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Alan Traynor Consulting Ltd.

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Structural Survey Report

Relating to

Two Storey Dwelling

At

24 Congress Tce,
St Michaels Road,
Longford,
Co Longford.

For

Longford County Council

Prepared by – Pauric Loughlin
File Ref: 21/107
Dated 17th May 2021

Surveyor: Pauric Loughlin

Date of Inspections: 5th May 2021.

Weather Conditions: Showery during inspection.

1 Description of Property:

- 1.1 The Property is a two-storey end of terrace dwelling. The original front section of property was constructed circa 1920's. There is a more recent rear extension which has a flat roof structure.
- 1.2 Accommodation at ground floor consists of living room, w/c, kitchen/dining, rear sitting room. There is a rear store which is accessed externally however this was locked at the time of our inspection. Accommodation at first floor consists of 5 bedrooms and a bathroom.

2 Scope of Inspection:

- 2.1 This survey has taken the form of an appraisal of the main parts of the structure arising out of a visual inspection only. Where parts of the structure are inaccessible or unexposed, no opinion can be given, and it must be appreciated that defects such as woodworm or dry rot may be present but cannot be conclusively identified. No tests were carried out in the electrical, plumbing, heating, or drainage installations.
- 2.2 Should further clarification be required in relation to the services, it is recommended that a qualified plumber/electrician be employed to carry out these tests. Minor details that do not affect the value of the property may not be commented on.

3 Use of Report:

- 3.1 This report is for the sole use of Longford County Council and their design team and shall not be given to or used by a third party without the expressed written consent of Alan Traynor Consulting Engineers Ltd.

4 EXTERIOR

4.1 Roof:

- 4.1.1 The roof construction to the original front section of the property is comprised of a traditional pitched roof construction with tile finish to the exterior. The roof

covering appeared in reasonable condition however the ridge caps require some pointing with damaged ridge caps replaced.

- 4.1.2 The flat roof to the two-storey rear extension has a parapet on three sides and discharges to an external gutter to the south-east elevation. The roof covering and parapet flashings could not be inspected however from inspection of the property internally it is clear that the roof covering, and flashings have failed as there is significant damp penetration. Due to the damp penetration the flat roof joists have significant wetrot and have dropped where bearing on external walls.
- 4.1.3 There was access to the pitched roof structure from an access hatch on the landing. The roof structure is of traditional cut roof construction and there is an intermediate timber purlin support which is supported of the party wall but has no additional supports provided and therefore is providing no support to the roof structure.
- 4.1.4 There is no roofing felt provided under the roof tiles and there is evidence of daylight in the roof covering. There is some damp staining to the blockwork in the vicinity of the chimney which may be due to damp penetration from cracking to render or damaged lead flashings. There is also some evidence of dampness to timbers at the junction of the rear flat roof extension.
- 4.1.5 There was some evidence of woodworm to roof timbers around the access hatch therefore all the timber will require inspection and spray treatment carried out.
- 4.1.6 The roof structure is not insulated at ceiling level and therefore there will be significant heatloss.
- 4.1.7 The property has timber fascia and soffits with no evidence of vents provided to ventilate the roof space. The gutters are of pvc and they appeared in reasonable condition however there was evidence of leaking to gutters of the rear extension. The downpipes discharge to gullies to the side of the property at the rear however there is no gully to the downpipe to the front of the property.
- 4.1.8 There is a single chimney to the front of the property which serves an open fire to the living room and bedroom at first floor level. There is some cracking to the render finish on the chimney to the side and evidence of damp staining to the blockwork in the attic. There are flue liners provided to this chimney.
- 4.1.9 There is no evidence of fire stopping to the party wall and the roof space of the adjoining property is visible.

