

**Southview School, Conrad Road, Witham, Essex**  
**RAAC Survey Report**  
**Job No. 500160**

Authors: Scott Barlow MRICS and Jack Denny BSc (Hons)  
Checked by: Paul Ruffell MRICS  
Date: September 2023  
Status: FINAL

Solving global challenges one building at a time

architecture  
building surveying  
building services  
planning  
interior design  
sustainability  
civil and structural  
quantity surveying  
project management  
CDM and H&S services  
transport and infrastructure



**CONTENTS**

1.0 INTRODUCTION..... 3

    1.1 Scope of Services ..... 3

    1.2 Information Collection (Stage 1)..... 4

    1.3 Initial Assessment (Stage 2)..... 5

2.0 CONCLUSION ..... 5

    2.1 Summary of Findings ..... 5

    2.2 Further Action..... 6

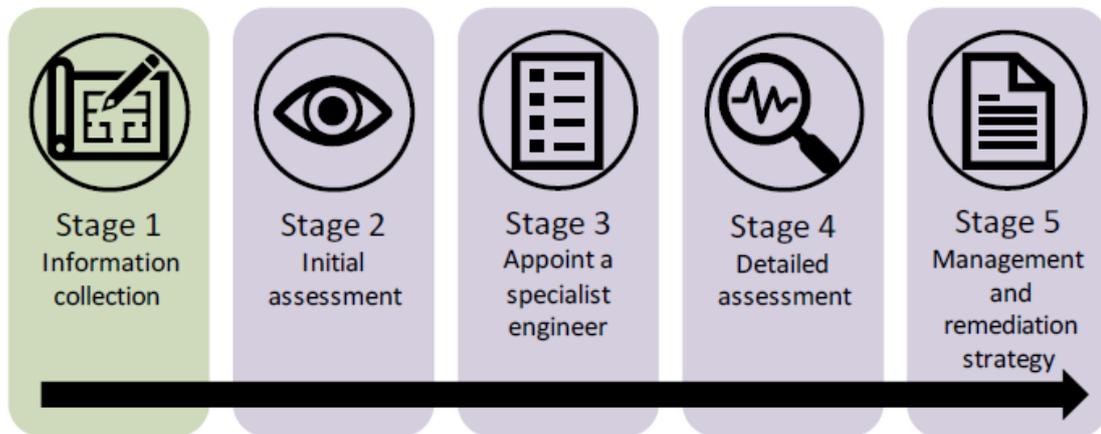
APPENDIX A – TABLE OF FINDINGS FROM STAGE 1 AND STAGE 2..... 7

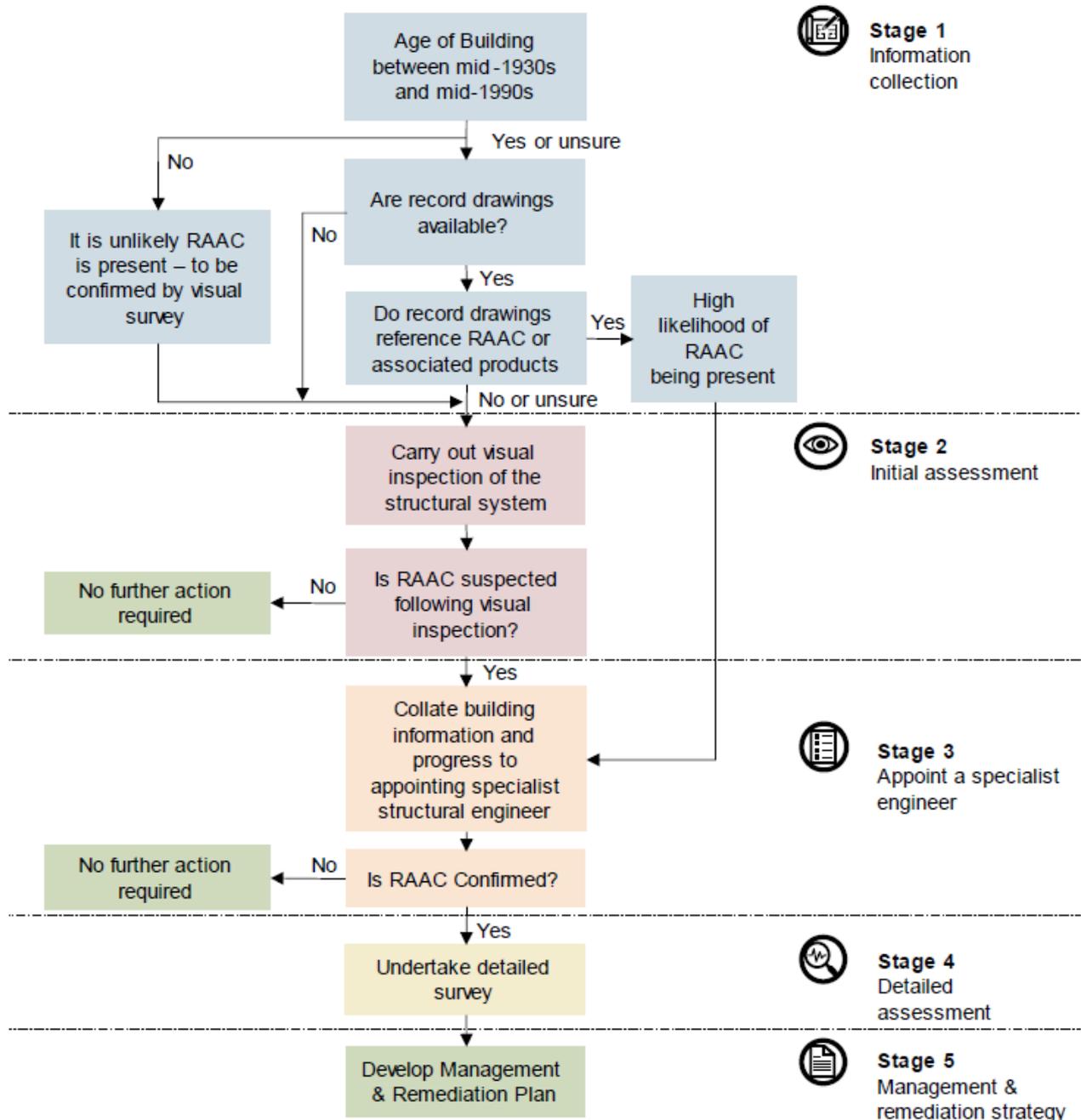
APPENDIX B – PLANRADAR SURVEY NOTES AND SUPPORTING PHOTOS ..... 8

**1.0 INTRODUCTION**

**1.1 Scope of Services**

- 1.1.1 In accordance with the recent guidance issued by the Department of Education we have been instructed by Julian Cochrane, the headteacher of Southview School, Witham, to undertake a visual inspection of high-risk areas within the school to ascertain whether there is a possibility of Reinforced Autoclaved Aerated Concrete having been used in the construction of the flat roof.
- 1.1.2 This is following published safety alerts from various professional bodies, including the Institution of Structural Engineers and Department for Education, regarding concerns about the structural safety of this form of construction, and the risk of sudden collapse.
- 1.1.3 In response to the above concerns and in accordance with the guidance set out within Reinforced Autoclaved Aerated Concrete (RAAC) – Estates Guidance published by the Department of Education (December 2022, updated August 2023) and also within Reinforced Autoclaved Aerated Concrete (RAAC) Investigation and Assessment – Further Guidance, published by The Institution of Structural Engineers (April 2023), Ingleton Wood LLP have developed a five-stage inspection and review process. The five-stage approach is as set out within the Guidance Stages and Flowchart below:





1.1.4 Mr Cochrane, following the above guidance, identified that part of the original school, constructed in the 1980’s, could be at risk of containing RAAC planks.

