

**COWAL DESIGN**  
**CONSULTANTS LTD**

## Newbrook House, Taylor's Lane Rathfarnham

Structural Inspection Report

Report Reference: 21-3406- R1

Prepared by: **Stuart Mitchell**

Date: 29<sup>th</sup> November 2021

Checked by: **Craig Armour**

Date: 29<sup>th</sup> November 2021

### **GLASGOW (HQ)**

Innovation Centre  
Hillington Park  
Glasgow, G52 4RU  
**0141 406 1688**

### **OBAN**

5 Stafford Street  
Oban  
PA34 5NJ  
**01631 571280**

### **STORNOWAY**

9 Bank Street  
Stornoway  
HS1 2XG  
**01851 307464**

### **LONDON**

86-90 Paul Street  
London  
EC2A 4NE  
**0203 856 8144**



[www.cowaldesign.co.uk](http://www.cowaldesign.co.uk)

[info@cowaldesign.co.uk](mailto:info@cowaldesign.co.uk)

Registered in Scotland, No. 391116  
Registered Office: 5 Stafford Street, Oban, PA34 5NJ



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## Introduction

Following appointment, Cowal Design Consultants attended Taylor's Lane Rathfarnham to undertake inspections on 5 No. existing buildings on the above site for a proposed care home and residential development.

The site is located on Taylor's Lane Rathfarnham to the south of Dublin.

The site visit was carried out on 1<sup>st</sup> October 2021 at the time of the visit the weather was intermittent light and heavy rain.

The purpose of this inspection was to determine the structural condition of the existing buildings and report on any issues. Note that the site contains an existing Listed Building Newbrook House, and 4 ancillary buildings from the most recent use of the site as a builders merchant.

## Scope & Limitations

The scope of this report will be limited and is intended to detail the following:

1. General condition statement
2. Defects observed
3. Remedial & repair works

The report is based upon a non-invasive, visual structural inspection, as undertaken by Cowal Design Consultants.

The findings contained within this report are non-exhaustive and are based upon the above noted inspections undertaken and limited to the scope as itemised.

During the inspection external observations were made from ground level and from aerial using a drone to inspect the roofs of each building. No specialist access equipment was required for the site visit.

All services and equipment will not be considered or detailed within this report. Should further information be required on these, a specialist contractor should be contacted.

## Site Description

The site is approximately 1.5 acres on a recently realigned Taylors Lane adopted road linking the suburbs of Sandyford and Knocklyon.

The existing Newbrook House is a two storey detached house around 1800sqft dating back to the 18<sup>th</sup> century when Newbrook House were built as part of the Newbrook Mill which was demolished in 1940's following a significant fire. The site was most recently used as a Builders Merchant and storage yard.



## Inspection

Site Plan with building locations contained within Appendix A

### Building 1 – Sales Office

Modern construction sales / ticket office of traditional construction with timber joisted flat roof. located at current entrance to site . Generally in good condition .

Pictures of building in Appendix B

### Building 2 – Storage Building

Existing single skin blockwork shell in dangerous condition , and of generally poor construction . Metal cladding roof has been removed and sections of secondary steelwork collapsed onto floor . Building has been formed on an adhoc basis to provide weatherproof storage for building materials. Building considered on the verge of being dangerous due to partial collapse of wall-head.

Pictures of building in Appendix C

### Building 3 – Storage Building

Existing single skin blockwork shell in dangerous condition , of generally poor construction . Metal cladding roof partially collapsed onto floor . Building has been formed on an adhoc basis to provide weatherproof storage for building materials. Building considered on the verge of being dangerous due to partial collapse of roof and adjacent wall-head.

Pictures of building in Appendix D

### Building 4 – Storage Building

Existing single skin blockwork shell in dangerous condition , of generally poor construction . Metal cladding roof partially collapsed onto floor . Building has been formed on an adhoc basis to provide weatherproof storage for building materials. Building considered on the verge of being dangerous due to partial collapse of roof and adjacent wall-head.

Pictures of building in Appendix D



## Building 5 – Newbrook House

### General

Two storey main detached building with sections of single storey elements as later extensions to the side and rear of the main building. The main two storey elevation is formed with a semi circular tower feature with raised parapets to the perimeter.

