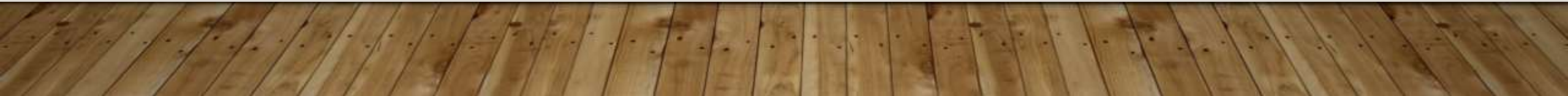# RESEARCHING AND PLANNING IN PREPARATION FOR A MODEL

SOME THOUGHTS (AND HOPEFULLY INSIGHTS) INTO THE PROCESS OF PREPARATION FOR BUILDING A SCALE MODEL OF AN ACTUAL BUILDING OR LOCATION WHEN THE ORIGINAL IS NO LONGER AVAILABLE.

RESEARCHING AND PLANNING IN PREPARATION FOR A MODEL

SOME THOUGHTS (AND HOPEFULLY INSIGHTS) INTO THE PROCESS OF PREPARATION FOR BUILDING A SCALE MODEL OF AN ACTUAL BUILDING OR LOCATION WHEN THE ORIGINAL IS NO LONGER AVAILABLE.

SOME PERSONAL RUMINATIONS ON RESEARCH AND PLANNING

WITH SPECIFIC REFERENCE TO RABBIT HOLES.

INTRODUCTION

- This talk is mostly based on the research for my model of Stirchley and Dawley station on the London & North Western Railway Coalport branch.

- Due to an abundance of caution all images that may be subject to copyright or other publication restrictions have been replaced by links to the original sources (where possible).

RABBIT HOLES

DOWN THE RABBIT-HOLE

…burning with curiosity, she ran across the field after it, and was just in time to see it pop down a large rabbit-hole under the hedge. In another moment down went Alice after it, never once considering how in the world she was to get out again. **The rabbit-hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping herself before she found herself falling down what seemed to be a very deep well.**

Lewis Carroll – Alice's Adventures In Wonderland

WHERE TO START

- Maps

- Photographs

- Documents

- Sources
  - Internet
  - Books
  - Magazines
  - "Archives"
  - People
  - DVDs

MAPS

Rabbit Hole

- National Library of Scotland
  - National Library of Scotland: https://maps.nls.uk/
  - Side by side viewer (https://maps.nls.uk/geo/explore/side-by-side/)
  - Always seems to be improving.
- Other sites
  - Historic England Listings; https://historicengland.org.uk/listing/the-list/
  - OldMaps Online: https://www.oldmapsonline.org/en
  - Other old map sites – now mostly seem to charge and no better than NLS.
  - Local Authority planning portals.
- Paper Maps
  - E.G. Alan Godfrey Maps – https://alangodfreymaps.co.uk/

Rabbit Holes

PHOTOGRAPHS

- The internet can be a very good source of photographs.

- Books, either line, company or area specific, are another good source.

- Magazine articles (often from old editions) can be another source.

- Don't treat captions as gospel, they can be misleading.

- If the location (or a similar one) is still around and accessible, taking your own photo's can be a useful reference.

SAVING PHOTOGRAPHS

- When saving a picture from the internet or a scan I now try to include the source name (web site, book, magazine title, etc.) along with the date of the image (the date taken not the date published). This makes seeing changes over time a little easier.
  For example: "1955-DawleyHistory-Dawley and Stirchley Station 002.jpg"

- When scanning it sometimes pays to try different resolutions and orientations to get the best result.

- If photographing original documents, try and keep the camera (or phone) parallel to the source.

- Poor quality pictures can sometimes be improved using specialist photo' processing software (if you have access to it).

AERIAL PHOTOGRAPHS

Rabbit Hole

- Historic England have digitized a large and growing collection of aerial photo's. These can be found on their web site at: https://historicengland.org.uk/images-books/archive/collections/aerial-photos/

- Their images allow a certain amount of zooming in but I also zoom the web page to get a bigger (not necessarily) better image.

- I find the best way of saving these is via a screen grab.

