

SPECIFIC DEFECTS REPORT

Relating to Dampness

London N6



Mr X

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INTRODUCTION AND INSTRUCTION

We have been instructed by Mr X to prepare a report

We have carried out a visual inspection of the property.

The weather was dry and overcast at the time of the inspection.

We are Independent Chartered Building Surveyors. We are registered with the Royal Institution of Chartered Surveyors and are members of the Independent Surveyors Association,

The Report has been carried out by Chartered Surveyors

The work has been carried out as per our standard Terms and Conditions of Contract which have been emailed to you as part of the confirmation of our instructions. If you would like further clarification please do not hesitate to contact us.

SYNOPSIS

We met the Mr X and the present occupier/tenant of Flat X who advised that there had been problems of dampness in the property resulting in mould in:-

1. the rear Lounge
2. the front bedroom.

We have been advised that the mould has been present since mid to late September xxxx and Mr X advises that there have been problems with dampness in the property in the past.

We duly carried out a visual inspection to advise on this matter.

CONSTRUCTION SUMMARY

External

Main Roof:	Flat roof (assumed)
Rainwater drainage:	Cast Iron / Plastic (assumed)
Soil and Vent Pipe:	Internal
Walls:	Clad in stretcher bond brickwork (assumed) What sort of breeze block would have been used in the 1970s/80s?
Structural Frame:	Assumed concrete possibly metal (further information required, see request for information)
External Joinery:	Windows in the subject property are plastic double glazed, front and rear have trickle vents that have been added after by the landlord and the two side windows are plastic double glazed without trickle vents and are fixed panels.
Foundations:	Not inspected and known

Internal

Ceilings:	Plasterboard (assumed)
Walls	Insitu plaster finish (assumed)
Floors: Ground Floor:	Concrete (assumed)
Heating	Gas fired Worcester Boiler located in the rear lounge to double panelled radiators with thermostatic radiator valves

We have used the term 'assumed' as we have not opened up the structure.

EXECUTIVE SUMMARY

Executive summaries are always “dangerous” as they try and encapsulate relatively complex problems in a few precise and succinct words. Having said that here is our executive summary and recommendations:

Dampness Problems

We believe in this situation there are a combination of issues which are causing the dampness problems, some of which are controllable, manageable and changable such as;

1. removing moisture from the high moisture level areas quickly
2. changes in how the property is used.



There are those items that are not so easily managed such as;

Dampness and moss sitting against the property

1. the location and surrounding environment such as trees and close proximity of other large properties which affects air circulation and air movement which means the building is not dried and also as it sits on a sloping site in a semi valley micro-climate situation.
2. The building construction
3. What your neighbours are doing in their properties.

Cause and effect

We feel the focus of any action needs to be on the cause rather than the effect although ultimately our aim is to reduce/eliminate the effect.

However we do need to reiterate that problems are likely to be a combination of issues and we do not feel that the problems can be completely stopped without major alterations to the structure and ultimately by either lining internally to increase insulation or externally as well as adding various insulation methods and adjusting occupiers current lifestyle.

The Principle Message

The problems are caused by a combination of issues, some of them are within your control and some of them are not. You may not be able to solve the problems in this apartment in isolation to the whole property as the only way would be to look at the property and the surrounding area as a whole. We do feel you can reduce the problems in the apartment.

Ways to improve the situation

We would recommend that large extract fans are placed in the kitchen and the shower room as these are your main moisture generating areas. We would recommend;

1. The fans we believe need to be a minimum of 150mm in diameter and controlled by humidity thermostats.
2. We would also recommend a proper extract hood over the cooker which extracts to outside air.
3. We would recommend that the washing machine and tumble drier have permanent extraction to external air.

ANTICIPATED COST: Each item we would expect to be in the region of a few hundred pounds.



