

Our Ref: JD/GW
Rep No: 34/756

Email Report to: Glen Simpson

Glen.simpson@interiorlab.co.uk

T: 020 8802 2233/4
: 020 8802 2333/4
F: 020 8809 1839

dampcoursingltd@btconnect.com
www.dampcoursing.com

12th November 2014

Dear Glen,

RE: ANTRIM GROVE, LONDON NW3

Further to our recent meeting at the above please find attached our report, recommendations and estimate accordingly.

As instructed we examined the basement for the effects of damp/water penetration.

We understand that the basement has been recently constructed and appears to have been lined with a Newton membrane type system.

There is obvious penetration at the interface between the steel beams supporting the roof and the adjacent high earth levels. There are further concerns over damp readings from the floor, unconnected with the water dripping from above.

There are visible evidence of solidifying salting behind the membrane to the exposed flank.

To the front the walls and floor appear to be sound although the skylight is badly affected by water penetration due to poor detailing around the skylight and the interface between the opening and the soffit requires repairs.

The existing pumping system would appear to be accurate and water seems to find it's way into the chamber after which it is then discharged.

We understand you may not have a guarantee on the system and therefore the existing cannot be relied upon and the consideration is for a new system to control the existing conditions.

We can overlay the existing floor with a new system incorporating an insulation floor build-up to which we attach our detail.

The section around the edges of the steel beams will require removal of the brick in-fill and opening up around the steel in order to form a water proof detail between the steel and the underlying substrate. This has not been closely examined at present.



We would advise the removal of the internal membranes from the walls to allow us to reinstate fresh membranes. However, it will be necessary to have a further look and assess the condition of the concrete behind. There may well be an additional requirement of waterproofing the concrete and stopping leaks prior to the installation of the membrane. This way the limescale can be controlled.

We will apply the Newton products around the front skylight in accordance with manufacturers instructions and this should control the moisture. However, we would advise that you will need to take up the skylight and allow us to take our materials up and over onto the slab and then you can re-bed the skylight in place.

We show a separate cost for the front sections of walls and floors as we believe this may well be left in-situ given the stripping out work required in the plant room and adjacent bathroom/store rooms etc.;

The existing flat roof to the rear has had a type of torch -on felt applied. This may well be adequate if it has been laid to a fall and water can then run away and soak away into the chamber to the rear. However, we do not know the detailing at the edges and this should be further explored.

It will be necessary for you to strip out all internal fixtures and fittings and provide us with drainage access into the sump chamber.

If you require a separate cost for replacing the existing pumps, please advise accordingly.

We trust we have interpreted your requirements correctly and look forward to receiving your further instructions in due course.

The client's builders are to remove all fixtures and fittings, including electrical fittings and radiators, etc., prior to commencement of our work and reinstate them on completion of our work. If hacking off of wall plaster is recommended, it is assumed it is to be carried out by the Main Contractor or the client's agent, unless it is clearly shown in our estimate that this company has allowed for carrying out that work.

Cavity Membrane Systems

All waterproofing of structures below the ground, or those partially earth retaining, should be designed to comply with BS 8102 2009. Amongst other recommendations BS 8102 2009 states that you should assume a head of water pressure to the full height of the retained ground at some time during the life of the structure, particularly if no geological or hydrogeological surveys have been undertaken or soil investigations are inconclusive with respect to ground water. All waterproofing systems should be designed to deal with these pressures. It is possible that your particular basement has never been subjected to water ingress but this is no guarantee that this will not always be the case. A basement waterproofing system should be designed for a potential of water pressure as stated above.

The Newton system is a drained cavity system. Cavity drain membrane systems are designed to control and disperse water. They are not designed to hold back water as a barrier to water pressure.

Cavity Drain Membrane systems are designed to deal with the naturally occurring ground water apparent at the time of our survey and not inundation of water caused by flash flooding, burst water or drain pipes etc.