- Post-processing can sometimes bring out more detail.

- There is also the Britain from Above web site: https://www.britainfromabove.org.uk/

"ARCHIVES"

Rabbit Holes

- There are lots of different archive sources
    - County archives (e.g. Shropshire Archives https://www.shropshirearchives.org.uk/)
    - National Archive (Kew https://www.nationalarchives.gov.uk/)
    - Historic England (Swindon https://historicengland.org.uk/)
    - National Railway Museum (York https://www.railwaymuseum.org.uk/research-and-archive)
    - The Network Rail archive (https://www.networkrail.co.uk/who-we-are/our-history/the-network-rail-archive/)
    - Railway company specific societies (e.g. LNWRS, The Great Eastern Railway Society, etc.)
    - Historical Model Railway Society (Butterley https://hmrs.org.uk/)
    - The Railways Archive (https://www.railwaysarchive.co.uk/)
    - Ironbridge George Museum Trust
    - More (Historic Image archives, etc.)

SEARCHING

- Top level internet search (e,g, Google, Bing, DuckDuckGo, etc.)
  - Should find images and articles (and possibly maps) from sites which contain the search term in the page/description.
  - Likely hits in local history groups, blogs and possibly company society pages.
- Site specific searches.
  - Most archive data will not be included in top level search results, you need to use the archive's site specific search tool.
  - The quality of site specific search engines is "variable".

WHAT TO SEARCH FOR?

Search terms are not always obvious or helpful:

- Stirchley
  - One in Shropshire, good.
  - One in Birmingham, bad.
- Dawley
  - Dawley and Stirchley, good.
  - Horsehay and Dawley, bad.
- Coalport
  - Coalport LNWR (later Coalport East), good.
  - Coalport GWR (later Coalport West), bad.

WHAT TO SEARCH FOR?

London & North Western Railway:

- LNWR

- L N W R

- L. N. W. R.

- L & NWR

- L & N W R

- L. & N. W.

- London & N. W. Railway

- London & North Western Railway

- London North Western Railway

- London and North Western Railway

WHAT TO SEARCH FOR?

- Think outside the box
  - Shropshire Canal Conversion
  - Premier Line To Coalport
  - LMS (L.M.S. etc)

WHAT NEXT?

We've collected resources, maps, photo's, etc. Now what to do with them?

If you are really lucky you might find published plans for your target, but beware, not all plans are accurate, and not all buildings get built to plan!

I was not lucky.

My way:

- Develop a plan of the building.
- Develop elevations from the plan.

DEVELOPING THE PLAN

Ordinance Survey 1888 – 6in (crop & scale)

View map: Ordnance Survey, Shropshire XLIII.NE (includes: Dawley Magna; Oakengates; Shifnal; Stirchley.) - Ordnance Survey Six-inch England and Wales, 1842-1952
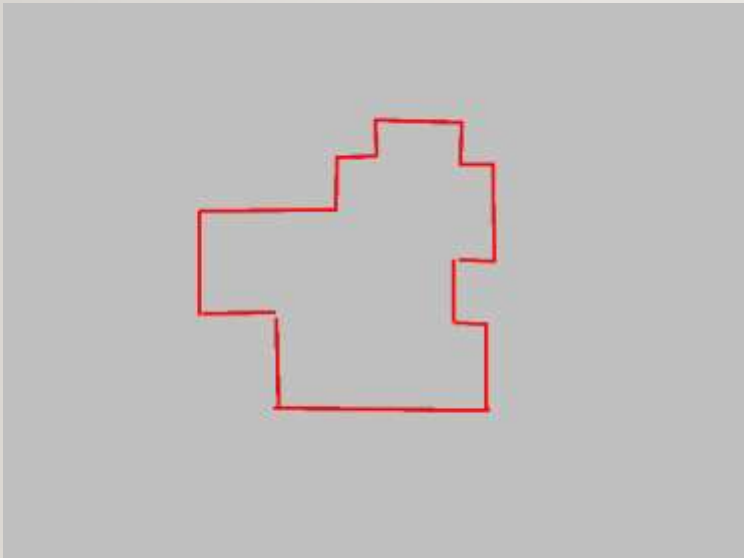
Stirchley station is near the bottom left corner.