### External facades

Externally the fabric of the building is render across the brick facades to all 4 elevations, with some high level vertical slate cladding on the western elevation of the two storey section. The facades are generally of brick with some areas of cement render to the southern elevations forming buttresses. Of the main rendered elevations there are many sections notably on single storey elements are boss with relatively large panels ready to fall away. Note no movement joints or detailing visible to allow any thermal expansion. No evidence of any damp proof course.

The main building is in generally reasonable condition with some cracking noted with the exception of the circular tower feature at the front which has 2 large cracks running the full height of the building from parapet down window jambs and down to ground level. This would appear to be a foundation issue likely due to subsidence of the ground conditions could be addressed by localised mass concrete underpinning to the front tower.

Facades generally plumb, true and level, with exception of the rear elevation on the southern side of the building where the brick façade is leaning outwards from the thrust of the collapsing roof internally. In addition considerable vegetation has grown on this elevation and internally this has entered the roof and areas of upper floor throughout these areas.

### Roof

The main roof has slate coverings to the main building with many sections having been stripped / removed along with lead flashings, around the tower roof which is of parapet detailing lies lead lined flat gutters, with sections having been removed. The lower level extension roofs are a mixture of roof tile and felt coverings. Significant water ingress has been occurring over a considerable time with the leading to the full internal fabric of the building demonstrating significant water damage / rot. Rafter ends seen to be suffering from wet rot and many already deteriorated beyond any salvageable condition.

Single storey roofs to the rear of the building partially collapsed due to rotten rafter ends, and propped in position with old timber joists, considered to be dangerous in current condition.

### Floors

Ground floor is of timber construction, and majority of this has collapsed / rotted away due to the water ingress and within the sections which have collapsed the earth solum directly below was visible, no evidence of any damp proof membrane, insulation or the like.

Upper floor is of timber joist and flooring construction and was deemed during visit to be unsafe for full access, so limited access to the upper floor was carried out. Majority of the upper floor in the two storey section is supported on props, formed from old joist or roof rafters nailed to the joists.

Extensive wet rot in joists and joist ends noted throughout the two storey section.



### **Wall linings and ceilings**

Internally the water ingress from the roof has caused collapses of sections of the ornate plaster ceilings , cornicework and wall linings . Considerable evidence of rot noted with joist ends and sections of wall timber linings falling away and vegetation growing through the linings .

Internally the building is a very poor condition due to the long term water ingress , ceilings collapsing , ground first floors collapsed in areas with some temporary timber propping in place supporting the upper floor , roof and ceilings but overall we would consider the interior to be dangerous at this time.



## Conclusions & Recommendations

- Building 1 - to be demolished as part of the proposed development works
- Building 2 - adhoc building of poor construction, currently dangerous and should be demolished
- Building 3 - adhoc building of poor construction , currently dangerous and should be demolished
- Building 4 - adhoc building of poor construction, currently dangerous and should be demolished
- Building 5 - Newbrook House to be retained. however will require extensive repairs :
- Strip out of full internals of existing building , floors, wall linings and roof
  - Irrigate walls and allow to dry out , possible temporary roof over to be considered
  - Investigation and possible underpinning to front tower elevation
  - Removal of all boss render to facades
  - Strip roof coverings and remove all roof timbers
  - Removal of any timber safe lintels
  - Remove full internals to allow masonry façade to be retained
  - Partial demolition of rear single storey extensions beyond salvageable repair
  - Façade retention of two storey element may be required to preserve facade
  - Isolated structural repairs may be required – lintols / etc once collapsing interior elements have been removed , suggest further structural inspection post strip out.
  - Replacement interior fit out
  - Replacement roof structure and coverings
  - Chemical DPC installation
  - Replacement render repairs to façade
  - New concrete floor , dpm and insulation

