



Brynglas House

Structural Condition Survey Report

for

Newport Norse

Project Number: 11735

Date: May 2023

Rev: A

Content/Quality Assurance

1.0	Introduction	3
2.0	Structural Form	5
3.0	Condition	8
4.0	Assessment of Floors	13
5.0	Discussions	15
6.0	Conclusions	17
7.0	Recommendations / Further Work	18
	Appendix A – Listing Statements	19

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1.0 Introduction

- 1.1 Brynglas House is an early 19th Century Victorian building located on the hill overlooking Newport and is accessed off Brynglas Road. The building is positioned with 19th and 20th century urban developments to the south and west and a primary school to the north. There is a public park on the east side of the building, followed by woodland and a steep slope which banks down to the River Usk,.
- 1.2 Brynglas House is Grade II listed (Cadw Ref: 3003).



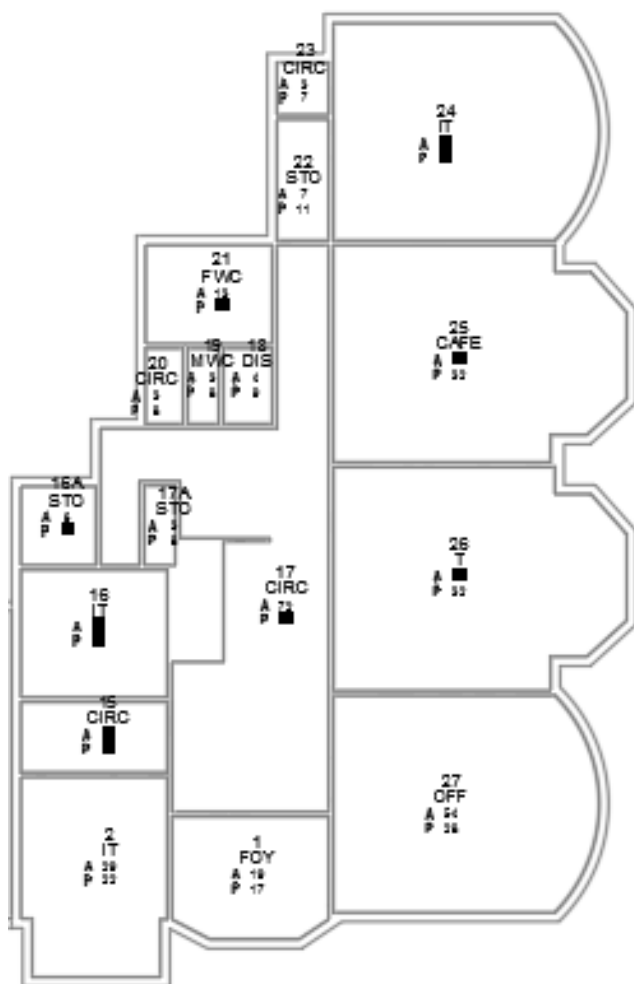
1.3 Brief and Scope

- 1.3.1 Mann Williams were appointed by Chris Gosling from Newport Norse to undertake a structural condition survey of Brynglas House which was vacated by the previous occupants (Newport County Council) in recent years due to reported concerns with the integrity of the building fabric and issues with water ingress. A preliminary walkover was undertaken on the 29th September 2022 by Tom Martin (Chartered and CARE Accredited Engineer) and Joshua Bird (Meng) of Mann Williams to scope requirements for opening up works and help direct the condition survey this report has been produced to document. The proposed opening up works were reviewed and approved by the Conservation Officer (Laura Smith – Newport County Council) prior to the visit.