Ordinance Survey 1901 – 25in (crop)

View map: Ordnance Survey, Shropshire XLIII.7 (Dawley Magna; Madeley; Stirchley) - Ordnance Survey 25 inch England and Wales, 1841-1952
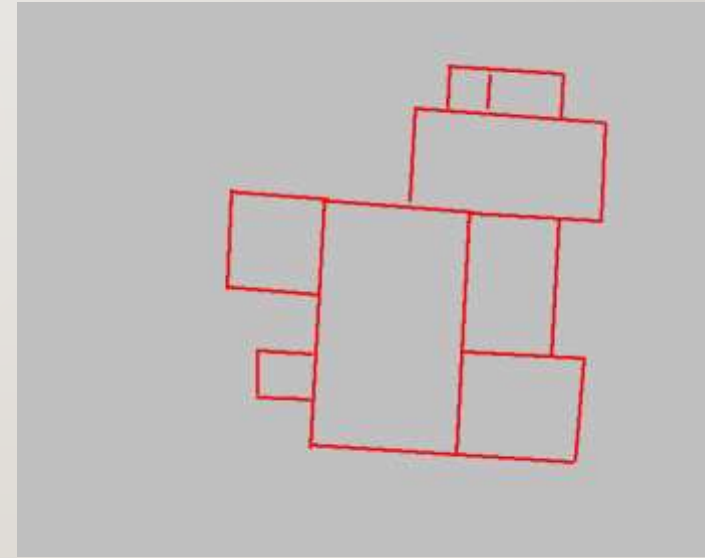
Stirchley station is just below the centre.

DEVELOPING THE PLAN

Ordinance Survey 1888 – 6in
(zoom & outline)

Ordinance Survey 1901 – 25in
(zoom & outline)

DEVELOPING THE PLAN

Ordinance Survey 1888 – 6in (crop & scale)

> View map: Ordnance Survey, Shropshire XLIII.NE (includes: Dawley Magna; Oakengates; Shifnal; Stirchley.) - Ordnance Survey Six-inch England and Wales, 1842-1952
>
> Stirchley station is near the bottom left corner.

Ordinance Survey 1901 – 6in (crop & scale)

> View map: Ordnance Survey, Shropshire XLIII.NE (includes: Dawley Magna; Oakengates; Shifnal; Stirchley.) - Ordnance Survey Six-inch England and Wales, 1842-1952
>
> Stirchley station is near the bottom left corner.
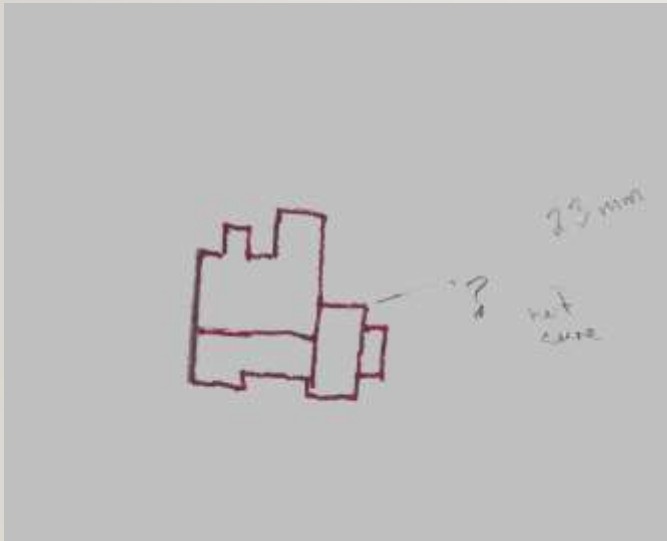
DEVELOPING THE PLAN

Ordinance Survey 1901 – 25in (crop)

View map: Ordnance Survey, Shropshire XLIII.7 (Dawley Magna; Madeley; Stirchley) - Ordnance Survey 25 inch England and Wales, 1841-1952

Stirchley station is just below the centre.

Ordinance Survey 1925 – 25in (crop)

View map: Ordnance Survey, Shropshire XLIII.7 (Dawley Magna; Madeley; Stirchley) - Ordnance Survey 25 inch England and Wales, 1841-1952

Stirchley station is just below the centre.

