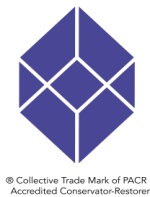
 Taylor Pearce Limited, Fishers Court, Besson Street, London SE14 5AS 

Method Statement

|  |
| --- |
| **PROJECT DETAILS:**  Removing floor tiles and floorboards.  Location – 7 Holly Village London N6 6QJ  Method statement compiled by Matt Nation, Taylor Pearce Ltd. September 2019 |
| **DESCRIPTION OF FLOOR COVERINGS TO BE REMOVED.**  **Hall and dining room.**  Throughout the hall and dining room the floor is covered with 6” (152mm), square, terracotta and buff quarry tiles in a chequerboard pattern, set diagonally across the space. The tiles are approximately 20mm thick.  A picture containing floor, indoor, table  Description automatically generatedA picture containing indoor, wall, floor, bathroom  Description automatically generated **Hall. Dining room.**  The tiles have been laid with fairly tight joints, in places the edges of the tiles are almost touching and at the widest the grouted joint is no more than 5mm.  Overall the tiles seem to be firmly fixed to the floor, however, there are several tiles that are loose, cracked, and chipped. Some new tiles have been added, presumably to replace broken ones, and the downstairs loo floor is all new tiles; these replacement tiles are a reasonable match in size and colour to the originals.  A tap test by hand indicates that there are areas of the tiled floor where the tiles are not as well adhered and when tapped sound somewhat hollow. As an estimate I would guess that approximately 20 – 25% of the tiles demonstrate a hollow sound when tapped, indicating that they are not as firmly fixed to the substrate as the rest of the tiles.  The tiles appear to go under the skirting, suggesting they were laid prior to the cement-based skirting being run in situ.  The floor in the dining area has a significant dip towards the centre of the room, as a result several tiles are fractured and have come loose.  A red and white tiled floor  Description automatically generatedAn area in the corner of the room where this movement has affected the tiles has allowed 16 tiles to be easily lifted so the substrate could be investigated.  This area of removed tiles has revealed a hard-modern cement adhesive, used to lay some of the new tiles, there is evidence of a lime mortar substrate beneath this new adhesive, presumably part of the original floor screed.  **Area of removed tiles.**  **Living room.**  The floor of the living room is covered with 6 ½ “(165mm) floorboards, nailed to the joists, which are spaced about 14” (355mm) apart. The boards generally run the entire length of the room and the ends go underneath the skirting by about 30mm, indicating that the skirting was put in after the floorboards.  **General view of the floor. Fireplace hearth on top of**  **A picture containing building  Description automatically generatedA picture containing floor, indoor, sitting  Description automatically generated floorboards.**  The boards are fixed with 2 nails at each joist positioned towards the outer edges of the board, which is a standard fixing for floorboards.  The floorboards around the hearth of the fireplace have been overlaid by a stone hearth and edging, the original mitred edges of the hearth framing timbers are just visible in places. Three of the floorboards have previously been cut to install central heating pipes and radiators.  A picture containing floor, indoor  Description automatically generated  **Cut floorboards.** |
| **SUMMARY OF WORKS:**  The tiles and floorboards need to be carefully lifted and retained so that underfloor heating can be installed and the tiles and floorboards are then to be re-instated. |
| **DOCUMENTATION:**  Prior to any works commencing the floors should be photographed to document the current condition, taking particular note of the locations and numbers of existing damages and previous interventions.  **Tiles.**  As the tiles are the same size and there are only two colours, they are interchangeable, and it is not necessary to record the specific location and orientation of each individual tile. However, some of the tiles will have been cut to fit specific parts of the room, doorways for instance, and in these cases it would be worth numbering these individual tiles, on their reverse side with pencil, and identifying them on a drawing or photograph so they can be replaced in the same location. A measured drawing would be a good idea to help with the setting out and relaying of the tiles in the same pattern.  **Floorboards.**  The floorboards will need to be individually numbered and their orientation indicated on a drawing or photograph; pencil can be used to mark this information on the reverse side of the board as it is removed. |
