery remaining (20%+) then turn the camera off again and continue with assembly instructions below.
- If there is insufficient battery remaining, turn the camera off again and open the battery compartment on the bottom of the camera.
- Remove the battery by moving the blue switch out of the way. The battery should leave the compartment of its own accord.

- Replace the battery with the spare, fully charged battery attached to the charger.
- Place the empty battery on the charger and plug it in. This will charge it while you work.



Battery Compartment - Battery in place



Battery Compartment - Battery ejected

3 **Ensure correct SD card is in camera to save photos**

- Open the compartment that contains the SD card and ensure that it's in place.
- If you are using your own SD card, it is crucial that you safely store the camera's SD card and replace it when you are done.



4 Attaching the Lens

- In order to take photos using your camera, you will need to attach a lens to it. Below is a visual progression of the camera from its stored state (cap still in place) to its final, lens-attached state.



This is what your camera should look like from the front before attaching the lens.

- Remove the cap on the front of the camera and ensure that there are no particles or dust present on the internal lens.



Camera with the front lens cap removed, ready to have the lens attached.

- Take the lens out of its case in preparation for attaching it to the camera.
- Remove the grey cap from the lens.
- Take note of the slightly raised white dot on the inside edge of the lens.



You will use this white dot to align the lens with the camera.

- Use both the white dot on the lens and the white dot on the camera mount to align the lens correctly with the camera. They should slot together comfortably.
- Once they are correctly slotted together, carefully rotate the lens clockwise until it locks into place.
- **NOTE: There will be an audible "click" when the camera has locked into place.**



Aligning the white dot on the lens with the white dot on the camera.



How the camera should look with the lens attached.

- Once the lens is correctly attached to the camera, the cap on the front can be removed by pinching the two buttons towards the middle of the cap and lifting it away.

5 **Deploy & Adjust Lens**

Once the lens is correctly attached the cap removed, you need to extend the lens in order to take your pictures.

Grip the larger inner wheel of the lens and rotate it clockwise (or to the right as-shown below).

The minimum rotation required for the camera to function is to set it to 28, but you can increase the zoom depending on the variety of pictures you want to take. Generally a larger zoom will capture more up-close detail, but constrict the shot. A smaller zoom will widen the shot.



What the camera should look like with the lens correctly extended, set to "28".

6 Camera Settings + Power On

Once the camera has been correctly assembled, ensure that the dials on top look like this, and switch the camera to the "On" position using the dial on the top right.

