

# STEAM WORKS SERVICES

A HOMER GROUP COMPANY

Since 1949, we have been in the roofing industry, repairing / renewing roofs and carrying out all aspects of roofing.

For years we have been removing moss from roof tops, by hand with the aid of a simple hand trowel. That is up until recently! Since this approach is time consuming and very labor-intensive and certainly not cost-effective.

From our professional perspective we also felt that when the roof was finished it looked patchy, and we never really felt the customer got the best value for money!

However, with our **NEW** revolutionary deep steam cleaning soft wash process, not only is ALL the moss removed! But also, the roof looks like new again, with no more patches... *Now we feel we have given value for money!!!*

## INTRODUCTION TO OUR STEAM WORKS PROCESS

- Our revolutionary deep cleaning soft wash process involves only the use of high-pressure steam (*in excess of 150c degrees*). With low pressure minimal water applied, which gently removes the moss, lichens etc.
- We always apply an Eco-friendly nonaggressive approach, no chemical biocide is used during the process, just pure and gentle steam.
- The steam (superheated water) will remove moss, algae, fungi and other biological matter... it will also kill off the spores!
- We have invested in the very best possible equipment, to carry out the job at hand both thoroughly and efficiently... the right tool for the job is so essential. Along with our vast knowledge on the subject.
- Our Expert Supervision / Professional Staff are trained to the highest level.
- We have all the experience and expertise required to execute the works thoroughly and safely.
- Roof steam works not only enhances the look of your property, but also ensures the roof returns to a healthy condition for longevity.
- A thorough steam clean and sanitation of the roof, can add many years to its serviceable life.
- When buying or selling a property, the survey will usually advise on the removal of invasive moss.
- You will also save money on various expensive remedial repairs over the years, caused from the fungus infection etc.
- The value of your property can also increase if your roof is in a sound and clean condition, in addition to looking more aesthetically pleasing to the eye!
- Moss on Roofs can be a serious health Hazard...While not all mould (fungi) and algae pose a danger to one's health, some are extremely harmful, especially for older people, younger children, babies and/or people who suffer from asthma and respiratory problems.

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Heavy Moss Build Up on a Tiled Roof

**-NO POWER WASHING OR JET WASHING INVOLVED-**

The Severe Damage “power jet washing” does to a roof is critical... It literally rips the sand from the felt exposing a petroleum based subsurface to the sunlight, this in turn breaks down the petroleum substrate in a matter of years. It also removes the protective glazed and/or sand blasted finish to tiles and slates!

*We would never use this method on a roof, with high water jets damaging your roof.*

**“PLEASE DON’T BE MISLED...”**

*IF SOMEONE INFORMS YOU:  
“YOU NEED A NEW ROOF, BECAUSE OF MOSS INFESTATION”*

***BEWARE THIS IS A HUGE SCAM IN THE UK!!!***

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Moss Build Up on a Flat / Tiled Roof: Causing Damage

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## **DOES MOSS ON MY ROOF MEAN I NEED A NEW ROOF?**

Silent yet invasive, the presence of moss and algae stains on your roof does not necessarily equate to requiring a whole new roof! Often the roof just needs a steam cleaning to restore your roof to a healthy serviceable condition!

## **BUT MOSS IS NOT ON ALL THE ELEVATIONS OF MY HOUSE?**

Like the tip of an iceberg! Just because you can't see moss on certain areas of your roof, it doesn't mean it's not already there, and beginning to develop. In its early stages of life, roof moss and algae are completely invisible to the naked eye.

## **WHY IS IT IMPORTANT TO KEEP YOUR ROOF MOSS-FREE?**

If your roof is not kept clean and well maintained, moss and algae build up and can reduce years of life from your roof... It is imperative to remember roof algae is a living organism. If your roof has a moss or algae infestation, you will have higher fuel bills, you will also need to have more remedial roof repairs carried out annually.

