

**BUILDING SURVEY DEFECTS AND COST REPORT**

**ON**

**CEMETERY BUNGALOW  
WINKLEIGH  
DEVON  
EX19 8AP**

**ON BEHALF OF**

**WINKLEIGH PARISH COUNCIL**



Drew Pearce  
Chartered Surveyors  
14 Cathedral Close  
EXETER  
Devon  
EX1 1HA

Tel: 01392 201748  
Fax: 01392 205009  
Email: [ev@drewpearce.co.uk](mailto:ev@drewpearce.co.uk)

Date: 12 April 2016 Amended 17 May 2016

Ref: EV/7037

## CONTENTS

|      |   |    |
|------|---|----|
| 1.0  | INTRODUCTION .....                          | 5  |
| 1.1. | Instructions .....                          | 5  |
| 1.2. | General Description & Overview .....        | 5  |
| 2.0  | BUILDING CONDITION AND STATE OF REPAIR..... | 6  |
| 2.1. | General Description .....                   | 6  |
| 2.2. | External Elements .....                     | 6  |
| 2.3. | Internal Elements .....                     | 9  |
| 2.4. | Fire Protection .....                       | 13 |
| 2.5. | Services.....                               | 13 |
| 3.0  | LOCAL ENVIRONMENT ISSUES .....              | 14 |
| 3.1. | Flood .....                                 | 14 |
| 3.2. | Environmental .....                         | 14 |
| 3.3. | Japanese Knotweed .....                     | 14 |
| 4.0  | SUSTAINABILITY.....                         | 14 |
| 4.1. | Thermal insulation.....                     | 14 |
| 4.2. | Water Use .....                             | 15 |
| 5.0  | CONCLUSION .....                            | 15 |

|            |                                 |
|------------|---------------------------------|
| Appendix A | Deleterious Materials           |
| Appendix B | Statutory Issues                |
| Appendix C | Standard and Survey Limitations |
| Appendix D | Information Sheets              |

## EXECUTIVE SUMMARY

Further to our site inspection we noted that the most significant defect is the excessive condensation within the roof void. The roof is a shallow pitched steel trussed roof with timber purlins with a bitumastic sarking felt with a metal profile sheet roof. The roof void has been packed with insulation to improve the thermal capabilities of the structure. The timbers within the roof void were dripping with condensation as were the steel truss frames. It would be our recommendation that the ventilation within the roof void is improved, either via passive ventilation or forced air ventilation to ensure there are significant air changes within the space to alleviate the condensation problem. Steel is a poor thermal conductor and gets cold quickly. Any moist air within the roof void is likely to condense on the steel which can result in rusting and damage to the Rockwool insulation. Where the steel trusses protrude into the rooms within the dwelling, they are forming a cold bridge which is the likely cause for the condensation and black spot mould noted within a number of rooms in particular the master bedroom.

Consideration should be given to replacing the profile metal sheet roof with an insulated roof cladding panel effectively creating a warm deck roof which would keep the loft space at a constant temperature and prevent the condensation forming on the trusses and purlins.

Generally the property was cold, the radiator sizings appear to be inadequate for the size of the property and consideration should be given to undertaking a BTU calculation to determine the heat requirement for each room. The oil fired boiler appears to be aged and it would be our recommendation that consideration is given to upgrading the boiler to the most efficient type currently available on the market.

The property was originally constructed in the early 1940's and was designed for storage and workshop space and was subsequently converted to residential accommodation. The quality of the original build is basic but would have been fit for purpose for this original use. It is noted that the external walls of the living accommodation have been clad with insulation and rendered over to improve the thermal efficiency of the building. However, compared to a modern new build, the insulation values are poor with no floor insulation and inappropriate roof insulation for the roof finish. The retro fit external wall insulation has been installed to help improve the thermal efficiency of the property.

## **Summary**

### Summary of landlord and tenant issues

We have not viewed the lease and cannot confirm all responsibilities for maintenance and repair of the property. However, if the responsibility lies with the landlord, long term consideration could be given to re-building the structure to provide purpose built and fit for purpose dwelling. The plot size is generous and could accommodate two two-storey properties subject to any planning consents.

### Main issues noted during the survey

We noted during our inspection various issues which are detailed in the main body of the report. A summary of the issues are identified below:

1. Excessive condensation within the roof void.
2. An inefficient heating system.
3. Condensation and black spot mould noted to the ceilings, in particular within the master bedroom around the exposed trusses.
4. Raised moisture levels to the external walls, in particular within the master bedroom with readings between 18 and 22 WME to the rear and party wall between the garage. It is unlikely that any property of this nature and type was constructed by a DPM or DPC which could enable to wick up the walls giving the raised moisture level readings.
5. The ceiling finishes are fibreboard, skelings are plasterboard.
6. Evidence of efflorescence to the external gable end wall within the garage internal face.
7. Cut edge corrosion noted to the profile sheet roof.
8. Sun bleached rainwater goods.