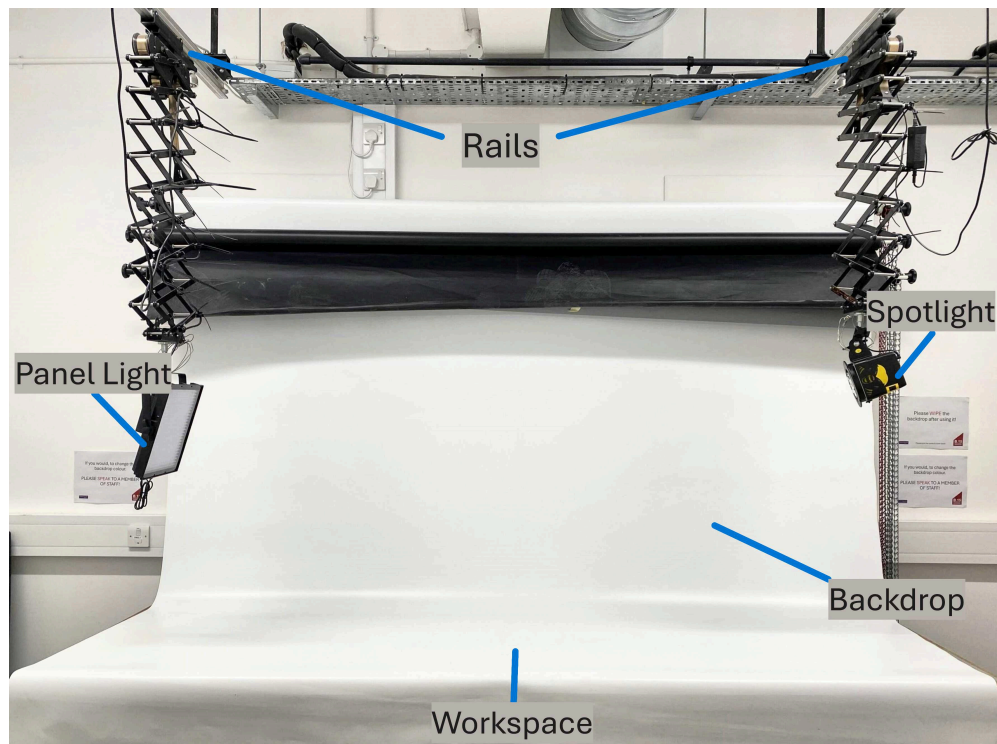


NOTE: You may get a pop-up stating that the battery being used is unsupported. Simply confirm the dialogue to make the box go away. There is no danger in using the alternate battery provided with the camera that you need to worry about.

Photography Space Setup

7 B.12 Studio Space - General Usage Instructions

The B.12 Workshop is located in the basement of Humanities Bridgeford Street, on the opposite side of the building from the B.15 Workshop. This is the space that contains the photography studio, pictured below:



The B.12 Photography Studio, with white backdrop

At time of publishing, both workshops are open from 9:30 - 16:30 every weekday, closing from 13:00 - 14:00 for a lunch break.

The space is designed to be used for taking pictures of architectural models and associated objects. It comes equipped with a lighting setup and multiple spaces to take photos of models of differing sizes.

NOTE: When placing a model in the studio space for photographs, you should center it in the middle of the table. An example is shown below:



Model centered within the studio space + placed on a turntable (for ease of repositioning/rotating model)

8 Backdrop Setup

The B.12 Studio Space has multiple different colours of backdrop available to choose from. You will want something that contrasts well with the model that you are photographing. If you're unsure about this, defaulting to a white backdrop is usually best, but the workshop technicians can also provide advice on what backdrop you should use.

IMPORTANT: Do not attempt to change the backdrop yourself. If you want the backdrop changed, please ask a workshop technician to change it for you.

9 Lighting Setup

Move both the panel light and spotlight into position to light the model as you see fit. You want your model to be lit well enough that the camera can pick up all fine detail on the model easily. Images that are too dark as a result of models being cast in shadow/not lit properly aren't generally suitable for display.

Both the Panel Light and Spotlight shown in the below images are attached to the ceiling by **rails**. These rails allow you to reposition the lights in two ways:

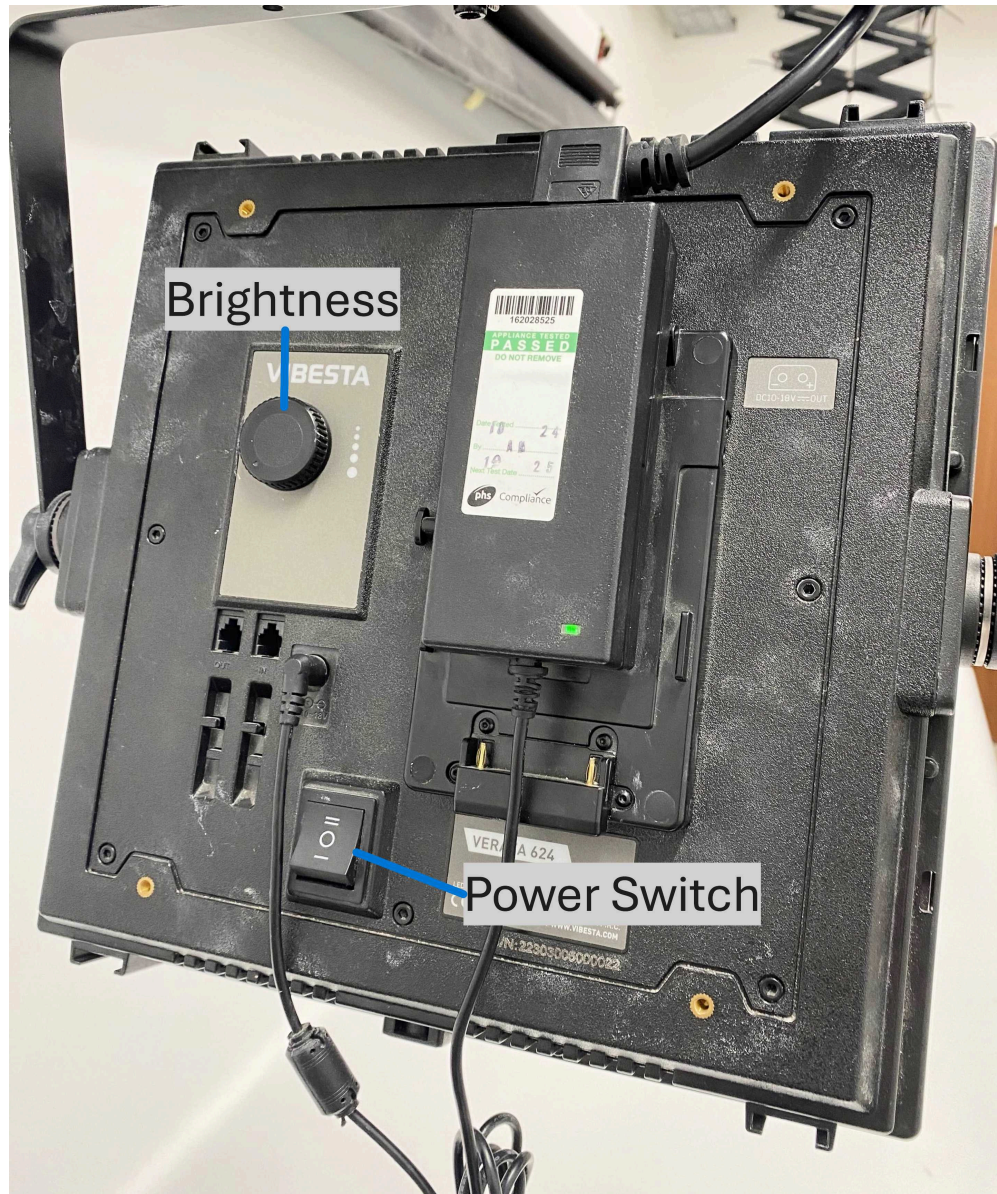
- Raising/Lowering
- Toward/Away from the backdrop