1.1.5 No constructional drawings were made available, however a limited review was undertaken on the planning portal.

**1.2 Information Collection (Stage 1)**

1.2.1 From our review of the planning portal we ascertained that Southview School was established utilising part of the unused Elm Hall Primary School and then adding two new buildings in or around

1995. We understand that the original single storey building adopted from Elm Hall Primary School was built in the early 1980s.

1.2.2 Based on the desktop information obtained we established that there was a very limited risk of the additional buildings constructed in 1995 containing RAAC. The building adopted from Elm Hall, however, being constructed in the 1980's had a high risk of containing RAAC.

### **1.3 Initial Assessment (Stage 2)**

1.3.1 Further to the completion of the desktop review, a non-intrusive visual inspection was undertaken of the high-risk block by Scott Barlow MRICS and Jack Denny BSc (Hons). An inspection was undertaken of all roof structures above the suspended ceiling tiles in order to ascertain their structural construction. The inspection was undertaken on Wednesday the 6<sup>th</sup> of September 2023.

1.3.2 Survey notes and photos were taken using PlanRadar software. These notes and supporting photos are included within Appendix B of this report.

1.3.3 The findings from our site inspections are contained within the table included within Appendix B of this report.

## **2.0 CONCLUSION**

### **2.1 Summary of Findings**

2.1.1 The additional buildings are provided with profiled metal roofs and therefore there is no RAAC present.

2.1.2 The original building adopted from Elm Hall was found to contain RAAC concrete planks forming the flat roof deck, supported off the perimeter walls and larger section steel girders. The RAAC was identified based on the surface texture, and the aerated core exposed with the use of a screwdriver.

2.1.3 The RAAC planks originally spanned unsupported lengths of 2300mm. It was clear, however, from our inspection that mitigation measures have already been installed throughout. These mitigation works comprised the installation of multiple primary and secondary supporting steel lattice beams between the original supporting walls and girders. It was also noted that inflation tubes had been installed above the beams traversing the planks. These tubes would have been installed as part of the mitigation measures to allow the planks to be levelled in the future if they ever started to sag. The installation of the mitigation works resulted in there being no unsupported lengths exceeding 760mm.

2.1.4 The above works, have in our opinion, satisfactorily mitigated the risk presented by the use of RAAC planks to form the flat roof deck.

2.1.5 The only unmitigated risk that we observed was the fixing of supporting brackets into the RAAC for the hoist tracks in isolated locations. There is a risk of them loading the RAAC and also the fixing, given the nature of RAAC, is unlikely to remain in place if any moderate weight is applied. We made Mr Cochrane aware of this risk on site and he undertook to have these relocated so that they were carried off the supporting steelwork.

2.1.6 Whilst on site we also undertook an inspection of the surface of the flat roof covering supported by the RAAC, to ensure that there was no surface deflection evident. There was none present, and the recently recovered roof surface was flat, albeit laid to falls to aid drainage.

## **2.2 Further Action**

2.2.1 It would appear that the mitigation works had been put in place when the site was extended back in 1995. We would assume, given the measures observed, that the mitigation scheme was designed by a structural engineer. We assume that the project was then implemented by Essex County Council, who would have had control on Elm Hall School at this time. As such we feel that it would be sensible to make enquiries of the Council to obtain details of the design and ascertain whether they have implemented any monitoring since installation.



**APPENDIX A – TABLE OF FINDINGS FROM STAGE 1 AND STAGE 2**

<b>Area</b>	<b>Assumed Age</b>	<b>Roof Type - Desktop Review</b>	<b>On Site Observation</b>	<b>RAAC Suspected - Yes/No</b>	<b>RAAC Mitigated - Yes/No</b>
<b>Corridor</b>	1980s	No constructional plans provided.	Pre-cast concrete planks supported off steel girders and perimeter walls forming deck to felt covered flat roof.	Yes	Yes
<b>Sunshine Room</b>	1980s	No constructional plans provided.	Pre-cast concrete planks supported off steel girders and perimeter walls forming deck to felt covered flat roof.	Yes	Yes
<b>Stars Room</b>	1980s	No constructional plans provided.	Pre-cast concrete planks supported off steel girders and perimeter walls forming deck to felt covered flat roof.	Yes	Yes



**APPENDIX B – PLANRADAR SURVEY NOTES AND SUPPORTING PHOTOS**



## RAAC Survey- Southview School, Witham

6th September 2023

5000160

874 The Crescent, Colchester Business Park, Colchester CO4 9YQ

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

---

London • Billericay • Cambridge • Colchester • Norwich • Nottingham • Oxford

# Table of contents

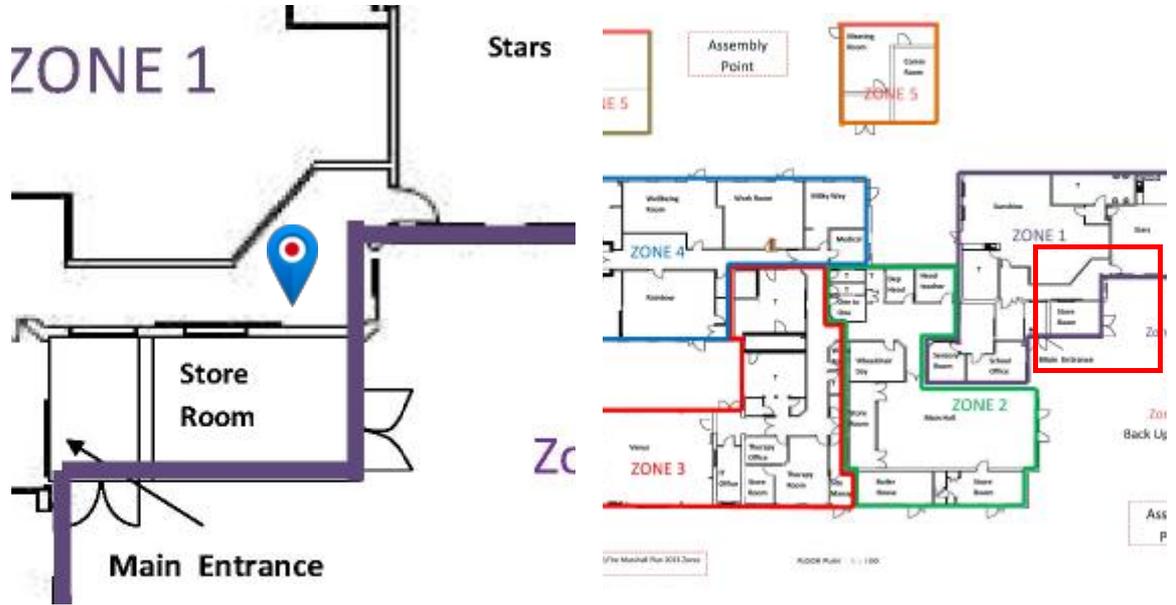
Corridor (1)	1
Sunshine Room (2)	4
Sunshine Room (3)	7
Sunshine Room (4)	8
Changing Area off Sunshine Room (5)	10
Store in Sunshine Room (6)	12
Toilet Area off Sunshine Room (7)	13
Kitchen Area off Stars Room (8)	15
Stars Room (9)	16
Stars Room (10)	18
Stars Room (11)	19
Stars Room (12)	20
Corridor (13)	21
Felt flat roof (15)	22

