TJ PROPERTY INSPECTIONS

Inspection Report

Property: Rua , Porto

Client:

Date of inspection: 05.04.2019

1. Post-inspection notes

1.1 Roof

Is made using reinforced concrete rafters, hollow bricks placed in-between then skimmed both sides, Roof tiles then placed over concrete battens. The construction is well done and solid. However a leak is occurring into the attic area (image 11) I speculate a small crack has opened in the bricks or between the rafter and a brick, this has allowed water to seep into the attic staining the wall and ceiling.

1.2 Foundation

A laser was used to check the level of the foundation, plus minus to a 7mm max was recorded. This is considered well within acceptable inclination. No subsidence or cracking was noted.

1.3 Main structure

Typical style of build, on site casted pillars and beams, walls made of hollow brick and rendered with cement based product. Laser showed walls to be plus minus to a 5 mm max, also normal in a build of this size. I found the building to be structurally sound at this time

1.4 Outer walls

One crack was noted, including movement in window outer casing (image 2) the crack had been repaired poorly (unfortunately the crack does not show up in the photo). Of course there is always some movement in a structure. The crack runs horizontal. I see no additional problems occurring from this movement.

1.5 Gutters

There are several problems resulting from a lack of gutters and insufficient drainage. I noted one small drain at the front of the BBQ area, this is considerably undersized for its potential requirements, and I am unsure if it is even functioning today.

All walkways that run parallel to the house, have begun to subside, creating openings between the two (images 6 & 14) this is due to continued water saturation. The ground under these areas, are absorbing all waters that are left to cascade into the garden areas during the wet season. Then the weight of the walkways causes them to sink into the soft earth. This movement, with the heavy water intrusion, has also caused many tiles to lift and crack (image 13).

This water saturation around the house is affecting the cellar as well. Damp was noted mainly on the rear wall (image 8). This damp has been kept to a minimum, due to a damp course having been added to the foundation during construction (image 15) However this (Platan system) has not been been installed correctly.

The higher section of the plastic sheet is not correctly attached to side of the foundation; an attempt to attach this using the render was visible in the photographed area. I can only speculate that it would be similar at all contact points surrounding the foundation. The installation of a damp course membrane is a very precise procedure.

Having observed the small area that was exposed to me, I can only believe this installation was not done to the highest standard, but is functioning at an acceptable level. The cellar area also benefits from extensive ventilation, which will certainly be helping the area to have reduced damp issues.

The stone garden in the front of the house (image 1) will be absorbing large amounts of water from the roof during rains, this is good to be aware of, and can potentially cause problems in the future. Only one water outlet was noted in the front retaining fence. Several more should be installed.

1.6 Windows and doors

These are of a reasonable quality and offer a medium thermal value, installation has been of a professional standard. No problems are expected.

1.7 Front balcony and steps

These were seen to be in good condition. Railings have been painted with a quality rust resistant paint and present well.

1.8 Fences

The fence between the residence, and the left side neighbour (image 3), is structurally sound, but is showing extreme rust due to low grade materials having been used. Various other forms of fencing have been used to enclose the property, these are presenting well.

1.9 BBQ area

Some damage similar to the walkways is occurring, but at this stage, not a major concern.

1.10 Driveway

Some tiles are lifting. There is a remote control gate (not seen functioning).

1.11 Attic

This is well built and no problems noted. (See point 1.1 above about water leak in roof.)

1.12 Bedrooms

No problems noted.

1.13 Walk in wardrobe

No problems noted.

1.14 Bathrooms

Some silicon to be replaced, upgrades to ventilation systems. Some low quality fittings and accessories. But overall in good condition. Intellivent ventilation system recommended.

1.15 Halls and steps

These had no major issues. A horizontal crack is visible in the cellar stairwell (image 10). This crack is not structural. Where the bricks meet the concrete has partially separated causing the render to crack. This is repairable.

1.16 Laundry

Shows damp damage on ceiling, room is small and not really considered adequate for its designated job.

1.17 Kitchen

The kitchen has some years on it, many of the main components are well past their prime. Gas boiler, overhead exhaust fan, basin. Two tiles have been cracked (image 12).

1.18 Internal walls

Some micro cracks (too small to show in photos) have begun to appear in several areas. This can be caused by many factors, but are not structurally related. They can be easily filled with plaster and the areas re-painted.

