Ref: T-004 - REM

TREATMENT & PREVENTION OF WOOD ROT

Rot is one of the major causes of timber decay in properties and will usually be found where dampness from any source has been allowed to become established for a period of time, thus creating the ideal conditions for wood rot spores to germinate and spread as a fungal infestation which progressively destroys the structural integrity of all types of timber.

DIAGNOSIS:
The correct identification of dry rot is important owing to the extensive and elaborate measures necessary to control and eradicate it. The recognition of the various diagnostic features of the timber, mycelium, the strands and fruiting body is important for a positive identification appraisal.

A) Timber
Timber is a cellular material consisting mainly of cellulose and lignin, which provides the timber with rigidity and strength. Dry rot breaks down the cellulose of the timber leaving behind the lignin, which gives the timber a darker colour. This darkening is characteristic of "brown rot".
As the wood breaks down it loses strength and weight and cracking and shrinkage occur. It may also appear warped. The decayed timber splits into cuboidal pieces with deep cracks along and across the grain caused by the shrinkage.

B) Mycelium
Fungal growth is dependent on the development of the hyphae, the fine filaments which elongate and spread through and across the damp timber. As the hyphae grows, it forms a larger mass, the mycelium, which can appear as a white, fluffy cotton wool like growth or silvery grey sheets. The mycelium can also be tinged with lemon yellow and lilac patches. The skin or sheet will peel back like a mushroom cap in straight lines. A musty mushroom-like smell may be present especially when conditions promote activity.

C) Strands
White or grey strands, which conduct nutrients and water are formed within the mycelium. These strands, which can be up to 8 mm thick, will allow the fungus to spread over and through inert materials and reach further timbers. This ability must be considered when inspecting a dry rot outbreak. The strands will become brittle on drying and will "snap" audibly. This brittleness will distinguish the strands from other similarly coloured wet rot strands.

D The Fruiting Body (Sporophore)
The fruiting body can be the first indication of dry rot although its development usually follows advanced growth. Shaped like a fleshy pancake or bracket the fruiting body has a centre section covered with wide pores or folds, orange or reddish brown coloured from which spores are produced. These rusty red spores are released into the surrounding area and disperse on air currents as a red dust settling on horizontal surfaces.

APPRAISAL:
Where dry rot is present the inspection must be carried out carefully and methodically. Remove affected skirting boards and floorboards and examine the sub floor area, checking for fungal growths and testing the joists by prodding with a screwdriver or similar implement to determine the depth and extent of decay. Assess the sub floor ventilation checking for a musty mushroom like smell, which may indicate activity and debris, which may promote the spread of the fungus or the germination of the spores.
Check the plasterwork adjacent to areas of decay by removing small pockets to determine the spread of strands behind the plaster. If necessary remove random bricks to examine the cavity for any signs of the fungus.
Determine the cause and source of dampness and rectify to promote drying conditions, paying particular attention to rainwater goods bad pointing flashings and bridged damp proof courses. Where dry rot comes into contact with a party property the owners or occupier must be notified and if possible an inspection carried out.

CONTROL:
The principal aim in the control of dry rot is to identify and eliminate the source of moisture and dry the building as quickly as possible to reduce the moisture content in the timber to below 20%. This procedure may take a long time and although it forms the basis for eradicating the fungal infestation secondary measures may be required to prevent further damage.

Treatment Procedures
Cut out and remove all decayed timber up to 600 mm beyond the visible limits of fungal decay depending on site conditions and severity of the fungal growth.
Remove all built-in timbers, e g. wall plates, lintels, bonding timbers within the affected area and replace using steel or concrete.
Remove all timber debris from the sub site area and any surface fungal growth, which may be on exposed areas of masonry.
Rake out mortar joints in areas where masonry sterilisation is required and carry out a thorough surface treatment using a coarse spray of **Palace fungicidal irrigation fluid** applying two or three treatments. This treatment is essential to ensure all residual spores from the infected timber are eliminated to isolate an existing outbreak and prevent any future recurrence. of dry rot by constructing a "cordon sanitaire", using a method of drilling and injecting **irrigation fluid** into masonry or brickwork to form a sterile barrier located as follows:
a) Between an outbreak and timber in the immediate area which is not affected,
b) At the base of a wall with no DPC membrane where fungal decay is established in infected wood beneath a solid floor,
c) To brickwork where fungal decay by dry rot has affected timbers or masonry in a party wall with adjacent property,
d) To isolate and protect built in timbers which may be affected by dry rot but are not readily removable.

Re-plastering of exposed brickwork should be carried out using **Palace Fungicidal Waterproofer** especially in areas where a severe infection is evident or in a party wall situation where access is not available to both sides of the wall.

The replacement timbers should be pressure impregnated and cut ends retreated using **Palace Universal Wood Preservative** or for large section timbers **Palace Timber-treat Ecology**. The ends should stand in the preservative for a minimum period of one hour to ensure penetration up the end grain. Residual sound timber in the area of the outbreak should be cleaned and treated using **Universal Wood Preservative**.

To prevent any future recurrence of a fungal outbreak it is important that the property is well maintained to prevent any ingress of damp and all external protective measures are kept in good order.

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