

Piling and associated drilling - JSA - B

en-SG · Technical failure review · v1.0 · 2026-10-14 · Sources: article section 9

Site: | Item ID: | Work area:

| Approval | Work supervisor | Technical reviewer | Release / handover authority |
|----------|-----------------|--------------------|------------------------------|
|          |                 |                    |                              |

1. Job details and team signatures

|                 |  |                 |  |          |  |            |  |
|-----------------|--|-----------------|--|----------|--|------------|--|
| Date / time     |  | Location / area |  | Assessor |  | Supervisor |  |
| Team signatures |  |                 |  |          |  |            |  |

2. Conditions and hold points

| Stage                   | Time | Location / area | Environment / readings | Item / condition | Controls | Plant / tools | Approval / signature |
|-------------------------|------|-----------------|------------------------|------------------|----------|---------------|----------------------|
| HP-0 Start              |      |                 |                        |                  |          |               |                      |
| HP-1 Plan and locate    |      |                 |                        |                  |          |               |                      |
| HP-2 Release platform   |      |                 |                        |                  |          |               |                      |
| HP-3 Assemble and test  |      |                 |                        |                  |          |               |                      |
| HP-4 Park and hand over |      |                 |                        |                  |          |               |                      |

Complete after actual checks. Recheck after changes, defects or shift handover.

3. JSA risk assessment

| Job stage                 | Hazards and effects                                                                | Failure factors                                                                                          | Technical and procedural controls                                                                                   | Site verification                                                                             | P | S | R | A |
|---------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---|---|---|---|
| 1. Release platform       | 1. Track punch-through<br>2. Edge collapse<br>3. Unreviewed travel loading         | 1. Soft patch beneath mats<br>2. Drainage or edge altered<br>3. Mat layout changed without review        | 1. Inspect travel and setup areas<br>2. Reassess after ground changes<br>3. Control platform repairs and edges      | 1. Platform condition<br>2. Drainage and boundaries<br>3. Repair record and release           |   |   |   |   |
| 2. Assemble and test      | 1. Hammer descent<br>2. Stored-energy release<br>3. Missing assembly retainer      | 1. Hoist or brake defect<br>2. Unsupported raised parts<br>3. Unsafe access for connection work          | 1. Test guards and safety functions<br>2. Block and isolate for access<br>3. Provide protected mast access          | 1. Brake and limit checks<br>2. Energy isolation<br>3. Fall protection and rescue             |   |   |   |   |
| 3. Drill and clear spoil  | 1. Flying spoil<br>2. Fall into bore<br>3. Unsafe spoil clearance                  | 1. Unsafe spin-off method<br>2. Open bore left unguarded<br>3. Emergency stop mistaken for isolation     | 1. Use specified spoil removal<br>2. Guard unattended bores<br>3. Isolate before tool changes                       | 1. Spoil discharge zone<br>2. Bore protection<br>3. Residual motion controlled                |   |   |   |   |
| 4. Pump concrete or grout | 1. Pressure injection<br>2. Cement burns<br>3. Trapped blockage pressure           | 1. Coupling opened under pressure<br>2. Blockage cleared unsafely<br>3. Hands used to find pressure leak | 1. Isolate and verify zero pressure<br>2. Follow pump clearing procedure<br>3. Keep hands away from suspected leaks | 1. Pressure limits<br>2. Wash and spill provisions<br>3. Leak isolation procedure             |   |   |   |   |
| 5. Pitch and drive piles  | 1. Crushing at leader<br>2. Flying fragments and noise<br>3. Uncontrolled rig slew | 1. Pile unstable before release<br>2. Damaged cap or cushion<br>3. Operator leaves operating rig         | 1. Secure pile before unhooking<br>2. Monitor driving and isolate zone<br>3. Maintain attendance and swing control  | 1. Hammer blocks and stops<br>2. Alignment and vibration<br>3. Operator and swing-brake state |   |   |   |   |
| 6. Crop and handle heads  | 1. Silica and fragments<br>2. Crushing by cutter<br>3. Sharp rebar injury          | 1. Driving continues nearby<br>2. People enter cropper envelope<br>3. Unsupported debris removal         | 1. Suspend conflicting driving<br>2. Control dust and debris<br>3. Plan reinforcement and sharp-end protection      | 1. Drive stop confirmation<br>2. Cutter condition<br>3. Rebar and fragment controls           |   |   |   |   |

P/S/R/A: Complete only after actual site assessment using the site risk method.

4. Pre-work checklist

|                                                    |                                                   |                                                      |
|----------------------------------------------------|---------------------------------------------------|------------------------------------------------------|
| <input type="checkbox"/> Platform condition        | <input type="checkbox"/> Brake and limit checks   | <input type="checkbox"/> Spoil discharge zone        |
| <input type="checkbox"/> Pressure limits           | <input type="checkbox"/> Hammer blocks and stops  | <input type="checkbox"/> Drive stop confirmation     |
| <input type="checkbox"/> Repair record and release | <input type="checkbox"/> Leak isolation procedure | <input type="checkbox"/> Rebar and fragment controls |