


**REPORT ON VISUAL ASSESSMENT FOR THE PRESENCE OF RAAC
CONCRETE WITHIN SALTASH TOWN COUNCIL ESTATE**

FOR

SALTASH TOWN COUNCIL

Prepared By: James M Barron MRICS	Date: 22 September 2023	Rev: A 6 October 2023
Checked By: 	Job Ref: 4310	



- Chartered Building Surveyors
- Project Managers
- Property Inspections
- Architectural Design

62C Larkham Lane | Plympton | Plymouth | PL7 4PN
Tel: 01752 257064 | **Email:** james@barronsurveying.co.uk
Website: www.barronsurveying.co.uk



SECTION ONE

- Instructions and Introduction

SECTION TWO

- Report Findings

SECTION THREE

- Photographs



SECTION ONE

Instructions and Introduction

1.1 Instructions

Instructions were received from Ms S Burrows, Town Clerk at Saltash Town Council under cover of Barron Surveying Services email 5 September 2023.

Instructions are to undertake a visual inspection of the Saltash Town Council estate buildings and provide a brief report on the likelihood of the presence of RAAC concrete. That report then to be referenced by Saltash Town Council across their property maintenance 5-year plan and stock condition schedules.

This Revision A report now encompasses Saltash Library.

1.2 Inspection

An inspection of the estate of property listed within this report has been carried out on Friday 22 September 2023 with access arrangements being made through Saltash Town Council.

Saltash Library was visited separately on 6 October 2023.

1.3 Surveyor

The inspection and this report has been conducted by James M Barron MRICS. James Barron is a Chartered Building Surveyor and Member of the Royal Institution of Chartered Surveyors Registration Number 0102368.

1.4 Limitations to Inspection

The inspection is a visual assessment of the accessible building fabric undertaken from inside and outside each building.

The inspection will be conducted from ground level externally with the assistance of a 3m surveyor's ladder where required.

No opening up or destructive inspection work has been carried out at this stage.

If the presence of RAAC concrete is suspected, further opening up and destructive inspection work may be required and that will be recommended, if felt necessary, in this report.



The inspection of the properties is for the sole purpose of assessing the likelihood of the presence of RAAC concrete. No other aspects of building condition will be referenced in this report.

1.5 RAAC Concrete

Reinforced Autoclaved Aerated Concrete (RAAC) is a particular form of reinforced concrete.

The material was in use generally from the 1950s to the 1990s in the UK although was used earlier in other countries.

RAAC concrete is approximately one third the density of ordinary cement concrete and is formed with aluminium additive creating voids within the mix. The end product is less durable and dense than ordinary concrete, but was widely used in construction because of its lightweight and relative ease of working.

RAAC concrete was predominantly used within education and public buildings. It is generally unusual to find RAAC concrete in a domestic setting.

Typically, RAAC concrete is used for roofing structures and also some wall cladding. Less commonly, RAAC concrete was used as a flooring structure.

RAAC concrete is typically formed in reinforced planks. The planks are typically 600mm wide and can be up to 6m in length. The planks are recognisable by a regular formation and light grey colour with a characteristic 'V' joint groove where each plank intersects.

The planks are abutted one against the other with the joint between bonded with reinforcement bar and grouted. For roofing applications, the planks are commonly waterproofed from above without use of screeding.

Importantly, RAAC concrete will not be identifiable unless the material itself can be physically seen. If the top surface is waterproofed and the underside decorated, then the presence of RAAC concrete will be concealed and unidentifiable without destructive core sampling.

The RAAC planks typically have a pattern of metal reinforcement cast within the concrete at construction. The arrangements of reinforcement bars is critical for the performance and durability of the RAAC planks.

The RAAC planks will sit upon bearing structures, commonly external walls or other supports. The adequacy of the end bearing for RAAC concrete planks is critical. Typically, transverse anchoring reinforcement bars are cast into the plank ends which are important to allow the reinforcement to properly perform within the concrete mix.



Common defects with RAAC concrete are:

- Site builders' cut plank ends removing the integrity of the end-bearing by destroying end-bearing reinforcement.
- Penetrations formed through the planks. The concrete is easily drilled or cut so penetrations though are simple to form and commonplace.
- Cracking across the plank and deflection across the plank span.
- Shear cracking and deterioration of plank end-bearings.
- Water penetration into the plank from deficiencies with the waterproofing layers above, typical for roofing situations.
- Overloading of the concrete planks either by installation of equipment above or by suspension of equipment or services from below.