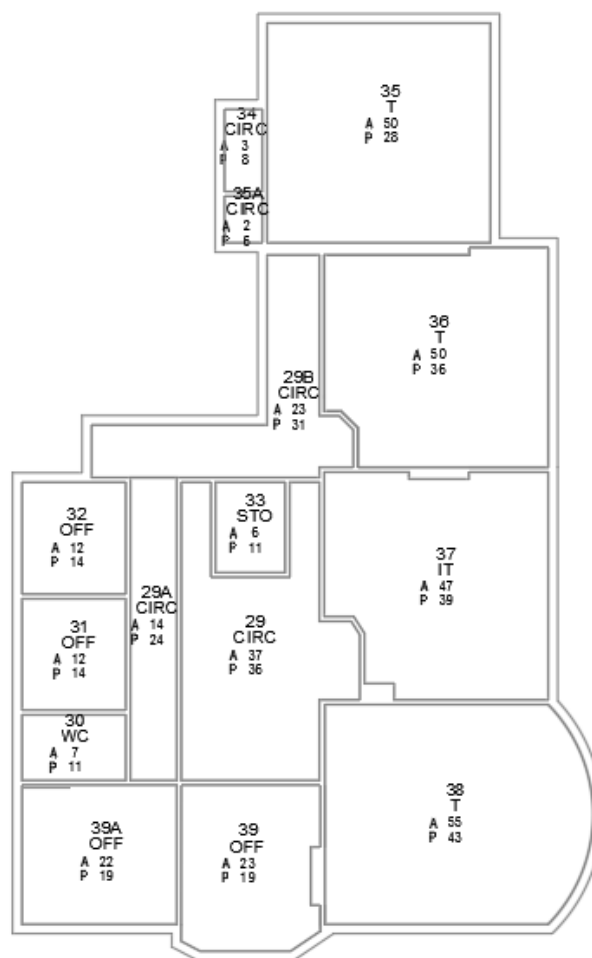
- 1.3.2 The scope of investigations / opening up works have been detailing in Mann Williams sketches 11735_001 and 11735_002. In summary, the opening up works are limited to the following:
- Localised removal of floor finishes to inspect the form and condition of floor structures (beams, joists etc).
 - Localised removal of plasterwork to permit internal inspection of lintels forming window openings, establish extent and depths of cracks through the masonry.
- 1.3.3 The inspections were isolated to rooms 24-26 at ground floor and, 35-38 at first floor
- 1.3.4 Joshua Bird undertook the structural condition survey on Tuesday 11th and Wednesday 12th May with assistance from Newport Norse operatives who undertook opening up works and provided access measures to inspection areas as required by Mann Williams.

1.4 Referencing

- 1.4.1 Where required, room references denoted on the plans below will be used to aid descriptions on condition and proposed recommendations.



GROUND FLOOR PLAN

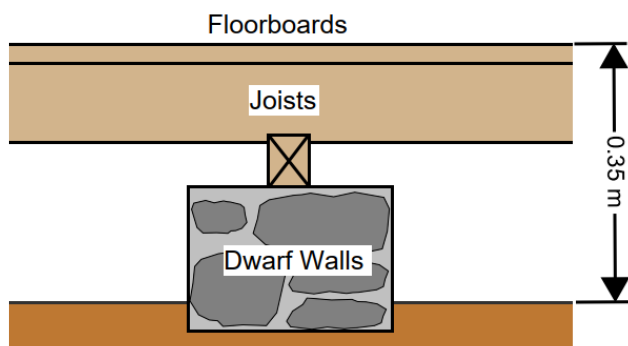


FIRST FLOOR PLAN

2.0 Structural Form

2.1 Ground Floor

- 2.1.1 The ground floor structure comprises 100x50mm good quality softwood / hardwood timber joists @ 600mm centres spanning onto 50mm timber bearers and rubble masonry dwarf walls @ 1000mm centres. Dwarf walls are built onto the ground buildup with appears to be well compacted granular material.
- 2.1.2 Floor joists are overlaid with 18mm thick timber tongue & groove floor boards.
- 2.1.3 The total build-up is 350mm from top of finishes to the underlying ground level. The ground floor is generally all on one level apart from room No. 24 which steps down approx. 800mm.

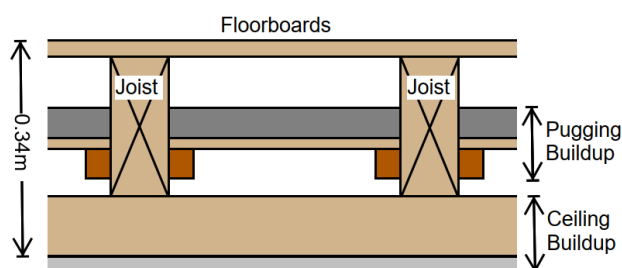


- 2.1.4 Below the floor of room No.26, a historic pipe runs from the centre of the west wall, towards the middle of the room then bends 90° to continue to the south of the building. The pipe sits within a 900mm deep trench, formed with rubble stone retaining walls on all sides, with stub masonry columns to support the floor joists / timber bearing members. Floor joists have been locally cut to permit passage of services.
- 2.1.5 Beyond the hatch the floor construction is the same as the general construction described above.