Kitchen extractor hood



Bathroom extract fan

Apartment Living

We noted no obvious external areas for drying clothes during the winter months obviously anyone living in the apartment is tempted to dry them internally which can lead to condensation and mould. You do need to consider how you utilise the building;

1. Where clothes are dried
2. Extract fans are always used in the high moisture area i.e. bathroom and the kitchen.

We would also suggest that the way the windows open onto the adjoining road does not encourage them to be open it would also be better if there was a small top window which could be opened independently.

ACTION REQUIRED: Look into changing the windows to have an openable top light as this would encourage the airing of the bathroom and the kitchen.

We are more than happy to go into more detail looking at how the property is used for this we would need to return and carry out an interview where we look at such things as;

1. Number of showers taken and temperature, you may wish to look at putting an isolator on the mixer taps on the showers to regulate the temperature.
2. Also look at whether heating is used on an on off basis or whether there is a general regular heating of the property as a constant background heat can reduce the cause of dampness.

New Factors

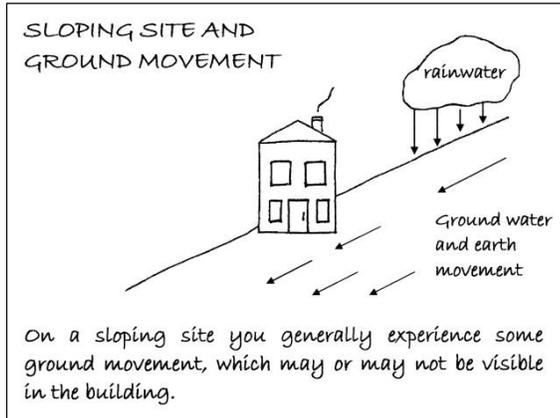
We would comment that a new factor that is introduced that may be effecting how ground water moves around your property which in turn will be effecting the ability of the walls and floor (remembering it is a concrete floor which acts like a sponge) to adjust and adapt to the moisture is the building of the party boundary wall with the far deeper foundation that it would have originally had which would have changed the path that the water takes.



Wall possibly redirecting the water

Sloping Site

The building sits on a sloping site, water needs to get from the top to the bottom and the building is in between.



Sloping site

Retaining wall

No weep holes present.



Retaining wall with no weep holes therefore water is being diverted

Cold Construction

The relatively cold construction was common place in properties of this era, we assume this was built from the 1960s to 1980s, (request for specific information on materials used?)

Thermal Characteristics

The thermal characteristics of the property will vary depending upon structural elements and that the construction is substantial or whether the construction is a panelling or cladding.

Windows

We recommend fully openable windows the present windows are not good quality (apologies we forgot to check this). Can the kitchen and bathroom windows open fully?



Trickle vents

Second Stage

We need to look at the structure as a whole, for this we need to request Plans of the property and Drainage drawings together with a Maintenance Record of repairs and improvements that have been carried out to this building and surrounding buildings since it was purchased in xxxx.

We also need a Questionnaire to be completed by the present occupier and by the Landlord.

The client needs to set a budget and we will provide a best solution based upon that budget.

Time Line – A brief history of the structure and alterations

This has been based upon a discussion with Mr X

DATE	DESCRIPTION
?xxxx?	Original construction
xxxx	Purchased by Mr X
Sept xxxx	Mould found to be occurring in the bedroom, particularly the front left hand side and in the lounge, particularly the front right hand side.

INSPECTION

Our inspection has been specifically related to the condensation issues detailed below.:

Visual Inspection

Our inspection has taken the format of a brief visual inspection:

1. External of the property of the
 - i. front
 - ii. rear
 - iii. side

We have had the benefit of a x 16 x16 zoom lens on a digital camera

2. Internal of the property

We have viewed:

Flat X

- i. Lounge (rear)
- ii. Kitchen
- iii. Bedroom (front)
- iv. Bathroom
- v. Corridor

Room	Mould occurred/visible
Lounge	Present
Kitchen	Not at time of survey
Bedroom	Present
Bathroom	Not at time of the survey
Corridor	Not at time of the survey

3. Surrounding areas

- i. front area
- ii. rear area
- iii. overview of area

4. Owner and the occupier

5. We have not had the benefit of talking to the neighbours and would suggest this takes place if you wish to have a more detailed report.