The following table sets out a brief overview of the type and nature of the identified issues and concerns together with suggested remedial actions required and estimated costs.

The table uses traffic light identification to highlight the potential impact in your investment as follows:

**High** Urgent attention required - e.g. Health and Safety Issues, high cost that could impact on the investment

**Medium** Risk of significant cost implication if not remedied – e.g. Disrepair to external fabric, further investigation/testing required

**Low** Not if immediate concern, may have future impact on costs of maintaining the building. Possibility of change if no actions are take in

| Item                                  | Main Issues   | Impact on Investment   | Cost (£)         |
|---------------------------------------|---|--|------------------|
|                                       |   |  | <b>High Risk</b> |
| 1                                     | Condensation within the roof void.                          | Corrosion to the steel trusses, damage to the Rockwool insulation, possible water ingress to the internal finishes. Introduce cross ventilation within the roof void, cost for airbricks for passive ventilation £250, cost for forced air ventilation cost £1,200, renew roof covering with insulated profile metal roofing panels cost £15,000.* This item could be deferred to when the existing roof covering needs to be replaced if the passive or forced air ventilation reduces the condensation within the roof void. | £15,000          |
| 2                                     | Cold bridging, exposed truss ends within a number of rooms. | Increased risk of cold spots and condensation mould and black spot mould. Insulate exposed truss ends and trusses within the void to reduce the likelihood of cold bridging.   | £900             |
| <b>Total Cost for High Risk Items</b> |   |  | <b>£15,900</b>   |

| Medium Risk                              |  |   |                |
|--|--|---|----------------|
| 1  | Fibreboard ceilings throughout the property.         | Poor finish, inherently unstable in terms of repair. If the fibreboard is damaged there is no suitable repair other than replacement. Replace fibreboard ceilings with foil backed/ insulated plasterboard. | £2,500         |
| 2  | Inefficient heating system.                          | Poor internal environment for occupiers, undertake a BTU heat calculation and upgrade heating system to include new boiler.   | £6,000         |
| 3  | Aged and worn bath suite.                            | Cyclical maintenance, strip out and renew bath suite and shower.  | £3,000         |
| 4  | Dilapidated and worn kitchen.                        | Cyclical maintenance, strip out existing kitchen and renew to include integral cooker and hob.  | £3,500         |
| 5.                                       | Internal decorations.                                | Cyclical maintenance.   | £2,700         |
| 6.                                       | Repairs to cut edge corrosion to metal profile roof. | Failure of component, water ingress.  | £450           |
| 7.                                       | External decorations.                                | Cyclical maintenance.   | £3,500         |
| <b>Total Cost for Medium Risk Items</b>  |  |   | <b>£21,650</b> |
| Low Risk                                 |  |   |                |
| 1  | Internal decorations.                                | Cyclical maintenance.   | £2,700         |
| 2  | External decorations.                                | Cyclical maintenance.   | £3,500         |
| <b>Total Cost for Low Risk Items</b>     |  |   | <b>£6,200</b>  |
| Total cost all items                     |  |   | £43,750        |
| Allowance for professional fees @15%     |  |   | £6,562.50      |
| TOTAL ESTIMATED LIABILITY COST (Rounded) |  |   | £51,000        |

## **1.0 INTRODUCTION**

### **1.1. Instructions**

1.1.1. In accordance with your instructions we inspected Cemetery Cottage on 21 January 2016 to advise you as to the structural condition and state of repair.

1.1.2. The scope of service was confirmed by email 17 December 2015 as were Drew Pearce Limited Terms and Conditions of Appointment together with our Standard Limitations and Survey Limitations that apply to this instruction.

1.1.3. As per your instruction we have not commissioned an M&E consultant to inspect and comment on the properties services and installations. (Our inspections of services extends to confirming what is on site, no comment has been made to its condition, suitability and or whether it is fit for purpose.)

1.1.4. You will appreciate that it is difficult to accurately predict the remaining lifespan of building components and the following general phrases may be used to indicate this:

- |    |              |                                 |
|----|--------------|---------------------------------|
| a. | Urgent:      | work required straight away;    |
| b. | Priority:    | work required within 12 months; |
| c. | Short Term:  | say, up to three years;         |
| d. | Medium Term: | say, five to eight years;       |
| e. | Long Term:   | say, around ten years.          |

### **1.2. General Description & Overview**

1.2.1. The weather at the time of inspection was cold and sunny.

1.2.2. The property is a converted warehouse/workshop and is a single storey structure with a pitched profile metal roof. The walls have been rendered and incorporate uPVC windows to the living accommodation and crittall metal windows to the attached garage. The doors to the property are timber with glazed panels.