2.2 First Floor

- 2.2.1 The floor structure is of timber construction and comprises 240x65mm floor joists @ 350mm centres with a pugging (ash deafening) build-up spanning between joists and built off 50mm square battens nailed into bottom of joists.
- 2.2.2 The ceiling build-up consists of 75x50mm joists underlaid with a lath and plaster ceiling.
- 2.2.3 The total buildup depth from top of floor boards to top of lath and plaster is 340mm. The thickness of the lath and plaster ceilings was not confirmed during inspections.
- 2.2.4 In rooms 35-38, the floor joists spans are broken up by 1No. 300x300 beam (in each room). The connection of the joists into the beams was not confirmed during the inspections.
- 2.2.5 Beams are built into masonry walls either end.
- 2.2.6 All first floor timbers are good quality softwood / hardwood (Oak).



Note: Pugging or Ash deafening was traditionally used to provide sound insulation between floor levels and comprises a build-up of ash and small builders' rubble poured onto timber boards.

2.3 Roof

- 2.3.1 The roof is of timber construction, with a series of timber trusses generally spanning N-S onto masonry walls and 100x50mm timber common rafters forming the pitches or flat sections of roof. The ceiling comprises 100x50 timber joists underlaid with lath and plaster.
- 2.3.2 There is evidence that elements of the roof have been replaced in more recent years as suggested by spliced sections of rafters and localised repairs to one of the trusses (shown in the photograph).



2.3.3 Base of rafters connect onto timber wall plates spanning along the head of the masonry walls. Ceiling joists connect onto timber batten running along the inside of the wall plate.

2.3.4 The flat roofs along the border of the building are formed by additional 100x50 rafters connected back to the pitched common rafters. Flat roofs are boarded and overlaid with a roof membrane. The pitched roofs are finished with timber boards overlaid with a tiled roof build-up.

2.3.5 The roof is finished with slate tiles, with historic and modern lead flashing details. A masonry upstand runs along the perimeter of the roof which is backed and topped with lead or felt.



2.4 Walls

2.4.1 The load bearing walls of the building are of masonry construction typically 400-500mm thick and comprising 2 skins of brickwork with dressed stone detailing. It is unclear whether walls are solid / cavity walls. In 1No. location (shown in photograph) the coursing appeared to be poor.

2.4.2 Walls are internally plastered with decorative mouldings and skirting boards present along the borders of ceilings and floors respectively.

2.4.3 Structural openings (windows & doors) are all formed with timber lintels where observed.



3.0 Condition

3.1 Ground Floor

3.1.1 Generally, where inspected the timbers of forming the ground floor appeared to be in reasonable condition with no obvious signs of degradation observed.

3.1.2 The supporting masonry dwarf walls / columns where inspectable appeared to be generally sound and robust. No obvious defects or signs of movement within these supporting elements was observed during the inspection.

3.1.3 In room No.26, supporting masonry walls and stacks appeared in reasonable and robust condition with no obvious signs of defects.

3.1.4 There is some evidence of discoloration on the faces of the joists beneath room No. 26 which appears to be due to historic water damage / rising damp from the ground below. Timbers however were inspected to be generally sound and robust.



3.2 First Floor

3.2.1 Generally, where inspected the first-floor joists and beams where inspectable were generally in reasonable condition, with no obvious signs of deterioration observed. Where opening up works were undertaken, and localised boards were removed or locally cut the accessible joists / beams were probed with a screwdriver and were generally found to be robust and solid with no evidence of softening recorded.

- 3.2.2 There are several long horizontal and diagonal cracks (1-3mm crack widths) to the historic decorative plaster ceiling and perimeter mouldings below room 37 (ceiling of room 26). Similar cracking is present in the ceiling over room 24.



3.3 Roof

- 3.3.1 Where inspected the roof and ceiling structure was generally observed to be in reasonable condition however there are some localised areas of degraded / softened timbers. Water ingress is suspected to be an ongoing issue as suggested by the poorly performing roof finishes, missing lead flashings and localised defects in the parapets along the perimeter of the building. These items will be further described in sections below.
- 3.3.2 Discolouration of existing timbers is suggestive of previous and potentially ongoing water ingress issues which has/is likely degraded the robustness of the existing roof structure.



3.3.3 At the south bearing of the timber twin beams over the head of the southernmost curved bay window, the timber is significantly softened and deteriorated and is limiting the robustness of the roof support in this location. It took minimal effort to penetrate the beam with a screwdriver. The beams span the full width of the bay window and support the ends of the principal rafters supporting the roof construction and are therefore structurally significant.