DEVELOPING THE PLAN
Initial sketch

Initial sketch
(overlay from 1901 plan)

Using photo' to verify plan

Photo' showing far side of building with the wating area not extending to the apex of the station master's house:
http://www.dawleyhistory.com/Postcards/Dawley%20and%20Stirchley%20Station/Dawley%20and%20Stirchley%20Station%20007.jpg

From:
Dawley and Stirchley Station

DEVELOPING THE PLAN
A stroke of luck?

2011 – Planning Application (Ex Madley Market Station)

Architect's plans from planning application.

Planning application:
Telford & Wrekin Council

Plan drawing (PDF):
https://secure.telford.gov.uk/planning/PCViewPlan.aspx?planID=17390

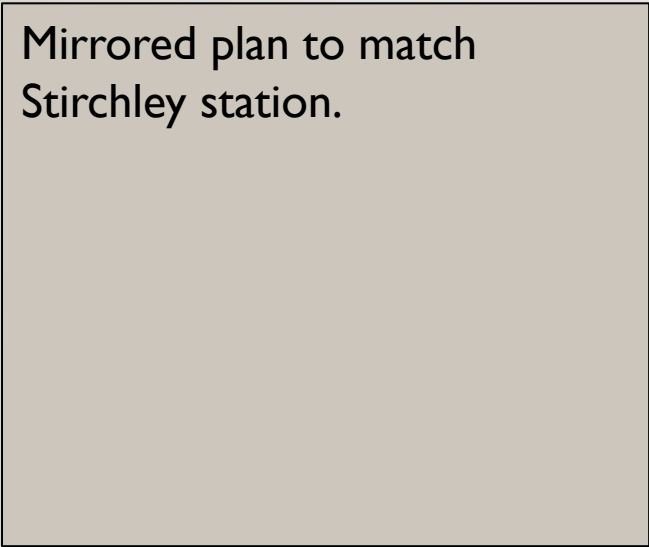### 2011 – Planning Application (Cropped and rotated)

Cropped and rotated section of plan.
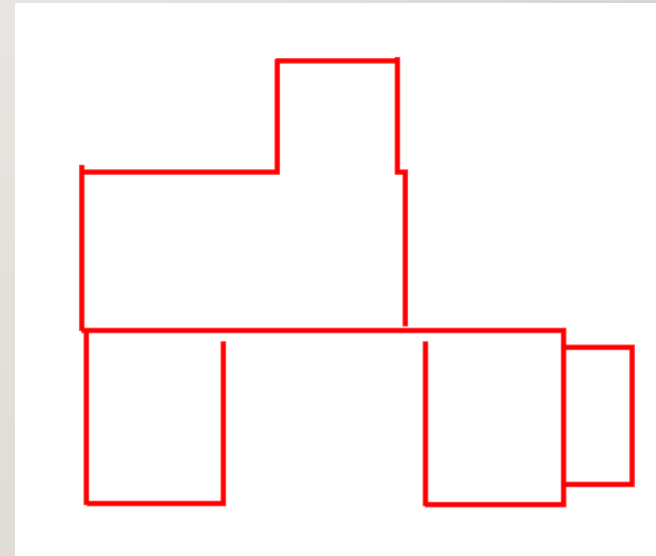
DEVELOPING THE PLAN
A stroke of luck?

2011 – Planning Application
(Cropped, rotated and mirrored)

Mirrored plan to match
Stirchley station.

2011 – Planning Application
(Probable original walls highlighted)

DEVELOPING THE PLAN
A visit to Shropshire archives

Rabbit Hole

1856 – Plans & Sections of Railway Hadley to Coalport

Photo' of part of a plan held in Shropshire Archives showing the canal and railway line but no station.

Link to archive record:

Search results

1872 – Much Wenlock & Severn Junction Railway, Lightmoor Extensions

Photo' of part of a plan from the Much Wenlock and Severn Junction railway - Lightmoor extensions - book of reference showing the early station.

Link to archive record:

Search results

DEVELOPING THE PLAN
So is there something there?