4.2 Walls:

- 4.2.1 The external walls of the original property are 280mm thick and may be of solid brick/stone or mass concrete construction. There was no evidence of dampness to walls at time of inspection with exception of the w/c under stairs where some damp staining was evident. These walls may not have a dpc provided and may

- require the installation of an electric osmosis damp proof course. There was no significant cracking evident however there was some detached render to the front elevation at first floor level.
- 4.2.2 The walls of the rear two storey extension are of cavity block construction. There is significant cracking to the north-east corner of this extension. This crack can be categorised as Category 3 (BRE Digest 251 assessment of damage in low-rise buildings) which are cracks with a width of 5 to 15mm which is significant structural cracking.
 - 4.2.3 There was some evidence of fine hairline cracks internally however these can be easily repaired during normal decoration works.
 - 4.2.4 There are no wall vents provided to allow for natural ventilation and wall vents or trickle vents incorporated into windows should be provided when carrying out renovation works.

4.3 Floors:

- 4.3.1 The ground floor of this property appears to be of concrete ground supported slab.
- 4.3.2 Due to the age of the property it is likely that no radon barrier, damp-proof membrane or insulation will be provided to the ground floor and it is recommended to replace floors to allow installation of radon barrier and insulation.
- 4.3.3 The first floors are of timber joists and appeared solid under foot. The floor joists of the rear extension may have wetrot of joists due to damp penetration.

4.4 External Joinery:

- 4.4.1 The roof soffits are of timber and appear in reasonable condition however they should be replaced with pvc when carrying out renovation works. Soffit vents or above fascia vents should be provided to ventilate roof space.
- 4.4.2 Windows installed are a mixture of double-glazed pvc and single glazed timber and these should be replaced when carrying out renovation works. There are no fire escape openings provided to the bedrooms to allow for fire escape/rescue and escape opening should be provided when carrying out renovation.
- 4.4.3 The front door is of aluminium and rear door is of timber which has swollen due to lack of heat. All doors should be replaced as part of renovation works.

5 INTERIOR

5.1 Ceilings:

- 5.1.1 Ceilings to the original property at ground floor and first floor are of painted plasterboard and are generally in a reasonable condition. There is some hairline cracking to ceilings which can be easily repaired prior to painting.
- 5.1.2 The ceilings of the rear extension are in poor condition due to the extensive damp penetration with significant sections of ceilings collapsed.
- 5.1.3 There are some ceiling tiles to the rear extension which require testing to ensure no asbestos is present.

5.2 Internal Partitions:

- 5.2.1 The internal partitions at ground floor are of blockwork construction and are load bearing as they support the first-floor joists.
- 5.2.2 The first-floor partitions appear to be of timber and there is evidence of cracking at the junction of internal partitions and external walls. There is extensive damage of internal studs to rear extension due to damp penetration.

5.3 Dampness and Timber Defects:

- 5.3.1 There is extensive damp penetration to the rear two storey extension due to a defective flat roof covering and/or parapet flashings. This damp penetration has caused significant damage to the fabric and structure of the extension.
- 5.3.2 There were signs of damp staining to the blockwork of the chimney in the attic which may be due to damp penetration due to cracked render.
- 5.3.3 There was woodworm infestation evident to roof timber, it would be recommended to spray treat the entire roof timbers.
- 5.3.4 There was some dampness evident to walls to w/c under stairs and as walls are of solid construction there may be no dpc present. Due to the age of the property there may not be a damp proof membrane provided to floors.

5.4 Fire Safety & Precautions:

- 5.4.1 There is no smoke detector provided throughout the property, these should be incorporated when carrying out renovation works.
- 5.4.2 There is no carbon monoxide detector provided and these should be provided to living room and bedrooms over when renovating the property.

- 5.4.3 There are no fire escape openings provided to bedroom windows and these should be provided when replacing the windows.
- 5.4.4 There is no fire stopping to the party wall and fire stopping should be provided between the top of the party wall and underside of roof covering when renovating the property to comply with Part B (fire).

6 SERVICES

6.1 Electrical:

- 6.1.1 There is an old fuse board provided and the electrics should be replaced with a new miniature circuit breaker (MCB) provided. The electrical outlets should be positioned to ensure they are at accessible heights.

6.2 Water Supply & Heating:

- 6.2.1 There was no evidence of a cold-water storage tank to attic space and water supply may have been directly from the mains. Generally a water storage is provided to allow for sufficient storage for time when there is interruption in supply.
- 6.2.2 A new central heating system will be required when carrying out renovation works.