1.2.3. The property appears to have been constructed circa early 1940's and we are of the understanding was converted in the mid 70's.

1.2.4. The property is not Listed and is not located in a conservation area.

- 1.2.5. We have not had sight of the asbestos management plan and would recommend that the vendor provides a copy as part of the sellers pack.

## **2.0 BUILDING CONDITION AND STATE OF REPAIR**

### **2.1. General Description**

The property is a converted warehouse/workshop and is a single storey structure with a pitched profile metal roof. The walls have been rendered and incorporate uPVC windows to the living accommodation and crittall metal windows to the attached garage. The doors to the property are uPVC with solid base panels and glazed top panels.

#### **2.1.1. Foundations**

2.1.1.1. Without exposing foundations and footings, it is not possible to come to a precise conclusion as to their construction or condition. However, the foundations of the original building are unlikely to be of a modern standard/to be a combination of short bored piles and ground beams/strip foundations.

2.1.1.2. However there is nothing at surface level to suggest a concern, or the need for further investigations.

### **2.2. External Elements**

#### **2.2.1. Main Roofs**

2.2.1.1. The main roof is a shallow pitched roof with preformed steel trusses which has been finished with a profile metal roof covering. To overcome the increased thickness due to the external wall retro fit insulation the roof has been extended to provide an overhang detail. Generally the roof is industrial/agricultural in nature but appears to be performing its function in maintaining weather tightness. The roof is generally in a fair condition, however, there is evidence of lichen growth to the older sections of profile roof and there is cut edge corrosion at the junction of the older roof covering and extension roof covering. It would be our recommendation that the cut edge corrosion is treated to prevent further decay and possible breakdown of material. Consideration should be given to replacing the metal sheet roof with an insulated metal roof panel to improve the thermal efficiency of the structure and reduce the likelihood of the noted condensation within the roof void. If this is not to undertaken passive roof void ventilation should be introduced, gable end air bricks; ridge & soffit ventilation & ventilation introduced mid pitch to provide a good flow of fresh air within the void. An

alternative to this would be to use a forced air system.



*Evidence of cut edge corrosion*



*Lichen growth to roof panels*

## **2.2.2. Eaves Joinery**

2.2.2.1. The soffits and fascias are formed of uPVC and generally appear to be in a fair condition with only a minor build up of algae noted which should be cleaned as part of cyclical maintenance.

2.2.2.2. The gable ends have been finished with profile metal capping detail and generally appears to be in a fair condition with only minor rust spots noted and some edge corrosion in particular to the right hand side gable. Consideration should be given to treating the corrosion as part of cyclical maintenance.

## **2.2.3. Chimney Stacks**

2.2.3.1. There is a single brick built chimney stack located to the left hand side of the property. Generally the chimney stack appears to be in a fair condition with only minor

delamination noted to the brickwork in particular to the rear elevation. Long term consideration would be to cut out the delaminated brickwork and replace. The lead flashings around the base of the chimney stack appear to be in a fair condition with no evidence of splits and only minor discoloration to the cover flashings noted. The corner junctions of the cover flashings appear to be folded and have not been seen welded and long term consideration would be to solder the join.

#### **2.2.4. Rainwater Goods**

2.2.4.1. The rainwater goods comprise of half round uPVC gutters and round downpipes with associated stop ends, clips, fixing brackets, swan necks and shoes. Generally the guttering appears to be in a fair condition with no evidence of splits or leaking around the seals. The gutters in particular are sun bleached and are possibly brittle. The long term consideration would be to replace the uPVC guttering with like for like.



*Sun bleached rainwater goods*

2.2.4.2. It would be our recommendation with the gutters and downpipes are rod through on an annual basis as part of cyclical maintenance.

#### **2.2.5. External Walls**

2.2.5.1. The walls to the living accommodation have been externally insulated and rendered. Generally the external walls appear to be in a fair condition with no evidence of cracking or spalling render. Where the external walls have been insulated, the render and insulation overhang the plinth detail, in particular to the left hand gable elevation.

2.2.5.2. The garage area of the property is original single skin brickwork which has been rendered. Generally the render is worn and aged but serviceable. Long term consideration would be to hack off the existing render and renew.