If a cavity membrane system is not drained it will fail if water pressure bears against the system. Be wary of those proposing to use a drain system that has no drainage within the design, either natural or mechanical. To comply with BS 8102 adequate drainage must be included within the design to remove water from behind the system. Newton System 500 membrane alone will not hold back water pressure.

The system has to be drained naturally or by pump drainage to be effective. We strongly recommend that if natural drainage is not available the system should drain to a Newton Titan Sump Chamber or similar. The Titan is a complete pump system including chamber, lid, pump and alarm. The pumps used are top quality pumps capable of 160-185 litres discharge per minute. The alarm will warn of any failure of the pump but you may wish to consider having a secondary pump, or even a battery powered backup pump that will continue to work even in the event of power failure to the property. The choice as to the type of pump and combinations of accessories will be yours.

Newton 500 can be directly rendered, plastered or dry lined with a plasterboard dry lining system. We generally recommend that the dry lining option be used as it allows for the routing of cables and pipework behind the plasterboard and for smarter looking flush mounted sockets and switches. A basement waterproofed with a cavity drain system is clean, dry and surprisingly warm. As well as having "U" values within the material the air gaps between the membrane and the wall and the dry lining and the membrane prevent the cold bridge associated with tanking. In most cases the cavity drain system does not require any further insulation.

The preparation, to be carried out by others prior to installation, requires all timber fixtures and other organic material to be removed to prevent risk of fungal or bacterial growth behind the system, e.g. skirting boards, timber plates, old wallpaper, etc. If evidence of rot exists after exposure Dampcoursing Limited must be contacted prior to installation of the system to advise. If any mould etc. exists this should be cleaned off and the area sterilised with a fungicidal wash. Any incoming services should be sleeved.

If the walls are uneven or areas have deteriorated then any large depressions should be levelled and made good by the builder to ensure solid fixings. The floor must be cleared of oil, loose material and any sharp edges should be levelled out. Any holes or severe depressions should be filled prior to laying the membrane.

The system can be drained using a Basedrain which sits at the wall/floor junctions and collects water from behind the wall membrane and receives water under pressure at the floor/wall junction.

The Basedrain is a designed method of removing water as it can interface with sump chambers, stack pipes, gullies, wastes pipes etc., it can also be cleaned by inserting jetting eyes into the system.

When you are dealing with confined basement areas with poor or restricted ventilation then you may consider the risk of condensation and the introduction of mechanical extraction systems with humidistat sensors. This is imperative if a totally dry environment is required.

The client should carry out regular maintenance inspections of the mechanical pumps and this inspection should cover the following items plus any additional requirements as required by the specific pump manufacturer. The pumps supplied by this Company are not covered by the Company waterproofing guarantee.

- 1) Cleaning and descaling as required.
- 2) Checking for and ensuring free movement of the impeller.
- 3) Checking seals for leakage and renewing as required.
- 4) An independent test ensuring free movement.
- 5) Inspect discharge pipe for damage and leaks.
- 6) Remove any debris from base of pump that may interfere with pumping.
- 7) Changing the oil as specified by the pump supplier.
- 8) Check electrical connections and fuses.

All the above should be carried out annually as a minimum requirement or in accordance with the pump manufacturer's recommendations. The above should be carried out by a competent person or as part of a maintenance contract.

NOTE:

- A) The pump should never be activated whilst dry as this will damage the effectiveness and life span of the unit
- B) Mechanical sump pumps are powered by electricity. It is important to maintain a constant power source to achieve maximum drainage capacity. Battery backup pumps are available for continuing the discharge of the sump during failure to the power supply or the primary pump.

We strongly recommend that a second pump be fitted to complement the primary pump. Although an alarm will warn of failure of the primary pump, such failure could result in overflowing the chamber, pressurisation of the membrane and subsequent failure.

Cavity drain membrane systems are flexible high density polyethylene membranes. These systems like other waterproofing systems should not be pierced in any way.