6.3 Drainage:

- 6.3.1 There is an existing foul Armstrong junction (AJ) to the south-east of the property which is connected under the rear extension to a manhole to the rear of adjoining properties.
- 6.3.2 There is a surface water manhole to the north-east of the site. There is no surface water gully to the downpipe to the front of the property and surface water is overspilling onto the ground. There was a gully for the downpipe to the rear however the gutter is damaged and overspilling onto external walls and ground.
- 6.3.3 There is very little surface water drainage provided around the property and site and additional drainage should be incorporated when carrying out renovation works.

6.4 External Boundaries/Site Works:

- 6.4.1 The site boundaries are well defined with blockwork and stone walls. There is a pedestrian gate to the front with a shared footpath for access to 23 & 24 Congress Terrace. This footpath has settled and is cracked and requires replacement.

- 6.4.2 There is a rear gate access to the south-east of the property, the piers and block wall are in poor condition with some cracking evident. There is a natural stone wall along this elevation which is overgrown with vegetation which requires removal to fully assess the wall. There was some cracking of mortar joints and the wall may require repointing with repairs to stonework and capping provided.
- 6.4.3 There is a Block boundary wall to the north-east boundary which has block piers. There is a significant vertical crack at the junction of the pier near the rear extension which will require monitoring with repairs carried out if movement has ceased.
- 6.4.4 There is a 100mm block boundary wall to infill from rear extension to north-east boundary.

7 Planning Permission:

- 7.1.1 No Planning Search has been carried out.

8 Conclusions & Recommendations:

- 8.1 The property is noted to be in generally poor structural and decorative condition and is in a very dilapidated state of repair. There is significant structural cracking evident to the rear extension and from the trial hole site investigation it would appear that ground conditions to the north-east of the site are very soft. The foundations to this extension are wide but are very shallow with soft strata under. It would appear that roof water to this extension is overspilling onto the ground and this may have causing the clay material to become soft.
- 8.2 We would recommend demolition of the existing two storey flat roof extension and construction of a specialist raft foundation for the new extension and additional proposed housing unit.
- 8.3 A Building Energy Rating and advisory report should be obtained for the property which will recommend where improvements can be made. The property is poorly insulated and will require significant upgrades to ensure it is energy efficient.
- 8.4 The timber purlin to the roof structure will require additional support especially at corner hips. The entire roof timbers will require spray treatment due to the presence of woodworm. As there is no roofing felt under roof tiles it would be advisable to remove roof covering and install a breathable felt with new roofing battons and new roof covering. The party wall will also require fire stopping to comply with Part B (Fire) of the building regulations.
- 8.5 The roof gutters, fascia and soffit will require replacement. The downpipes should have new gullies provided and connected to existing surface water sewer.
- 8.6 It would be recommended to remove the ground floor slab and install insulation, radon barrier and new floor slab. This will also allow for installation of heating system and services to existing property.

- 8.7 Mechanical vents should also be provided to bathrooms and w/c.
- 8.8 New external windows and doors should be installed. Fire escape openings should be provided in bedrooms for escape/rescue.
- 8.9 Existing foul sewer is provided under the existing two storey rear extension which is not good building practice. This sewer should be diverted if required to allow construction of extension.

I trust this report is of benefit to you, however should you have any queries regarding this report, please do not hesitate to contact me.

Yours faithfully







Pauric Loughlin

B.Sc (Hons), AB Eng.


For and on behalf of **Alan Traynor Consulting Engineers Ltd**



Appendix of Photographs



1	 A photograph showing the front elevation of a two-story house. The house has a light-colored, textured facade with a central entrance door and two chimneys on the roof. There are several windows, some with white frames. A small blue sign is visible on the right side of the house. The house is surrounded by green grass and a small tree.	Front Elevation of 23 & 24 Congress Tce.
2	 A photograph showing the side elevation of the same house. The side wall is a different color, possibly grey or a darker shade of the main facade. There is a chimney on the roof. The house is surrounded by green grass and some trees.	Front/side elevation of 24 Congress Tce.