1939 – Madeley Market Station
Crop from ariel photo'

Tight crop of the top left corner of the image from the Britain From above web site. Shows lean-to outbuilding on back.

Photo' link:
EPW061722 ENGLAND (1939). The Gas Works off Queen Street and environs, Madeley, 1939 | Britain From Above

1946 – Dawley & Stirchley Station
Crop from ariel photo'

Tight crop of Stirchley station area from a photo from the Historic England archive web site. Shows possible shadow of an outbuilding at the back of the station.

Photo' link:
raf_106g_uk_1483_rs_4038 - Aerial Photo | Historic England

DEVELOPING THE PLAN
So is there something there?

1952 – Dawley And Stirchley Station
Suggestive evidence?

A little bit closer…

Photo' showing path sloping away from thee back of the station master's house:
http://www.dawleyhistory.com/Postcards/Dawley%20and%20Stirchley%20Station/Dawley%20and%20Stirchley%20Station%20004.jpg
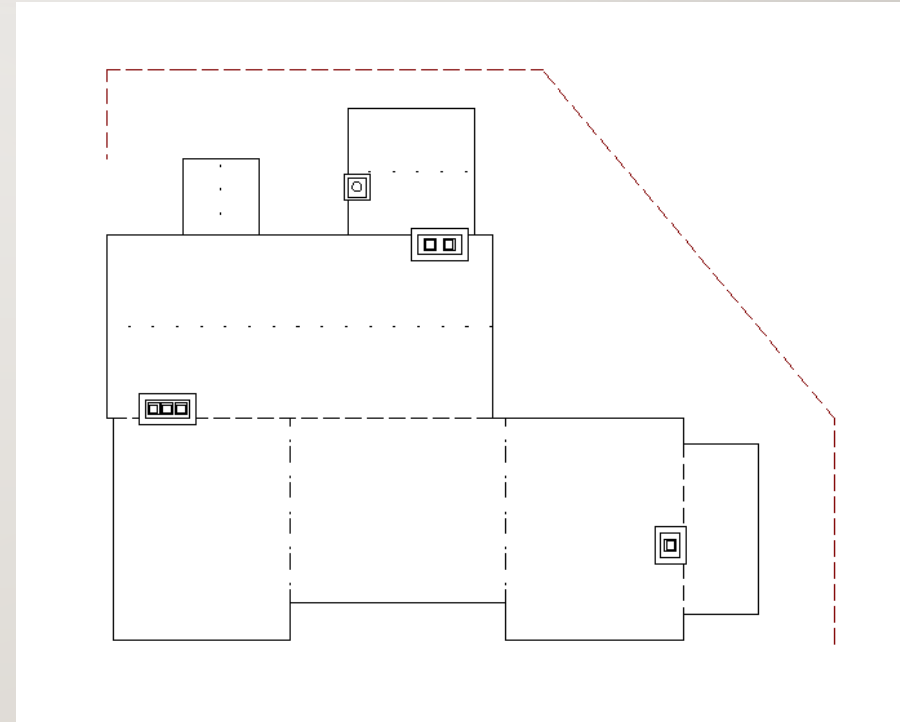
From:
Dawley and Stirchley Station

Zoomed version of the previous photo' showing the back path (and shed).

DEVELOPING THE PLAN
Decision time

At some point you must make decisions and move on. My next step is to use a 2D CAD program to draw a plan.

- Dimensions were largely taken from the planning application (and scaled or guessed where needed).

- I "invented" a porch at the back.

- The chimneys are important to the look of the building, so I included them in the plan.

DEVELOPING THE ELEVATIONS
We have a plan, now we need elevations

2011 – Planning Application
Madeley Market

Architect's elevation for platform face from planning application.

Planning application:
Telford & Wrekin Council

Elevation drawing (PDF):
https://secure.telford.gov.uk/planning/PCViewPlan.aspx?planID=17392

Dawley & Stirchley Station
Just Madeley flipped and "screen" removed

Architect's elevation for platform face from planning application mirrored to match Stirchley station and with wating area screen removed showing a good likeness with Stirchley station.

BEWARE OF ARCHITECTS
Their drawings cannot be trusted

Architect's elevations showing a chimney that appears in one elevation but then goes missing from another elevation.