1.19 Ceilings

No serious faults were noted, though several ceilings need to be professionally finished.

1.20 Water

This is mains supply (samples taken). Pipes, connections, and drains are showing signs of wear, but no imminent problems noted. There is also a bore hole on the property, the pump system at this time is not functional (no sample was taken).

1.21 Electricity

This is mains supply, fuse boxes were inspected, and scanned with thermal imaging, no faults or hotspots were noted. The electrical system has been professionally installed and should continue to function as intended.

1.22 Heating system

This is a gas unit (image 9). This system will need upgrading in the near future. The unit itself was leaking water, many of the fittings were rusty at the joints, and I believe the unit to be approximately 20 years old. Some of the elements in the house have rust at joints, and the element in the living room, had been leaking on the floor.

1.23 Fireplace

This was not seen functioning. No rating can be given.

1.24 Retaining wall (back garden)

Two cracks have formed (images 4 & 5). Drainage points should be drilled into the wall to allow moisture to escape as necessary.

1.25 Paint

Mostly professional works have been carried out as far as paint is concerned. Quality products have been used throughout the residence.

2. Cost analysis of required work

2.1 Gutters

Approx. 40 metres of guttering plus down downpipes needs to be installed. Prices for supply and fit could range between 1500–2000 euros. This is only the first step to removing this problem.

Ground works will also be required. A system of underground drainage pipes need to be installed to direct the water away from the residence to the street. This would include cutting into some of the tiled paths, for the inclusion of a catchment system next to the structure, and the digging of trenches to create an area for all the drainage pipes to be installed. Depending on the design of the system and how much area has to be excavated, I would expect this to cost in the region of 3000 euros.

On completion of these works, pathways should cease to subside. To remove the damaged pathways and replace with new would not be cost effective. I would recommend the present cracks be cut neatly open, and then filled with a flexible, water repelling, sealant, possibly Sika Sikaflex. All tiles removed, area grinded back to smooth, a professional primer applied, outdoor tile adhesive, appropriate tiles and a water deflecting grout. The sika product will look correct to the join and prevent further water from finding its way between the foundation and the walkway. Cost should be somewhere between 3000–5000 euros. Works should always be carried out by a larger well known firm, and a guarantee of works should be included.

2.2 Drainage channels for retaining walls

These can be easily installed by using core drilling equipment. Once the hole is made to the required diameter, a corresponding sized plastic pipe can be inserted into the ground behind allowing for

moisture to escape. These works are done relatively fast. This would be a one day project for professionals. Cost for this is expected to range from 400–600 euros.

2.3 Platan, damp course

It would not be cost effective to attempt an upgrade to this system. I speculate it is working at 90% of its intended effect. Most houses of this era were built without this system, so knowing this has been done is definitely a win and what faults it may have are small in the big picture.

2.4 Fence

It is not cost effective to paint. A new fence of a similar design will cost approx. 700 euros for supply and install, this should require only a single day for completion.

2.5 Micro cracks

These are small and only really visible when you look for them. I would wait until an area was to be modernised with new paint. The cost of filling the cracks and sanding before painting is minimal.

2.6 Cracks in retaining wall

These can be repaired with a system known as lacing, this requires steel staples to be inserted in the wall structure over the cracks and tightened. When done the areas are back filled the area re rendered and painted. This system will prevent the cracks returning. Cost 500–800 euros.

2.7 Damp in the cellar and garage

Once the gutters and drainage are done, this problem should be reduced dramatically. All walls should be treated against mould, and when painted, ensuring good quality paint is used. This area should always have good ventilation.

