



LONDON FIRE BRIGADE

London Fire Brigade Headquarters  
169 Union Street London SE1 0LL  
T 020 8555 1200 F 020 7960 3602  
Textphone 020 7960 3629  
london-fire.gov.uk

**Freedom of Information request reference number:** 4466.1

**Date of response:** 08/07/2019

**Request:**

*I would like to request under the Freedom of Information Act 2000 all electronic communications between Rendall & Rittner and Gresham with London Fire Brigade - specifically: with regards fire safety, risk assessments and cladding/EWI issues at Albert House on the Royal Artillery Quays Development (RAQ) or RAQ Development generally from 1st Jan 2015 to date.*

*Please provide a list of any other contacts at London Fire Brigade who have been in contact with aforementioned Rendall & Rittner and Greshams in relation to fire safety, risk assessments and cladding/EWI issues at Albert House on the Royal Artillery Quays Development (RAQ) or RAQ Development generally from of 1st Jan 2015 to date.*

**Response:**

As you are aware we are currently working with Rendall & Rittner and Gresham SMS Ltd to address the recommendations in the "Notice of Deficiencies" or "NODs" issued on Royal Artillery Quays, which I understand you have previously received. Whilst the NODs are available under freedom of information, other materials, documents and information held by the Brigade (such as email correspondence) will usually be exempt from access via the FOIA provisions. It is often the case, that the exemption within FOIA for Law Enforcement will apply to the information held by the LFB, the relevant exemption is [Section 31\(1\)\(g\)](#) combined with 31(2) (a) and 31(2) (c).

We clearly understand that there is public interest and concern about knowing about the fire safety of the buildings in which you live, work or visit however we need to maintain a balance between the public interest in safety and the Brigade's ability to work with responsible persons in a safe space where honest, frank and meaningful discussions can take place. A great deal of the steps the Brigade takes with building owners to improve public safety outcomes come about from the ability to influence and negotiate with those with responsibility.

We have checked our records to see if we can provide any other information in relation to fire risk assessments and cladding at Royal Artillery Quays. As the enforcing authority under the Regulatory Reform (Fire Safety) Order, 2005, (RRO) the Brigade does not provide, or carry out fire risk assessments (FRA) as this is the responsibility of the responsible persons (RP). Whilst on some occasions the RP may provide a documents to the Inspecting Officer (IO) we are under no obligation to retain them. In this case however we do hold a copy of two documents that have been provided to us by the RP, that we still have on record, and have attached these for you as: 'Document 1 - Letter in Relation to Render at Royal Artillery Quay' and 'Document 2 - Cladding Investigations at Royal Artillery Quay.' Personal data has been removed from the attached documents under [section 40 of the FOIA – Personal Information](#).

We have dealt with your request under the Freedom of Information Act 2000. For more information about this process please see the guidance we publish about making a request [on our website](#).

BARRATT  
— LONDON —

Rendall & Rittner  
Portsoken House  
155 – 157 Minories  
London  
EC3N 1U

23<sup>rd</sup> January 2018

Dear Sirs

Re: Royal Artillery Quay, Erebus Drive SE28 0GE

We understand you are the owner / responsible person for the purposes of fire regulation at the above property.

We confirm that we constructed the same in 2002 and are writing to you to make you aware of a change in certification applying to a product which was used in the construction of that building.

As far as we can tell from records available to us the product specified as a render used to cover the cladding or façade at the property was sold under the name of StoTherm Classic. At the time of its specification and use the British Board of Agreement certified its use as being compliant with all appropriate fire regulation standards applicable to all buildings, irrespective of height.

We have recently been advised that the British Board of Agreement Certificate for this product was altered, we understand, in 2012 so that the Agreement Certificate does not, any longer, endorse its use in buildings above 18 metres in height.

We have endeavoured to ascertain from the manufacturer the reason for this change. We understand that certification is based upon a rigorous regime of testing carried out by or under the auspices of the British Board of Agreement and we must make clear that we do not imply or suggest that there has been any failing in this testing regime at any stage.