---

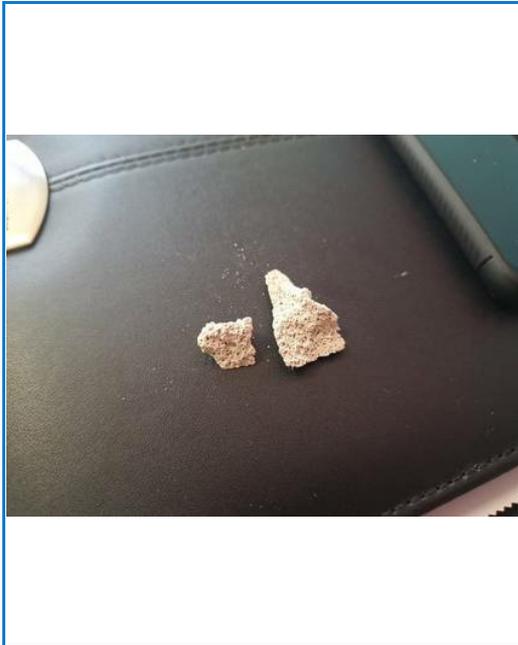
**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Corridor  
**Created on:** 06/09/2023 03:00 PM

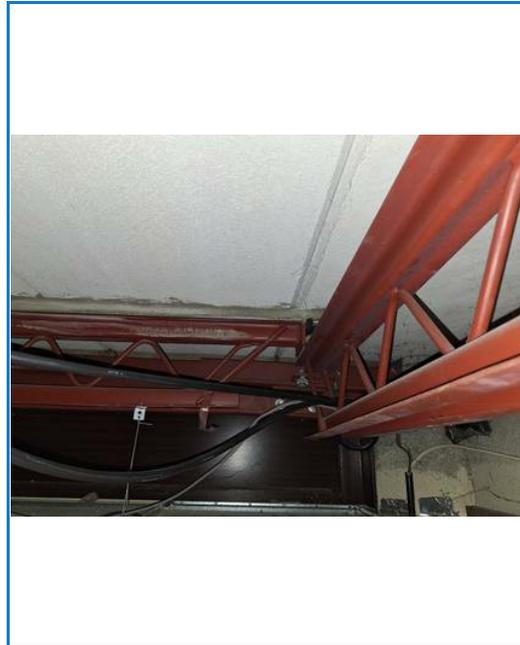
Plan:



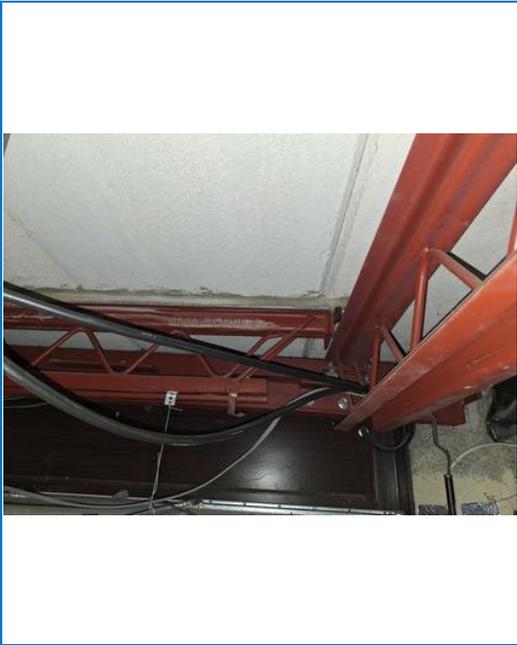
Images:



1. 06/09/2023 02:59 PM



7. 06/09/2023 03:03 PM



3. 06/09/2023 03:03 PM



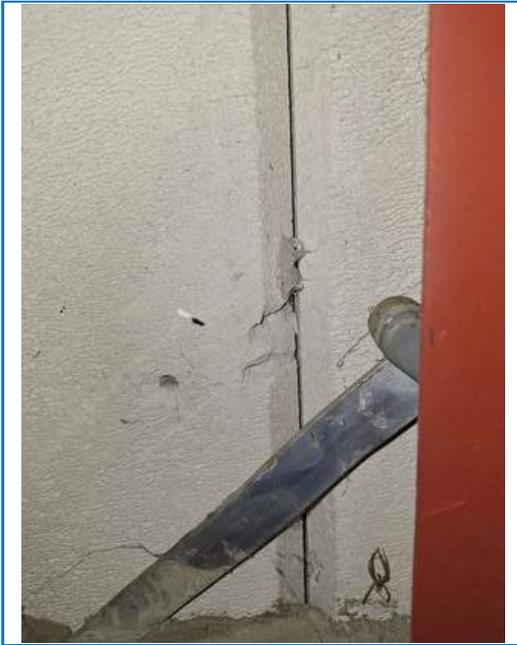
8. 06/09/2023 03:03 PM



6. 06/09/2023 03:03 PM



2. 06/09/2023 03:04 PM



5. 06/09/2023 03:04 PM

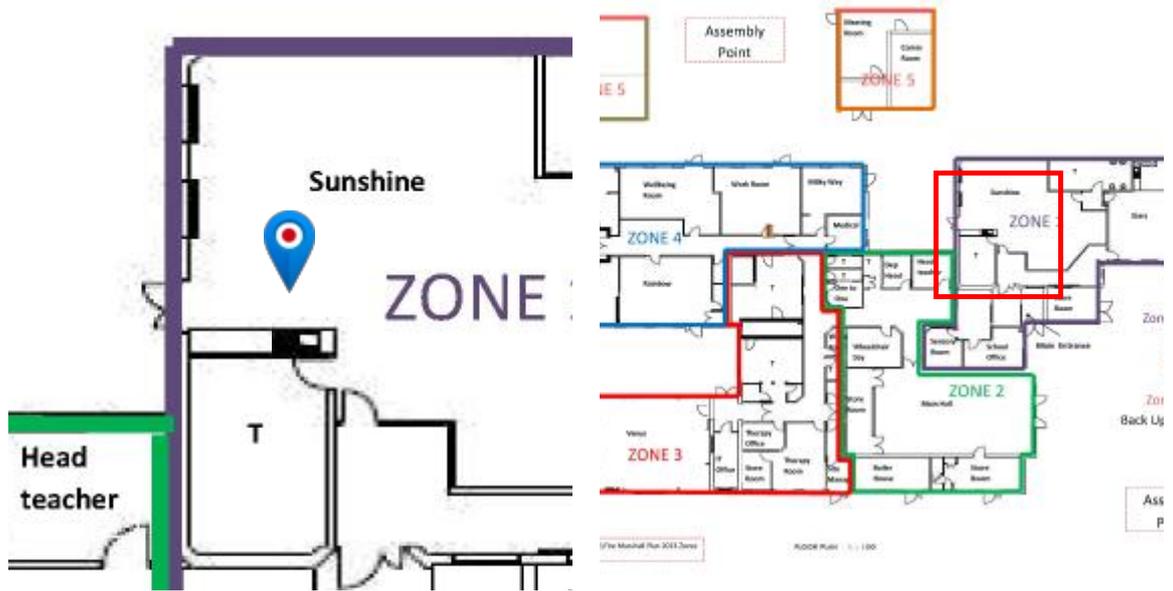


4. 06/09/2023 03:04 PM

**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Sunshine Room  
**Created on:** 06/09/2023 03:07 PM

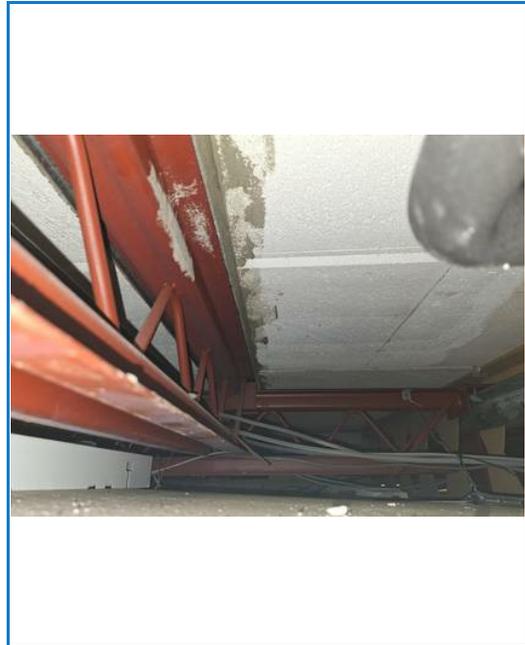
Plan:



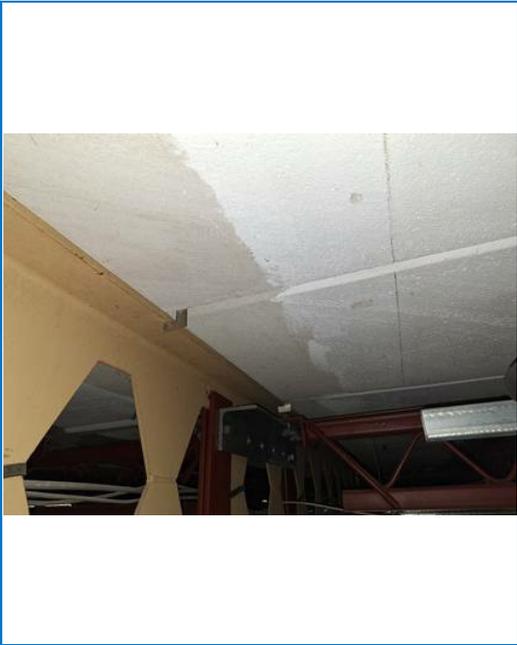
Images:



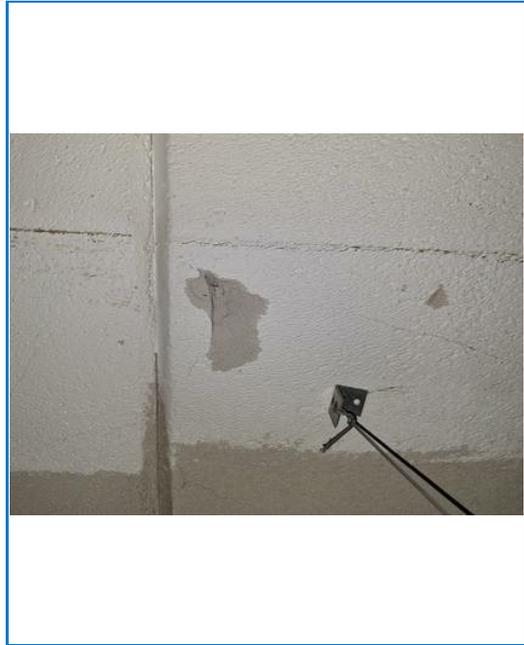
1. 06/09/2023 03:08 PM



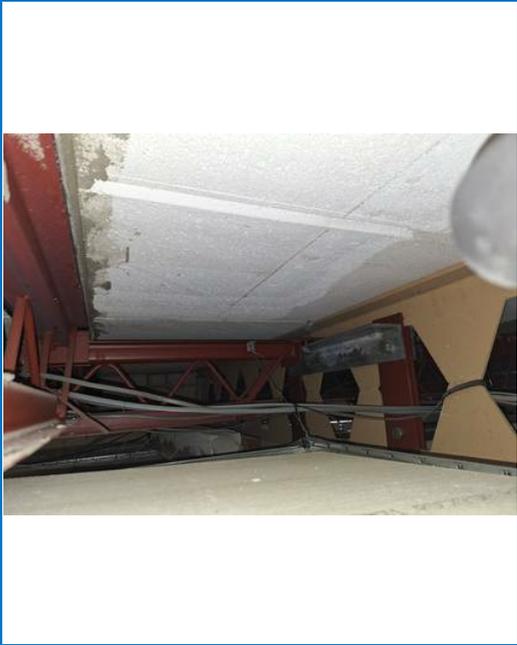
2. 06/09/2023 03:11 PM



3. 06/09/2023 03:11 PM



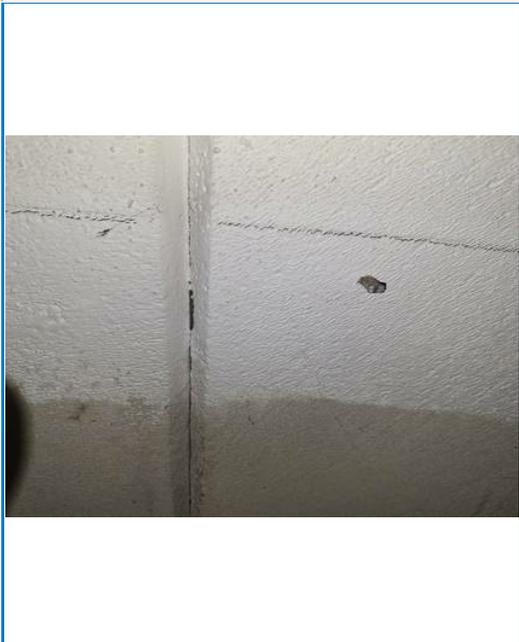
7. 06/09/2023 03:11 PM



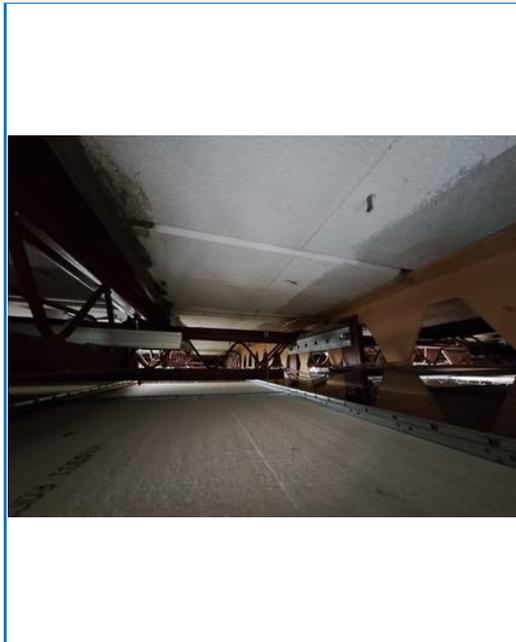
4. 06/09/2023 03:11 PM



5. 06/09/2023 03:13 PM



6. 06/09/2023 03:13 PM



8. 06/09/2023 03:29 PM



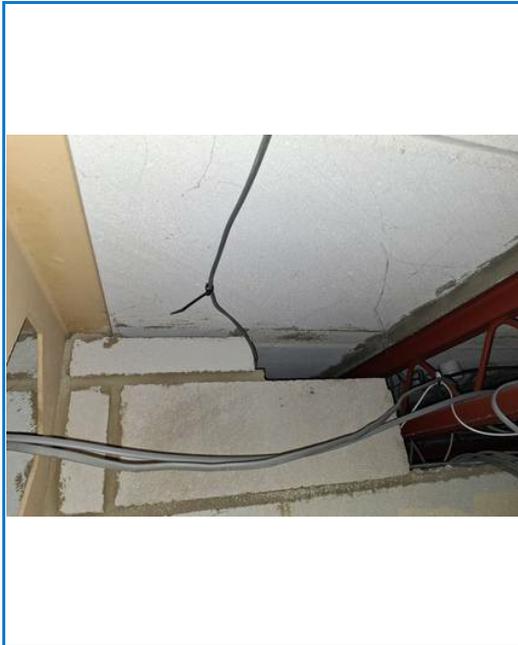
**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Sunshine Room  
**Created on:** 06/09/2023 03:32 PM

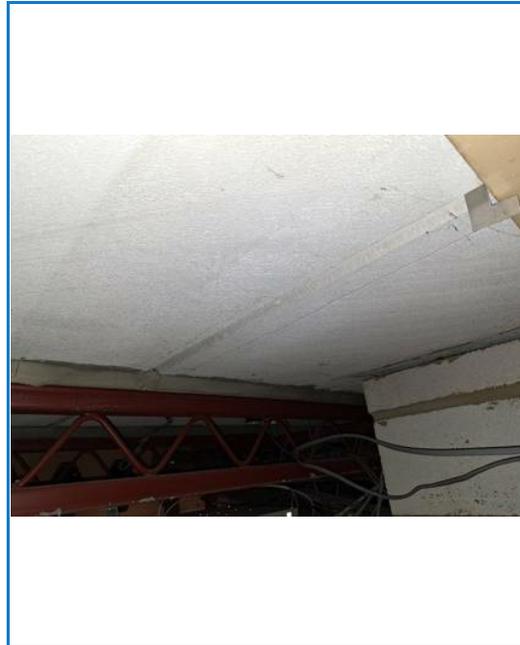
Plan:



Images:



1. 06/09/2023 03:31 PM



3. 06/09/2023 03:32 PM

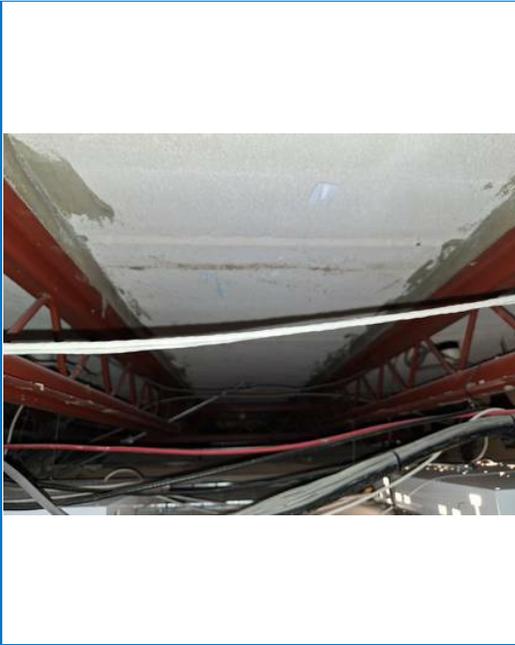


2. 06/09/2023 03:32 PM

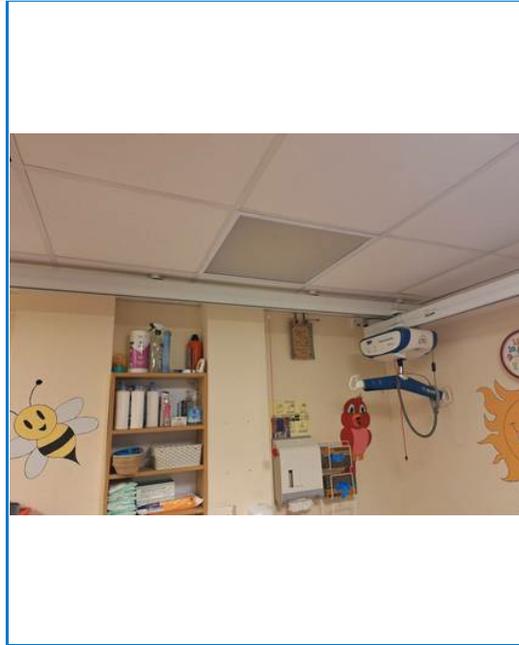


4. 06/09/2023 03:32 PM

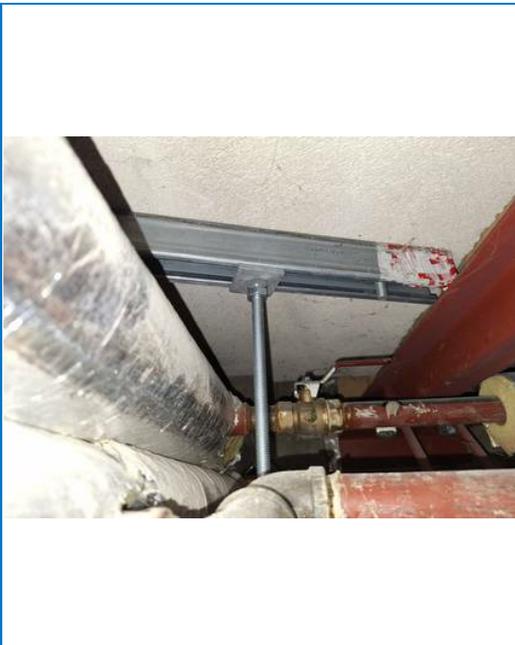




2. 06/09/2023 03:38 PM



4. 06/09/2023 03:41 PM



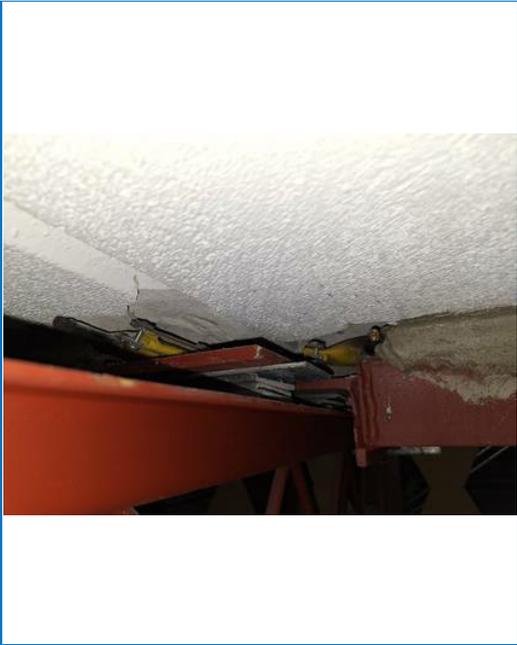
5. 06/09/2023 03:42 PM



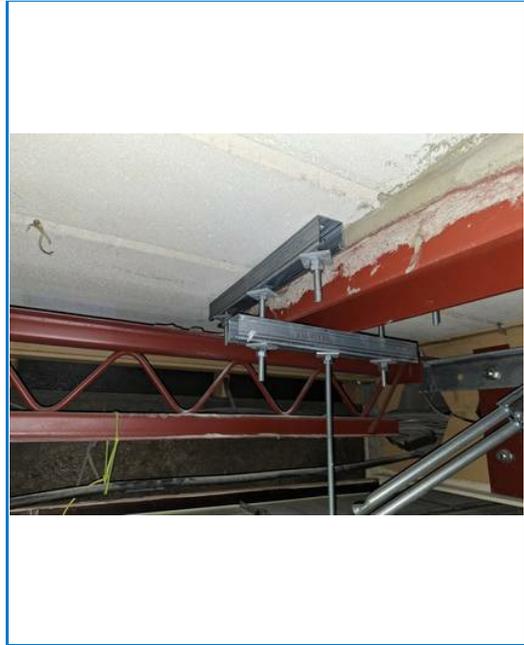
6. 06/09/2023 03:42 PM







3. 06/09/2023 03:51 PM



4. 06/09/2023 03:51 PM

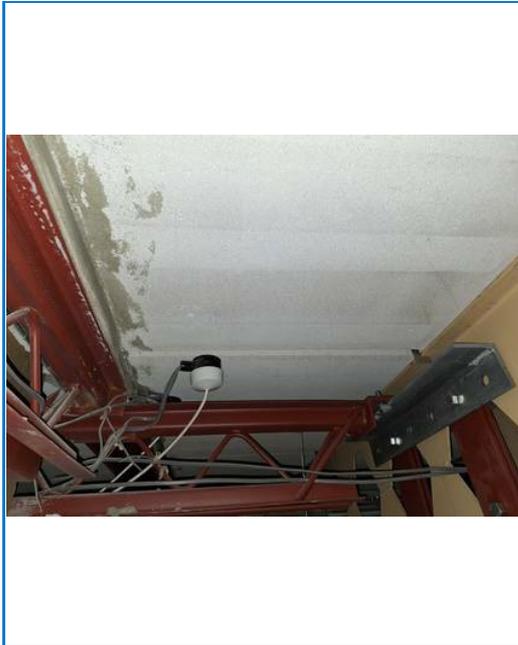
**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Kitchen Area off Stars Room  
**Created on:** 06/09/2023 03:56 PM

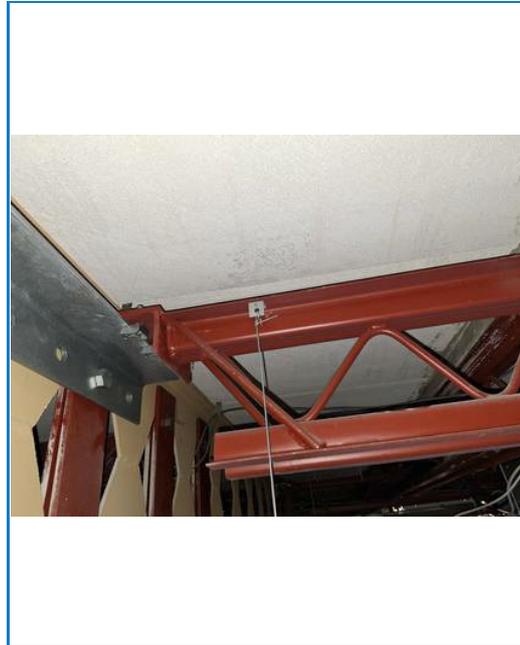
Plan:



Images:



1. 06/09/2023 03:56 PM

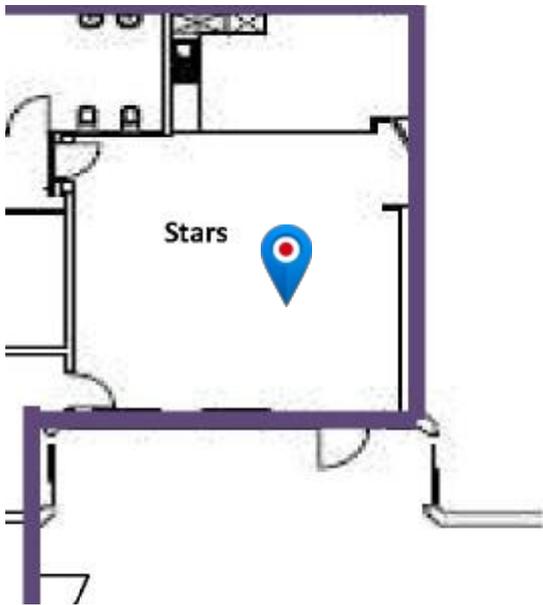


2. 06/09/2023 03:56 PM

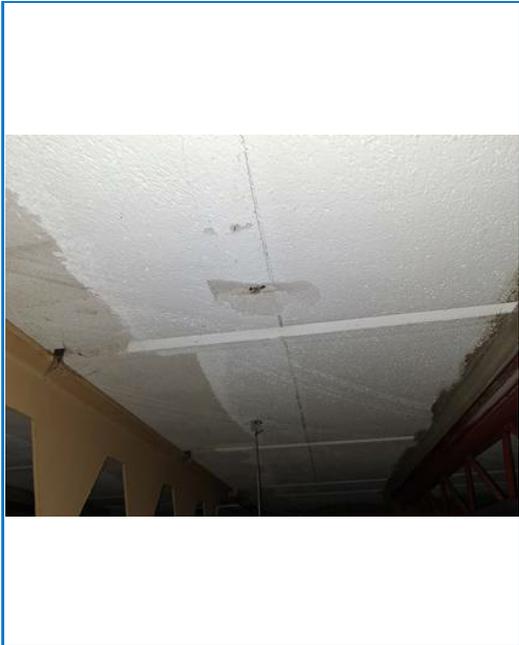
**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Stars Room  
**Created on:** 06/09/2023 03:58 PM