3. Photographs taken at property visit

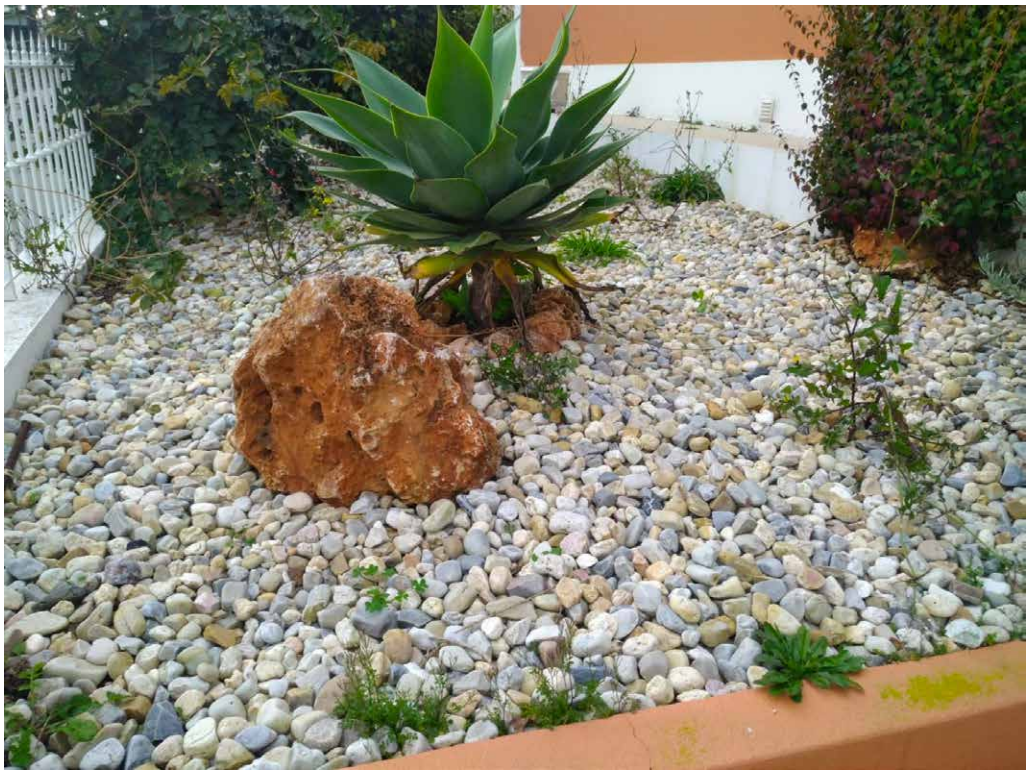

Image 1

Image 2

Image 3

Image 4

Image 5

Image 6

Image 7

Image 8

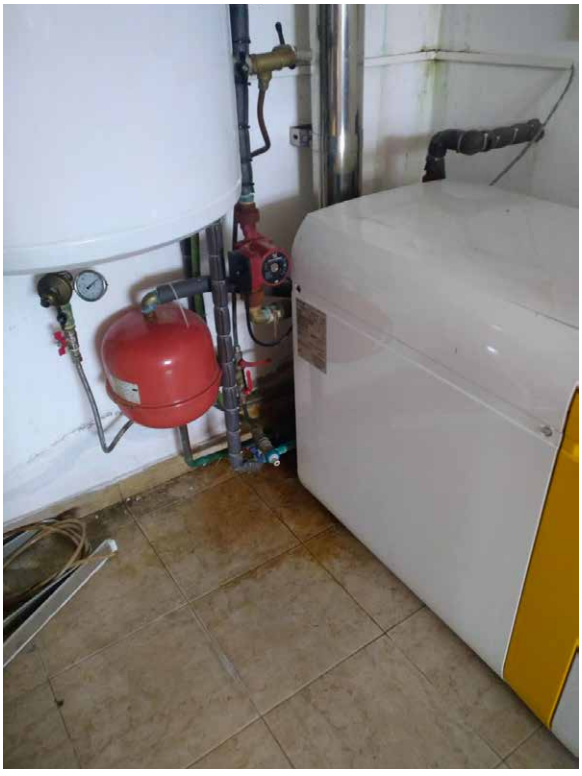

Image 9