3.3.4 The beams appear stable state however are of structural concern due to the risk of in the event of further deterioration as a result of water ingress.



3.3.5 The photos below show where original rafters have been cut at approx. 1m from the wall plate and new sections of softwood have been spliced (bolted) to the original timbers. Similarly, the trusses have been retrofitted with additional softwood sections which have been bolted to the side of the tie beams. The reasons for these works are unknown however may be suggestive of previous repair works undertaken to the roof structure.



- 3.3.6 The existing roof finishes appear to be in reasonable condition. There are localised areas where the roof finishes are in poor condition with existing flashings failing or missing and permitting water ingress to the structure below.

- 3.3.7 At the north west corner of the roof, the upper course of brickwork leaf has collapsed inwards leaving the corework and backing to façade stonework exposed and vulnerable to weather attack. The masonry in its current condition appears stable however continued deterioration is likely to cause issues such as degradation of bedjoints / stonework.



- 3.3.8 The roof coverings behind are in poor condition and likely not performing adequately with regards to draining the roof to the nearest outlets.

3.4 Ground Floor

- 3.4.1 Generally, the external masonry fabric, is in reasonable condition however there are some areas of cracking around windows indicating localised degradation or movement within the masonry. These defects are described further in the sections below. No inspections were undertaken to remove external patches of render to allow a sufficient inspection of the masonry or lintels externally.

- 3.4.2 Internal timber lintels were exposed during the inspections and were confirmed to comprise of 100mm deep timber lintels. Where exposed the lintels were generally in sound condition with no significant signs of softening or degradation. Lintels beyond the internal face were not exposed and therefore not inspectable during the visit.



- 3.4.3 Masonry over the top of the southernmost bay window is showing signs of distress by means of a long crack in the render along the top of the windows. The causes for the cracking were not identified during the inspections however the issues appear stable in their current condition. However further weathering of the finishes is likely to permit water ingress through the walls with the potential to cause deterioration to the masonry fabric leading to further cracking / loss of historic fabric.



- 3.4.4 Along the border of the roof, the lead flashing has been historically removed by vandals. Where the lead flashing is missing, the projecting string course stones are degrading and delaminating at high level. Stones appear stable in their current condition however continued weathering is likely to degrade stones further resulting in further loss of historic fabric.