## **2.2.6. External Joinery, Windows and Doors**

- 2.2.6.1. The windows to the living accommodation comprise of uPVC double glazed units incorporating trickle vents and drainage channels. Generally the windows appear to be in a fair condition with no evidence of blown glazing units or failed seals. It should be noted that the uPVC cills in particular to the rear elevation are covered with algae and should be cleaned as part of cyclical maintenance.
- 2.2.6.2. The front and left hand side pedestrian doors are formed of uPVC, solid base panel with glazed top panel and generally appear to be in a fair condition with no evidence of blown glazing or failed seals.
- 2.2.6.3. The windows to the garage comprise of crittall single glazed windows and are generally in a fair condition for their age although decoratively poor. Consideration should be given to redecorating the windows within the next 12 months and/or replacing with uPVC windows to match the rest of the property.
- 2.2.6.4. To the right hand side gable is the plastic coated steel up and over garage door within the right hand elevation generally appears to be in a fair condition with no evidence of decay or weighting issues with the opening mechanism.

## **2.2.7. External Decoration**

- 2.2.7.1. Generally the decorations are in a fair condition, with some rust staining noted, in particular to the right hand elevation and organic growth to the base of the wall to all elevations. Consideration should be given to treating the walls with a fungicide and treating and sealing the rust staining prior to any redecoration. We would recommend that the external walls are redecorated within the next 12 - 24 months.

## **2.3. Internal Elements**

### **2.3.1. Roof Voids**

- 2.3.1.1. The roof void has been filled with Rockwool insulation to a varying depth between 300mm and 400mm. The roof structure comprises of preformed steel trusses with timber purlins and ridge boards. The roof structure has been finished with a covering of steel mesh with bitumastic sarking felt to the underside of the profiled steel sheet roof covering. There is a significant condensation problem within the roof void, the condensation was dripping off the purlins and steel trusses, which over time could have

a significant and adverse effect to the roof structure. Significant condensation can cause rot to the timber and rust and decay to the steel components of the roof structure. It was noted that there was very little air circulation within the roof void and it would be our recommendation that as a minimum, air bricks are inserted into the gable ends to provide a cross flow of ventilation to reduce the condensation within the roof void. If this form of passive ventilation is found to be inadequate forced air ventilation could be a consideration to reduce the condensation levels. Consideration could be given to stripping the existing roof covering and renewing with an insulated roofing sheet to effectively provide a warm roof which would keep the internal structure at a more constant temperature and above the dew point which will prevent condensation forming on the structural members.



*Evidence of condensation within roof void*



*Evidence of condensation within roof void*



*Evidence of condensation within roof void*

### **2.3.2. Ceilings**

2.3.2.1. The ceilings throughout the property are formed of fibreboard and the junctions have been taped. Generally the ceilings undulate which is not unexpected given it is formed of fibreboard. The material itself absorbs moisture and over a period of time sags. It is difficult to repair any damage to the fibreboard due to the make up of the material and our recommendation will be to remove the fibreboard complete and board the ceiling with insulated or foil backed plasterboard and skim.

2.3.2.2. The skellings within the property are formed of plasterboard and generally appear to be in a fair condition with only minor hairline cracking noted at the junction of walls and skelling which is decorative in nature.

2.3.2.3. The ceilings appear to have been finished with gloss paint. If the gloss paint is oil based it is a potential fire risk.



*Gloss painted fibreboard ceilings found throughout the property*

### **2.3.3. Internal Walls**

2.3.3.1. The internal walls are formed of solid masonry and have been plastered and skimmed and generally appear to be in a fair condition with no evidence of cracking or de-bonding plaster.

2.3.3.2. Elevated moisture readings are noted to the internal face of the external walls. Readings between 20 – 22 WME in particular to the rear master bedroom. It is noted that the external walls have been insulated and rendered over. It is possible the damp noted is as a result of residual damp within the premises prior to the insulation installation and structure is still in the process of drying out. We would recommend that moisture levels are monitored on a regular basis.

### **2.3.4. Floors**

2.3.4.1. The floors appear to be solid and have been finished with a variety of floor finishes. We did not lift any of the floor finishes to determine the make up of the substrate, however, it is our opinion that the floor is formed of concrete with associated screed. There was no evidence of undulation to suggest there is an issue with the floor slab. However, it is unlikely that the slab is insulated and/or has a DPM. This could result in any moisture trapped underneath the slab being wicked up the internal walls which could explain the high moisture readings noted to the inside face of the external walls, in particular within the master bedroom.

### **2.3.5. Internal Joinery**

2.3.5.1. The internal joinery comprises of skirtings, door frames, architraves, door stops and doors and generally appears to be in a fair condition with the exception of day to day wear and tear.