If works are proposed in the basement area that are likely to penetrate or disturb the membrane advice must be sought from Dampcoursing Limited prior to such work being carried out. Even if minor modifications are proposed to the waterproofed areas such as shelves, cupboards etc., Dampcoursing Limited should be contacted so that they can advise on the correct fixing methods.

The membrane installation is guaranteed for 10 years. The pumps are covered by the manufacturers 1 year limited warranty, but Dampcoursing Limited do not accept any consequential losses due to the failure of their pumps. We strongly recommend that you the customer take out a service contract. As the installation will have involved some concreting works the pumps are often subjected to high lime scale deposits due to free lime leaching out the concrete within the first few

months. It is therefore recommended that the pump(s) is/are serviced within six months of installation. The service engineer will then decide the frequency of service intervals depending on a number of factors.

To arrange a service please contact the following:

Paul Davie, Basement Pump Servicing, PO Box 881a, Kingston upon Thames, KT1 9JF.

Mobile: 07900 867830 Freephone: 0800 0433220 paul@basementpumpservicing.co.uk

In addition to our installation guarantee we can offer the added security of an underwritten guarantee by the Guarantee Protection Trust. If, in the unlikely event of the company being unable to honour our guarantee, the G.P.T. would have any works required carried out by another contractor under the G.P.T. guarantee.

A meaningful guarantee is very important. If you were to sell the property the guarantee would be an important document requested by the purchasers solicitor.

The company reserves the right to make a charge for a preparatory works undertaken by our operatives and not already estimated for due to preparation found not to have been completed upon our arrival on site by the contractor/and or client, which would otherwise necessitate us leaving site and making further charges for time lost.

All builder's work mentioned in this report is to be carried out by your builder, under a separate contract.

We will require free use of an electric power supply to be made available. If this is not possible we will hire generators and will pass the cost of the generators to your goodselves.

All debris resulting from our work, will be deposited at a convenient place on site, for collection by your contractor, unless otherwise stated.

Our estimate *does not* allow for the replacement of any skirtingboards, unless otherwise agreed.

IMPORTANT

We are pleased to confirm that guarantees issued by Dampcoursing Limited for works undertaken can be covered by the Guarantee Protection Trust Limited for a once only premium for each guarantee. Guarantees must be registered with the G.P.T. within 6 weeks from the date of invoice. Guarantees cannot be registered unless the Company invoice has been paid in full. Further details on request.

Where works to party walls are involved, the provision of the Party Wall Act apply. In accepting our estimate, our client is deemed to have obtained the consent of the adjoining owner(s) for works to be carried out to the party wall(s).

This report/specification and estimate is the property of Dampcoursing Limited and may not be used by any person (s) to instruct any others, unless prior authorisation is obtained from this company.

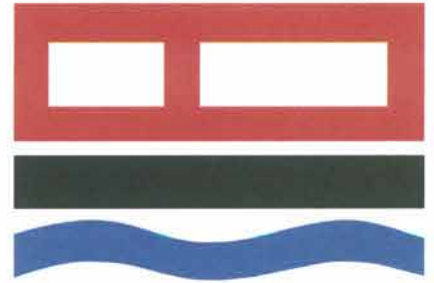
Our estimate for carrying out this work in accordance with our guarantee is enclosed. On receipt of your signed acceptance (form enclosed) we will make arrangements to put this work in hand.

For any further information you may require, please contact this office.

Yours faithfully,

A handwritten signature in dark ink, appearing to read 'J. Donaldson', with a stylized flourish at the end.

J. Donaldson C.S.R.T. C.S.S.W
Dampcoursing Limited



Estimate

T: 020 8802 2233/4
: 020 8802 2333/4
F: 020 8809 1839

Rep.No: 34/756

Date: 12th November 2014

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Re: ANTRIM GROVE, LONDON NW3

A. MAIN AREA

To supply and install the John Newton 500 system. To apply anti-lime treatment. Lay 50mm closed cell insulation to floor. Supply and fit Newton basedrain to perimeter and drain to Chamber. Supply and fit Newton 508 clear to walls and Floor. Clear away debris.