| **TILE REMOVAL:**  The whole area of tiling will need to be removed to allow the underfloor heating works to be carried out.  As there are some areas of loose tiles and others that are hollow sounding beneath it is hoped that the tiles can be removed without causing much more damage. The original floor screed appears to be a lime-based mortar, and this is likely not to be strongly adhered to the underside of the tiles, which should allow them to be removed more easily than modern cement-based adhesives.  However, it is impossible to guarantee that no tiles will be damaged during the removal process. Although the aim would be to lift them as carefully as possible it might be that the adhesion between the underside of the tile and the substrate is such that the tiles may fracture during the removal process. A certain % of further damage to the tiles is to be expected; what is considered an ‘acceptable’ level of damage is subjective, but I would hope that less than 15% new damage is achievable.  **Proposed methodology.**  In general terms we would recommend that the tiles are removed from one end of the room working towards the other in a systematic, methodical manner. Any tiles that need to be individually recorded, because of a specific cut shape, can be marked on a drawing and numbered on the reverse with pencil. As tiles are removed they should be sorted into the two different colours and any with damages kept apart from whole, undamaged tiles. The tiles can be carefully packed into boxes with some thin softening between them. No tiles, even broken ones, should be discarded in case they are useful to fill in small areas during the relaying of the tiles.  Given that there is an area where the tiles have already been removed it would make sense to start in this area, working towards the other side of the dining room and out into the hall towards the front door.  In principle a tile needs space around it to allow it to be lifted. Ideally the joints on at least two adjacent sides should be cleared of grout before attempting to lift a tile. We would suggest that a multitool (vibration motion) is used to help remove grout at joints around the tiles. A diamond blade fitted to the multitool is probably best for the removal of grout. Other tools may also be suited to this task, hack saw blades or other thin cutting blades, but care should be taken not to chip the edges of the tiles.  With the space created by the removed tiles it should be possible to lift the adjacent tiles using a thin, wide, flat blade (such as a paint scraper) held flat along the floor and gently tapped (with a suitable hammer) horizontally into the joint between the underside of the tile and floor surface. The forces exerted by the tool should help to cleave the tile loose from the substrate. If necessary, the same thin blade can be used to tap vertically down into the joints and help to cleave them away from adjacent tiles.  We would not recommend the use of power tools, such as breakers, to remove the tiles as the forces exerted are difficult to gauge and unpredictable. By using hand tools, it is easier to ‘feel’ how the tiles are moving and adjustments in technique can be easily adapted to suit the situation.  Tiles around the edges are underneath the skirting and it is not yet known how easily these can be removed. It might be necessary to cut out a small strip of skirting above the tiles to allow sufficient room for the tiles to be removed. To cut the skirting we would recommend that an angle grinder, fitted with a diamond blade, is used. Protection in the form of thin metal sheet can be laid over the tiles to prevent the grinder blade damaging the tiles during this cutting operation. Upon completion of the relaying of the tiles this cut strip at the bottom of the skirting can be made good.  If the following methodology proves to be ineffective at removing the tiles successfully then another approach might need to be adopted. Until an attempt to remove the tiles is made it is difficult to know what other methods might need to be employed, but it might mean that the tiles need to be dug out by excavating the lime mortar from underneath to free them.  **Removal of mortar from tiles.**  As tiles are removed it is likely that some will have residues of grout along their edges and mortar adhesive on their underside. In order to re-lay the tiles these residues will need to be removed prior to laying the tiles. It usually makes sense to remove these residues as tiles are removed from the floor and before they are packed. This allows for tiles to be packed neatly, which reduces the risk of further damage through poor packing and handling.  The grout and mortar residues may be removed by hand tools, but it might be that a small angle grinder is needed to carefully take off harder lumps, particularly on the undersides of the tiles. Not every millimetre of mortar residue has to be removed, as long as what remains is well adhered to the tile and not likely to cause any interference during the re-bedding process.  Sometimes it helps to soak tiles in clean water to soften the mortar before removing these residues. Only when the tiles have been removed will it become apparent whether or not soaking in water helps with this process of residue removal.  **Cleaning.