

# Timberwise

## BELOW GROUND WATERPROOFING

### B A S E M E N T   W A T E R P R O O F I N G   P R O P O S A L

#### P R O P E R T Y   A D D R E S S

Kings Arms Hotel  
2 Lion's Gate  
Molesey  
KT8 9DD

**Timberwise Waterproofing Specialist Team**

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## **BASEMENT WATERPROOFING PROPOSAL**

CLIENT NAME AND ADDRESS

Amy Montgomery  
CATO Creative

DATE OF REPORT

9<sup>th</sup> April 2018

DATE OF VISIT TO PROPERTY

REPORT REFERENCE NUMBER

P37574

PROPERTY ADDRESS

Kings Arms Hotel  
2 Lion's Gate  
KT8 9DD

WEATHER AT TIME OF VISIT

Wet and raining

DESCRIPTIVE ORIENTATION

All situations, directions, descriptions and orientation should be taken as if stood facing the front of the property.

YOUR TIMBERWISE CONTACT

Keith Defoe CSSW  
Mobile 07789 770401

Thank you for choosing **TIMBERWISE** to help you with your basement project. We enclose details of our understanding of your requirements, and our proposals for fulfilling these.

In our proposal we include details about **TIMBERWISE**, our products and services, a Client Information Sheet and our Terms of Contract. Please read these as they will form part of any contract we may enter into. We also include a fact sheet entitled The **TIMBERWISE** Guide to Waterproofing and our Client Guide to Choosing a Contractor, which we hope you will find of use.

**TIMBERWISE** is a national property care company operating from a network of local service centres. Each service centre has a specialist basement waterproofing/conversion division with experienced and qualified staff. Timberwise have been dealing with damp and water problems in buildings for over 49 years. Our basement specialists are trained by The School of Waterproofing, by our colleagues at Basement Systems in the USA, and within our own in house training here in the UK.

We take an active part in The British Wood Preserving and Damp Proofing Association/Property Care Association and the industry's insurance backed guarantee provider, The Guarantee Protection Trust. We are also members of The British Structural Waterproofing Association and The Basement Development Group. As a member we must uphold a strict code of ethics and we are constantly reviewed on our performance.



**TIMBERWISE** are leading registered installer for the manufacturers of Cavity Drainage Membranes: **Delta Membranes, John Newton, Triton and Safeguard.**

## **CLIENT'S INSTRUCTIONS**

Your instructions were written in the form of a site visit. The instructions were clear and they were that **TIMBERWISE** should prepare a quotation for the installation of a basement waterproofing system within the two basements behind the bar and the kitchen at the property.

Our proposal and recommendations are based on the information available to us prior to producing this document. If we have misinterpreted any issues or indeed your instructions, please notify us immediately as it may be necessary to amend our proposal.

Our brief did not include the application to the relevant Statutory Authorities for either planning or Building Regulations Approval, nor were we asked to prepare a quotation for associated builder's work and therefore no liability will be placed with us for such requirements.

## **OBSERVATIONS**

The basements are used for storage of plant, materials, personal items and beer storage. The walls are painted bricks and arch ceilings and the floors are off concrete, generally no form of waterproofing works have been completed in the past. There is a pump in the main beer storage chiller area.

## **OUR PROPOSAL**

### **Basements**

We have considered a range of options to meet your requirements and have no doubt that the following provides the best solution to waterproofing the basement. Waterproofing is the most important part of any basement conversion and as such we have designed the system in strict accordance with the British Standard – BS8102:2009 The code of practice for protection of below ground structures against water from the ground. We have enclosed further information on this standard in the appendices and if you wish us to explain the standard in more detail please do not hesitate to ask.

**Due to the property being listed, we strongly recommend the installation of cavity drain membrane lining system, as this doesn't rely on a chemical/mechanical bond between the structure of the property and therefore it could easily be removed.**

## **DISCUSSION POINTS**

By virtue of the natural environment the underlying conditions of the walls and floor are always likely to be prone to dampness of one sort or another and therefore the condition of the existing wall finishes will continue to deteriorate gradually over a period of years.

This means that if damp free surface conditions are required a 'tanking' process is necessary which should involve the treatment of the walls and floor.

In considering the processes available and under the site conditions witnessed in order to comply with BS8102 for waterproofing below ground structures, we have designed your waterproofing system specifying the use of a cavity drain membrane (type c) system to achieve a habitable grade 3 environment.

The BS8102 states that a type c drained protection type of construction is considered to be the most effective and trouble-free form of waterproofing.