£13,947.00
Plus VAT

B.
Extra over for battery back up system.

£1,450.00
Plus VAT

C. BUDGET COST
To plug joint between end of steel beams and apply 2 coats of Newton 101F at junction.

£2,500.00
Plus VAT

D. FRONT AREA
To supply and install the John Newton 500 system. To apply anti-lime treatment. Lay 50mm closed cell insulation to floor. Supply and fit Newton basedrain to perimeter and drain to Chamber. Supply and fit Newton 508 clear to walls and Floor. Clear away debris.

£8,067.00
Plus VAT

E.
To apply Newton 101F to exposed perimeter of skylight.

£1,550.00
Plus VAT

Company Guarantees are issued Free of Charge upon settlement of our invoice, as per our Terms and Conditions. Please advise at time of placing your order if you require the G.P.T. insurance back-up

We would draw your attention to our standard conditions which are attached.

Assuring you of the best care and attention at all times.

Yours faithfully


Dampcoursing Limited



The drawing is issued under Copyright
 Copyright remains the property of SKS unless
 otherwise assigned

Figured dimensions only to be taken from this
 drawing

DO NOT SCALE

All dimensions to be verified on site prior to the
 commencement of work. Any structural alterations
 on this drawing are to be taken from this drawing. All structural
 details to be submitted to a structural engineer
 for checking and approval. It is the responsibility of the client
 for checking all settings and dimensions. SKS is not
 responsible for any discrepancies prior to any manufacture or
 construction works.

**ISSUED FOR
 INFORMATION**

ON BEHALF OF BMS

ON BEHALF OF CLIENT

A. Updated following site survey. DATE: 07/10/14

By: [Signature]

PRE CONSTRUCTION

For Construction Approval/Construction For Bid Drawing



Project Name: House Quercus

Project Address: [Address]

Project Date: [Date]

Project Title: Basement

Project No: [Number]

Project Ref: [Number]

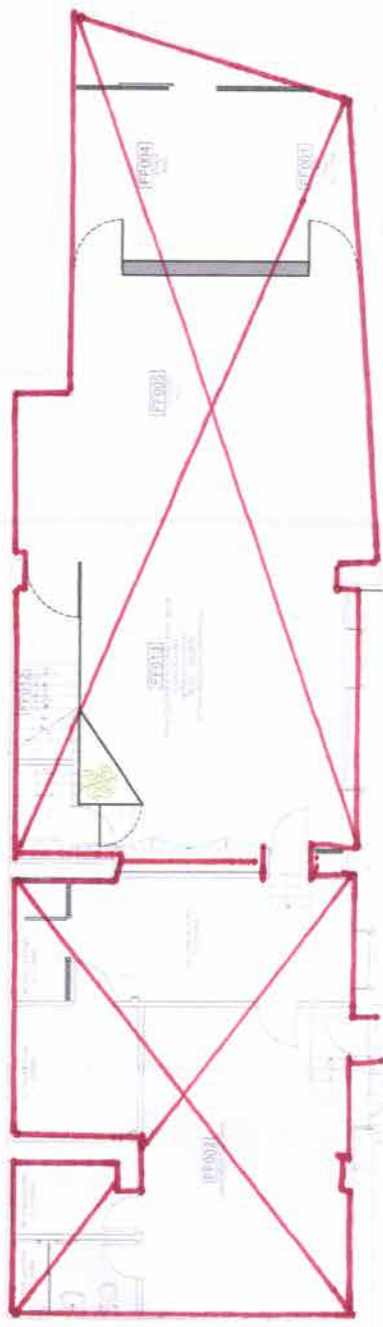
Project Rev: [Number]

Project Date: [Date]

Project No: [Number]

Project Ref: [Number]

Project Rev: [Number]



BASEMENT PLAN
 SCALE 1:50

REVISIONS 608

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