IMPORTANT: The wires from the lights can sometimes get tangled while moving them. Ensure that a light is clear of obstructions before attempting to move it.

IMPORTANT: The studio's default lighting should be turned off using the light switch, and the door to the studio should be closed to prevent lighting from the workshop space entering and interfering with the lighting setup.

9.1 Panel Light

The Panel Light simulates natural daylight. You likely want this on some sort of medium level of brightness, but brighter and lower lights can also be suitable.



Back of the Panel Light

9.2 Spotlight

The Spotlight simulates specific directional light, used to deliberately cast shadows or brighten a certain aspect of your model. Though it may seem counter-intuitive, **setting this to 86% brightness is a good "medium" level for this light.**



Back and top of the Spotlight

Taking The Photos

10 General Photography Tips & Process

NOTE: Always ensure you are not casting a shadow on the model while photographing. As a rule of thumb, avoid standing between your light source and the subject.

1. Use viewfinder or the screen on the camera to help you visualise and line up the picture.
2. Hold button halfway down to focus the camera, it will beep when focused.
3. Press button fully down to take picture.

TIP: If using the viewfinder, built-in digital level indicators will assist in straightening your shot. These guides turn green when the frame is correctly aligned on each axis.

You should aim to have enough photos of your model that you'll be able to select 8-10 at the end of the process. Not all of the photos you take will come out well when you review them, so be sure to take plenty throughout the process.

Some basic examples of potential photos you could take of your model. When not taking scale photos, ensure that the scale is removed from the shot.

Important shots are marked with an asterisk.

- Photo from directly above the model including **scale** in shot. *

(Scale will be flat on the table for this, ideally to the left of the model for consistency)

- 2x high-angled photos from the front (Front left corner & front right corner)
- 1x front eye-level shot (including **scale**) *
- Rotate model
- 1x rear eye-level shot
- 2x high-angled photos from the back
- 1-3 shots that you think highlight a specific element of your model that you want to show off *

Below are some example photos that you can use to inform or inspire your photography process:



Example of front eye-level shot including scale.



Example of scale shot from directly above.



Example of "Wildcard Shot" to show off lettering.

11 Finishing Up

Once you have taken the photos you need and have finished with the studio, you'll need to leave it in a clean and tidy state.