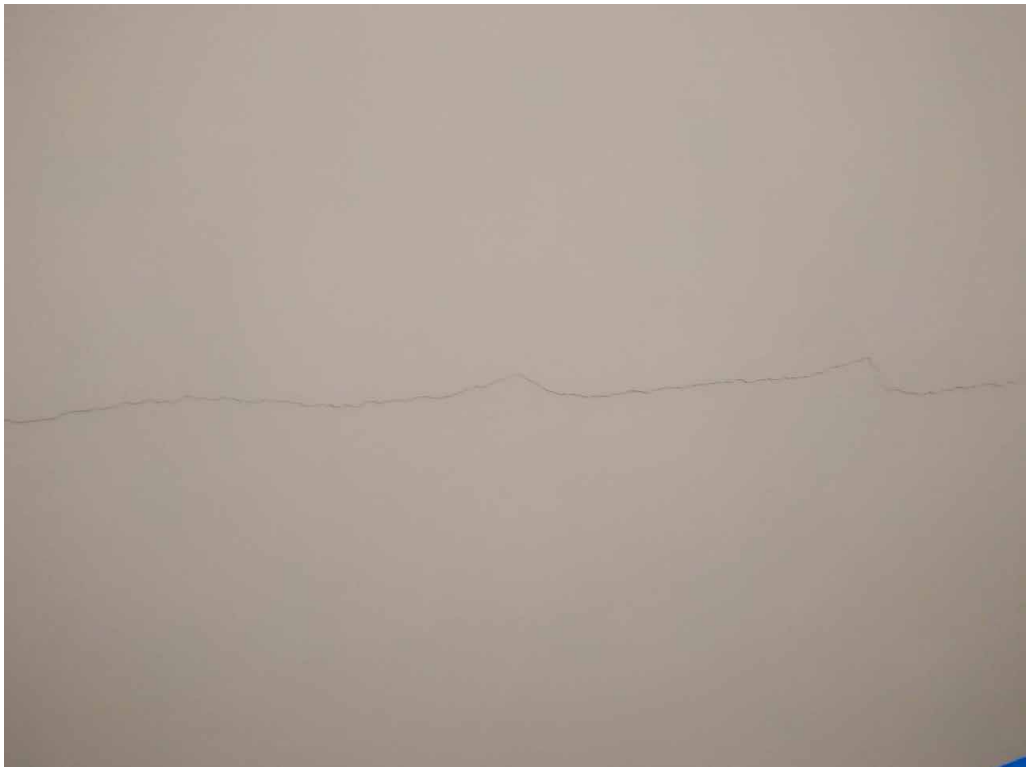

Image 10

Image 11

Image 12

Image 13

Image 14

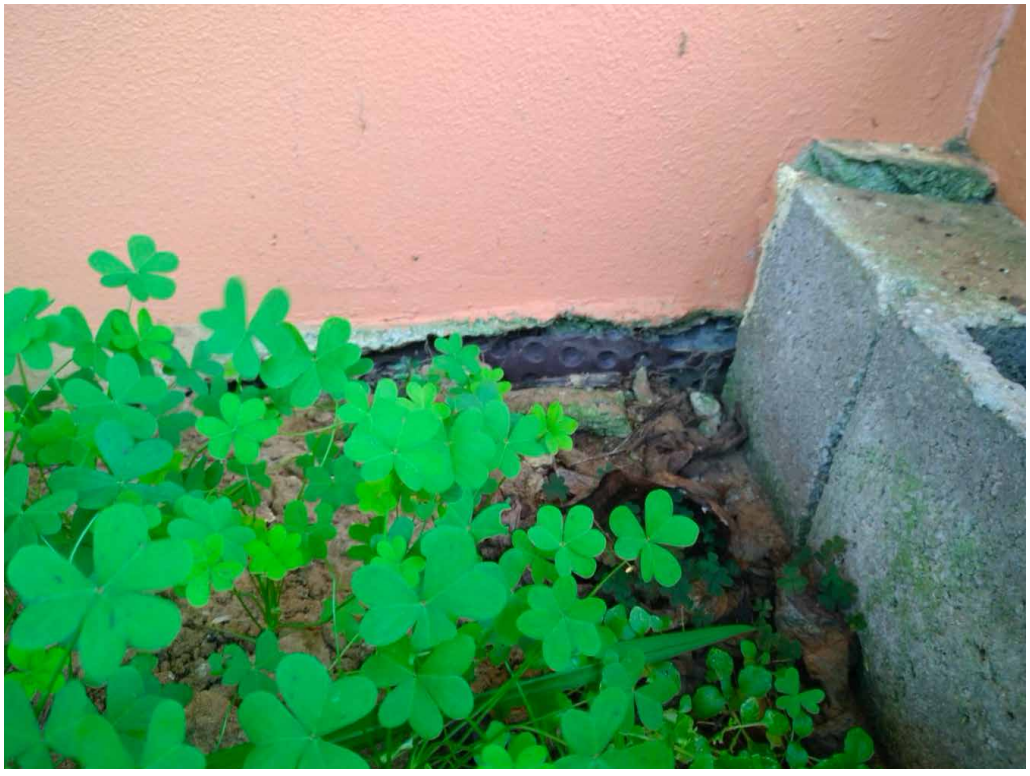

Image 15

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