

Client: **WESTMEATH COUNTY COUNCIL**

Project: **PROPOSED HOUSING DEVELOPMENT AT
BELVEDERE ORPHANGE, TYRELLSPASS,
CO.WESTMEATH.**

Document Title: **STRUCTURAL SURVEY OF
EXISTING MATRON'S HOUSE**

Project No.: **22124**

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Document Amendment Record Sheet:

Client:	Westmeath County Council
Project:	Proposed Housing Development at Belvedere Orphanage, Tyrellspass, Co. Westmeath.
Project. No.	22124

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Revision	Purpose / Description	Originated	Checked	Authorised	Date
01	Issue to Client	PS	CD	DG	07.02.2024

1. CLIENT DETAILS

Westmeath County Council

2. PROPERTY ADDRESS

Former Matron's House at Belvedere Orphanage, Tyrellspass, Co. Westmeath

3. PROJECT DETAILS

Proposed Housing Development at Belvedere Orphanage, Tyrellspass, Co. Westmeath.

4. PROPERTY SUMMARY DETAILS

This structural survey is for a property known as the former Matron's House at Belvedere Orphanage. Belvedere Orphanage forms part of the Tyrellspass Architectural Conservation Area (ACA).

The Matron's House is listed on the National Inventory of Architectural Heritage (NIAH).

5. SURVEY METHODOLOGY

While the survey was generally superficial in nature, small areas of ground floor ceiling lathe and plasterwork were removed to determine the size and spacing of first floor joists.

The condition of the lean to garage and shed at the ground floor was not surveyed as this is in a generally very poor condition and is proposed to be demolished. This area was not part of the original listed building structure.

6. ELEMENTAL SURVEY RESULTS

External Walls – Main Structure

The existing external wall of the main core of the house is a solid masonry/stone approximately 500-600mm thick.

The flat roofed two storey section at the rear of the house (Kitchen/Dining at Ground, Bed 4/Bathroom at First) was likely a later addition to the main core of the house. The walls in this area are a thinner construction in the region of 300mm thick including render.

Render to external walls has a rough/dash texture.

Generally the main body external walls of the main structure are in good condition. (See Photo 1 – Appendix B).

Notwithstanding this, the existing lintels do not appear to be in good condition and should be replaced to ensure an adequate future design life of the proposed works.

However there is a large vertical crack at the junction of the two storey return where the wall of bedroom 4 meets the wall of Bedroom 1. This is another indicator that the Bed 4/Kitchen return was a later addition of the house. (See Photo 2 – Appendix B)

External Walls – Front Porch

The external walls to the front porch area are in poor condition and there are large cracks to both the side and front of these walls. The front of the porch appears to lean away from the house. This and the orientation of the cracking appear to indicated the substructure of the front porch walls has subsided. (See Photos 3&4 – Appendix B)

Roof Finishes – Externally

The timber roof fascia and eaves appear in a poor condition. The roof slates appear worn and appear to be reaching their end of life. There is weed growth in the gutters and the valleys which may have allowed water ingress causing damaged rafter ends and have damaged valley rafters. See Roof Structure notes.

Ground Floor – Floor Construction

The floor to the Living Room/Stores to the right of the entrance hall are concrete slabs and in generally good condition.

The floor to the Entrance Hall and the Sitting Room to the left of the entrance is in poor condition and appears to be a suspended timber floor.

The floor to the Kitchen/Dining appears to be a concrete slab and generally in good condition.

Ground Floor Walls - Internally

The ground floor walls are of solid masonry/stone construction. Main internal walls are approximately +800mm thick apparently to allow for fireplaces to both sides of the walls.

Most of the rendered walls were either covered in layers of wallpaper or drylined, but where visible they generally appeared to be of sound construction, and no obvious cracking was observed. (See Photos 5-7 – Appendix B)

The cracking visible on the external face of the external walls at the front porch is also visible on the internal face of these walls.

First Floor Construction

The first floor joists, from localized opening up of the ground floor ceiling, appear to be 200mm x 35mm joists at 300mm crs.. There were no obvious defects apparent in these joists. Recommend that additional larger openings, at joist ends, are made to ensure that any damaged joists are identified for replacement.

First Floor Walls – Internally

Most of the rendered walls were either covered in layers of wallpaper or drylined, but where visible they generally appeared to be of sound construction, and no obvious cracking was observed. (See Photo 8 – Appendix B)

Roof Structure – Generally

There is visible major water damage to the valley rafters. The rotting of the valley rafters will mean they need to be replaced and existing rafters supported by the valley rafters will also largely need to be replaced. (See Photo 9 – Appendix B).

The roof structure visible within the attic access hatch were in relatively good condition, however the size of the rafters may need to be increased (or new rafters sistered onto the existing) in order to meet current building regulation loading requirements.

While there is no other visible damage to other areas of the roof structure, the overgrown condition of the gutters suggest there may be water damage to the ends of the existing rafters.

7. SUMMARY CONCLUSIONS

- Existing external walls are generally in good condition, with the exception of the front porch.
- Front porch walls will require underpinning and significant crack repair works.
- Existing lintels should be replaced.
- Existing roof slates should be replaced as part of any major renovation to ensure an adequate design life of the slates.
- The existing first floor structure appears in mostly good condition and should be re-useable, subject to further opening up works.
- The existing roof structure at the valleys should be replaced.
- Existing roof rafters may need strengthening or replacement.
- Further opening up works should be carried out to determine if rafter ends need to be replaced.

APPENDIX B – PHOTOS

Photo 1 – Front Elevation



Photo 2 – Vertical Crack at Junction of Two Storey Return at Rear of Building



Photo 3 – Cracking to
Porch Front Elevation



Photo 4 – Cracking to
Porch Side Elevation



Photo 5 – Ground Floor Walls



Photo 6 – Ground Floor Walls



Photo 7 – Ground Floor Walls



Photo 8 – First Floor Walls



Photo 9 – Valley Rafter
Rot