<p>3.</p>	 <p>A photograph showing the side elevation of a rear flat roof extension. The building has a grey, textured facade. There are three windows: two on the upper floor with blue curtains and one on the lower floor that is boarded up with wooden planks. A yellow excavator is visible on the left side of the building, and a chimney is visible in the background.</p>	<p>Side elevation of rear flat roof extension.</p>
<p>4.</p>	 <p>A photograph showing the rear extension of a building. The extension is a two-story structure with a white facade. It has a white door on the ground floor and a window on the upper floor. A blue recycling bin and a green trash bin are visible in the foreground. The building is situated on a narrow street.</p>	<p>Rear extension to 23 Congress Tce.</p>

5.	 A photograph showing the side elevation of a rear extension. The main building has a dark, weathered facade with a small window. In the foreground, there is a green corrugated metal shed and a white corrugated metal structure. A satellite dish is mounted on the wall to the right.	Side elevation of rear extension from 23 Congress Tce.
6.	 A close-up photograph of a concrete boundary wall. A prominent vertical crack runs down the center of the wall, indicating structural damage or settling.	Cracking to boundary wall to North-East of site.

7.		Historic cracking to boundary wall to south-west.
8.		Cracking to boundary wall between properties 22&23.

9.	 A photograph of a building's exterior wall. The wall is made of grey concrete or masonry. A prominent vertical crack runs down the right side of the wall. To the left of the crack, there is a window with blue curtains and a smaller, boarded-up window below it. A yellow object is attached to the wall. The sky is blue with some clouds.	Cracking to south-east elevation of rear extension.
10.	 A close-up photograph of a large, deep crack in a concrete wall. A ruler is placed horizontally across the crack to provide scale. The ruler has markings in centimeters and millimeters. The crack is dark and appears to be quite deep. The concrete surface is rough and textured.	Close-up of large crack to side elevation.

11.		Detached render to front elevation at first floor level.
12.		Cracking to existing chimney.

13.			Crack internally to rear extension which correspond with external cracks.
14.			Damp penetration at junction of pitch roof and flat roof to rear extension.

15.

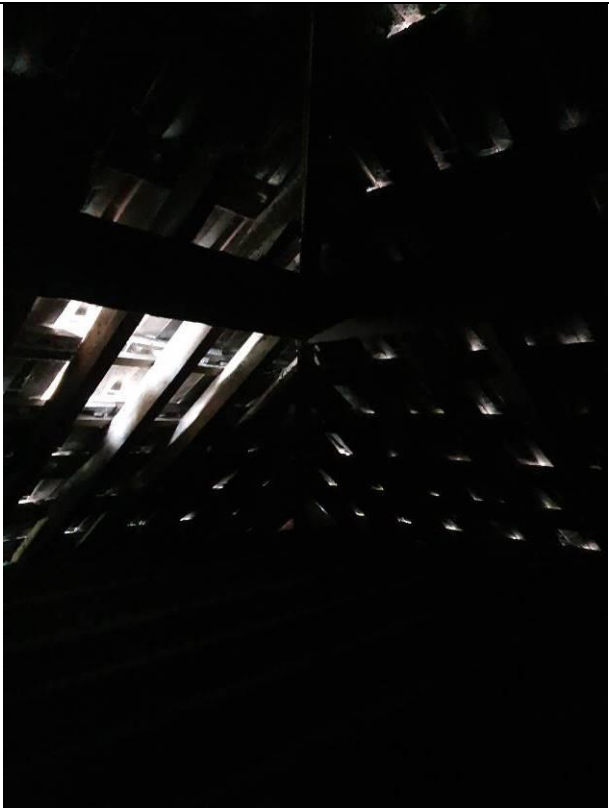



Damp penetration to rear flat roof extension to north-east elevation.

16.



Wetrot of flat roof joists due to failed flashings at parapet wall.

17.			No roofing felt present under roof tiles to front pitched roof and daylight present in joints.
18.			Existing timber purlin not adequately supported and woodworm present to roof timbers.