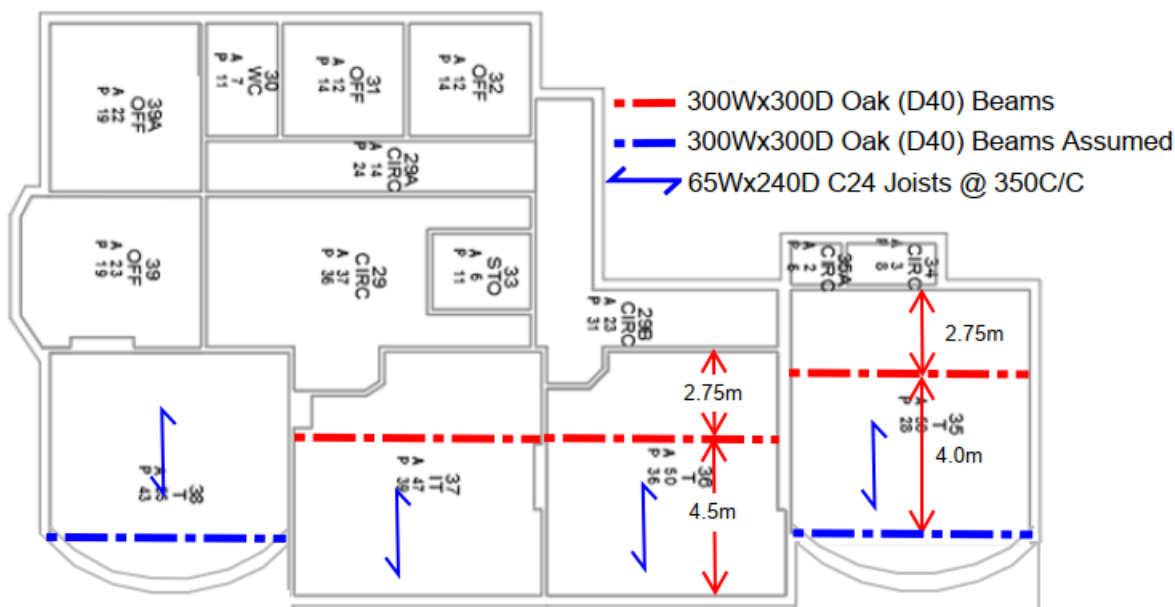


- 3.4.5 In 1No. location, at the entrance to room no. 36, cracking was observed in the plasterwork at the crown and up the internal elevation of the 1 brick thick masonry arch. On removing a localised patch of the plasterwork, the crack was confirmed to continue through the full thickness of the arch. Stones were locally loose and at risk of falling if left unsupported therefore a prop was installed to the underside of the arch to hold brickwork in place until remedial works can be undertaken.



4.0 Assessment of Floors

- 4.1 A general numerical analysis of the first and ground floor slabs has been undertaken considering the worst case beam and joists span measured during the site inspections. The data for the analysis has been based on site measurements and photograph taken during opening up works. Where assumptions have been made regarding material properties and loadings these have been noted.
- 4.2 The analysis aims to assess the allowable imposed (occupation) area loads based on calculated self weights and allowance for finishes, ceilings and services;
- 4.3 Two elements of the timber floors have been checked:
 - Timber beams.
 - Timber joists.
- 4.4 No analysis has been undertaken on the tongue and groove boards to all slabs.
- 4.5 The timber elements have been analysed as fully restrained simply supported beams. Their stresses have been limited, under factored loads (as per BS EN 1990), to a characteristic stress based on recommendations in BS EN 1995 for the respective timber grades, partial material factors and medium load duration. Allowable live loads have also been assessed based on limiting the deflection limits of the beams to modern standards for live loading only i.e. span/360. All analysis was undertaken in accordance with modern Eurocodes considering modern factors of safety.



4.6 Material Properties

- 4.6.1 Given the age of the timber it is reasonable to assume that the floor joists are made from an equivalent to modern C24 timber. Beams within the floor build-up, considering the measured sizes are likely made from D40 hardwood, most likely oak
- 4.6.2 Beams generally span 7m from north to south, and joist spans vary from 2.5-4.5m. Analysis and allowable live loading results will be based on the maximum spans of each element.
- 4.6.3 The following timber properties have been assumed in accordance with Eurocode 5.

Table CD1.1 Properties of solid timber grades BS EN 338:2003^a

		Poplar and softwood species ^a										Hardwoods						
		C14	C16	C18	C20	C22	C24	C27	C30	C35	C40	D30	D35	D40	D50	D60	D70	
Strength properties (N/mm²)																		
Bending	$f_{m,k}$	14	16	18	20	22	24	27	30	35	40	30	35	40	50	60	70	
Tension parallel to grain	$f_{t,0,k}$	8	10	11	12	13	14	16	18	21	24	18	21	24	30	36	42	
Tension perpendicular to grain	$f_{t,90,k}$	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
Compression parallel to grain	$f_{c,0,k}$	16	17	18	19	20	21	22	23	25	26	23	25	26	29	32	34	
Compression perpendicular to grain	$f_{c,90,k}$	2.0	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	8.0	8.4	8.8	9.7	10.5	13.5	
Shear parallel to grain	$f_{v,k}$	1.7	1.8	2.0	2.2	2.4	2.5	2.8	3.0	3.4	3.8	3.0	3.4	3.8	4.6	5.3	6.0	
Stiffness properties (N/mm²)																		
Mean MOE parallel to grain	$E_{0,mean}$	7000	8000	9000	9500	10000	11000	11500	12000	13000	14000	10000	10000	11000	14000	17000	20000	
5th percentile MOE parallel to grain	$E_{0,05}$	4700	5400	6000	6400	6700	7400	7700	8000	8700	9400	8000	8700	9400	11800	14300	16800	
Mean MOE perpendicular to grain	$E_{90,mean}$	230	270	300	320	330	370	380	400	430	470	640	690	750	930	1130	1330	
Mean shear modulus	G_{mean}	440	500	560	590	630	690	720	750	810	880	600	650	700	880	1060	1250	
Density (kg/m³)																		
Characteristic density	ρ_k	290	310	320	330	340	350	370	380	400	420	530	560	590	650	700	900	
Mean density	ρ_{mean}	350	370	380	390	410	420	450	460	480	500	640	670	700	780	840	1080	
Notes																		
^a These properties are compatible with timber conditioned at a temperature of 20°C and a relative humidity of 65%.																		
^b BS EN 338 also gives values for C45 and C50.																		