As with all tanking systems this is a masking process with the conditions of the underlying walls and floor unaltered.

However, unlike cementitious systems, this method relies on managing a running water situation rather than preventing it. This means that water pressure is equalized, routed to a drainage facility then pumped from the property.

## **THE PROPOSED SYSTEM**

### **CAVITY DRAIN MEMBRANE**

The system has been especially designed for below ground installation and is a high density extruded membrane moulded in a stud formation. The studs serve to hold the product away from the areas that have been treated allowing an air gap behind the system in which water and water vapour can move unhindered in all directions thus achieving 'damp pressure equalisation'.

**On this project, we have specified a Membrane to allow it to be dry lined and plasterboard and then skimmed.**

The installation of cavity drainage membrane systems is considered to be the most effective and trouble free form of waterproofing in comparison to the more traditional methods of 'tanking' because it does not seek to hold back water pressure. Water is allowed to seep through the substrate and as soon as it reaches the air gap provided by the studs of the membrane it immediately depressurises.

The membrane is not designed to do more than provide a dry liner skin to separate the wet substrate and dry interior with the studs acting as stilts to allow for this natural movement of water. The drainage of the water away from the cavity drainage membrane is therefore vitally important to the ultimate success of the proposed system and when implemented correctly cannot fail.

Therefore, it is fair to say that the system should be considered a water management and therefore a 'waterproofing' process rather than 'tanking'.

### **DRAINAGE CONDUIT**

Cavity drain membrane must be provided with a drainage system to allow the free flow of water to the exit point. The weakest point of the structure is at the floor/wall juncture. The drainage system (basedrain) is fitted around the perimeter of the basement structural walls. It is an integral part of the system enabling any water ingress to be routed to the exit point whether it is natural drainage or a pumping system. Jetting eyes at strategic locations are recommended to enable maintenance by way of periodic power flushing.

**In this instance we propose to lay the drainage system into a perimeter rebate created into the existing floor slab.**

### **PUMPING SYSTEMS**

The sump and pump is the heart of the system. The cavity wall membrane, floor membrane and drainage system will route any free flowing water into the sump chamber. This water will need to be pumped away for disposal into designated drainage. The drainage to which the pumping system discharges must be effective and regularly inspected and tested to ensure it is not blocked and/or obstructed, it must be free flowing otherwise backing-up of water could occur.

The sump chamber and pumping system is permanently formed and fixed within the floor slab essentially in a location where it is always readily accessible for inspection and maintenance. The covering over it is dependent upon the floor finish.

**In this instance based upon site conditions and the size of the area we have specified a dual pump in at least 2 or 3 locations pumping systems.**

Type C cavity drainage systems must have blockage free drainage to prevent failure of the system.

We must make you aware that our guarantee is invalid in the event of a failure within your drainage system and Timberwise hold no responsibility for maintenance or servicing of the system. Should you require any further information on this matter, please do not hesitate to contact your local Timberwise surveyor or office.

For and on behalf of **TIMBERWISE**.

**SPECIFICATION FOR TIMBERWISE (Allowed for within our quotation)**

**Recommendations**

1. Carefully remove paint and loose materials from the ceilings, walls and floor.
2. Clean off all remains of preparation works.
3. Create a recess around the perimeter within the existing solid floor slab to sit the channel in to position.
4. Excavate suitable holes within the solid floor to house the sump chamber and pumping system.
5. Ensure the pumps are leveled to obtain a flat solid slab with no more tolerance than 5mm.
6. Supply and install the cavity drain wall membrane system to the full height of the walls and across the ceilings where possible and dress into the higher levels walls in accordance with the manufacturers instructions.
7. Seal all wall and ceiling joints with corner strip tape and over seal tape.
8. Supply and install dual pumping system leaving ready for connection to the existing rainwater disposal system / adjacent gully / drain / waste pipe / manhole.
9. Flood test the existing floor to ensure that water does not pool significantly in low areas. If pooling is found to occur we will submit a supplementary report and quotation for any works required or advise you of levelling works to be carried out by your builder.
10. Supply and lay a perimeter drainage into a pre-formed recess within the existing floor slab and link to the sump chamber by way of a 40 – 50 mm waste pipe.
11. Supply and install jetting eyes situated at the required internals to allow the drainage conduit to be flushed through as part of any maintenance programme adopted.
12. Carry out a trial flow test on the drainage system to ensure water runs freely into the sump chamber.
13. Supply and install a 8mm or 20mm studded floor membrane over the floor area in accordance with the manufacturer's instructions.
14. Supply and lay a concrete screed or a T&G chipboard flooring over the floor membrane.
15. Supply and secure timber battens over the wall membrane and secure plasterboard to the framing and skim plaster over.