We simply draw an apparent change in the certification and its extent to your attention and would respectfully suggest that you seek advice in relation to the property. We are, of course, not in a position to provide you with advice in relation to your obligations as the owner / responsible person in relation to this building. It would be quite wrong of us to do so. We have been unable to obtain any further information or explanation in relation to this change and therefore we cannot advise whether any action is necessary or appropriate at this juncture. We are satisfied that at the date of its specification and use it met all appropriate standards and regulations and was certified for such use by an independent third party whose opinion we, and all parties in the construction industry did, and would, continue to rely.

We apologise for being unable to provide further information. However, we do consider that it would be wrong of us, having found out about this change in the extent of the Certificate, to fail to draw it to your attention where we believe that this material may have been used on your building.

RECEIVED  
24 JAN 2018

We do, however, understand that a product is available from the manufacturer which can be applied to this product to enhance its performance in a manner which is consistent with current or anticipated recommended guidelines applicable to any building.

Yours Sincerely,

[Redacted Signature]

Senior Technical Manager

[Redacted Email]@barratlondon.com

Tel: [Redacted]

Mob: [Redacted]

# **RS Specialist Services Ltd**

Independent Building Consultants

CLADDING INVESTIGATIONS

AT

ROYAL ARTILLERY QUAY

WOOLWICH

LONDON



Prepared For:

Gresham SMS Ltd.

Date: 15<sup>th</sup> November 2018

Report Ref. 18086/1

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### **Appendices**

Appendix A – Photographs

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## **1. Introduction**

RS Specialist Services were instructed to undertake investigations in order to confirm the presence of cladding cavity barriers and establish the nature and flammability of render and insulation at Royal Artillery Quay, Woolwich, London.

The purpose of the investigation was to:

- Inspect rendered insulated cladding cavities
- Locate cavity barriers
- Remove samples of cavity insulation and render
- Carry out laboratory analysis and testing on the samples.

A visit was made to the property on 5<sup>th</sup> November 2018.

The observations and comments contained in this report relate to the findings at that time.

The investigation was carried out by [REDACTED] BSc CEng MINDT.

## **2. Property Description**

The property comprises 8 large residential blocks.

They were constructed in 2002.

The accommodation is arranged over lower ground, upper ground and up to 14 upper floor levels.

The cladding comprises a combination of the following materials:

- Brickwork masonry
- Insulated render

The windows and doors are powder coated aluminium framed double glazed units

### **3. Method of Investigation**

#### **3.1 Cladding Investigations**

We were requested to remove samples of the render at selected locations and also inspect any cavities behind the render facing to confirm the cladding build up and also to locate cavity/fire barriers.

At the investigation locations the following was carried out:

- Small diameter holes were drilled through the cladding in order to use a rigid borescope to attempt to vertical or horizontal cavity/fire barriers. In the event no significant cavities were present behind the insulated render.
- Photographs of each location are included in Appendix A.
- At selected locations samples of the render and also the insulation was removed.
- Samples were then to be analysed as follows:

#### **Material Identification**

- The materials were examined directly by Fourier transform infrared spectrometry using attenuated total reflectance through a germanium crystal.
- The spectra produced were compared with reference library data to determine the nature of the materials.

#### **Flammability Test**

- The samples were subjected to burning to determine if they were flammable and/or combustible.

The analysis was undertaken at a UKAS accredited laboratory.

Details of the analysis are contained in Appendix C.

#### **Infrared Thermal Imaging**

The external rendered elevations were scanned using an infrared thermal imaging camera

This technique involves scanning the areas under investigation with a heat sensitive real time infrared camera that can remotely identify very small temperature variations.

The purpose of this exercise was to locate any thermal anomalies from the building surfaces that might be attributable to fire/cavity barriers.

The survey was carried out using a Flir Systems longwave infra-red camera. This camera detects the heat being emitted from surfaces, in the infra-red wavelength range 7.5 -13 microns

Selected digital thermal images were recorded and are contained, with corresponding traditional photos, in Appendix A.

The images show the relative surface temperatures as a colour palette from black (cold) to white (hot).

## **3.2 Access/Limitations**

- Access was obtained to selected areas of cladding from balconies or terrace areas.
- These locations appeared to be representative of the building.
- The results obtained relate to the areas investigated.