4.7 Permanent Loading

4.7.1 Permanent actions on existing structural members have been established in accordance with Eurocode 1 – Actions on Structures. Permanent actions from the existing carpeting, tongue & groove flooring, pugging and ceiling and secondary timberwork have been considered in analysis. The total assumed permanent loading is 1.75kN/m². Refer to the calculations in the Appendix give a detailed breakdown of the loads assumed.

4.7.2 Loads from the pugging within the floor joists has been assumed based on a modern equivalent product (Hush Fill 60).

4.8 Results

Member Type	Notes	Uniformly Distributed Load (UDL) (kN/m ²)	Point Load (PL) (kN)
Joists	Size - 65x240mm Softwood Grade C24 Based on max. 4.5m span.	M – 8.5 (5.6) D - 5.5	M – 5.3 (3.5) D - 5.4
Beams	Size – 300x300mm Hardwood Grade D40 Based on max. 7.0m span.	M - 3.2 (2.1) D –1.2	M – 18.3 (12.2) D - 18.3
Joists (Ground Floor)	Size – 100x50mm Softwood Grade C24 Based on max. 1.0m span	M - 17.5 (11.6) D – 17.5	M – 5.1 (3.4) D – 5.93

Note: M & D denote which calculation has output the allowable live loading, where M is the moment (flexural) calculation, D is the deflection calculation. Values in brackets allow for a Factor of safety of 1.5 applied to the flexural capacities in accordance with the Eurocode Limit State Design. Values in red denote the lowest allowable live load value where either the moment or deflection of the members govern. Generally, the moment capacity of the beams will be considered as the most onerous.

5.0 Discussions

5.1 Historic Occupancy

- 5.1.1 As described in the listing statements in the Appendix, the historic use of Brynglas House has varied since construction. Prior to the first world war the property was residential with likely occupancy area loads of $1.0\text{--}2.0\text{kN/m}^2$. During the first world war the building was utilised as a military hospital although the extents of hospital facilities across the building are unknown however floors may have seen occupancy loads of between $3.0\text{--}4.0\text{kN/m}^2$. Similarly in the 1920s the building was used as a school therefore may have seen classroom occupancy loads of approx. 3.0kN/m^2 . Until recently, Brynglas house was occupied by Newport Council and rooms at first and second floor were used predominantly as Office spaces with some light book storage. We anticipate that more recent floor loads are in the region of $1.5\text{--}2.0\text{kN/m}^2$.
- 5.1.2 It is suspected that the cracks in the historic plaster ceiling below room 37 is a result of historic deflection of the beams and underlying ceiling joists. The beams are numerically suitable for imposed UDLs of 1.2kN/m^2 when considering the beam as a fully restrained, simply supported beams.
- 5.1.3 However, the results of the analysis are likely conservative, and the limited distress and high historic loading suggests the actual current capacity is likely to be higher than the calculated capacity. The following assumptions have been made during analysis which are likely conservative:
- Simple supports have been assumed. Beams are likely to be built in and therefore partially fixed.
 - Secondary load paths provided by stiff elements such as floorboards and plaster ceilings have been ignored.
 - Timber properties based on modern Eurocode values, reduced using modern material factors of safety.
- 5.1.4 Considering the various changes of use described previously it is assumed that the numerical deflection capacity has been exceeded at some point during the buildings history thereby causing the cracks. The ceilings of rooms 35,36,38 are showing less significant evidence of cracking however these ceilings are considered to be of lower significant than the decorative ceiling in room 37.

5.2 Proposed Occupancy

- 5.2.1 The results of the numerical analysis denote that the overall performance of the first floor is governed by the deflection and moment capacity of the floor beams. The joists are currently sufficient for a variety of uses up to an allowable imposed loading of 5.5kN/m^2 .
- 5.2.2 The ground floor slab is likely suitable for most applications as joists are suitable for imposed loads up to approx. 17kN/m^2 . No analysis has been undertaken on the supporting dwarf walls, underlying ground materials or foundations therefore higher occupancy loads are likely requiring further investigations and analysis of these elements.

