Ventro
Aquilam House
7 Darklake View, Plymouth
PL6 7TL

FRAEW/PAS 9980 report

St Tydfils Court,
10 Caedraw Road,
Merthyr Tydfil,
CF47 8HP

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1. Introduction

Merthyr Valley Homes have instructed Ventro to undertake an inspection which identifies the cladding material, investigates the materials used in the façade sub-structure construction behind the cladding and other areas of interest and, subsequently, compile a FRAEW (Fire Risk Appraisal of External Walls) report in accordance with PAS 9980:2022.

A non-intrusive site visit was carried out on 17th August 2022. An intrusive survey was carried out on 25th May 2022 – this report considers the findings of the intrusive survey completed by Ventro.

The purpose of this document is to inform the Fire Risk Assessment of the property. Any findings from this report should be incorporated into the Fire Risk Assessment of the property – the findings of this report may require the risk rating to be re-visited.

The non-intrusive survey and PAS 9980 report has been compiled by Thomas Barry TIFireE, MIFSM, AMIFPO, CFRAR, FireACQP.

2. Limitations

The construction of the PAS 9980:2022 guidance is such that it possesses certain limitations when compared with other methods of assessing the external wall construction of a building. These include:
a) It is intended primarily to inform the buildings fire risk assessment.
b) It cannot warrant absolute safety, as it will be risk-based and therefore reliant on professional judgement
c) It might not be possible to identify the full scope of work needed as part of the FRAEW from the outset, as the conclusion might be that a further inspection or in-depth technical assessment Is needed.
d) It is not specifically intended to address protection of firefighters
e) It is not intended to address property protection.
f) It can only be based on available industry knowledge at the time of FRAEW and more definitive information on the fire performance or external wall construction might come to light subsequently.

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3. Description of Building

St Tydfil's Court is a twelve-storey purpose-built block of flats providing independent living for elderly residents. There are 66 flats located within the building; 6 flats per floor. A Neighbourhood Services Manager on site Monday to Friday typically between 08:30-12:30hrs.

Each floor is served via a common corridor which is accessed via a single stairway and two lifts. A shared communal day room is provided on ground floor. A manager's office, a recycling store and storeroom are also provided on the ground floor. Electrical service cupboards are provided on each floor. External surface cladding comprises Rockwool panels (fire rating A1) mechanically fixed to the wall with a thin topcoat of render (mix of cement and silicone) directly onto the insulation panel (fire rating A2). Rockpanel decorative panels are mechanically fixed (rivets) on metal track system, over the rainscreen board. Decorative panels have a 38mm gap between them and the insulation (system fire rating A2). Rainscreen Boards are Kingspan Kooltherm K15 Rigid thermoset fibre-free phenolic National (Classification Class 0 when tested to BS 476. Part 6 and 7). Internal walls are a mixture of brick/blockwork and stud plasterboard partitions. The staircase is constructed of concrete. The roof is flat. The property is constructed of 1960's. Wimpey "no fines" concrete frame construction

Openable windows are provided within the staircase of the property. Common corridors serving flats are not provided with automatic opening vents. A communal fire warning system is installed comprising of an addressable panel, automatic fire detection and manual break glass call points are provided within the communal escape route and high-risk rooms – the system appears to be an L2 system in accordance with BS5839-1. The communal fire warning system extends into individual flats. The fire warning system is linked to an alarm receiving centre. A sprinkler system is provided – with sprinkler heads being located within the common area and self-contained flats. An emergency lighting system is provided and has been installed in accordance with BS5266-2016. Communal fire doors appear to be certified FD30S doorsets comprising of timber which measures at 44mm, indicative of 30 minutes fire resistance. Flat entrance doors have been subject to replacement and appear to be certified FD30S doorsets. Doors are provided with x3 fire rated hinges and intumescent strips/cold smoke seals. A lighting protection system is provided. A dry rising main is provided on each floor. Fire doors are provided with "Fire Door Keep Shut" signage as required. A premise information box is provided on the ground floor within the circulation space – no information was reviewed as part of this survey. No directional signage or fire action notices were observed during inspection. The property operates a dual policy – simultaneous evacuation from the shared communal facilities, stay put within flats.

Three exits are provided at ground floor level. Ancillary accommodation has independent means of entrance/exit, separate from the common area.