## **CAN MOSS CAUSE ANY HEALTH PROBLEMS?**

While not all mould (fungi) and algae pose a danger to one's health, some are extremely harmful... especially for elderly people, babies and younger children, and/or people who suffer from asthma and respiratory problems.

Like the 'Trojan Horse'... The spores on your roof can infiltrate your home, they end up on the driveway and paths and are easily tracked inside the house.

Different mould species can have varying health effects, but it is important to remember that excessive mould growth needs to be taken care of immediately, regardless of the species. Any excessive mould growth can lead to increased allergies and unhealthy toxicity.

Blue, green or black stains on a bitumen felt roof, are mostly caused by algae, these algae staining begins with small spots, over time these spots can develop into large streaks. Did you know? Algae stains are often mistaken for mould or mildew.

We always carry out a leak test to your rainwater system, should any faults be found at this stage to the guttering or blockages to the downpipes, this would be drawn to your attention... so you can budget towards these works for a later date.



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Moss On Interlocking Tiles & Ridges

## THE STEAM WORKS PROCESS A STEP BY STEP

Our revolutionary steam works process, involves a soft deep cleaning approach, using only high temperature steam (in excess of 150 degrees) employing minimal water pressure, just enough to achieve pure steam, which gently removes and kills the micro roots, moss, lichen, algae, dirt, grime and pollutants spores from the pores of tiles/slates, render or matter we are cleaning, the system will also break down bugs, nests and spider webs, whilst also killing mould, mildew and bacteria in the process. Leaving surfaces completely sanitised, without causing harm any or shock to the substrate.

When your rainwater downpipes are directly connected to main drains or soakaways, we disconnect the swan necks from your gutter / downpipes and install (temporary downpipes). This is to prevent any debris entering the main drains, which could lead to major and expensive problems of blocked drains!

All waste and water from the guttering is diverted through a temporary fitted downpipe, the waste is then collected and bagged to be removed away from site. The water from the temporary downpipe is totally safe to run back into the earth, as we use NO chemicals during the entire process.

Once this stage of the works has been completed, your rainwater guttering system is cleaned and left free of all debris, the original swan necks are reconnected to the guttering and downpipes and are returned to an as found state.

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## **INEXPERIENCED PEOPLE CLIMBING ON ROOFS**

By its very nature Roof Cleaning should **NEVER** be undertaken at any time by an inexperienced amateur, not only due to the danger from working with heights, but for the reasons of damage to your roof!

Without the correct training, or experience on how to access a roof correctly, and/or the knowledge of where you can walk on a roof without causing any long term damage, and at all times, abiding by the Health and Safety competence assessment.

## **HEALTH AND SAFETY COMPETENCE ASSESSMENT - WE HOLD**

- A COMPREHENSIVE HEALTH AND SAFETY POLICY
- A STRICT ENVIRONMENTAL POLICY
- 'HSE' COMPLIANT RISK ASSESSMENTS
- COSHH ASSESSMENTS
- HEALTH AND SAFETY TRAINING FOR ALL EMPLOYEES, INCLUDING MANAGEMENT
- ACCIDENT REPORTING AND FURTHER INVESTIGATION
- PLANT EQUIPMENT AND TOOL MAINTENANCE/CALIBRATION/PAT
- WE CONSULT WITH ALL STAFF ON UP-TO-DATE HEALTH & SAFETY MATTERS
- OPEN ACCESS TO HEALTH AND SAFETY INFORMATION
- INSURANCE POLICY: PUBLIC LIABILITY 5 MILLION & EMPLOYERS 10 MILLION
- EMPLOYEE DBS CHECKS
- NPPV1 (POLICE CHECKED)
- ASBESTOS AWARENESS TRAINING
- CSCS SKILLS CARD
- PROFESSIONAL BODY MEMBERSHIPS
- WASTE CARRIER LICENCE HOLDERS
- IPAF LICENCES
- REGULATION 7 OF THE MANAGEMENT OF HEALTH AND SAFETY AT WORK SCHEME