### **2.3.6. Fireplaces and Flues**

2.3.6.1. There is a fireplace within the sitting room insert electric fire installed. The flue opening appears to be boarded we saw no evidence of venting to the base of the flue and consideration should be given to installing a hit and miss ventilation grille to allow air movement within the void and prevent the build up of condensation which could leach through and stain the internal finishes.

2.3.6.2. \*Post inspection note, the fire place in the dining room was not inspected at the time of survey. The fire place was concealed with house hold items stored in front of it.

### **2.3.7. Internal Decorations**

2.3.7.1. Generally the decorations internally are in a fair condition with the exception of day to day wear and tear. Consideration should be given to redecorating within the next two years as part of cyclical maintenance.

### **2.3.8. Fixtures and Fittings**

2.3.8.1. The bathroom is aged and worn and consideration should be given to stripping out and renewing to include all splashbacks within the next two years as part of cyclical maintenance.

2.3.8.2. The kitchen is dilapidated and piecemeal in nature and consideration should be given to stripping out and installing a new fit for purpose kitchen within the next 12-24 months.

## **2.4 Fire Protection**

2.4.1. During our inspection we noted limited smoke detection within the property, it is unknown if the detection is hard wired. If the detectors are hard wired they have a life of 10 years before the heads require replacement. If the detectors are battery operated these should be replaced with hard wired detectors. Given the ceilings have been finished with a gloss paint which is likely to be oil based, it would be our recommendation that that oil painted fibreboard ceilings are replaced with plasterboard ceilings.

2.4.2. We would also recommend that as a responsible landlord you undertake a Fire Risk Assessment and action any recommendations.

## **2.5. Services**

2.5.1. The property is supplied by mains electricity, and the meters are located within the kitchen above the external exit door. It would be our recommendation that an electrical check is undertaken of the existing system to understand if there are any re-wiring considerations.

2.5.2. The heat source within the property is provided by an oil fired boiler. It would be our recommendation that the boiler is inspected and that BTU calculation is made to determine the size of radiators required within each room. The boiler appears aged and inefficient and dependant on the inspection report consideration should be given to

replacing the boiler with an energy efficient model.

### **3.0 LOCAL ENVIRONMENT ISSUES**

#### **3.1. Flood**

3.1.1. The Environment Agency does not have a flood risk assessment for this property. This is probably because the property falls outside the floodplain and is therefore considered to be at low risk. They are often able to provide an assessment based on historical flood records and geographical models. The data indicates where flooding from rivers, streams, water courses or the sea is possible. It does not cover flooding from other sources like burst water mains, road drains, run off from hillsides etc.

#### **3.2. Environmental**

3.2.1. We have not carried out an Environmental Audit of the site or surrounding area but would be pleased to organise this if you so require.

3.2.2. In addition to the standard enquiries of the local authority you may wish to commission a separate Environmental Report which will comment specifically on Statutory Registers (to identify any nearby industrial processes or installations which might have an environmental impact on the property), site history, land instability issue and natural perils which will provide further comment on flooding and radon previously discussed. Your solicitor will be able to organise for this report should you so require.

#### **3.3. Japanese Knotweed**

3.3.1. Japanese Knotweed was not observed during our inspection. Further information on Japanese Knotweed can be found on Information Sheet 2 appended to this report.

### **4.0 SUSTAINABILITY**

#### **4.1. Thermal insulation**

4.1.1. We have not been provided with a copy of the energy performance certificate for the property. The vendor is legally obliged to provide a copy of this under the Energy Performance Directive of Buildings.

4.1.2. You should seek to obtain a copy of the full Energy Performance Certificate from the vendor agent's, as this contains details of ways to reduce energy and fuel consumption

to increase the energy efficiency rating of the building.

- 4.1.3. Under the Energy Act 2011, landlords will be unable to let non-residential buildings with an EPC rating of F to G from April 2018. It is therefore likely that future improvements will be required to ensure the building achieves a rating of least E.

#### **4.2. Water Use**

- 4.2.1. The property is mains fed.
- 4.2.2. The foul drainage runs to a septic tank located to the rear of the plot. We did not inspect the chamber and cannot comment as to its condition. However, as part of cyclical maintenance we would recommend that the septic tank is de-sludged every 18 - 24 months. It was noted that the cast iron soil vent pipe is in a poor decorative condition and consideration should be given to replacing with uPVC to reduce long term maintenance. If the cast iron pipe is to remain insitu it should be redecorated within the first 12 months. Cast iron rusts and can break down unless well maintained, in particular to the rear seam which is difficult to access.