## **4. Observations**

The findings of the intrusive investigations are as follows:

### **4.1 Intrusive Investigations**

1. Tideslea Tower – Flat [REDACTED] – 14<sup>th</sup> Floor (wall between the West balcony and the stairwell)
  - The cladding build-up comprised:
    - Render (2-3mm) (Sample 1/B removed)
    - Insulation (circa 75mm) (Sample 1/A removed)
    - Concrete (no obvious cavity)
  - No cavity/fire barriers were noted
2. Tideslea Tower – Flat [REDACTED] – 5<sup>th</sup> Floor (front wall to terrace)
  - The cladding build-up comprised:
    - Render (2-3mm)
    - Insulation (circa 75mm) (sample 2 removed)
    - Concrete (no obvious cavity)
  - An inspection hole drilled at 6<sup>th</sup> floor slab level revealed the present of a horizontal mineral wool fire barrier. The render was 5-6mm thick at this location.
3. Tideslea Tower – Flat [REDACTED] – 2<sup>nd</sup> Floor (rear balcony wall)
  - The cladding build-up comprised:
    - Render (2-3mm)
    - Insulation (circa 75mm)
    - Concrete (no obvious cavity)
  - No cavity/fire barriers were noted.
4. Tidlock House – Flat [REDACTED] – 4<sup>th</sup> Floor (front wall to terrace)
  - The cladding build-up comprised:
    - Render (2-3mm) (sample 3/B removed)
    - Insulation (circa 75mm) (sample 3/A removed)
    - Concrete (no obvious cavity)
  - An inspection hole drilled at 5<sup>th</sup> floor slab level revealed the present of a horizontal mineral wool fire barrier. The render was 5-6mm thick at this location.

- Above the terrace access door there was a condensate pipe that penetrated the render. This was apparently unsealed.
  - No vertical fire/cavity barriers were noted.
5. Tidlock House – Flat [REDACTED] – 5<sup>th</sup> Floor (rear wall to balcony)
- The cladding build-up comprised:
    - Render (2-3mm)
    - Insulation (circa 75mm) (sample 4 removed)
    - Concrete/masonry (no obvious cavity)
  - No cavity/fire barriers were noted.
6. Tidlock House – Flat [REDACTED] – 7<sup>th</sup> Floor (rear wall to balcony)
- The cladding build-up comprised:
    - Render (2-3mm)
    - Insulation (circa 75mm)
    - Concrete/masonry (no obvious cavity)
  - No cavity/fire barriers were noted.
  - No barrier beneath the window cill was noted.
  - The insulation was exposed to the render panel along its lower edge.
7. Bendish Point – Flat [REDACTED] – 9<sup>th</sup> Floor (wall between the west balcony and stairwell)
- The cladding build-up comprised:
    - Render (2-3mm) (sample 5/B removed)
    - Insulation (circa 75mm) (sample 5/A removed)
    - Concrete/masonry (no obvious cavity)
  - No cavity/fire barriers were noted.
8. Bendish Point – Flat [REDACTED] – 8<sup>th</sup> Floor (rear balcony wall)
- The cladding build-up comprised:
    - Render (2-3mm)
    - Insulation (circa 75mm) (sample 6 removed)
    - Concrete/masonry (no obvious cavity)
  - No cavity/fire barriers were noted.
  - The insulation was exposed to the render panel along its lower edge.
-

## 9. Bendish Point – Flat [REDACTED] – 3<sup>rd</sup> Floor (rear balcony wall)

- The cladding build-up comprised:
  - Render (2-3mm)
  - Insulation (circa 75mm) (sample 6 removed)
  - Concrete/masonry (no obvious cavity)
  
- No cavity/fire barriers were noted.

### **4.2 Infrared Thermal Imaging**

The scanning revealed the presence of horizontal linear thermal features at each floor level on each block that could be indicative of horizontal cavity/fire barriers.

No similar vertical features were identified.

A selection of images are contained in Appendix A.

## **5. Laboratory Analysis**

### **5.1 Material Identification**

The summarised results of the investigations carried out to establish the insulation materials are as follows:

<b>Sample Reference</b>	<b>Location Reference</b>	<b>Sample Type</b>	<b>MaterialType</b>
1/A	1	Insulation	Polystyrene Resin
1/B	1	Render	Cement With Glass Fibres Coated With Polysulphide
2	2	Insulation	Polystyrene Resin
3/A	4	Insulation	Polystyrene Resin
3/B	4	Render	Cement With Glass Fibres Coated With Polysulphide
4	5	Insulation	Polystyrene Resin
5/A	7	Insulation	Polystyrene Resin
5/B	7	Render	Cement With Glass Fibres Coated With Polysulphide
6	8	Insulation	Polystyrene Resin

### **5.2 Flammability**

#### **Insulation**

The insulation samples supported combustion and continued to burn after the source of ignition was removed.