6. We have utilised a resistance meter for measuring dampness , please see the Survey Findings for specific Gann Meter records.
7. We would also recommend the use of a thermal imaging camera, produced by Flir, to obtain the best readings we need to have the whole structure pre-prepared however we understand the difficulties in doing this. Ideally you need at least a ten degree differential between the inside and the outside of a property.
8. We have had a brief discussion with the occupier and the landlord.



SURVEY FINDINGS

Front elevation

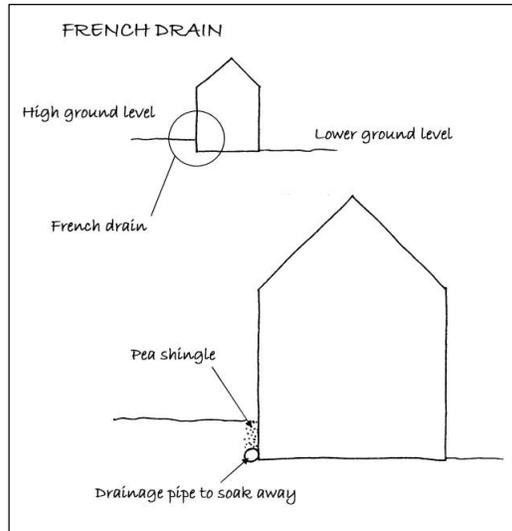
A mixture of visible structural frame, external brickwork and rendered cladding panels under the windows and relatively large double glazed areas/percentage of windows.

Right hand side

Construction as described on the front elevation in addition to this there is a driveway running down the side on the sloping site, this means part of the building is below ground level therefore we would recommend a French drain (note our comments in the Appendices and how not to make into a pond).

New Party Wall (boundary wall)

The foundation on this is typically 1.4 meters which is likely to be far deeper than the original one which literally given the age of the property could have had no foundation or a very shallow one.



Rear Elevation

Construction as the front elevation but with larger surface areas/percentage of glazed windows. The rear elevation is below ground level and as such will suffer from ground water travelling from the top of the site to the bottom.

1. From our visual external inspection we noted:

- i. roofs
- ii. walls
- iii. windows and doors

2. From our visual internal inspection we noted

- i. ceilings
- ii. walls
- iii. floors

Note; we have not moved furniture or fixtures and fittings.

Note; the full areas inspected are identified within the inspection part of the report and this should show anything in this section

3. Resistance Damp Gann Meter Readings

Room	Readings Obtained	Typical Readings
Bedroom		In all cases 30-40
Left hand side wall	Late 30s to early 40s	
Front wall	Late 30s to early 40s	
Right hand side wall	Late 30s to early 40s	
Rear wall where cupboard is	Advise no mould occurring in this area	
Bathroom	Mid to late 30s	
Kitchen	Mid to late 30s	
Lounge		
Right hand side wall	Mid 30s to early 40s	
Rear wall	Mid 30s to early 40s	
Left hand side wall	Mid 30s to early 40s	

The readings obtained indicate that this is a brick or more usually, given the age of construction, a block inner wall (the type of block that is very important) with in situ plaster finish.

SUMMARY UPON REFLECTION

The Summary Upon Reflection is a second summary so to speak, which is carried out when we are doing the second or third draft a few days after the initial survey when we have had time to reflect upon our thoughts on the property. We would add the following in this instance:

We believe there are a combination of issues that you should work through, these items being identified earlier in the Executive Summary.

To enable us to comment further we would request the following information:-

Original 'as built' plans
Plans as is now
A cross section of the building
Specific materials used

and we would seek access to adjoining properties

If you would like any further advice on any of the issues discussed or indeed any that have not been discussed! Please do not hesitate to contact us on 0800 298 5424.