<u>Load Type</u>	<u>Uniformly Distributed Load (UDL) (kN/m²)</u>	<u>Point Load (PL) (kN)</u>	<u>Requires Strengthening? Yes / No</u>
Residential, hotel with kitchen & toilets (Category A)	1.5-2.0	2.0-3.0	No
Office (Category B), Communal (Category B), Storage (Category E)	2.0-3.0	1.5-4.5	Yes
Classroom / Café	3.0-4.0	3.0	Yes



5.2.3 A series of architectural layouts for one potential arrangement of Brynglas House has been developed by AWW architects which describes using building for private residences / hotel accommodation, with localised communal, storage and office areas. Considering the allowable occupancy loads noted in Section 4.0, proposals at first floor are feasible with potentially minor strengthening to the existing floor beams. If the communal area in room 37 is moved to the ground floor this will avoid requirements for more significant strengthening to the beam in this room.

6.0 Conclusions

6.1 Structural Condition

- 6.1.1 Generally where inspected during the site visit, the structural elements (beams, joists) of the suspended floors (ground and first floor) were in good to reasonable condition with no significant defects or evidence of deterioration observed during the visit. As such no significant structural interventions are required to reinstate the existing floors.
- 6.1.2 Where inspected the roof structure was observed to be in reasonable condition, with most of the timberwork (trusses, rafters, ceiling joists) showing no obviously concerning defects in need of immediate structural intervention. Evidence of water ingress was observed locally and issues with the existing roof finishes are likely to cause further water ingress with the potential to degrade the structural elements and compromise the localised integrity of the roof. Recommendations will be made for further inspection and maintenance of the roof finishes.
- 6.1.3 The walls of the building were generally in reasonable condition however there are some obvious localised defects which were not quantified or inspected further during the visit. Where lintels were inspected, they were generally in reasonable condition with no obvious evidence that these are causing defects in the surrounding masonry. Continued cracking and potential loss of patches of render is likely to accelerate the degradation of the masonry fabric with the potential to permit water ingress which could cause damp and damage to internal finishes. We recommend works are undertaken to resolve existing defects to mitigate risk to the historic fabric.
- 6.1.4 Assessment of Floors
- 6.1.5 The first floor is generally suitable for residential / light office use however considerations will need to be made for strengthening to the beams to increase capacities and mitigate potential deflection issues which has caused previous issues with the suspended ceilings. .
- 6.1.6 The ground floor is likely suitable for heavier occupancies such as communal rooms, classrooms, dining facilities (café) or light gallery spaces. As stated previously, significantly higher occupancy loadings may require further investigation to establish the ground conditions and form and condition of the sub-structure.

7.0 Recommendations / Further Work

- 7.1 As part of the regeneration of Brynglas House we recommend the following works are undertaken to secure the integrity of the listed building and/or enhance the existing structural performance to suit the proposed refurbishment and change of use:
- 7.2 Walls
- 7.2.1 For the external walls, no specific causes of the cracks in the render have been identified therefore we recommend the cracks in the render are repaired as part of a full render repair to the building.
- 7.2.2 During the render repair works, we recommend that once render is removed from around window heads, an engineer is to be approached to inspect the form and condition of the external lintels (timber / steel) and exposed masonry. If lintels are found to be degraded, we may recommend that these are replaced with precast concrete at the time for improved performance and longevity.
- 7.2.3 Consideration should be given to replacing the flashing along the projecting string course along the perimeter of the roof with specific considerations to waterproofing.
- 7.2.4 For the internal arch, we recommend the arch is repaired and an allowance is made for installing 4No. 600mm long stainless steel pins, and repairing cracks on the front and rear elevations by installing 4No. 1m lengths of stainless steel bed joint reinforcement (Helibar or similar approved) and bedding in lime mortar. Once repair works have been completed the existing prop can be removed.
- 7.3 Roof
- 7.3.1 We recommend that the existing roof finishes are inspected by a conservation accredited architect / contractor and a schedule of required repairs is produced with consideration to reinstating water tightness and integrity of the roofs.
- 7.4 Floors
- 7.4.1 No works are currently recommended to the joists considering the currently proposed occupancy loads. If higher loads are desired beyond the noted member capacities, strengthening works can be proposed as required.
- 7.4.2 To improve the deflection and moment capacity of the existing floor beams, we recommend strengthening works are undertaken. To strengthen the beams, we propose setting and fixing a steel T section into the top face of the beams which will improve the overall performance under live loads. Steelwork will be specifically designed to achieve the desired occupancy loading. Following strengthening of the beams, we recommend that the plaster ceilings are repaired. The decorated ceiling in particular should be repaired by a suitable plaster contractor. Repairing plaster prior to beam strengthening may risk the defects coming back.