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*All the access equipment below is at our disposal, from one of our sister companies, which allows us to be able to tackle any roof requiring the right access in the safest and most economical way possible to you - the customer.*

*Our surveyor will decide on the most suitable access plant required for your property, which may be one, or several of the access options below:*

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***\* QUICK ACCESS TOWERS \* MOBILE TOWERS***

***\* EASI-DEC SYSTEM \* SCAFFOLDING***

***\* CHERRY PICKER (MEWP) \* ROOF LADDERS***

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*Moss Build Up on a Tiled Roof*

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## WHAT CAUSES MOSS & FUNGUS INFESTATION?

Where and when the air that we breathe is highly polluted, moss and lichen struggle to survive, but where the air is clean, they will survive.

Moss & Algae will grow and thrive on your roof, with the environment in the UK being rather moist and humid, this combined with indirect sunlight to shaded areas from trees etc, allows the moss to be rampant in the infected area.

The absence of sunlight dictates the amount of moss or Algae growth, this combined with cool weather encourages and expedites the growth of moss on your roof.

While Moss is a microorganism that does not require an actual root to anchor itself to the substrate, when left to grow and multiply its roots can grow to ascertain a strong bond to the surface and keep the moss where it is most happy surviving.

Moss will always find an ideal place to live, where it can spread and grow in comfort! It is however reliant on damp conditions for its reproduction, as the male cells, move via a film of water to reach the female cells for fertilisation, sometimes this is within one plant, but can also allow them to reach other plants, depending on the individual species.

If your property is situated more into the suburbs as opposed to the city, trees and surrounding plant life can cause heavier microorganisms' production, which spread onto your roof quicker than if you were living in the city.

Lichen and Moss are very different but can happily coexist alongside each other, and on the same roof. Lichen is actually a composite organism, while fungus can be both an algae or bacteria, they soon however form a bond and live off each other.

Lichen can survive the harshest of climatic conditions, and is rarely effected by long drought and damp conditions, the one thing that can kill lichen is atmospheric air pollution.

There are approximately 15,000 species of lichen, but the one that is most common on roofs in the UK is Ascomycetes Foliose, this form of lichen starts life as a small yellow or orange microscopic atom, and later grows out from its centre getting larger and eventually leaving the centre to go a pale white / grey colour.

Moss on the other hand is a very simple plant form that prefers to move water around inside its own body, it has to absorb the moisture directly and that is why it prefers damp shady areas.

Of the 12,000 species of moss the most, common moss found on roofs is bryophyte andeaeaceae, which grows in green humps and has a little lantern shaped spore capsules in place of a flower.





Heavy Moss on a Flat Roof

## PROBLEMS OF MOSS, FUNGUS, ALGAE & MOULD TO BUILDINGS

Moss is amazingly resilient, normally found developing to a north or west elevation of roofs, that receive higher levels of rainfall, and have high humidity.

Moss flourishes in shaded areas that receive limited amount of indirect sunlight, together with periodic exposure to water or damp conditions it becomes an ideal breeding ground for a moss colony.

When moss forms on a roof, moisture becomes trapped, preventing the natural evaporating process taking place.

Persistent moisture does lots of damage to the roof coverings over time and contributes to another more serious problem mould! Which is a far more of a hazardous problem than moss, it grows persistently on moist surfaces, if a mould colony grows on your roof, the fungus can cause permanent damage.

You can only ensure a mould free roof, by keeping the substrate free from excess moisture, and in turn you can only free your roof of excess moisture, by eliminating moisture trapping organisms like moss.

Moss acts like a sponge, it retains and absorbs water with the ability to absorb liquids up to 20 times its own weight! And it fosters the growth of other roof inhabitants such as mould or Fungi, leading onto dampness.