LIMITATIONS

Specific Defects Report

1. Conditions of Engagement

Please note: references to the masculine include, where appropriate, the feminine.

Subject to express agreement to the contrary (which in this particular case has been none) and any agreed amendments/additions (of which in this particular case there have been none), the terms on which the Surveyor will undertake the Specific Defects Report are set out below.

Based upon a visual inspection as defined below the Surveyor will advise the Client by means of a written report as to his opinion of the visible condition and state of repair of the specific problem or problems only. In this instance with have viewed the outside and the inside of the property only.

2. The Inspection

a) Accessibility and Voids

The Surveyor will base this report on a visual inspection and accordingly its scope is limited. It does not include an inspection of those areas, which are covered, unexposed or inaccessible. Our visual inspection will relate to the specific defects shown to us only.

b) Floors

We have not opened up the floor structure. We have only carried out a visual inspection and any conclusions will be based upon our best assumptions. We can open up the floor if so required at an extra fee.

c) Roofs

The Surveyor will not inspect the roofs in this instance.

d) Boundaries, Grounds and Outbuildings

The inspection will not include boundaries, grounds and outbuildings unless specifically stated (none stated).

e) Services

No services inspected.

f) Areas not inspected

The Surveyor will have only inspected those areas identified within the report. His report will be based upon possible or probable defects based upon what he has seen together with his knowledge of that type of structure. If you feel that any further areas need inspection then please advise us immediately.

g) Specific Defects Report

As this is a report upon a Specific Defect we do not offer any comment or guidance upon reactive maintenance and/or planned or routine maintenance items.

h) Whilst we have used reasonable skill and care in preparing this report, it should be appreciated that the Chartered Surveyors cannot offer any guarantee that the property will be free from future defects or that existing defects will not suffer from further deterioration;

3. Deleterious and Hazardous materials

a) Unless otherwise expressly stated in the Report, the Surveyor will assume that no deleterious or hazardous materials or techniques have been used in the construction of the property. However the Surveyor will advise in the report if in his view there is a likelihood that high alumina cement (HAC) concrete has been used in the construction and that in such cases specific enquiries should be made or tests carried out by a specialist.

4. Contamination

The Surveyor will not comment upon the existence of contamination as this can only be established by appropriate specialists. Where, from his local knowledge or the inspection he considers that contamination might be a problem he should advise as to the importance of obtaining a report from an appropriate specialist.

5. Consents, Approvals and Searches

a) The Surveyor will assume that the property is not subject to any unusual or especially onerous restrictions or covenants which apply to the structure or affect the reasonable enjoyment of the property.

b) The Surveyor will assume that all bye-laws, Building Regulations and other consents required have been obtained. In the case of new buildings and alterations and extensions, which require statutory consents or approval the Surveyor will not verify whether, such consents have been obtained. Any enquiries should be made by the Client or his legal advisers.

Drawings and specifications will not be inspected by the Surveyor. It is the Clients responsibility to forward any drawings and specifications that he has or knows the whereabouts of to us to include information in our report. If these are not forthcoming we will make our best assumptions based upon the information available.

- c) The Surveyor will assume that the property is unaffected by any matters which would be revealed by a Local Search and replies to the usual enquiries or by a Statutory Notice and that neither the property nor its condition its use or intended use is or will be unlawful.

6. Fees and Expenses

The Client will pay the Surveyor the agreed fee for the Report and any expressly agreed disbursements in addition.