Elevation drawing (PDF):

https://secure.telford.gov.uk/planning/PCViewPlan.aspx?planID=17392

DEVELOPING THE ELEVATIONS
But the elevations are helpful…

2011 – Planning Application
Road face mirrored

Mirrored architect's elevation showing that some windows match but one does not.

Dawley & Stirchley Station
Crop of photo showing elevation

Different crop showing the windows on the side of the station master's house. Cropped from:
http://www.dawleyhistory.com/Postcards/Dawley%20and%20Stirchley%20Station/Dawley%20and%20Stirchley%20Station%20004.jpg

From:
Dawley and Stirchley Station

DEVELOPING THE ELEVATIONS
…but not everywhere

2011 – Planning Application
Rear face mirrored

Architect's elevation for the rear face from the planning application showing that the building no longer matches Stirchley (or Madeley Market) stations as we see them in photo's.

Elevation drawing (PDF):
https://secure.telford.gov.uk/planning/PCViewPlan.aspx?planID=17392

I have found no pictures of the back but there are obvious difficulties:

- Rear extensions to station master's house.
- Pitched roof over gent's toilet.

But some possible hints:

- Small window into gent's toilet.
- Possible door into ladies waiting room.
- Chimney location.

DEVELOPING THE ELEVATIONS
What about dimensions?

I got lucky…

TITLE **STATION HOUSE, MADELEY - Elevations as Existing**

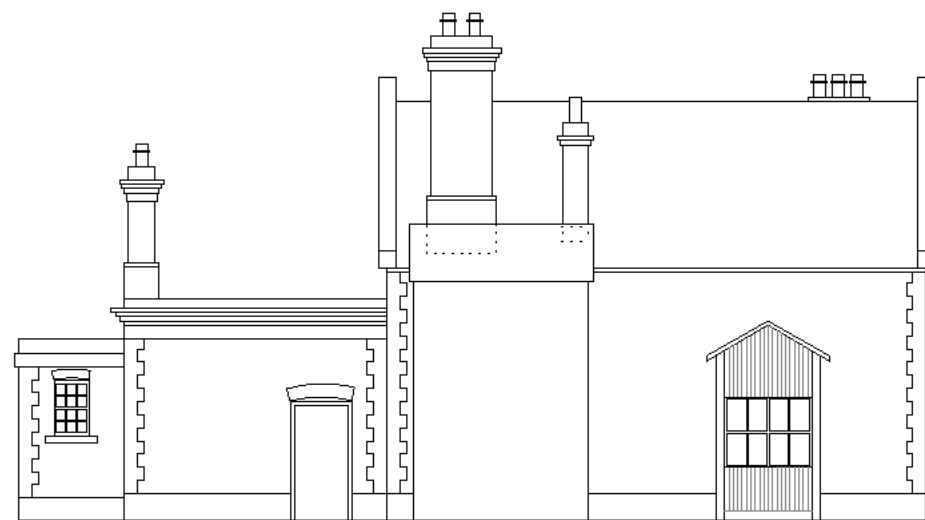| SCALE	BY	DRG No	DATE
1:100 @A3	DRS	SH5	19/10/2011

…and I have an A3 printer!

…and a scale rule

- Position and sizes of openings scaled from drawing where they matched.
- "Relative" sizes and positions estimated for others.
- Rear elevation largely a matter of guesswork.
- Chimney heights scaled.
- Chimney pots taken from photo's.
- 2D Elevations added to CAD (with plan).

DEVELOPING THE ELEVATIONS
The CAD of the elevations

- Some things had to be "guessed":
  - The rear "porch".
  - Internal details of "lobby".
  - Bottom of the "non-road" side of the station master's house.
- Some things were drawn "simplified":
  - Chimney pots.
  - Lower brick plinth.
  - Eaves details.
- Elevations (and plan) are drawn full size (1:1) and then printed to 2mm scale.