#### **5.0 CONCLUSION**

- 5.1.1. Generally the property was found to be cold and inefficient and terms of thermal capabilities and requires some upgrading to improve the comfort levels within the property. The most significant of which would be the replacement of the existing roof covering with an insulated panel and the upgrading of the heating system.
- 5.1.2. The plot size is generous and consideration could be given to obtaining planning permission to construct 2 no. dwellings on the site with the view of demolishing the existing structure and providing efficient low energy use structures which are fit for purpose.

**EDWARD VEREKER BSc (Hons) MRICS .....**

**DREW PEARCE**

**©Drew Pearce Chartered Surveyors**

This document is copyrighted with all rights reserved. Under copyright laws, the document may not be copied, photocopied, reproduced, translated, altered or reduced to any electronic medium or machine readable form, in whole or in part, without the written consent of Drew Pearce Chartered Surveyors. Failure to comply with this condition may result in prosecution



## **APPENDIX A**

### **DELETERIOUS MATERIALS**

#### **Alkali silica reaction**

This concrete defect, sometimes referred to colloquially as concrete cancer, affects a small proportion of concrete as a consequence of a chemical reaction between water and certain aggregates.

#### **Asbestos**

Guidance on asbestos can be found at [www.hse.gov.uk/asbestos](http://www.hse.gov.uk/asbestos).

#### **Brick slips**

Brick slips are thin faces of brickwork used to conceal structural members in order to give a visually uniform appearance. They are typically bonded to the structural substrate and can suffer from loss of adhesion or from lateral forces caused by thermal movement.

#### **Calcium silicate brickwork**

Whilst calcium silicate bricks (sometimes known as sand lime bricks) are inherently a stable material, they should be constructed with a suitable allowance for their future thermal movement. However, occasionally they are constructed in a similar way to clay brickwork, which can lead to cracking of larger brickwork bays.

#### **Calcium chloride additives to concrete**

Used to accelerate initial setting of the concrete.

#### **Composite panels**

Composite panels are typically either used externally as roof or elevation cladding or internally, typically by the food industry, to create highly insulated working or storage environments. Composite panels are formed from an internal core, bonded to outer faces. That bond creates the structural integrity. A number of fire events in which composite panels were considered a contributing factor had led the UK insurance industry to review their position in relation to composite panels. The specification, design of installation and other contributing factors are relevant in assessing the associated risk. A variety of core materials have been used to create composite panels, which can have a varying impact on fire risk. In broad terms, expanded polystyrene and expanded polyurethane (PUR) are considered to represent a risk. However, some

(but not all) polyisocyanurate (PIR) cored panels are certified by the Loss Prevention Council (LPC) as being suitably fire resistant for either internal or external applications. The only way to be certain of the specification of a composite panel is to review the specification or by testing of the core material. It is also possible that early composite panels incorporate CFC or HCFC gasses, used as blowing agents to introduce the insulant.

### **High alumina cement (HAC)**

HAC based concrete is almost exclusively found in pre-cast concrete elements. There is potential for a reduction in strength over time as a consequence of a process known as conversion. This can be more significant where the concrete element is exposed to moisture.

### **Hollow clay pot and concrete beam composite floors**

This form of construction allowed for lighter weight structures and is inherently stable if well-constructed. However, it is possible that the concrete beams (which were cast on site between the hollow clay pots which created a formwork) can suffer from poor compaction and voiding. These problems, whilst unlikely to have structural significance, can expose steel reinforcement bars to low concrete cover levels which itself can reduce the fire integrity of the structure. Often it is difficult to identify such lack of concrete cover, particularly if the clay pots were spaced using clay tiles, which remain in-situ and conceal the underside of the poured concrete.

### **Lead**

Typically used for pipework and paintwork. It should be noted, however, that the use of lead roofing and waterproofing details is not considered prejudicial.

### **Loose mineral fibres**

Loose mineral fibres can represent a health risk when the fibres measure below a certain threshold width, because of the effect on the lungs.

### **Mosaic tiles**

Mosaic tiles are used as a decorative finish but can be affected by a loss of adhesion or thermal movement within the building.

### **Mundic blocks**

Mundic blocks were used principally in the south west of England and can lead to deterioration of concrete over time, if used as aggregates in concrete.

### **Nickel sulphide inclusions**

Nickel sulphide inclusions are impurities in toughened glass that can, over time and when exposed to increased environmental temperatures, cause spontaneous cracking of the glazing panels. In order to reduce the risk of such cracking, toughened glass is usually heat-soaked, to recreate that environmental risk.

### **Polychlorinated biphenyl (PCBs)**

PCBs were historically used (amongst other applications) as coolants in electrical equipment. It is highly toxic and classified as a persistent organic pollutant.