7. Restrictions on Disclosures

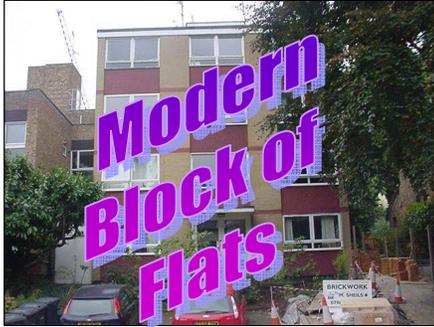
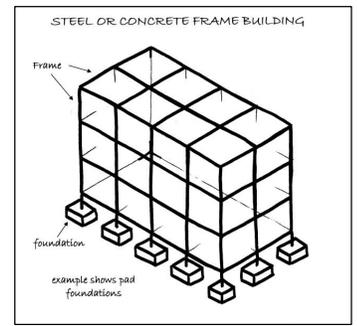
- a) This report is for the sole use of the Client in connection with the property and is limited to the current brief. No responsibility is accepted by the Chartered Surveyors if used outside these terms.
- b) Should any disputes arise they will be dealt with and settled under English law;
- c) This report does not fall under the Third Parties Rights Act.

8. Safe Working Practices

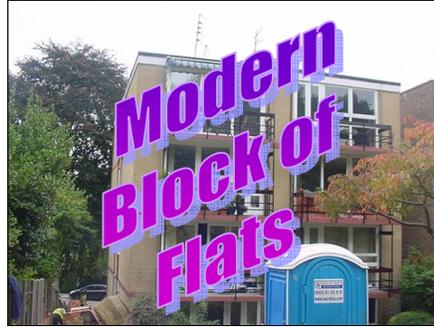
The Surveyor will follow the guidance given in Surveying Safely issued by the Royal Institution of Chartered Surveyors (RICS).

APPENDIX 1

EXTERNAL



Front elevation



Rear elevation



Rear Patio area

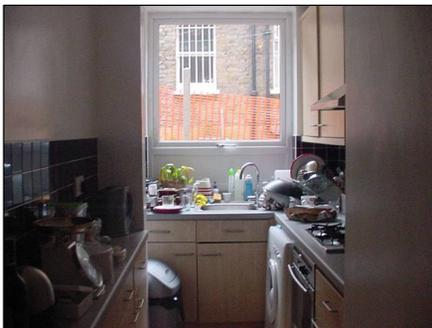
INTERNAL



Lounge to rear



Bedroom to front



Galley Kitchen



Bathroom

Condensation and Damp Walls

Why are my walls damp?

Damp walls occur for many reasons. They can be very inconvenient, not only damaging the wall paper or the paint finish, also mould can occur on clothing and can also be bad for your health. We have seen dampness at high level, it can be leaking roofs, gutters or hopper heads. These tend to occur around the top of the wall and the ceiling. At mid-level to the property it could be the central wall, this is often caused by leaking downpipes or defective pointing, or poorly fitted windows or a missing damp proof course to the windows, and at ground level rising damp tends to get blamed for all problems, but as you will see from reading this article and contacting us on our free phone number, 0800 298 5424, dampness at ground level can be for many reasons, everything from drains and gutters and gullies blocking, to downpipes discharging against the wall, or a high water table level. Whatever the reason, it can cause a situation that is very unpleasant to live in.

Dampness put simply

To establish exactly why a wall is damp you do need to consider many possibilities. Some of these you can effect by altering how you use the property and some of them you cannot. So, it makes sense to look at the damp problems that you can resolve.



Dampness that you can help to solve

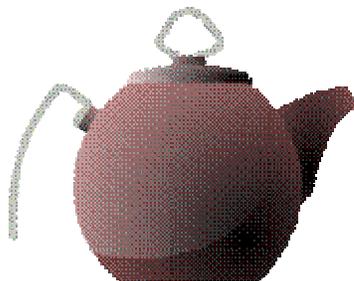
Probably the most common cause of dampness is condensation and this can be resolved or reduced considerably by changing the way that you use the property.

Identifying condensation

Tell tale signs of condensation are mould on the walls and furniture and on clothes and literally windows that are dripping wet. Condensation is where the moisture content of the air meets a cold surface, such as a window, and then the dampness occurs. This is very easy to see if it is on a window where it causes a misting effect, but it can be virtually detectable at first if it is onto a papered wall and often the first signs are when the mould occurs. It tends to occur more within the corners of the property in areas that are colder.