1. Wipe down the backdrop once you're finished using it.
2. Ensure that all lighting equipment you've been using is turned off.
3. If you have moved the lights far out into the studio space using their rails, ensure they are returned to rest near the wall (as shown in the initial picture of the workshop).
4. Turn off the workshop lights.

Retrieving Photos From Camera

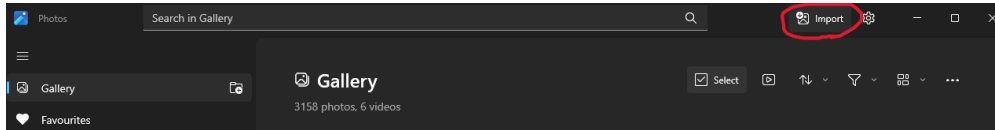
12 Importing + Storing Photos

Using the **Camera Transfer Cable** stored in the camera's carry case, connect the camera to the laptop or PC that you will be using to store the photos.



Showing the USB-C port on the side of the camera

Once the camera is connected to your PC or Laptop, you will be prompted to open the Photos app, and presented with a screen that looks like the below. You want to click the Import button, and select the connected camera to start the import process:



The "Import" button in the Photos interface

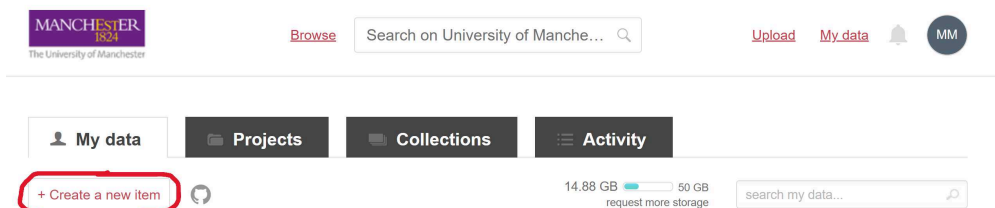
Once you have clicked import and selected the camera from the device list, you will be able to select which photos you wish to import either one-by-one, or "all new images". Select either of these two options and confirm to begin the transfer.

Upload to Figshare

13 Creating a New Item in Figshare

Log in to Figshare using the "Log In" button in the top right of the main page.
<https://figshare.manchester.ac.uk/>

Once you have successfully logged into the Figshare site, you'll be presented with the following screen. You can either browse existing item uploads, or submit a new one by clicking on the "Create a new item" button.



The Figshare "My data" Hub

For the B.15 Archive, the first thing you'll want to do is change the Group of the item. Click on "Change group" first.



Draft

Untitled Item

☒ Add files or folders ☐ Link to external files ☐ Set as metadata record

Drag and drop files or folders here to upload

[Browse files](#) or [Browse for folders](#)

mandatory fields required to publish the item

Item title *

Untitled Item

B *I* A ^A

Group *

Selecting a different group will result in a different set of metadata fields. The information on the fields that don't match the new group will be lost.

Current group: IT Services Division

[Change group](#)

Item actions

- Add embargo
- Share with private link
- Reserve DOI
- Edit timeline
- Add custom thumbnail

[Preview item](#)