In addition, the samples all produced molten droplets of flaming polymer during the test.

This indicated that the insulation material was combustible and flammable.

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## Render System

Only the polymer coatings of the exposed fibres at the edges of the core samples were found to combust.

A separate combustion test carried out on the fibres alone revealed that only the coatings of the fibres were combustible; the fibres themselves melted to a bead indicating that the fibres consisted of glass.

A literature search on polysulphide materials indicates that they are flammable.

Only the exposed coated glass fibres of the render were found to be combustible when the entire render system was tested for combustibility and flammability.

The cementitious render was not flammable.

## **5.3 Presence OF A Fire Retardant**

A visual examination of the surfaces of the samples did not reveal the presence of any obvious coatings or layers.

Detailed results are contained in Appendix C.

## **6. Conclusions**

### **6.1 Render**

The analysis carried out revealed that the render comprised a cementitious product with a polysulphide coated glass fibre mesh.

The polysulphide coatings were found to be combustible.

A literature search on polysulphide materials indicates that they are also flammable.

Only the exposed coated glass fibres of the render were found to be combustible when the entire render system was tested for combustibility and flammability.

The cementitious render was not flammable.

### **6.2 Insulation**

The analysis carried out revealed that the insulation present behind the render facing was expanded polystyrene that was highly flammable.

### **6.3 Cavity/Fire Barriers**

Horizontal cavity/fire barriers (mineral wool) were identified.

No vertical barriers were noted.

### **6.4 General**

It was noted that the render coating was failing in places.

The insulation was also exposed at the base of some render panels.

In addition, a number of unsealed pipe penetrations through the render were noted.

In these areas the flammable insulation would potentially be exposed.



**[Redacted Name] CEng BSc MINDT  
Director**

**APPENDIX A**  
**PHOTOGRAPHS**



1 – General view of the property.



2 – Location 1 – Tideslea Flat (L 14).



3 – Location 1

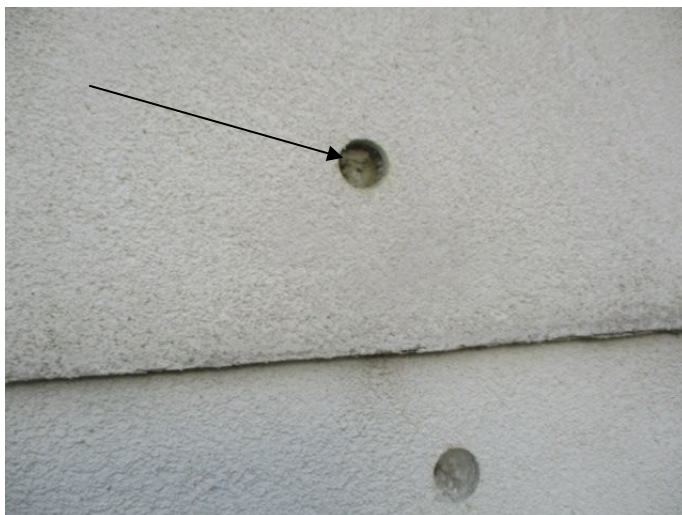




4 – Location 2 – Tideslea Flat (L5)



5 – Location 2



6 – Location 2 – Mineral wool horizontal barrier



7 – Location 3 – Tideslea Flat (L2)