AND THIS WAS WHAT WAS BUILT
(almost, as the trial build)

More pictures of the model before priming at: Dawley And Stirchley Station

WHAT IF YOU'RE NOT LUCKY?
How can you get the dimensions

- Scaling from maps:
  - Use largest scale map or plan that you can get.
  - O.S. not always accurate.
  - Just a starting point.
- "Guesstimating" from photo's – as a verification or as the only way:
  - Brick counting.
  - Estimating openings.
  - Use other items with known size in the photo's.

AN ASIDE ON BRICK COUNTING
How big is a brick?

A brief historical background:

- 1776 Parliament sets size as 8½" x 4" x 2½".

- 1784 Brick tax imposed – mayhem!

- 1796 Maximum size set to 10" x 5" x 3".

- 1850 Brick tax repealed.

- 1903 B.S. sets size as 9" x 4½" x 3".

- 1965 B.S sets size to 215 x 102.5 x 65 (mm) (that's about 8½" x 4" x 2½").

So how big is a Victorian brick?

- After 1850, any size they wanted!

- Mostly 9" x 4" or 9" x 4½" in plan.

- Height could vary between 2" and 3" (or even more).

- No fixed standard mortar gap.

- Check your photo' for other things for corroboration (particularly on height).

ESTIMATING DIMENSIONS
Other considerations

- Openings (e.g. doors, windows) did not have a standard size.

- Some railway companies had their own standards.

- Some went further and had standard modular buildings.

- Track (straight) has a known gauge.

- May need to take viewpoint and projection into account.

- Beware of photo's with "stretched" aspect ratios.

AN EXAMPLE
Estimating the platform width

An annotated scan of a print of the picture showing the track gauge being used to estimate the width of the platform and platform edging.

Picture:
http://www.dawleyhistory.com/Postcards/Dawley%20and%20Stirchley%20Station/Dawley%20and%20Stirchley%20Station%20004.jpg

From:
Dawley and Stirchley Station

BACK TO THE MODEL
What colour should it be?

Back off to the internet to search:

- Buff and brown

- Stone and brown

- Buff and tan

- Light buff and dark buff

- Buff and chocolate

All seemed confident and none particularly helpful!

DON'T JUDGE A BOOK BY ITS TITLE
Or why you shouldn't make assumptions

LNWR LIVERIES (HMRS publication)

- A treasure trove of information.

- Standard colours for stations and other buildings:
  - Stone (buff)
  - Mid brown (chocolate)
  - White

- But colours changed:
  - Recipes and mixes varied.
  - Time/light caused fading or darkening.

- 1885 buff recipe:
  - 7lb White lead
  - ½lb Yellow ochre
  - ½oz Turkey umber

- 1898 buff recipe (a darker shade):
  - 7lb White lead
  - 2lb Yellow ochre
  - 1½oz Turkey umber

- 3 year repaint schedule.

COLOUR SELECTION
All Citadel acrylics

Colours were all tested on samples to find the ones that looked best to me.

- Woodwork
  - Buff – Morghast Bone
  - Light Brown – Mornfang Brown

- Brickwork
  - Red brick – Scrag Brown (highlights: The Fang/Ratskin Flesh)
  - Blue brick – The Fang (highlights:: Night Lords Blue)
  - Mortar – Karak Stone

- Windows
  - Frames – White Scar
  - Cills/Lintels – Wraithbone

Citadel paints are available in Shrewsbury (Warhammer/Games Workshop) and at least 3 places in Telford (Glasshammer Gaming, The Larp Inn, Questing Knight Games).

THE PAINTED MODEL
(not yet weathered)

More pictures of the nearly complete model at: Dawley And Stirchley Station

IS THAT THE END OF THE STORY?

- New sources suggested by a new contact:
  - 'The ex-L&NWR Coalport Branch', by T.R. Perkins - Railways (later Railway World) March 1952
  - 'The Coalport Branch', by William H. Smith - British Railway Journal No.19, 1987
  - 'Premier line to Coalport', by Bryan Wilson - Railway Bylines, April 1999

- Another new contact
  - Worked on the archaeological dig on the site (about 2015).
  - They found no evidence of a door in the rear wall of the Station Masters house.
  - No luck (so far) tracing a copy of the records of the dig.

'THE COALPORT BRANCH', BY WILLIAM H. SMITH
British Railway Journal No.19, 1987 – Possible gold

Page scanned from 'The Coalport Branch', by William H. Smith British Railway Journal No.19, 1987.