Plan:



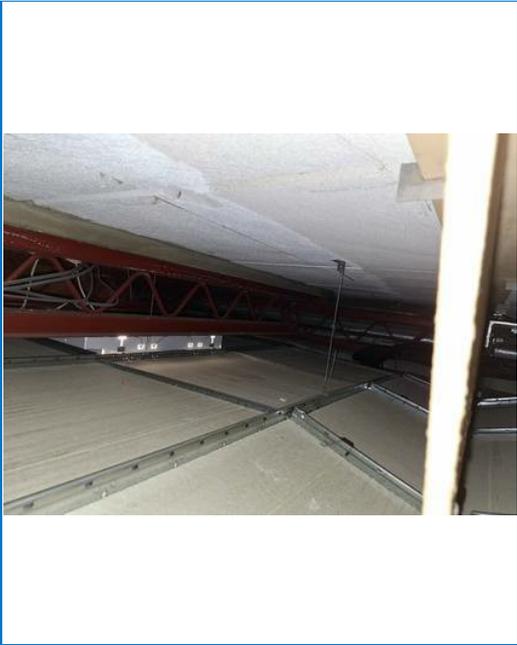
Images:



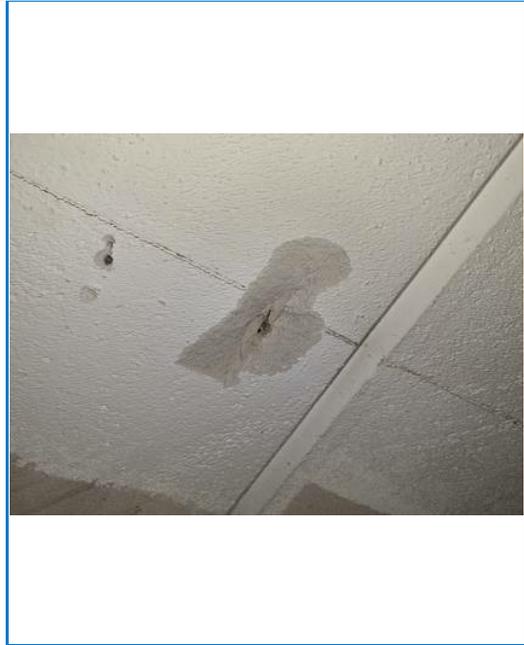
2. 06/09/2023 03:57 PM



1. 06/09/2023 03:58 PM



3. 06/09/2023 03:58 PM



4. 06/09/2023 03:58 PM

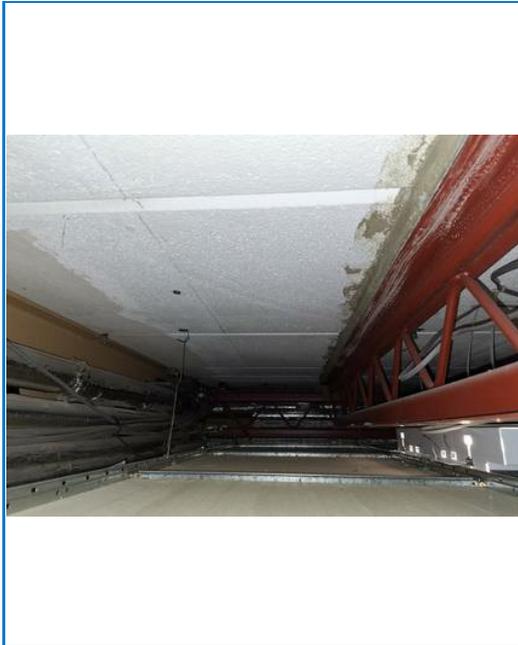
**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Stars Room  
**Created on:** 06/09/2023 04:00 PM

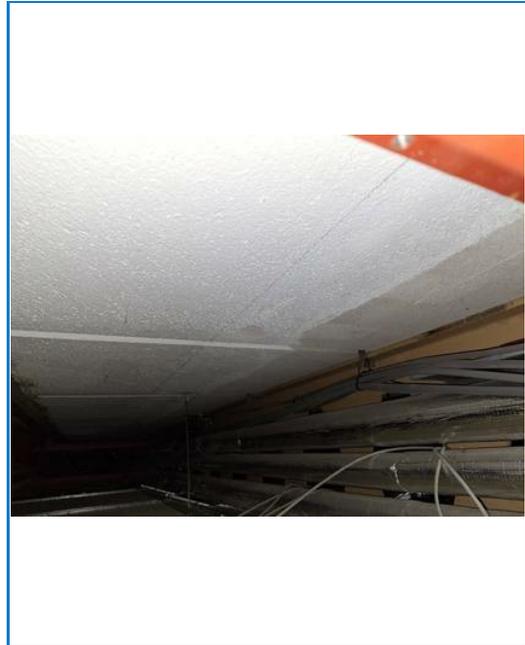
Plan:



Images:



1. 06/09/2023 03:59 PM



2. 06/09/2023 03:59 PM

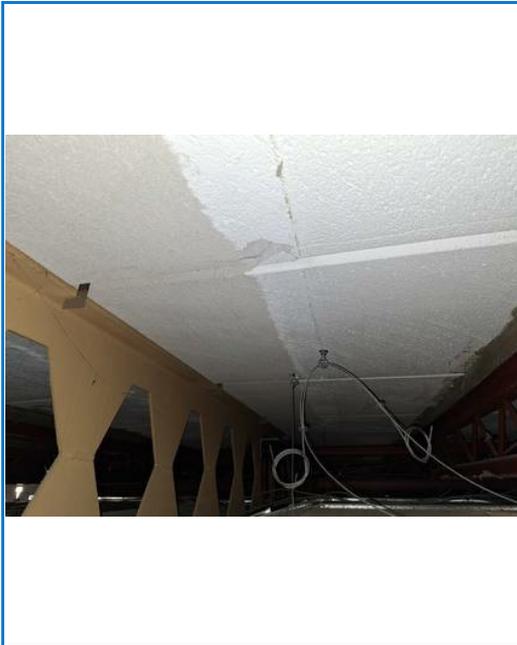
**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Stars Room  
**Created on:** 06/09/2023 04:01 PM