8 – Location 3



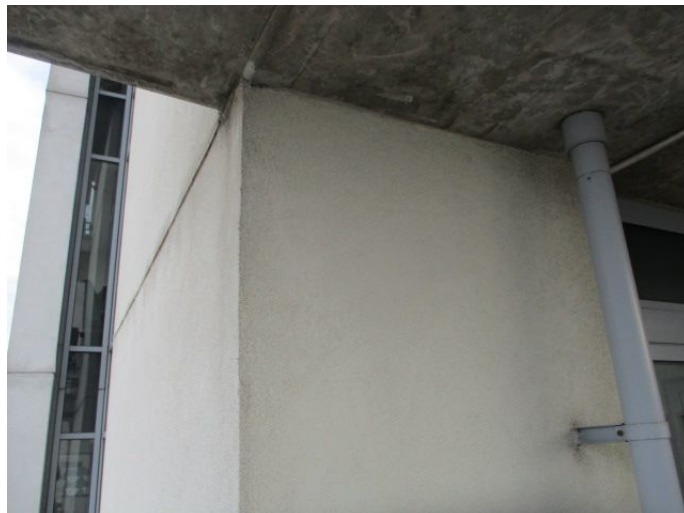
9 – Location 4 – Tidlock Flat (L4)



10 – Location 4



11 – Location 4 – Horizontal rockwool barrier



12 – Location 5 – Tidlock Fla [REDACTED] – L5



13 – Location 5



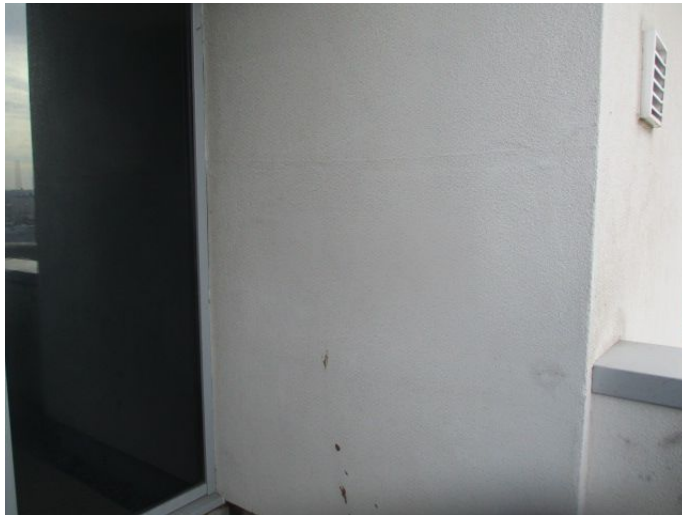
14 – Location 6 – Tidlock – Flat [REDACTED] (L7)



15 – Location 6



16 – Location 6 – Insulation exposed beneath panel



17 – Location 7 – Bendish Flat (L9)



19 – Location 7



18 – Location 10 – Bendish Flat (L8)



20 – Location 10



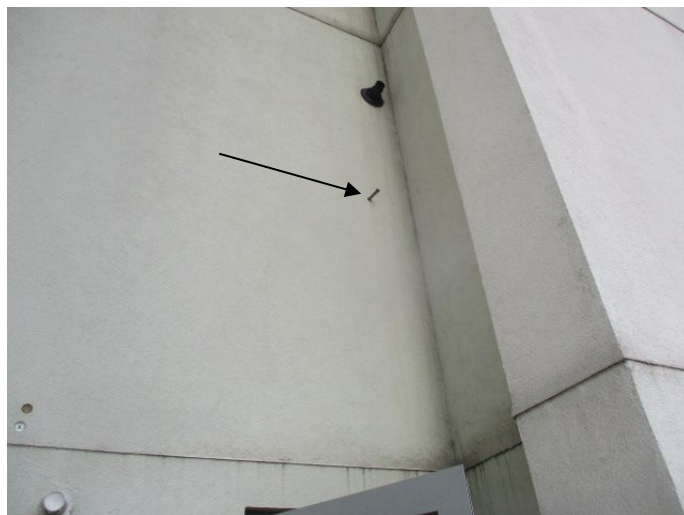
21 – Location 10 – Polystyrene insulation exposed at base of panel



22 – Location 11 – Bendish Flat (L3)



23 – Typical location where the render is failing.



24 – Typical unsealed pipe through render (above Location 4)



25 – Typical unsealed pipe through render.



26 – Failing render



27 – Typical thermal anomalies at slab level (possible cavity/fire barriers ?).