Page shows original architect's plans, elevations and sections for Madeley Market station.

Page scanned from 'The Coalport Branch', by William H. Smith British Railway Journal No.19, 1987.

Page shows original architect's sections for Madeley Market station and plans for the water tower at Coalport station.

ARCHITECT'S DRAWINGS OF MADELEY MARKET
Plans, elevations and cross sections

Zoomed image of the scanned plan of Madeley Market station.

JUST MIRROR TO GET STIRCHLEY
(But it makes the text hard to read)

Mirror image of the scanned plan showing Stirchley station.

WHAT'S THAT IN THE BOOKING OFFICE?

MADELEY MARKET

Scanned elevation of Madeley Market station showing the booking office with a door.

STIRCHLEY

Mirror image of the scanned elevation showing Stirchley station with the booking office door.

BEWARE OF ARCHITECTS – EVEN VICTORIAN
Their drawings also cannot be trusted

Part of the scanned elevations of Madeley Market station showing that Victorian architects could also miss off chimneys!

LOOKING AT PHOTO'S

Picture showing that in 1932 Madeley Market station probably still had a door where the booking office door is shown on the original architect's plan.

Photo' scanned from page 184 of:

> The Shropshire Union Railway
> Stafford to Shrewsbury
> including the Coalport Branch

Bob Yate; The Oakwood Press.
ISBN: 0 85361 613 2

Picture showing that in 1932 Stirchley station definitely had a window where the booking office door is shown on the original architect's plan.

Photo's:
http://www.dawleyhistory.com/Postcards/Dawley%20and%20Stirchley%20Station/Dawley%20and%20Stirchley%20Station%20001.jpg

From:
Dawley and Stirchley Station

1932 – Possibly a door at Madeley Market

1932 – Definitely a window at Stirchley

NOW REALLY LOOKING AT PHOTO'S

Zoomed in crop showing the lighter brickwork where the door was closed up.

Cropped from:
http://www.dawleyhistory.com/Postcards/Dawley%20and%20Stirchley%20Station/Dawley%20and%20Stirchley%20Station%20004.jpg

From:
Dawley and Stirchley Station

Zoomed in crop of the 1932 picture more clearly showing the lighter brickwork where the door was closed up.

Cropped from :
http://www.dawleyhistory.com/Postcards/Dawley%20and%20Stirchley%20Station/Dawley%20and%20Stirchley%20Station%20001.jpg

From:
Dawley and Stirchley Station

Spot the lighter brick infill…   …and from another angle

IMPLICATIONS FOR THE MODEL (MARK 2)
The initial version was always intended as a prototype

- Additional work needed on rear elevation.

- More consideration needed for gable detailing.

- Should the end wall be rendered?

- Was the building ever constructed as in the original plans?

- How about a Mark 3 based on the original plans with booking office door?

REALLY LOOKING AT PHOTO'S

Zoomed in crop showing the clock nicely centred on the window at Stirchley station.

Cropped from:
http://www.dawleyhistory.com/Postcards/Dawley%20and%20Stirchley%20Station/Dawley%20and%20Stirchley%20Station%20004.jpg

From:
Dawley and Stirchley Station

Zoomed in crop showing the rather random placement of the clock at Madeley Markey station (including it biting into the decretive brickwork).

Cropped from:
https://www.shropshirestar.com/resizer/v2/https%3A%2F%2Fcontentstore.nationalworld.com%2Fimages%2Fa8411f27-46fe-4c54-9dbc-82dfeee45990.jpg?auth=4d8dbd77f27faf8708d25d5fe74eafe87dcdb1678f206a0c7672bf2f452eec15&width=1200

From:
How final train journey went from misery to top send off | Shropshire Star

What do these pictures tell us about the clock?

FINAL THOUGHTS

- Research can be addictive.

- Expect to be disappointed along the way.

- At some point you have to stop, make decisions, and do some modelling.

- All models involve compromise to some degree.

- At the end of the day – just have fun…

    …and watch out for rabbit holes.   Rabbit Hole

- Did I mention research can be addictive!

THE END

Thank you for listening