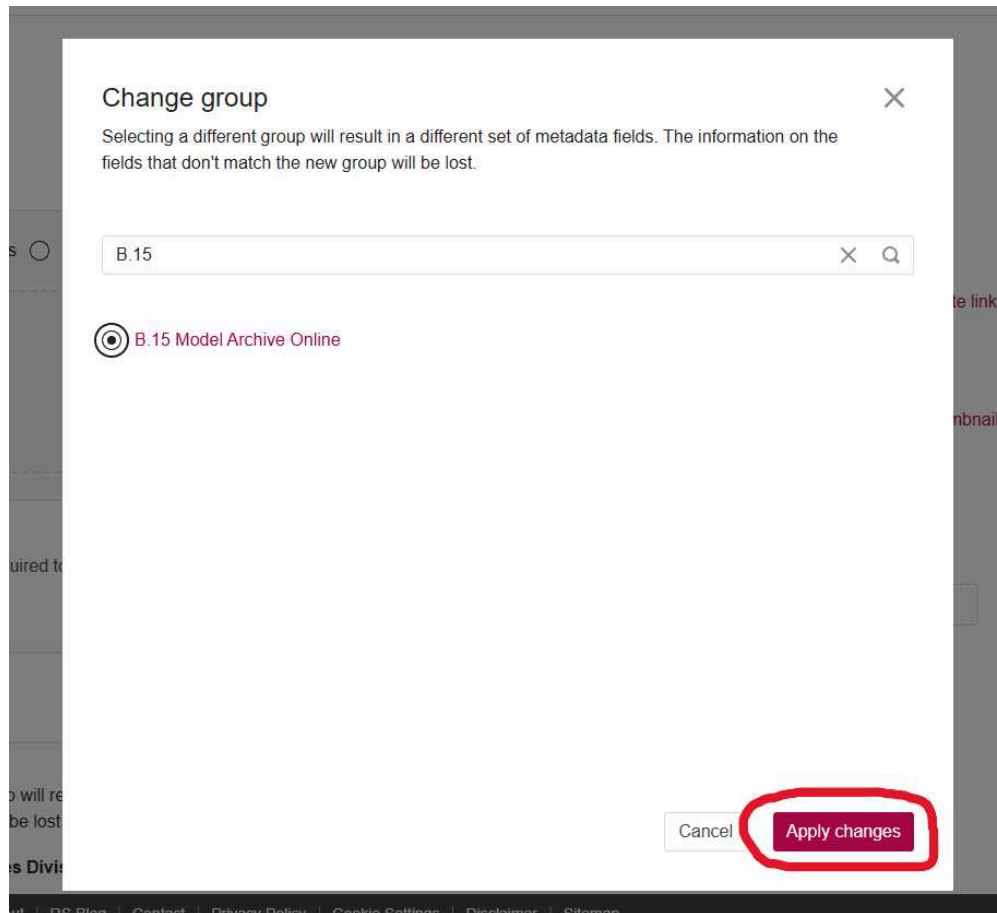
Delete item

[Save changes](#)

[Submit for review](#)

The Figshare new item page

Once you've done that, you'll be presented with the below pop-up. Type B.15 into the search bar, and select "B.15 Model Archive Online", then press "Apply changes".



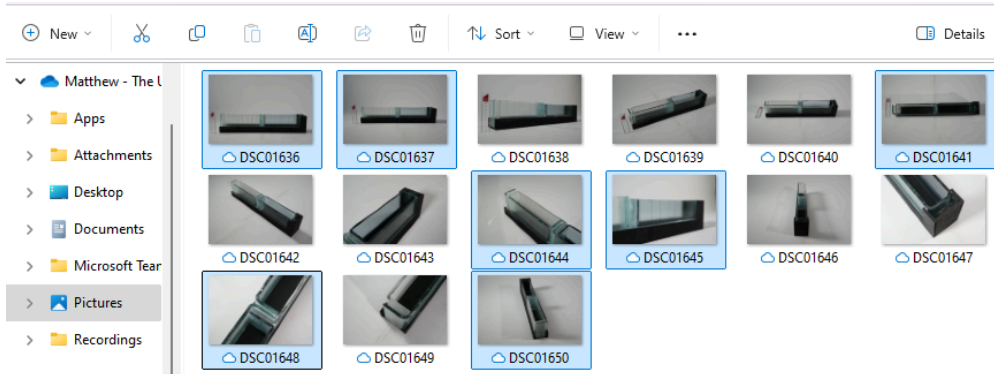
The Change group interface, showing the B.15 Model Archive Online option

The untitled item is now in the correct grouping.

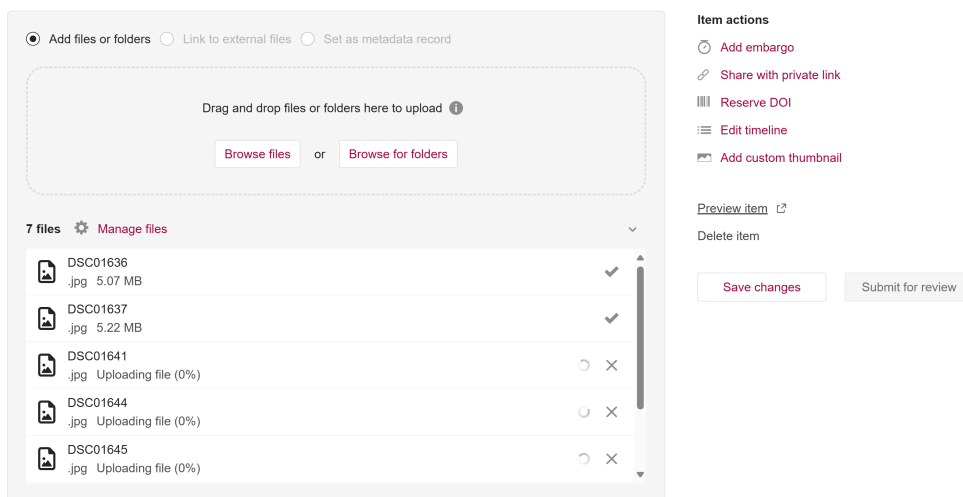
14 **Uploading Photos to Figshare**

The process of uploading photos is relatively simple:

- Navigate to the folder or location on your PC or laptop that contains your photos
- Select the photos that you wish to upload (holding ctrl + clicking will allow you to select multiple individual photos)
- Drag these selected photos onto the Figshare page, dropping them in the designated space.



Selected photos (using ctrl + click) ready to be dragged to the Figshare page



Figshare interface, showing where files should be dropped + the upload process

- Once this is done, you can click Save changes to record the reclassification of the item group as well as the uploaded photos.

Metadata & Submitting for Review

15 Filling Out Metadata Fields

With the item correctly categorised into the B.15 Model Archive group and your photos uploaded, the only thing left to do before submitting your item for review is to fill in the metadata fields of the item to the best of your ability.

* mandatory fields required to publish the item

Item title * i

Untitled Item

B *I* **A** *A'*

Group *

Selecting a different group will result in a different set of metadata fields. The information on the fields that don't match the new group will be lost.

Current group: **B.15 Model Archive Online** Change group

Item Type *

[Learn more about item types](#)

Figure Change item type

Authors * i

Search for authors by name, full email or ORCID.

Categories * i

Browse or search for categories

Keywords * i

Add keywords for easy discovery. Hit enter after each...

Description * i

Describe the research as well as you can. Formatting is preserved when pasting from other sources and counts towards character limits.

Item actions

- Add embargo
- Share with private link
- Reserve DOI
- Edit timeline
- Add custom thumbnail

[Preview item](#)

Delete item

Save changes Submit for review

A selection of the metadata fields for the item, mandatory fields are marked with an asterisk

Funding i

Search grant by name/number or add your own

+ Add another

Related Materials i

No related materials.

Manage materials

Licence * i

CC BY 4.0

Research ethics approval number i

Year-00000-00000

The remaining metadata fields for the item

Within figshare, each field has an information bubble (the i in a grey circle) to the right hand side that will tell you what the expected content of the field is.

A brief rundown of these fields is as follows (* denotes a mandatory field):

- ***Item Title** - The name of your model.



- ***Group** - Should be set to "B.15 Model Archive Online" as previously covered in Step 14.
- ***Item Type** - Should be set to "Figure".
- ***Authors** - The name of the creator(s) of the model.
- ***Categories** - Search for "Architect" and select all categories that you feel apply.
- ***Keywords** - Tags for the model. This should cover materials, techniques and styles used or associated with the creation of the model.
- ***Description** - A brief description of the model, as well as anything extra that you wish to include that isn't covered by other fields.
- **Funding** - If work has been funded, use this to add grant number/name/funder body etc.
- **Related Materials** - Links to relevant content or external resources.
- ***Licence** - The usage Licence that the model is published under. The most common license would be CC BY 4.0. A list of classifications can be found here: [What is the most appropriate license for my research? - a help article for using figshare](#)
- **Research Ethics Approval Number** - Not relevant for this application, but if you do for whatever reason have an ethics approval number enter it here.

Once the mandatory fields have all been filled, click "Save changes", and then click "Preview Item" to see what your item will look like when published.

If you are satisfied with the way your item looks, then you can return to the edit page and click the "Submit for review" button. This will highlight any mandatory fields that are incomplete.

If all mandatory fields are complete then you will see the following confirmation pop-up. This also confirms the license type to the user. If you are satisfied that everything is correct and ready for review, click "Submit for review" to finish the process.

Submit for review



In order to publish this item, it needs to be submitted for review! To be reviewed by:
[Bill Ayres](#), [Clare Liggins](#), [Eleanor Warren](#), [Christopher Gibson](#), research data, [Tristan Martin](#), [Justyna Pujso](#),
[Kirsten Loach](#), [Matthew McGill](#).

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Cancel

Submit for review

