



# OPERATIONS & MAINTENANCE MANUAL

## Tile Installation

8 Jubilee Avenue, Broadbeach (Malo)

K&H Constructions Pty Ltd t/a Grand Tiling Services

Address: U3/127 Olympic Circuit, Southport QLD 4215

Email: [admin@grandtiling.com.au](mailto:admin@grandtiling.com.au)

Phone: 0404 520 432

ABN: 79 629 154 554

# Table of Contents

<b>Introduction.....</b>	<b>2</b>
<b>Maintenance .....</b>	<b>3</b>
<b>Warranty Information .....</b>	<b>9</b>

# 1. INTRODUCTION

K&H Constructions Pty Ltd, trading as Grand Tiling Services, has completed the tile installation 8 Jubilee Avenue, Broadbeach, known as Malo.

This Operation and Maintenance Manual has been prepared to provide guidance and recommendations to assist:

- Users of the building
- Managers of the building and services
- Employees who carry out maintenance, repair, or new works within the building

in understanding, running, and maintaining the tiling system installed.

We strongly encourage you to become familiar with the contents of this manual to ensure the proper care and maintenance for tiled areas.

## 2. MAINTENANCE

While materials and construction forms are chosen to be suitable and fit for their intended purpose, many components may have a service life shorter than the expected life of the building. To maintain the building's functionality and preserve material, product, and installer warranties, regular condition monitoring and maintenance are essential. This proactive approach ensures that all components perform as intended, contributing to the longevity and efficiency of the building.

Performing biannual visual inspections of your building, both inside and out, is essential. These inspections help monitor the building's condition and enable early detection of any deterioration that may require immediate attention. This proactive approach ensures the continued safety and integrity of the structure.

Regular inspections will help you understand how your building is performing and accurately plan and budget for future maintenance and capital works. This proactive approach can result in reduced long-term maintenance costs and help maintain the value of your asset.

Please note that the frequency of inspections for the tiling system may vary depending on the manufacturer's recommendations, the materials used, and the building's location. It is important to follow these guidelines to ensure the proper maintenance and longevity of the tiling system.

Failure to maintain your building can lead to early component failure, potentially resulting in:

- Unsafe and/or unhealthy conditions
- Costly repairs
- Unattractive appearance
- Loss of recourse to material, product, and installer warranties
- Litigation

**Maintenance work should only be carried out by suitably licensed and experienced contractors.**

## **Expansion Joints and Perimeter Joints**

These are crucial components for tiled area, preventing cracks and ensuring the structural integrity of the tiling system. Here are some key points regarding these joints:

1. **Location and Purpose:** Expansion joints are typically located where walls meet floors, internal corners, or at specific intervals externally within the floor. These joints are filled with a flexible material, such as silicone, to accommodate building movement without damaging the tiles.
2. **Inspection Frequency:** It is essential to inspect these joints monthly for any signs of damage, such as tears or openings in the silicone. Regular inspections help identify issues early and prevent further damage.
3. **Repairing Damaged Joints:** If any torn, lifted, or damaged silicone is found, the damaged section must be removed and replaced immediately. Failure to repair damaged joints can lead to moisture infiltration and subsequent damage to the tiling system.
4. **Consequences of Ignoring Damaged Joints:** Leaving damaged silicone joints untreated can allow moisture to penetrate below the tile surface, leading to various issues:
  - **Efflorescence:** A white, powdery deposit that forms on the surface of tiles due to moisture migration.
  - **Discoloration of Grout:** The grout may appear dark or light due to moisture exposure.
  - **Mold Growth:** Mold may develop on the surface of the grout, especially in poorly ventilated and sunlit areas.
  - **Waterproofing Warranty Void:** Large volumes of trapped water below the tiling system can void the waterproofing warranty.

Regular inspection and maintenance of expansion and perimeter joints are crucial to ensure the longevity and performance of your tiled surfaces.

### **Recommendations:**

1. **Engage a Professional:** We recommend engaging a qualified tradesperson to undertake the inspection and maintenance of expansion joints and perimeter joints. A professional will ensure that the work is done correctly and according to industry standards.
2. **Maintain a Maintenance Logbook:** Keep a detailed maintenance logbook where each area with expansion joints and perimeter joints is identified with photographs. Acknowledge monthly checks and note areas that have been removed and replaced. This documentation will help identify patterns of wear and movement in the building.
3. **Identify Patterns:** By identifying patterns in the maintenance logbook, you can accurately predict where the building is moving and which areas require regular attention. This proactive approach can help reduce maintenance costs by addressing smaller, manageable issues before they become major problems.
4. **Regular Maintenance:** Schedule regular maintenance based on the identified patterns. By addressing issues early, you can prevent more extensive damage and costly repairs in the future.
5. **Professional Advice:** If you are unsure how to monitor or maintain your building's expansion joints and perimeter joints, seek professional advice. A qualified professional can provide guidance on maintenance practices and help ensure the longevity of your tiling system.

## Visual inspection of Grout

Grout plays a crucial role in supporting tiles from vibration and movement. Regular inspection of grout walls and flooring is essential to maintain the integrity of the tiling system. Here are some key points regarding grout inspection:

1. **Signs of Damage:** Inspect grout regularly for signs of cracks or missing grout. Heavy loads, point loading, or blunt impacts can cause vibration, leading to loosened or cracked grout.
2. **Recording and Investigation:** If damage is observed, record the findings and take photographs of the area. Investigate if any furniture removalist has used hard-wheeled trolley jacks or similar equipment, as these can cause damage to the grout. Damaged grout should be removed and replaced promptly.
3. **Tile Impact Tolerance:** Tiles can withstand only 1-2 blunt impacts or heavy loads before becoming "drummy" (hollow-sounding) and potentially de-bonding from the substrate.
4. **Warranty Considerations:** When making a warranty claim for drummy tiles, it is important to note that damage due to blunt impacts or heavy loads is not covered under warranty. This should be communicated to the building manager or body corporate.

