



Lay paving

AHCLSC204

By the end of this topic, you should be able to:

- Plan and prepare for paving work
- Set out and prepare paving area
- Undertake ground preparation
- Lay bedding material
- Lay pavers to a given pattern
- Clean site and store tools and equipment

- To prepare for paving work, you should familiarise yourself with the following:
 - Task requirements
 - Refer to documentation to determine required materials, tolerances, tools and equipment (e.g. plans and specifications and lists/instructions provided by your supervisor)
 - Apply active listening when receiving instructions
 - Clarify any unclear instructions with your supervisor
 - Apply calculations
 - Area (m^2): $L \times W$
 - Volume (m^3): $L \times W \times D$

- To prepare for paving work, you should familiarise yourself with the following:
 - Workplace information
 - Safety documentation:
 - Job Safety Analysis (JSA) for an analysis of potential hazards completing the task on site
 - Safe Work Method Statement (SWMS): Outlines how activities are to be carried out safely
 - Safety Data Sheet (SDS): Explains how to safely handle, use and dispose of hazardous materials
 - Site safety plans: Explains emergency procedures
 - Environmental plans to determine appropriate practices (e.g. clean up, noise control)

- To prepare for paving work, you should familiarise yourself with the following:
 - Workplace requirements
 - Laws applicable to your workplace, such as:
 - Acts [e.g. *Work Health and Safety Act 2011 (Qld)*]
 - Regulations [e.g. *Work Health and Safety Regulation 2011 (Qld)*]
 - Industry standards for:
 - Bedding depth, level and falls
 - Shape, depth and dimensions of sub base level
 - Finished level of base material

- To prepare for paving work, you should familiarise yourself with the following:
 - **Work area**
 - Identify any WHS hazards and assess risks (e.g. unauthorised persons in work area)
 - Report hazards to your supervisor within a timely fashion – especially emergency situations

Workplace risk assessment

- Risk is measured in terms of the seriousness of the possible **consequences** of the hazard and the **likelihood** that those consequences will occur, as in the matrix shown below:

Likelihood

- 1: Very Likely
- 2: Likely
- 3: Possible
- 4: Unlikely
- 5: Very Unlikely

Consequences

- A: Death or Permanent Disability
- B: Serious Injury
- C: Lost Time Injury
- D: Casualty Treatment
- E: First Aid

Matrix	A	B	C	D	E
1	E	E	H	H	M
2	E	H	H	M	M
3	H	H	M	M	L
4	H	M	M	L	L
5	M	M	L	L	L

- To prepare for paving work, you should familiarise yourself with the following:
 - Available PPE, tools and equipment
 - PPE may include: Gloves, face mask, goggles, long pants, sleeved clothing, wide brimmed hat, work boots
 - Safety equipment may include:
 - Barricades to reduce risks to personnel on site (e.g. marking areas not to be entered)
 - Signage to convey safety messages – placed visibly in the relevant work area, at eye height
 - Tools and equipment may include: Brooms, rakes, shovels, wheelbarrows, compactor, concreting equipment
 - Ensure they are appropriately selected, prepared and used for the task, following manufacturer recommendations and supervisor's instructions

- The materials to be used for paving work will differ depending on the work to be completed.
- However, some common materials include:
 - Sub base (e.g. crusher dust, decomposed granite or coarse sand)
 - Bedding materials (e.g. adhesives, bedding sand, cement mortar or mortar with adhesive additive)
 - Bricks and pavers (e.g. clay or concrete)
 - Slate (random and regular)
 - Stone segments
 - Waterproofing materials

- Follow the steps outlined below when laying pavers:
 - Undertake calculations
 - Area to be paved
 - Materials required
 - Prepare paving area and ground
 - Mark out according to plans and check with supervisor
 - Peg the reduced levels of the proposed area from the survey benchmark using the rise and fall method in a closed level run
 - Excavate area to sub base level (observing industry standards)
 - Place, compact and trim the sub base (matching contour chosen for final paving, within a tolerance of +0 to -20mm)
 - Be mindful of the effects of soil disturbance (e.g. disturbance of tree roots)

- Follow the steps outlined below when laying pavers:
 - Install drainage
 - If necessary, install drainage
 - Note the effects of altering water flow when installing drainage
 - Be mindful of water pooling in new areas, which may affect nearby plants and structures
 - Ensure that slopes are directed away from buildings
 - Consider infiltration water – water entering the bedding sand must not pond
 - Consider subsurface flow – water from beyond the pavement and flowing under it
 - Consider surface runoff – that water falls directly onto the pavement and flows off the surface

- Follow the steps outlined below when laying pavers:
 - Spread and compact the bedding material
 - Spread bedding material loosely over the area
 - Use screed rails to ensure the bedding course is maintained
 - Lay the pavers to a given pattern
 - Set out pavers according to the required dimensions and pattern (e.g. Herringbone, Basketweave, Stretcher and Tracery)
 - Use grid string lines to ensure patterns and straight lines are attained
 - When laying pavers in the chosen pattern, start from the straightest convenient edge

- Follow the steps outlined below when laying pavers:
 - Cut the pavers, as required
 - Appropriate tools for cutting include: concrete saw, paving splitter or bolster chisel
 - Lock the pavers into place to prevent movement
 - You may use permanent edge constraints, such as concrete, timber or steel constraints

- Follow the steps outlined below when laying pavers:
 - Fill the joints
 - Ensure that a nominal joint has been maintained to allow sand penetration
 - Spread sand evenly
 - Compact to the established finish level
 - Avoid using a plate compactor on large paving or flagstones as it could cause them to break
 - Sweep surface to remove debris

- After completing paving work, you are required to complete the following practices:
 - Clean up the work area
 - Record and/or report your work outcomes to your supervisor
 - Shut down, maintain, clean and store plant, tools and equipment
 - Follow manufacturer's specifications and supervisor's instructions
 - Report faults that are discovered in logbook and/or site records

- After completing paving work, you are required to complete the following practices:
 - **Dispose of materials that cannot be reused or recycled**
 - Separate soil and waste material (e.g. organic, inorganic and recyclable piles)
 - Ensure that you follow the enterprise guidelines (e.g. JSA and SWMS for handling and disposing of waste)
 - Follow Safety Data Sheets (SDS) and environmental plans to ensure environmentally safe practices