Appendix A – Listing Statements

The following extracts have been taken from the Full Report for Listed Buildings register on the Cadw website.

History

Originally built in 1834 for Edward and John Alfrey who owned the brewery housed in Newport Castle. House was substantially rebuilt in 1877 by Thomas Cordes MP for Newport and it remained in the family until 1890. Used as hospital during the 1914-18 First World War and purchased by Newport Council in 1922 for use as school. Still in Council ownership, it has been a Community Centre since 1974. Malpas Tithe Map of 1840 shows Bryn Glas as a large roughly rectangular house with a W rear range. The OS map surveyed 1881 shows it as roughly U-shaped with the E garden frontage as the central section, the grounds descending to the Great Western Region Railway, the Monmouthshire section of the Eastern Valleys Line running alongside the River Usk. The rear service wing including kitchen and servants quarters was demolished. Photograph of 1890 shows the central section originally had balustraded parapets at main roof level and to the canted bays, with pediment heads over the 2nd and 5th upper floor windows, and further stacks.

Exterior

Classical mansion. Two storeys. Originally of stucco with ashlar dressings, now wholly painted. Very shallow pitched hipped roof of Welsh slate with central narrow rectangular stack, only readily visible above E elevation. Entrance frontage to S: a central canted bay with windows to each face, flanked on each side by a single window range. Raised end pilasters, corniced parapet and platband separating the storeys. Central flat-roofed portico in front of a round-arched moulded doorway, with entablature, slender Ionic columns and rear pilasters. Wide single storey ground floor bay projects to left. Original glazing was 12 pane-sashes with slender glazing bars, narrow sills; some glazing altered. Extensive E-facing garden frontage. Central projecting 6-window range - three 12-pane windows each above two wide canted ground floor bays with large sash windows, tripartite to centre, some glazing bars lost. The bays are separated by a narrow round-arched niche. At each end are bowed 3-window ranges of large first floor 12-pane sashes and long full-height ground floor 15-pane sashes. End pilasters, platband and shallow roof cornice and parapet. N-facing elevation has a similar 3-window range of large sashes.

Interior

In spite of later institutional use, interior contains a range of C19 fittings and furnishings, including shutters to almost all the windows, panelled reveals, door surrounds with paterae, decorative plasterwork, marble fireplaces. The 5-sided porch has an encaustic tiled floor and the glazed lobby entrance has decorative plasterwork of side pilasters with egg and dart cornice and narrow Ionic scrolls, acanthus leaf coving and anthemion cornice to the ceiling. The main hall has a wider coloured range of decorative floor tiles, similar plasterwork, piers with similar narrow capitals. Corridor with a series of heavy moulded bracketed plaster arches gives access to the main reception rooms of the garden frontage; panelled cupboards on the inner rear wall. Room 1(former library) with front and garden elevations has decorative plasterwork cornice, panelled reveals and shutters to the long windows of the bowed garden wall. Room 1A on the other side of the hall (former morning room) has bay window to front and door to former conservatory to side; some modest decorative plasterwork. Room 2 (former music room) has an elaborate and delicate gilded and painted wooden chimney-piece incorporating mirrors resting on a white heavily carved marble fireplace; the painted decoration here and on the ceiling is derived from Roman classical motifs popular in the late C18-early C19 Pompeian style, also a 3-banded ceiling cornice of classical motifs. The window bay recess is framed by fluted columns with Ionic capitals and pilasters against the wall; low panelled dado and entablature over door. Coffee bar (former dining room) has an elaborate heavily carved brown/grey marble fireplace incorporating pre-Raphaelite style tiles, heavy billet-moulded cornice and heavy brackets to the bay window recess. Room 3 to rear was butler's pantry. Room 4 at end (former billiard room) has two frontages and is at a lower level; former dressing room off.

Open well staircase of dark wood with twisted balusters and decorative treads ends rises to a landing newel under an arcade of 3 round-headed arches and round columns with shallow capitals and similar cornice. Tall round-arched staircase window with fluted surround and brackets and millennium glazing. Main first floor rooms lead off the L-shaped landing/corridor. These have less elaborately moulded plasterwork and mainly plain pale marble classical style fireplaces; smaller former service rooms off rear passage

Reason for designation

Listed as an early Victorian mansion with added historical interest for its connections with the Allfrey and Cordes families. Group value with Brynglas Gardens adjacent.