**APPENDIX B**  
**LABORATORY ANALYSIS**

**REPORT 63784/C**

**ROYAL ARTILLERY QUAY, WOOLWICH**

**ANALYSIS OF INSULATION AND RENDER  
SAMPLES**

Sandberg LLP  
5 Carpenters Place  
London SW4 7TD

Tel: [REDACTED]  
Fax: [REDACTED]

email: [REDACTED]@sandberg.co.uk  
web: www.sandberg.co.uk

**REPORT 63784/C**

**ROYAL ARTILLERY QUAY, WOOLWICH**

**ANALYSIS OF INSULATION AND RENDER SAMPLES**

RS Specialist Services Ltd  
166 Manor Green Road  
Epsom  
Surrey  
KT19 8LL

This report comprises  
3 pages of text  
Appendix A of 2 sheets

For the attention of [REDACTED]

14 November 2018

Partners: [REDACTED]

Senior Associates: [REDACTED]  
Associates: [REDACTED]

**REPORT 63784/C**

**ROYAL ARTILLERY QUAY, WOOLWICH**

**ANALYSIS OF INSULATION AND RENDER SAMPLES**

**Reference:** Written instruction from [REDACTED]  
Job No: 18086

**1. INTRODUCTION**

Three render samples and six insulation samples, taken by yourselves from the above location, were received in our laboratories on 6 November 2018. We were asked to carry out analysis to determine the nature of the materials and to determine whether or not the materials were combustible and/or flammable.

**2. SAMPLE DETAILS**

Sandberg reference	Sample reference	Sample details	Weight of sample, g
C97969	Sample 1A	White insulation foam pieces	2.4
	Sample 1B	Render $\varnothing$ 30mm core, up to 3mm thick, comprising cementitious render with coated fibre mesh lattice	
C97970	Sample 2	White insulation foam pieces	<1.0
C97971	Sample 3A	White insulation foam pieces	2.8
	Sample 3B	Render $\varnothing$ 30mm core, up to 3mm thick, comprising cementitious render with coated fibre mesh lattice	

Sandberg reference	Sample reference	Sample details	Weight of sample, g
C97972	Sample 4	White insulation foam pieces	<1.0
C97973	Sample 5A	White insulation foam pieces	2.3
	Sample 5B	Render $\varnothing$ 30mm core, up to 3mm thick, comprising cementitious render with coated fibre mesh lattice	
C97974	Sample 6	White insulation foam pieces	<1.0

### 3. ANALYSIS METHOD AND RESULTS

#### 3.1 Fourier Transform Infrared Spectroscopy

The insulation samples and the coatings of the fibres were examined directly by Fourier transform infrared spectrometry using attenuated total reflectance through a germanium crystal.

The spectra produced were compared with reference library data to determine the nature of the material.

All six of the insulation samples gave closest library matches to a polystyrene resin.

The coatings of the fibres found in all three render samples gave closest library matches to a polysulphide resin.

#### 3.2 Combustion and Flammability test

The samples was subjected to burning to determine if they were combustible and/or flammable.

All six of the insulation samples were found to readily support combustion and continued to burn after the source of ignition was removed. The samples all produced molten droplets of flaming polymer during the test.

Only the polymer coatings of the exposed fibres at the edges of the core samples were found to combust. The rapid combustion did not allow an assessment of the flammability of the coatings.

A separate combustion test carried out on the fibres alone revealed that only the coatings of the fibres were combustible; the fibres themselves melted to a bead indicating that the fibres consisted of glass.

The render samples were tested with the polymer coated glass fibres removed; the cementitious part of the renders did not combust nor were flammable.

A literature search on polysulphide materials indicates that they are flammable.

#### 4. REMARKS

- All six of the insulation samples were found to consist of a polystyrene resin.
- All six of the insulation samples were combustible and flammable and produced molten droplets of flaming polymer during the test.
- The render samples were all found to comprise a cementitious render with a polysulphide coated glass fibre internal lattice.
- The polysulphide coatings were found to be combustible.
- A literature search on polysulphide materials indicates that they are flammable.
- Only the exposed coated glass fibres of the render samples were found to be combustible when the entire render system was tested for combustibility and flammability.
- The cementitious part of the renders were not combustible nor were flammable.

The sample sizes were small and therefore the results obtained should be treated with a degree of caution. Any decisions based on the results should be undertaken taking this into account.