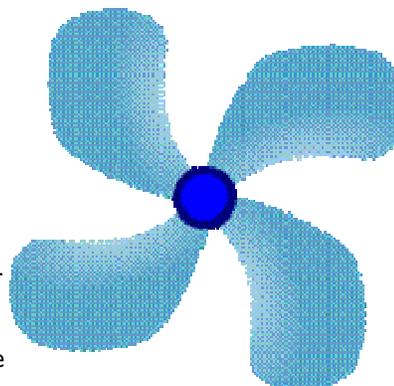
So what can I do about condensation?

To reduce condensation you need to increase the flow of air in the property. This can be as simple as opening the windows or using the trickle vents that are on the windows (small vents that open, often set at the top of windows) or using any vents that are set in the walls.



Condensation has become more common as we have made our houses more airtight. This was never a problem in years gone by, when we had rattley old sliding sash windows and wooden casement windows that didn't fit properly and also there was less things causing condensation. Today we have many items such as showers, washing machines, kettles, steam cooking, etc, to add to the moisture content of the air.

It really can be as simple as opening the windows to bring in some fresh air that has less moisture content. We do appreciate that this is easier said than done during the winter months when it is freezing cold outside and the last thing you want to do, having warmed up a room, is to allow cold air into it. In such a case as this, if you haven't got trickle vents on the windows or a vent into the house, then you need to add them. If the problem is in an area such as the kitchen or the bathroom then you need to add extractor fans. Remember the key to using condensation is to have air that doesn't have much moisture in it.



An example of condensation that we are coming across more and more is where an extractor fan is installed to the bathroom to take away the excess moisture, but unfortunately where ceiling extractor fans are fitted and these are very popular where a light is fitted, and if they are fitted directly over the shower it makes sense to have one fitted, then the extract flue is left to discharge into the roof space or attic, rather than taking it to a vent to outside air.

The reason this is the case is because it is much harder to get it vented to outside air. We have been into a roof where literally it was like a rain forest. You could tap the underside of the felt in the roof and get covered with water. Fortunately, we only see this once every five to ten years but we can only imagine it is going to become more common with the general increase in thermal efficiency of houses. Whilst we feel thought has been given to the air change in properties there is a big human factor in having to use the extract fans in the bathroom and kitchen and having to maintain them once they are broken.

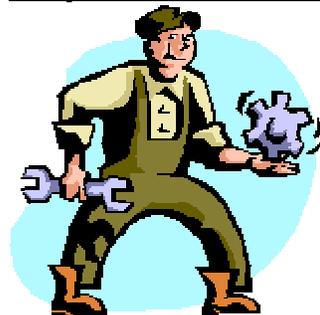
Dampness Problems

Dampness Problems

We were recently contacted by the Environmental Health Office of the Local Authority about dampness problems in an adjoining property to one which we manage, where the people next door had advised that there was dampness and mould, making it very unpleasant in their bathroom. The Environmental Health Officer had kindly gone round to have a look at both properties and thought there may be problems in our property from the drains causing water in next door's property, possibly via a cracked drain.

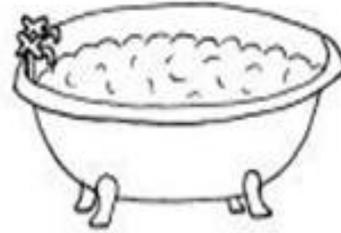


Inspection for dampness



We visited to have a look at both properties. The adjoining property, which is a Victorian mid-terrace, which has undergone some refurbishment over the years, an original two rooms up, two rooms downstairs property, which had had the bathroom that was originally in the back bedroom moved to the rear of the ground floor into what would effectively have been the old storage/coal sheds. When we use the term "sheds" the structure is finished in a render and probably brick built.