The nature of RAAC planks is that, when inserted side-by-side in a roofing or flooring situation, there is little load sharing between the planks. Consequently, any load imposed upon a single plank can quite quickly cause significant deflection and eventual failure of the structure.

Recently, RAAC concrete has become very topical following a sudden failure of a RAAC roof in a school environment some years ago. It is becoming increasingly understood that RAAC planks can fail suddenly and without any obvious decay or visible warning. That failure is typically a failure at end-bearings where the plank will no longer receive support and will suddenly collapse.

Survey work and analysis continues into RAAC concrete industry wide. It is important to understand that RAAC, in itself, is not a defect, but the limitations and durability of this building material must be understood. RAAC does not, by default, need to be removed by its simple presence in a building, but any RAAC identified will need to be monitored and its condition assessed appropriately.

1.6 Saltash Town Council Estate Surveyed

The following buildings have been assessed in this report.

- 1) Saltash Guildhall, Fore Street, Saltash PL12 6JQ
- 2) Maurice Huggins Room, Callington Road, Saltash PL12 6LA
- 3) Longstone Park Depot, Longmeadow Road, Saltash PL12 6DW
- 4) Waterside Public Toilets, Tamar Street, Saltash PL12 4EJ
- 5) Alexander Square Public Toilets, Saltash PL12 6AN
- 6) Longstone Public Toilets, Saltash PL12 6DW
- 7) Belle Vue, Bell Vue Road, Saltash PL12 6ES
- 8) Heritage Building, Lower Fore Street, Saltash PL12 6JQ
- 9) Saltash Library, Callington Road, Saltash PL12 6DX



SECTION TWO

REPORT FINDINGS

2.1 Saltash Guildhall, Fore Street, Saltash PL12 6JQ

Within the limitations of this assessment, no RAAC concrete materials have been identified and the risk from RAAC concrete is negligible.

2.2 Maurice Huggins Room, Callington Road, Saltash PL12 6LA

This building is most likely to have a concrete flat roof structure which is underlined inside with timber battens and plasterboard and has a sheet metal roof covering across.

A small test drill hole was formed with a light fitting removed in this room with Town Council staff present. This small exposure area was not conclusive as to the nature and consistency of the concrete.

We recommend a more through test inspection to determine the nature of the concrete roof at this building.

This can be done either from inside by removing a section of ceiling or perhaps more easily from outside by cutting through a section of overhanging soffit. You would need to check your asbestos register first to ensure that the soffits are not asbestos containing materials before test sampling through.

Once the plasterboard or soffit material is removed, that should expose the concrete structure where a test drill could be carried out. If the concrete is dense, it will not be RAAC.

In summary, for this building, further investigation work is recommended.

2.3 Longstone Park Depot, Longmeadow Road, Saltash PL12 6DW

Within the limitations of this assessment, no RAAC concrete materials have been identified and the risk from RAAC concrete is negligible.

2.4 Waterside Public Toilets, Tamar Street, Saltash PL12 4EJ

This single storey toilet block does have a concrete flat roof. However, this roof is visible from above with an asphalt style covering and rendered and decorated under from inside the male and female WC areas. The roof is thick concrete with no characteristics of RAAC concrete roof planks. Despite there being a concrete roof here, there is no evidence of defect and negligible risk of the concrete being



RAAC, rather traditional reinforced concrete roof slab. No further works is considered necessary.

2.5 Alexander Square Public Toilets, Saltash PL12 6AN

Within the limitations of this assessment, no RAAC concrete materials have been identified and the risk from RAAC concrete is negligible.

2.6 Longstone Public Toilets, Saltash PL12 6DW

Within the limitations of this assessment, no RAAC concrete materials have been identified and the risk from RAAC concrete is negligible.

2.7 Belle Vue Public Toilets, Belle Vue Road, Saltash PL12 6ES

Within the limitations of this assessment, no RAAC concrete materials have been identified and the risk from RAAC concrete is negligible.

2.8 Heritage Building, Lower Fore Street, Saltash PL12 6JQ

Within the limitations of this assessment, no RAAC concrete materials have been identified and the risk from RAAC concrete is negligible.

2.9 Saltash Library, Callington Road, Saltash PL12 6DX

Within the limitations of this assessment, no RAAC concrete materials have been identified and the risk from RAAC concrete is negligible.



SECTION THREE

Photographs

Saltash Guildhall





Maurice Huggins Room





Longstone Park Depot





Waterside Public Toilets





Alexander Square Public Toilets





Longstone Public Toilets





Belle Vue Public Toilets





Heritage Building





Saltash Library