**  As there will be new tiles needed to complete the tile floor when it is re-laid it makes sense to clean the tiles so that they are a closer match to the new replacement tiles. Overall cleaning of the tiles is probably best carried out before the tiles are removed; with them still on the floor the cleaning can be carried out more quickly than attempting to clean individual tiles after they have been removed. Cleaning trials should be carried out prior to cleaning the whole floor.  Water washing with hot water and non-ionic detergent applied and worked in with bristle brushes and residues removed with sponges should work, but if the surface of the tiles is particularly soiled or has a greasy/waxy layer then proprietary cleaners might be required.  **New Tiles.**  Any new tiles will need to match the existing in terms of colour, size and surface finish. In terms of relaying the floor we would suggest that new tiles are confined to the kitchen and toilet floors and any others that are needed to replace damaged originals should be placed in areas where they are less noticeable i.e. corners and edges of rooms or where furniture is likely to cover them. |
| **FLOORBOARD REMOVAL:**  In total there are 14 floorboards that would need to be lifted to allow the underfloor heating to be installed. The one by the window can remain in place and the ones into the niches on either side of the fireplace do not need to be lifted.  The 3 floorboards that have already been cut are adjacent to each other and are easily removed as they have been taken up before.  With these 3 cut boards removed it allows access to the joint between the underside of the adjacent floorboards and the top of the joists.  **Proposed methodology.**  In principle the removal of nailed boards can be carried out by carefully inserting flat bladed tools between the floorboard and joist and levering upwards to lift the floorboard, usually pulling the nail with it. The size and shape of tool inserted to help with the levering depends on the space available, but small flat crow bars are often suitable. If necessary wooden wedges can be inserted into the joint and tapped in with hammers to lift the floorboard a little way to allow for crow bars to be inserted.  It is usually best to work on lifting a floorboard by gently working along the whole length of the floorboard a little at a time, rather than trying to completely free only one nail. The nail closest to the open side should lift relatively easily, the other nail, closest to the adjacent board might not be so easily levered up. However, once the board has started to lift it is usually possible to insert a tool further into the joint to get a better purchase to ease up the second nail.  If the boards do not seem to lift relatively easily then it might be necessary to cut through the nails, this can be done with hand-held hacksaw blades. However, it is preferable to lift the nails and remove them so these fixing holes can be re-used.  **Skirting.**  Apart from the 3 pre-cut boards and the 4 that end in the door threshold, the remaining 7 to be lifted are mastered at either end by the skirting. It will not be possible to easily lift these boards with both ends covered by the skirting. To allow these boards to be removed we would suggest that one end of the board is cut close to the skirting; this can be done with a multitool fitted with the appropriate blade. The cut can be a vertical cut carefully following close to the line of the skirting. This will then allow the cut end to be lifted and the whole board raised up from that end, working towards the other end still under the skirting. The two nails at the end still held down by the skirting will need to be cut through with hand-held hacksaw blades to free the floorboard so it can slide out from under the skirting.  **Floorboard along the front of the hearth.**  **A picture containing indoor, floor  Description automatically generated**The floorboard that runs along the front of the hearth may need to be cut in order to lift it. We would suggest that a multitool with suitable blade is used to cut the board close to the front of the stone and around the mitre joint. With this cut it should be possible to lift the board without cutting it into smaller lengths.  **Removal of nails from the floorboards.**  With the boards removed it is most likely that the nails will pull up with the boards and remain protruding from the underside. In order to remove these nails, we suggest that they are carefully tapped back through the hole using a hammer and then pulled out with pliers or similar tool. If removing the nails causes the floorboards to splinter around the nail-head, then the wood adjacent to the nail-head may need a little opening up with sharp hand tools to allow space for the head to push up through the timber without snagging, care should be taken to only remove a minimum of material. Any cut nails can be removed by tapping the nail back through the board with a metal drift and hammer.  **Tongue and groove.**  It seems that the floorboards are of a tongue and groove style, with a separate metal strip acting between the two boards by fitting into grooves along the length of the boards. These metal strips should be carefully removed and set aside for re-use when the floorboards are re-laid. |