The owners were quite amenable and showed us round and we found that the bathroom had mould on the walls and in the tiles, which is probably from condensation. It also had rising damp (although please see our article on the mystery of rising damp) to the outer walls and the floor, and it also had, quite unusually, on the adjoining wall to the next door property within a service duct (basically a boxed in area around pipework) standing water of a few inches in depth. The cause of this water, to some extent, was a mystery. The obvious possibilities, such as leaking pipes had, we were advised by the owners, already been checked by a plumber and they wanted to explore the possibilities of leaking drains. We were more than happy to do this once some common sense checks had been carried out.



Victorian drains

As surveyors we come across problems with Victorian drains quite frequently. Having said that, given the age of the drainage system it is not surprising that if there haven't been repairs or operations over the years that there are some problems with it. Typical problems that we find are leaks to the drains, particularly to the rear drains that are situated near the kitchen area. This, we believe, is nothing more than wear and tear and is relatively common for the leaking of the drains to cause minor structural movement to the rear of the properties. There are various ways to repair the drains: everything from digging them up, although this can be costly and inconvenient, particularly if you have a nicely patio garden area, to lining the drains, though again this can be expensive. First of all you need to have some checks carried out.

Common sense checks for drain leaks



Checking a manhole

The first thing we would always do is to try and establish where the drains are running. By this we mean identifying the manholes and the drainage runs from the house and trying to establish where they run. It is relatively easy if there are manholes present as it is literally manhole to manhole and water can be run from the taps to check this. We have even used dye in the test just to establish which drains come from which section of the house.

Drain leak test

To do the drain leak test we locate the manhole and literally run the taps to see if the amount of water coming out is similar to that going through the drains. It is very rare for it to be different, but we have come across one or two cases over the years.



Drains and dampness problems

Often with drainage problems there is a blockage or dampness and it can be a rush to find a solution, but it is worth standing back and thinking about what your investigations have shown and how best to proceed. For example, with the dampness problem it may not relate to the drains at all.

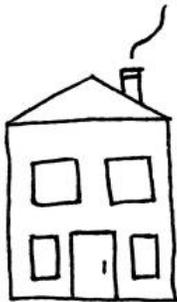
Close circuit TV cameras

Over the years we have found close circuit TV camera inspections to be very useful. The problem with them is being able to get the camera down the drain, but when the close circuit TV people had managed to do this and produced a written report the information has been very useful. In fact for the cost we would recommend it when purchasing an older property. Unfortunately, in this particular instance it was impossible to get a camera down the drain. We therefore pressure hosed the drains, which is a good thing as the water will clear any blockages.

Still a problem with dampness

We cleared the drains in the property that we manage and spoke to the neighbours who had the original damp problem and they advised that they still had the damp problem. We therefore checked their property and found:

Checking next door's property

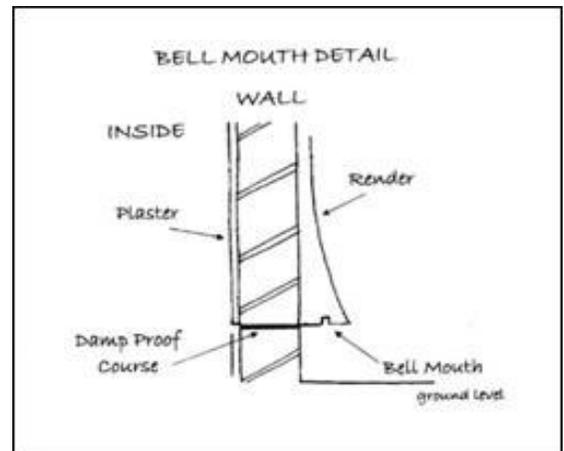


Before we say what we found about the dampness, let us just explain what we have done to check. We looked at the roof, at the walls to see if any dampness was coming in this way, and we also took taken readings with a differential damp meter (we do appreciate that any conneissuer reading this that these meters are specifically designed for timber, but they still give a good indication of problems on walls) to check for dampness by doing a relative comparison with the other walls. These readings meant that there was dampness in the floor and in the walls. We believe the dampness relates to either leaking pipes or condensation on the pipes.