If left untreated Moss will seriously shorten the lifespan, of roofing felt, asphalt, tiles and slates etc., once the coverings become damaged, and the timbers becomes exposed, it's only a matter of time before the timber decking and joists begin to rot, leading to permanent and very expensive structural damage.

Moss also likes to grow on cement and often will agitate the mortar bond joints between the hip and ridge tiles to the roof, disturbing the seating, lifting the mortar bed of the tiles/slates, and will ultimately unbound the mortar itself.

Moss settles between, and under roof tiles/slates, when the outside temperature drops it will then freeze, causing expansion and contraction to the roof tiles/slates, leading to the tiles becoming brittle and weakened, which advocates fractures/winter cracks, followed by potentially causing leaks into the loft area.

The presence of moss and lichen on a roof affects the performance of the roof tiles by preventing water to run off the built-in drainage points, within the laps and interlocks to the tiles/slates, in severe cases where the second interlock becomes blocked as well, this forces rainwater to filter off the sides of the interlock, which collects dirt and eventually form a dam, causing water ingress to the underside of the roofs underlay.

Moss and lichen will grow on tiles/slates including clay tiles, manmade fibre cement slates etc., but their preference surface to adhere to is ideally concrete tiles.

Generally you will find lichen growing mainly to exposed areas, while the moss will grow in corners of the interlocks of the tiles/slates as well as the head laps, where there is shelter, and more water can be retained. If left untreated, the longevity of a roof will be shortened, as moss causes damage such as, pitting to many surfaces such as, roof tiles/slates, render and concrete surfaces. Algae and other organic growths such as mould, moss and lichen have devastating effects to building surfaces, such as render, as they are a major contributor to the premature decomposition process of building materials.

The presence or biomass affects the degree of sunlight a roof can absorb, and in turn the amount of heat a building is able to maintain. The microscopic root system of moss is strong, although to the naked eye you cannot see the roots they are still there!

We can certainly see the damage caused, after the moss has been removed once you inspect the building materials. Mould, algae, moss are all living microorganisms that live in plants, soil and trees and grow everywhere, including on buildings.

When moss is seen on roofs, it is often a good indication that there is already a moss deposit present within the rainwater system, rain, wind and snow frequently dislodge pieces of moss allowing the moss to get trapped within the rainwater system, the wet moss will then swell in size, reducing the flow of the guttering and in turn forming blockages to downpipes and into the main drains or soakaways.

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Once the flow is restricted, and the rainwater system cannot drain away quick enough, this will lead to the guttering and downpipes overflowing, leading onto damp and mould entering the eaves and soffits, forming rot to the timber structure and leaving the smell of damp within the loft space.

The algae spores are carried to our roofs by the wind and birds, often you will see pieces of moss on your patio, or a conservatory roof etc. A lot of the time this is caused by birds who are routing for insects, bugs or for nesting materials, and source them from the rainwater guttering where they are trapped.

In many instances the start of moss or lichen growing on roofs is due to bird droppings, look under any TV aerials that are fixed to chimneys where the volume of lichen and moss is at its greatest.

The nutrients in the bird droppings give moss or lichen a good start in life, and when the surface of the tile/slate is of a granular surface, it gives the nutrient something to anchor onto, making it more difficult to be washed away from the roof.

Both moss and lichen alike are slightly alkaline to an acidic surface, as the combination of acid rain, and alkaline tile (concrete) produces a very weak salt solution, which it thrives upon!

This is another reason you see a lot of moss and lichen, on roofs of houses near to the sea, both organisms and plants like wet conditions, therefore they tend to grow better on the north and west facing elevations of any roof.