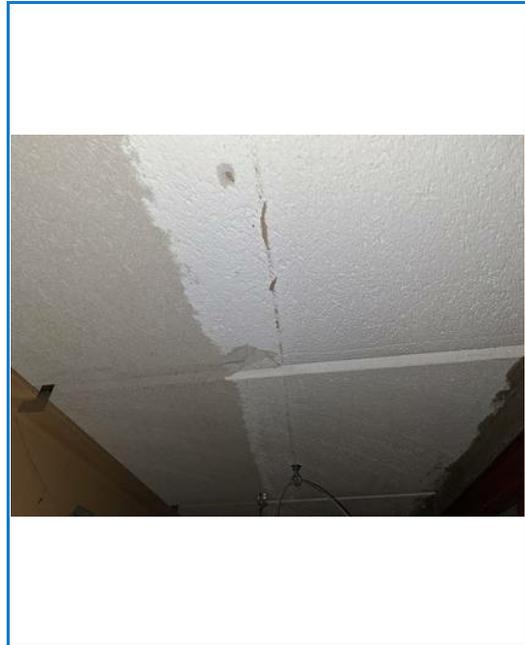
Plan:



Images:



1. 06/09/2023 04:00 PM



2. 06/09/2023 04:01 PM

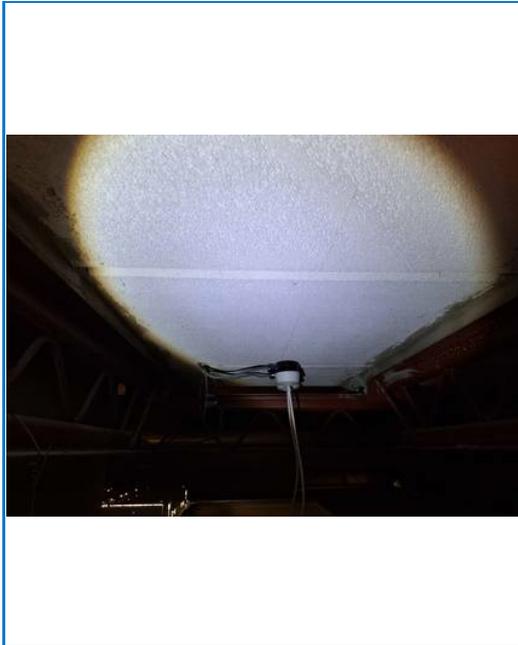
**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Stars Room  
**Created on:** 06/09/2023 04:04 PM

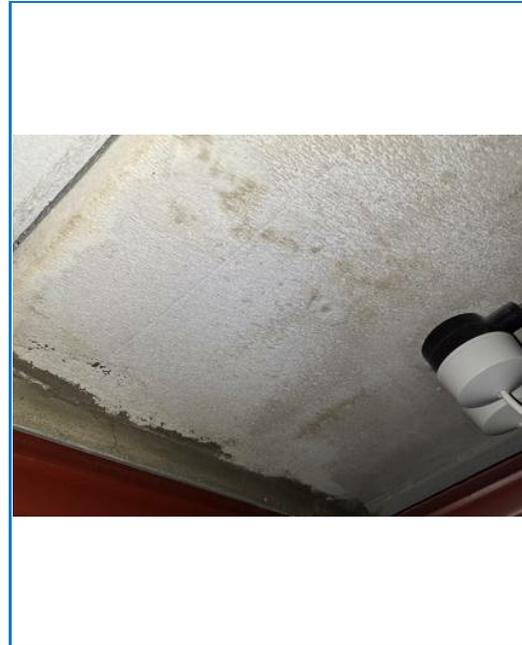
Plan:



Images:



1. 06/09/2023 04:04 PM

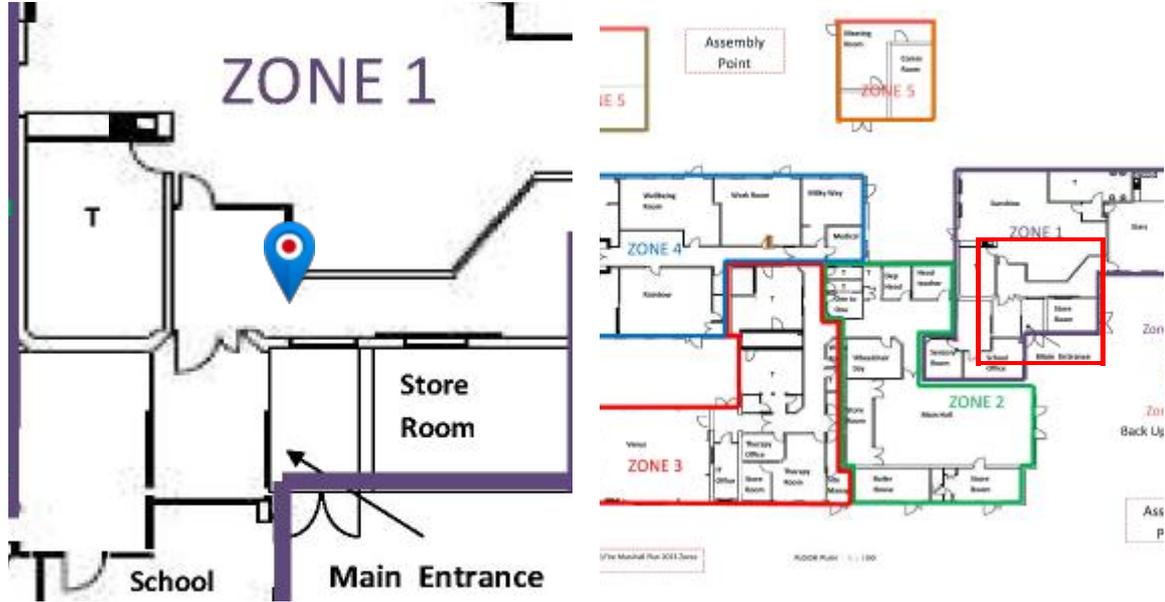


2. 06/09/2023 04:04 PM

**Form:** Survey Report  
**Author:** Jack Denny

**Title:** Corridor  
**Created on:** 06/09/2023 04:13 PM

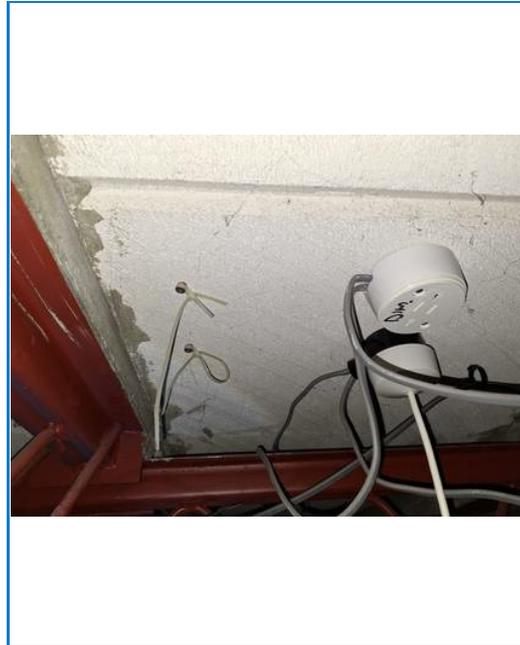
Plan:



Images:



1. 06/09/2023 04:11 PM



2. 06/09/2023 04:12 PM