Yours faithfully

Stuart Mitchell

Chartered Civil/ Structural Engineer

For Cowal Design Consultants Ltd

21-3406-R1



Appendix A – Site Plan



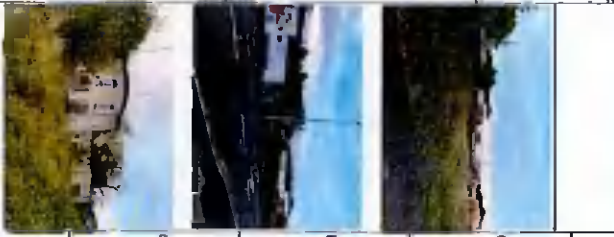


Site Plan

Scale: 1" = 20'

North Arrow

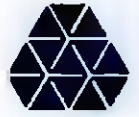
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(Symbol)	Existing Building Footprint
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(Symbol)	Existing Driveway
(Symbol)	Proposed Parking
(Symbol)	Existing Parking
(Symbol)	Proposed Fencing
(Symbol)	Existing Fencing
(Symbol)	Proposed Landscaping
(Symbol)	Existing Landscaping
(Symbol)	Proposed Utilities
(Symbol)	Existing Utilities
(Symbol)	Proposed Erosion Control
(Symbol)	Existing Erosion Control



**ardmore point**  
 10000 Ardmore Point Road  
 Suite 100  
 Dallas, TX 75244  
 Phone: (972) 440-1111  
 Fax: (972) 440-1112  
 Email: info@ardmorepoint.com

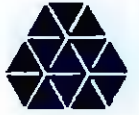
**Client:** Ardmore Point Community Club  
**Project:** Ardmore Point  
**Address:** 10000 Ardmore Point Road  
**City:** Dallas, TX  
**State:** TX  
**Zip:** 75244  
**Scale:** 1" = 20'  
**Date:** 08/20/2024  
**Drawn By:** [Name]  
**Checked By:** [Name]  
**Project Number:** [Number]  
**Revision Number:** [Number]

**Gregory Perry, Principal**



## Appendix B - Building 1 Photographs





## Appendix C - Building 2 Photographs











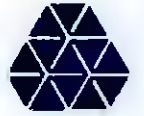


## Appendix D - Building 3 Photographs









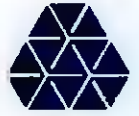
## Appendix E - Building 4 Photographs











Appendix F- Newbrook House Photographs



Eastern half of north elevation.  
Note crack running through left hand window on drum.



Rear wall looking west.

Note different stages of build, top storey wall leaning out due to pressure from roof structure (dangerous - to be removed as soon as possible).



South west corner.  
Significant vegetation damage at roof edge.



First Floor North Wall Behind Drum

Note timber propping suggesting significant rotten joist ends putting the saving of the roof structure in doubt.



**North wall of Drum Interior**

Attractive windows, surrounds and cornice to be saved if possible. Note timber props supporting the floor structure over, it is likely that a significant number of the joist ends are rotten to the point that the floor cannot be saved.



East Wall of North Room Behind Drum.  
Attractive apse moulding to be saved if possible (note timber props in foreground)



West Rear Corner  
Overgrown with vegetation





First Floor North Wall Behind Drum  
Windows and surrounds which should be saved if possible.  
Note timber propping suggesting significant rotten joist ends putting the saving of the roof structure in doubt.



**Detail of Internal Timber Lining**

This is typical of the interior lining in that it is soaking with the integrity of the timber material significantly compromised.



South West Rear Room

Note heavy disturbance of vegetation and water ingress at roof edge



Central Rear Room

Note timber propping - this roof structure is structurally dangerous and is to be removed.



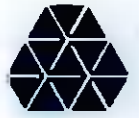
**East End of Rear Central Room**

Note severe water ingress in corner of room. Note original window in foreground at original back wall of building, before modern extension built.



West Front Room

Note propping of roof structure suggesting extensive rotten joist ends and requiring full removal.



## Appendix G- Drone Photographs



BUILDING 1





BUILDING 2



BUILDINGS 3 AND 4



BUILDING 3



NEWSHOOK HOUSE ROOF



NORTH FACE OF NEWBROOK HOUSE



ROOF OF NEWBROOK HOUSE



FULL ROOF OF NEWBROOK HOUSE



REAR EXTENSION OF NEWBROOK HOUSE