### **R22**

A HCFC refrigerant gas, currently being phased out of use. From 1 January 2015 it will no longer be legal to "use" R22 in the maintenance and repair of air conditioning equipment. This means that certain repairs will not be possible and effectively mean the equipment has to be converted to use another gas, or replaced. A landlord or tenant with a repairing obligation may be liable for system replacement if such a failure occurs.

### **Sea dredged aggregate**

Such aggregates were occasionally used and increased the risk of salts affecting steel elements within concrete.

### **Thin stone panels**

There are circumstances where stone panels (and particularly marble) are thin enough to allow thermal movement significant enough to cause curling of the stone.

### **Woodwool slabs used as permanent formwork**

When used as permanent formwork for concrete structures, woodwool slabs do represent a potential risk. It is possible for: excessive and concealed voiding to be present in the concrete and for reinforcement to be exposed as a consequence; cement fines to leach into the woodwool before the concrete sets (reducing strength), compromising the inherent fire integrity of the structure.



## **APPENDIX B STATUTORY ISSUES**

### **1.0 The Equality Act 2010**

1.1 Since 1<sup>st</sup> October 2010 the *Equality Act 2010* which replaced *Disability Discrimination Act 1995*, this maintains the duties for service providers and employers to make reasonable adjustments in relation to the physical features of their premises to overcome physical barriers to access for persons with disabilities. In some cases this can involve building alterations to ensure compliance with the legislation.

1.2 We have not, during our inspection, undertaken an 'access audit' for the purposes of the Act. In fact it is not possible to undertake such an audit without detailed knowledge of your proposed use of the building, and the services, if any, that you intend to provide.

1.3 If you are a service provider within the terms of the Act then we recommend that you arrange for an access audit of the premises.

1.4 Level access into the building is possible.

1.5 There are no marked disabled parking bays in the car park.

1.6 There is not an accessible WC for disabled persons provided.

### **2.0 Fire Risk Assessment**

2.1 The Regulatory Reform (Fire Safety) Order 2005 requires a 'Responsible Person' (e.g. Employer) to take such general fire precautions as will ensure, so far as is reasonably practicable, the safety of any of their employees, and to ensure the premises are safe.

2.2 A suitable and sufficient Risk Assessment must be carried out and must be reviewed if changes occur. We have not, during our inspection, undertaken (or assessed an existing) Fire Risk Assessment. We must advise you have a suitable Fire Risk Assessment if the vendor is unable to provide one.

### **3.0 Asbestos**

3.1 If you own, occupy, manage or have responsibilities for premises which may contain asbestos, you will either have, a legal duty to manage the risk from this material, or, a duty to co-operate with whoever manages that risk.

3.2 Asbestos is a known significant risk to health. Breathing in air containing asbestos fibres can lead to asbestos related diseases, mainly cancer of lungs and chest lining. Asbestos is only a risk to health if asbestos fibres are released into the air and breathed in. This is likely to occur if materials containing asbestos should deteriorate, be damaged or are likely to be worked upon. Asbestos can be found in numerous building materials including pipe lagging, corrugated sheet material and fibre cement roofing slates to name but a few. Asbestos fibres and their presence in building materials cannot be evaluated by the naked eye. A sampling test is required to determine the fibre material present. All asbestos is dangerous and should be treated as such.

3.3 In this report we may identify some materials which we believe could contain asbestos, but this does not infer all other materials are free from asbestos. We would advise that you instruct a qualified asbestos surveyor to carry out a survey including sampling of materials considered to contain asbestos fibre as required under The Control of Asbestos Regulations 2012. The surveyor can then advise you an appropriate course of action to be adopted to manage the risk and comply with all necessary Health & Safety legislation which will include the provision of an asbestos management plan.

3.4 The vendor or their landlord should have an existing management plan and in which case a copy of the report should be obtained as part of your pre-acquisition enquiries.