*Advanced Moss infestation on Pitched Roof*

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## **STEAM WORKS SERVICES OFFERED**

### **DOMESTIC PROPERTY**

- \* PAINT REMOVAL \* GRAFFITI \* BIRD OR VERMIN FOULING
- \* CHEWING GUM \* BITUMEN \* OIL \* GREASE ETC
- \* BRICK CLEANING \* RENDER \* STONEMWORK CLEANING
- \* ROUGHCAST \* CLADDING \* SOLAR PANELS
- \* UPVC GUTTERING FASCIA SOFFITS AND BARGE BOARDS
- \* CONSERVATORIES ROOFS AND FRAMEWORK
- \* WINDOW FRAMES CLEANED \* ROOF CLEANING \* MOSS REMOVAL
- \* ROOF TILES \* ROOF SLATES \* FELT \* ASHFELT CLEANING
- \* ASBESTOS ROOF CLEANING \* ALGAE \* MOSS \* FUNGI

### **COMMERCIAL ★ INDUSTRIAL PROPERTY**

- \* WINDOW FRAMES CLEANED (UPVC OR ALUMINIUM)
- \* INDUSTRIAL ROOF CLEANING \* ASBESTOS ROOF CLEANING
- \* COMMERCIAL ROOF CLEANING \* ALGAE ☐ MOSS ☐ FUNGI

## **STANDARD JET PRESSURE WASHING SERVICES OFFERED**

### **DOMESTIC ★ COMMERCIAL ★ INDUSTRIAL PROPERTY**

- BLOCK PAVING \* CAR PARKS \* CONCRETE ☐ SLABS
- DRIVEWAY CLEANING \* PATIO CLEANING \* TENNIS COURT

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## DID YOU KNOW? FUN FACTS ABOUT MOSS

### MOSSES AND WWI

During the First World War (WWI), mosses were used as bandages. Moss has antiseptic properties, which were perfect to cleanse and heal the wounded during the course of the war. Earlier, mosses have even been used as baby's nappies!

### MOSSES WERE ALSO USED...

To soothe the infection since they contain chemical with anti-bacterial properties.

### PEOPLE USED DRIED MOSSES FOR...

Heating houses in the past, live mosses were used to insulate boots in cold climates in Russia.

### REINDEERS LOVE MOSS

Most animals don't eat moss. It's hard to digest, and it has little nutritional value. So why are Rudolph the red nose reindeer different? The moss contains a special chemical that helps reindeer keep their blood warm. It keeps them warm during their yearly journey across the Arctic region, much like antifreeze keeps a car from freezing up in the winter. At the beginning, there was – moss. About 450 million years ago, first algae adapted to life on earth, and mosses evolved.

### MOSS WAS THE VERY FIRST PLANT ON EARTH!

At the beginning, there was – moss. About 450 million years ago, first algae adapted to life on earth and mosses evolved.

### EVER HEARD OF ECO-GRAFFITI?

Known as guerrilla gardening or eco-graffiti, moss is being used by some as a more eco-savvy alternative to permanent ink! The next evolution of street art!

### MOSSES DON'T HAVE ROOTS!

Instead, they have cell filaments (rhizoids). Even though mosses live all over the world. Unlike the roots of most plants, rhizoids allow moss to attach to all kinds of surfaces.

### MOSSES CAN INDICATE POLLUTION

As mosses do not have roots, they need to get their nutrients from the air. They absorb whatever is in the air – including pollutants, meaning moss is a good bio indicator of air pollution. A EU research project is already testing a lab-grown peat moss to measure air quality within urban sprawls. If this could be extended to forests, fields, and rivers, it would allow us to study a complete picture of the effects of pollution on the ecosystem.

### IS MOSS BAD FOR YOUR HEALTH?

Moss on Roofs can be a Health Hazard... While not all mould (fungi) and algae pose a health danger, some are harmful, especially for older people, younger children and people who suffer from asthma and respiratory problems.

### DOES BOILING WATER KILL MOSS?

Boiling water is the easiest way to get rid of moss, all you must do is to pour boiling water over the moss and scrub it off with a stiff brush. The moss will begin falling off and the surface can be scrubbed clean with a brush



Our Sister Company: Homer Hire Cherry Picker Access  
(Mewp)



Our associated company: Erect Scaffold