**Note:**

Pipes and other surfaces may have to travel behind or in front of these linings and therefore penetrations may have to be dressed around or sealed.

**We will require the following works to be undertaken by others under separate contract prior to our arrival.**

1. Fixtures, fittings, joinery items together with pipe work and electrical installations etc. will hinder any attempts to waterproof this area. We therefore require that all impediments are removed by others under separate contract prior to our arrival on site.
2. Remove all joinery and fixed cupboards shelving door frames internal and external.
3. Remove all associated pipework's and ducting travelling across the ceilings.
4. Supply, fit and connect 2 x 13-amp non-switched fused spur per pumping unit to the ring main ready for connection of the sump pump.

**SYSTEM BENEFITS AND COMPARISONS**

- Dense render or slurry systems allow the transmission of water vapour from the structure through in to the internal space. Cavity drained systems are vapour proof.
- Cavity drained systems do not require destructive preparation techniques that are associated with conventional render or slurry systems. Cavity drained systems are therefore more sympathetic to the structure and generally more economical. Less disruption is also caused.
- Cavity drained systems rely on a mechanical fix rather than on the ability of the product to bond to the substrate.
- Cavity drained systems are flexible. No special attention needs to be given to movement joints. Small movements that may occur in the structure, pose no problem. The system remains flexible. There are no curing differential problems.
- The cavity created by the membrane and the membrane itself reduces thermal conductivity of kilowatt energy from the walls helping to increase U values giving a generally warmer finish than direct applied renders.
- Cavity drain membranes are covered by a manufacturers Thirty-year warrantee (sample available on request).
- Conventional render systems can induce condensation problems. Cavity drained systems help to reduce condensation and the need for condensation control such as extractor fans.

**CLIENT NOTES**

Following intensive testing, the above system has been awarded an Agrément Certificate (No 02/3956) by The British Board of Agrément. The BBA's Agrément Certificate provides authoritative and independent information on the performance of building products. Every Agrément Certificate contains important data on durability, installation and compliance with Building Regulations.

Having installed the system we will provide a 10 year Guarantee for the membrane and workmanship. As a benefit for our clients, Timberwise carry full Product and Public Liability insurance, which also extends to Guarantees. We also carry Professional Indemnity insurance to £10,000,000 (product guarantee being £500,000 on the advice we give our clients).

The pump carries a manufacturers 12-month warranty. The maintenance of the sump pump and drainage system is critical to the performance of your waterproofing system. To ensure optimum performance, this equipment will require periodical servicing.

We understand that there is no known presence of asbestos containing materials within the property. In the unlikely event that we uncover suspected asbestos containing materials Timberwise may have to suspend work to have the material investigated for asbestos. We will stop work, seal the area and immediately inform you. Testing for asbestos is an easy procedure which we can either deal with on your behalf or make recommendations.

## **REFER TO OPTIONS BELOW**

### **VENTILATION AND HEATING**

It stands to reason that adequate ventilation and heating must be specified in any overall basement conversion. Condensation occurs when moisture laden air is allowed to condense on cool surfaces. It is important to ensure a flow of air in and out of the basement to limit the effects of condensation. We have not included for these items in our estimate. We are sure your architect will include for these to meet Building Regs.

Basement waterproofing and indeed the general upgrading of basements must be undertaken in a careful, planned and effective manner, if the works undertaken are to provide the desired results. Whilst the use of specific materials and products may increase the cost of our quotation slightly, we are conscious that from experience our specifications are undoubtedly effective and the result is that the basement environment which is provided will be suitable for its intended use. Basement waterproofing and basement upgrading are specialist "fields" of work and it is a recognised fact that works of such a category be placed with only responsible and suitably qualified companies.

As part of our proactive customer care plan, if you accept our estimate, your property will receive documented site visits by me and/or other management, ensuring that quality control and the progress of your project are always maintained. Having purchased our waterproofing system we are available for service in the future if you so require.

We hope that the above is of interest. If you have any questions regarding any part of the above, please contact the writer who will be pleased to clarify any points that may have been overlooked. We hope that our recommendation meets with your approval and when you wish us to carry out the work you need only complete and return the attached acceptance of quotation.

Yours sincerely

***Keith Defoe***

Keith Defoe CSSW  
Managing surveyor and Waterproofing design Specialist