### Recommendations:

1. **Maintenance Logbook:** Keep a detailed maintenance logbook where each area with grout is identified. Acknowledge monthly checks and note areas that have been removed and replaced. This documentation will help identify patterns and determine if there are any underlying problems that need further investigation.
2. **Cleaning:** Use a pH-neutral cleaner specifically designed for grout cleaning. Prepare and follow the cleaning process according to the manufacturer's instructions. Avoid using abrasive cleaners or bleach, as they can damage the grout. If abrasive cleaners are used, please follow the instructions carefully.

## **Visual inspection of tile surface**

Drummy or loose tiles can compromise the integrity of the tiling system and should be identified and addressed promptly. Here are some guidelines for visually inspecting tiles:

1. **Avoid Tapping with Metal Objects:** Never tap tiles with a metal object, as this can create a hollow sound and potentially damage the tiles, voiding warranties.
2. **Proper Inspection Method:** The proper way to check for drummy or loose tiles is to use a lanyard with three or four keys attached. Lightly drag the keys across the surface of the tiles while listening for a hollow sound or a change in sound.
3. **Identifying Drummy or Loose Tiles:** If a hollow sound or change in sound is heard while dragging the keys across the tile surface, it may indicate that the tile is drummy or loose.
4. **Recording and Reporting:** If drummy or loose tiles are identified, record the findings and report them to the appropriate personnel for further inspection and action.
5. **Maintenance Logbook:** Keep a detailed maintenance logbook where each area with tiles is identified. Acknowledge monthly checks and note areas that have been identified as drummy or loose. This documentation will help track the condition of the tiles and ensure timely repairs.

By following these guidelines, you can help maintain the integrity of the tiling system and avoid potential issues with drummy or loose tiles.

**Note:** Tiles fixed to lounge rooms, kitchens, and some wet area floors may have a sound acoustic mat installed between the concrete substrate and the tile. The tiles may sound drummy or hollow when tapped. This is a normal characteristic of this installation method and should not be cause for concern.

### **Special note on Point Loading**

- **Avoid Point Loading:** Do not place heavy objects directly on the tiled flooring system, as this can cause damage to the tiles.
- **Use Proper Equipment:** When moving heavy objects such as fridges, use trolleys with pneumatic tires to distribute the load evenly and reduce the risk of damage to the tiles.
- **Use Plywood for Protection:** If pneumatic tires are not available, lay down a 15mm thick plywood sheet (1200x2400mm) on the tiled floor before moving heavy objects. This will help distribute the load evenly over the tiles and protect them from damage.

Please follow the table below for procedures.

## Troubleshoot Table

<b>Problem</b>	<b>Possible Causes</b>	<b>Action</b>
Grout is Cracked	Blunt impact Point loading	Check for drummy or loose tile If YES – replace tile If NO – remove & replace grout
Tile surface is cracked or broken	Blunt Impact Point Loading Building Vibration	Remove & Replace Tile
Loose or Drummy Tile	Blunt Impact Point Loading Building movement Building vibration	Check expansion joints for splitting or missing silicone Check for moisture build up below the tile surface
Silicone cracking or splitting	Building movement	Replace silicone which is affected
Silicone hardened	Joint is exposed to harsh weather (sunlight)	Replace silicone
Tile surface looks dirty	Latent cleaning solution left on surface, and surface is not neutralised	Follow cleaning process by, using 2 mops / buckets and applying lots of fresh water to neutralise as well as alternating acid / alkaline cleaners Tile surface may need to be strip cleaned
Tile grout joints are black	Latent cleaning solution left on surface, and surface is not neutralised	Follow cleaning process by, using 2 mops / buckets and applying lots of fresh water to neutralise as well as alternating acid / alkaline cleaners Tile surface may need to be strip cleaned
Tile grout joint looks patchy	Moisture is likely trapped below the tile surface	Look for cracked grout or missing silicone and close water entry point.
Efflorescence is leaching	Water has penetrated to the tiling system, which can cause degradation to the adhesive and can void warranties.	Stop water from penetrating the system. Look for the water entry point, which is typically missing silicone, cracked grout, pot plants must have air gap between tile and water tray.

### 3. WARRANTY INFORMATION

Scope/Item	Subcontractor	Warranty Period
Tile installation	K&H Constructions Pty Ltd t/a Grand Tiling Services	12 months

K&H Constructions Pty Ltd, trading as Grand Tiling Services, warrants the tile installation at 8 Jubilee Avenue, Broadbeach (Malo) project to be free from defects in workmanship for a period of 12 months from the date of completion.

This warranty covers the installation of tiles in accordance with industry standards and manufacturer specifications.

This warranty does not cover damage caused by improper use, accidents, natural disasters, or other external factors beyond our control.

Damage resulting from failure to maintain the tiled surfaces as per the Operation & Maintenance Manual provided is not covered under this warranty.

K&H Constructions Pty Ltd liability under this warranty is limited to the repair, replacement, or re-installation of the affected tiles and does not extend to any other damages, including but not limited to indirect or consequential damages.