Wall problem with dampness

We would normally expect there to be some problems with dampness coming in via the walls, or up the walls, but in this instance the property has been relatively newly rendered, approximately five to ten years ago. The rendering is well detailed, including a bell mouth at the base.

Bell mouths form drip details, which throw the water away from the base of the property.



Lack of ventilation

We also noted that the ventilation in the bathroom is via opening the windows; always a dangerous way to have ventilation, as it involves someone actually opening the windows, which often doesn't happen, particularly where properties are rented out and people are watching the pennies for the heating bill. Accordingly, we would also recommend an extract fan is added that is connected to the light switch.

French Drains

Using a French Drain to resolve a Damp Problem

We are finding where we are asked to look at damp problems in general (i.e. damp walls and floors) that commonly it is due to the external ground level being higher than the internal ground level. It could also be that air bricks have been blocked, or simply paving slabs, decking or briquettes have been used to form a patio area which then discharges any rainwater against the building. Quite often the solution is to add a French drain. Whilst French drains are quite simple and are basically nothing more than trenches filled with gravel (although there is a little bit more to them as we will explain), they are almost a DIY job for most people and they are relatively easy to install and are for the most part low cost. You do however need some care and attention when installing them. You could install what we have heard referred to as the "French pond".

What use is a French Drain?

A French drain is a trench of approximately 6" or 150mm wide (or the width of your spade), approximately twice the depth (i.e. 12" or 300mm). In most cases this will suffice however where there is a large amount of ground water, you may wish to make the trench wider and deeper. A French drain acts as an area where water soaks away quickly. We often recommend them close to the building and not next to the building as this helps to reduce the ground level and it will take any water that is directed at that area away (for example as mentioned where a patio has been placed which aims any rainwater to part of the wall). As mentioned, whilst a French drain is a DIY job it does need some understand of how it works.

French Drains must be on a slope

The pipe that is at the base of a French drain should be perforated or as we did years ago for land drains, there should be gaps between each pipe which should be set onto a bed of firm ground and the pipes should be on a fall to the drain. Whilst you should be able to ensure that there is enough fall by site, we always like the idea of rolling a marble from one end to the other! You will then need to place the pipes down and fill the trench with 0.5" (7.5mm) to 1" (15mm) sized gravel. You can leave it at that, or in addition you can cover this with sand and then turf over it. This is how a basic French drain is carried out.

The French Drain System which we would recommend

The French drain system which we would recommend would be as described although we would add to the base an inch or two of gravel onto which the perforated drainage pipe would rest (the drainage pipe should be 4" (100mm) to 6" (150mm). We would then wrap around that drainage pipe a filter fabric. This is to stop the holes in the perforated pipe from blocking up! We would then add gravel around this and further fill with gravel. In addition to this, we would add a silt trap. This is added in the run of the pipe and is very similar to a road gully (not that this is of much use if you don't understand how a road gully works!). The silt trap is a rectangular box with a pipe opening at each end. The drain water passes into this. Any particles sink to the bottom of the box and then the water travels on to the other side of the box, enabling it to feed into a drain. These are usually made of glass reinforced polyester (it

being available in this form since the mid 1980's) and then normally reinforced with a steel frame for additional strength and bedded in concrete.

The French Pond!

French drains will over time clog up, which is why we recommend using a filter fabric however even with this, they will eventually clog up. Unfortunately there is no Dyno Rod equivalent and it is normally fine sand organic matter or clay which clogs up the French drain. In this case it will have to be dug up and the pipe work will require cleaning (or it may be quicker to just replace it) adding a filter fabric and refilling the gravel.