RS Specialist Services Ltd  
166 Manor Green Road  
Epsom  
Surrey  
KT19 8LL

For the attention of [REDACTED]

for Sandberg LLP

[REDACTED]  
[REDACTED]  
Senior Associate  
14 November 2018

**APPENDIX A**  
**INFRARED SPECTRA**  
**OF MATERIALS**

This report is personal to the client, confidential, non-assignable and written with no admission of liability to any third party.

This report shall not be reproduced, except in full, without the written approval of Sandberg LLP.

Where our involvement consists exclusively of testing samples, the results and our conclusions relate only to the samples tested.



**APPENDIX C**  
**CONDITIONS & LIMITATIONS**

## **Conditions and Limitations**

### **1. Access**

If we observe evidence to suggest that concealed parts of the structure and fabric might be defective or contain hazardous materials, we will advise you accordingly and make recommendations for further investigations.

However, unless otherwise instructed by you, we will not open-up for inspection any permanently enclosed or concealed parts of the structure and fabric.

Access to some areas may be restricted or denied. If we find that our inspection has been excessively limited we will advise you accordingly and seek your further instructions.

Our report will list any significant internal and external areas that we are unable to inspect.

### **2. Deleterious Materials**

Deleterious materials surveys are carried out by suitably experienced and qualified staff.

The sampling regime and inspection will be designed to be representative of the materials within the property. The samples taken would represent a fraction of the materials present within a property however.

In addition, the sampling and inspection locations will be dictated by accessibility, practicality and the requirement to minimise occupant disturbance.

The results provided will relate to those materials/elements tested and reported on only.

**Therefore there cannot be a guarantee that all potentially deleterious materials have been identified.**

### **3. Asbestos Surveys**

Asbestos surveys are carried out by experienced P402 qualified staff in general accordance with HSE document "Asbestos: The survey guide".

The survey types available are as follows:

1. Management Survey – Sampling Survey, samples of representative suspect materials taken for laboratory analysis.
2. Refurbishment & Demolition Survey – Pre demolition/major refurbishment survey.

In addition we can undertake a pre acquisition/overview – A walk around non intrusive survey.

All reasonable efforts will be made to detect asbestos. It must be recognised however, that areas of asbestos may be in inaccessible locations or obscured.

In addition the inspection locations will be at selected or random spot positions (although designed to be representative of the property) only.

As such **no guarantee, regardless of the type of survey**, can be given that all asbestos materials will be located.

Except where specifically requested, land contamination would not be included.

RS will accept no responsibility for claims arising as a consequence of exposure of others to asbestos containing materials and accept no liability in the situation that asbestos is not identified during a survey.

#### **4. Investigations and Testing**

RS will employ techniques and equipment considered appropriate for particular investigations. Should it subsequently become clear that additional works are required this will be communicated to the client.

RS are therefore unable to guarantee that the results of each and every investigation will be completely conclusive but will recommend additional works where appropriate.

Any non-destructive testing may be limited by the capabilities of the technique/method.

The results of water ingress investigations can result in remedial works being proposed in order to eliminate certain details or identified defects.

Water can appear within a building at one location although there is more than one source. It must therefore be recognised that additional testing or remedial works may therefore be required.

#### **5. Payment Terms**

Invoices are issued either at completion of the appointment or, in the case of ongoing projects, approximately monthly.

Payment is strictly due within 28 days of the invoice date.

RS retain the right to charge an interest of 8% above standard base rate on overdue accounts.

## **6. Obligations**

RS will exercise all reasonable skill, care and diligence in the provision of the service and act in good faith, but accept neither responsibility nor liability for any loss or damage arising from the service.

## **7. Retention of Title, Copyright and Samples**

The Title for all reports, advice, design or material of any kind provided in writing or orally is retained until payment for all work has been made in full.

Our report shall be relied upon only by the party to whom the report is addressed and only when payment for the report has been made in full.

Copyright on all of the above mentioned is retained permanently unless expressly assigned by RS in writing.

Samples or materials may be disposed of after three months unless express instructions to the contrary have been given.

## **8. Costings**

The costings for remedial works are estimates only based on observations made during the inspection.

They are approximate figures that indicate the general scale of likely costs only and are not corroborated by tenders from the market.

Except where stated, the costings would not include for VAT, professional fees or access provision.