**APPENDIX C  
STANDARD AND SURVEY LIMITATIONS**

- 1.0 The weather on the day of inspection was cold and sunny. As it was not raining heavily we cannot be certain that all of the rainwater goods, roofing etc, is leak free. We will have made certain assumptions which can only be confirmed during periods of prolonged rainfall.
- 1.1 At the time of our inspection the property was fully furnished and occupied and floor surfaces were mainly covered with carpets/vinyl flooring. We were only able to inspect those parts of the structure which were accessible without removing furniture and fittings. Our inspection of the roof timbers was restricted to those areas visible from a safe vantage point at the centre of the roof and without lifting insulation boarding or stored goods.
- 1.2 We inspected all those parts of the property which could be seen either from ground level externally or from within the property. We did not disturb any parts of the structure which were concealed during the course of construction, for example, foundations were not exposed, and floorboards were not lifted, nor were plaster finishes removed from the surfaces of the walls. It follows that for practical reasons we have not inspected all the brickwork/blockwork, stonework (*masonry*), timber and other parts of the structure which are covered, unexposed or inaccessible and we are unable to report that any such part of the property is free from defect.
- 1.3 We did not find any evidence of woodworm infestation in the property, but we should point out that even in apparently sound timber the absence of characteristic flight holes is no guarantee that larvae are not already tunnelling within it. No timber can be confidently stated to be free from infestation unless it has been properly chemically treated.
- 1.4 The report is confined to material defects only and we have not noted all minor items such as loose door or window fittings, which are not of structural significance.
- 1.5 We have not carried out any investigation of planning, highway, environmental, contamination or any legal matters which may directly or indirectly affect the property.

- 1.6 We must stress that we have not carried out any investigation to determine whether high alumina cement, or concrete with calcium chloride additive or any other deleterious material has been used in the construction of this property and we are, therefore, unable to report that the property is free from risk in this respect. However, it is improbable that these materials will have been used in a structural situation in a property of this age and construction.
- 1.7 We have not carried out any tests for the presence of Radon.



## INFORMATION SHEET 1

### Radon

We have not carried out any tests for the presence of Radon gas. Radon is a colourless and odourless naturally occurring radioactive gas, which enters buildings from the ground. The amount of Radon formed within the ground depends on the type of rocks in the sub-strata, so that the amount of Radon permeating through to the surface throughout the country does vary. Exposure to high concentrations increases the risk of lung cancer. The Radon level in the air we breathe outside is very low but can be higher inside buildings.

Public Health England (PHE) recommends that radon levels should be reduced in homes where the annual average is at or above 200 becquerels per cubic metre (200 Bq m<sup>-3</sup>). This level is termed the Action Level. PHE defines radon affected areas as those with 1% chance or more of homes having a radon concentration at or above the Action Level. The joint PHE-BGS digital Indicative Atlas of Radon in Great Britain presents an overview of the results of detailed mapping of radon potential, defined as the estimated percentage of homes in an area above the radon Action Level. The Atlas presents a simplified version of the Radon Potential Dataset for Great Britain with each 1-km grid square being classed according to the highest radon potential found within it, so is indicative rather than definitive.

Data from UK radon's Indicative Atlas of radon shows this property is within a 1km square where there is a 10 – 30 % chance of homes being at or above the Radon Action Level.

According to PHE all workplaces in a designated radon Affected Areas should be tested, unless a detailed assessment shows good reason to expect the radon level to be low. A workplace Measurement Pack can be ordered to test for radon. Radon should remain in your routine reviews of risk assessments

If you are concerned about this problem we can arrange for a test to be carried out to establish the relative risk. Special tests of this nature are additional to our fee. If the property is found to have high levels of Radon we can advise on suitable remedial measures but you should be aware that these could cost a considerable sum of money.

If you require any further information on Radon in homes we suggest you contact Public Health England at the following address: Centre for Radiation, Chemical and Environmental Hazards, Radiation Protection Division, Chilton, Didcot, Oxon, OX11 0RQ.

Your Solicitor should enquire as to whether any Radon tests have already been carried out at the property, and the results if applicable.

## INFORMATION SHEET 2

### Japanese Knotweed

Japanese Knotweed is a large, herbaceous perennial plant, native to eastern Asia in Japan, China and Korea. In North America and Europe the species is well established and has been classified as invasive in several countries.

In relatively recent years it has become a problem in the United Kingdom and it can cause damage to buildings, drains and hard surfaces. It is difficult to control, smothers native plants and spreads rapidly.

Due to the problems that can result, all parts of the plant are deemed controlled waste and must be disposed of correctly. Where found to be present, the problem can be costly to eradicate and failure to remove it in a controlled manner is a legal offence.

During our inspections of the grounds we did not find evidence of the presence of Japanese Knotweed. However, the plant is most recognisable during May to October when the plant is at its most vigorous. It grows to a height of about 3 metres and is formed from stiff purple speckled stems or canes resembling bamboo. The canes grow densely in the summer and die back in the autumn with white flowers appearing late in the season. The costs incurred in controlling the plant are significant and any waste arising from the plant should be disposed of in accordance with the Environmental Protection (Duty of Care) Regulations 1991, as controlled waste.

Further information regarding the control of this plant is available from The Environment Agency – Customer Contacts Team (telephone number 03708 506 506).

The Environment Agency provides a Code of Practice including an example management plan for dealing with Japanese Knotweed and the pieces of legislation that cover this including the Wildlife and Countryside Act 1981