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4. External Wall Systems and Building Construction

The property is of concrete frame construction and has multiple external wall types including: a render system with rockwool insulation, aluminium composite spandrel panels and Chamaeleon rock panel rainscreen cladding. All wall types appear to be applied to a structural precast pebble dashed concrete. Panels which are attached to the substrate. 110mm mineral wool insulation is provided within all wall types within the concrete structure. The construction of the façade is primarily an insulated render system installed to the face of an existing concrete façade construction. The existing structure is of relatively low risk double masonry construction, and the retro fitted insulated render system is laid to a non-combustible insulation.

As detailed within PAS 9980:2022, the configuration of external wall systems within property, paired alongside the fire performance of related system, should be reviewed to take a holistic view to fire safety within the property. See table below – existing external wall types have been categorised into “Positive, Neutral, Negative”.

Positive	Neutral	Negative
-110mm mineral wool insulation behind all wall types. -double masonry construction with no cavity. -Render construction & insulation - non-combustible. -Chamaeleon rock panel rainscreen cladding – non-combustible. - The risk of surface spread of flame is minimal in this façade construction. -ACM spandrel panels begin approximately 5m from ground level.		-Building greater than 18m. -Aluminium composite spandrel panels – combustible. -Spandrel panels run entire height of building. -Cavity barriers not installed within Chamaeleon rock panel rainscreen cladding system.

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5. Existing Fire Safety Arrangements

As detailed within PAS 9980:2022, existing fire safety arrangements within the property should be reviewed to take a holistic view to fire safety within the property. This includes fire strategy design and the existing Fire Risk Assessment of the property. See table below – existing fire safety arrangements have been categorised into “Positive, Neutral, Negative”

Positive	Neutral	Negative
-Site is managed with trained staff. -Fire warning system is connected to an ARC. -Sprinkler system provided within the common area AND residents flats. -Flat entrance doors have been subject to replacement with certified FD30S doorsets. -Programme of works underway to remediate internal compartmentation.	-Dry rising main. -Fire service access is adequate.	-No access to flats to ascertain levels of fire detection. -No access to suspended ceiling void to review levels of compartmentation.

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6. Executive Summary

To summarise, the risk of surface spread of flame is minimal in this façade construction. The majority of the external wall is constructed from non-combustible materials. Risk of fire spread is low considering the isolated nature of the non-compliant façade types. The building has a sprinkler system provided within flats and communal areas.

This property has been given a **"Medium/Tolerable"** risk rating. Whilst there are non-compliant wall systems present (ACM spandrel panels), the locations of which are adjacent to communal areas where the risk of ignition is minimal. There are window opening within close proximity of the non-compliant ACM spandrel panels, however, a state of flashover would have to occur in order to propagate enough heat to ignite the spandrel panels by which point, operational fire service crews would have control of the site. There is adequate construction between the communal areas and self-contained residential apartments to instruct a stay put policy unless instructed otherwise by the fire and rescue service.

7. Recommendations

-Update Fire Risk Assessment with the findings of this report to ensure it is "Suitable & Sufficient" in accordance with the Regulatory Reform (Fire Safety) Order 2005.
-Consider non-compliant ACM spandrel panels during future refurbishment.
-Install cavity barriers to Chameleon aluminium rain screen system.
-No access was obtained to review fire alarm system within flats. Consideration should be given to upgrading fire warning systems within flats to Grade D1:LD1 systems, if not installed already. Heat detection should be provided in locations adjacent to the spandrel panels or locations that would be subject to false activations. This system should be linked to the communal system so staff can investigate accordingly, in the event of an activation. This allows the local F&RS to be alerted at the earliest opportunity.

This FRAEW should inform the existing Fire Risk Assessment of the property, in accordance with the recommendations of PAS 9980. This assessment may change the existing risk rating awarded via the Fire Risk Assessment. The FRAEW and FRA of the property should be reviewed post completion of any recommendations within this report.

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8. Photographs

Spandrel panels run vertically the entire height of building in an isolated location.

Addressable panel installed which is connected to an alarm receiving centre.

Area adjacent to non-compliant wall system was free from ignition sources and combustible materials during inspection.

Sprinkler system is installed within communal area and self-contained flats. This is unusual in accordance with the British Standard.