Dowhigh

**Risk Assessment**

**and**

**Method Statement**

**Machine laying Asphalt, various locations**

Document author: Tony Davies

Date: 14/11/2024

| Date | Reviewed by | Next review date | Amendments |
|---|---|---|---|
| 14/11/2024 | T. Davies | 14/11/2025 | |
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**Scope of works**

Planing of existing carriage way and removal of chippings.
Preparation of ground for new surfacing materials
Adjustment/ replacement of any associated ironworks
Adjustment/ replacement of any Kerb lines, edgings and other Precast concrete items
Laying and compaction of base and binder
Adding a Tack layer between applications
Laying of new surface course

**Plant and equipment**

| | |
|---|---|
| **Plainer** | **Pneumatic breaker (hand held and machine mounted)** |
| **Insulated Asphalt wagon** | **Roller Breaker** |
| **Grab wagon & Tipper** | **Roller (various size)** |
| **JCB** | **Compaction plate (Whacker)** |
| **Excavator** | **300 mm Cut off saw (Stihl saw)** |
| **Asphalt Paver** | |

**Associated Risks**

| | | | |
|---|---|---|---|
| **1** | Working in live highways | **8** | Members of the public |
| **2** | Manual Handling | **9** | Violence and aggression |
| **3** | Working with Hot Bituminous materials | **10** | Noise |
| **4** | Plant and machinery | **11** | HAVS |
| **5** | Dust | **12** | Slips, trips & falls |
| **6** | Live services | **13** | Falls from hight |
| **7** | | **14** | |

## Safe Place

**Work will not commence until a safe workspace can be established. This will include: - (where necessary but not limited to)**

**Barriers erected and clipped together encompassing the work area,** removing the likelihood of pedestrians entering the work area.

**Implementation of Traffic management (if required)**. Taking into consideration – operative and pedestrian safety.

**All operatives to wear full appropriate PPE** Class 3 PPE, HI-VIS trousers, long sleeve HI-VIS vest compliant with **EN 20471:2013**

## Safe Persons

All operatives to be trained and competent at every task they undertake.

Dowhigh employees are fully trained, and hold valid CSCS and NRSWA cards

Plant and equipment only to be used by competent and qualified personnel, Qualified by CPCS, NPORS or equivalent.

## Safe working Practice

Locate the proposed work area and establish a safe working area and establish road closures and Traffic management as required.
Erect barriers the length of the proposed work area, preventing pedestrians walking / crossing the work area.
**Planing and removal of road surface.**
Planing machine is to be operated by a trained and competent operator('s).
Planings are to be ejected from the planer directly into a tipper wagon, the speed of which is dictated by the planer operator. Wagon divers (if unfamiliar) should have a full explanation of the duties required of them prior to commencement.
Any cutting to be done with 300mm cut off saw (Stihl saw or similar) or floor saw is to have water fed dust suppression.
Pouring water directly onto the saw blade by another operative is prohibited. **additional PPE required, FFP3 Dust mask or FFP3 filtered breathing apparatus to be worn, hearing protection with a rating of 30db or greater and high impact safety eyewear**
Where it is necessary to use pneumatic or electro-mechanical breaker to break up and loosen existing ground for removal such as around ironworks or similar. Safe manual handling techniques are to be adopted as well as additional PPE of safety glasses and heating defence.
**If any unchartered underground services are found, then work is to stop immediately and a supervisor is to be informed.**
**Machine laying Asphalt.**
Only trained and competent operatives are to operate Paving machines.
Asphalt is to be tipped directly into the Paving machine from insulated asphalt wagons, this is to be under the clear control of the Paver operator('s).
Burns from Hot Materials: Hot asphalt is typically heated to temperatures between 150-200°C (300-400°F). Contact with hot asphalt can cause severe burns to the skin. Full PPE is to be worn. (mitigations can be put in place during hot summer months at the discretion of site supervisor however this must be confirmed by Dowhigh Safety Department)
Machinery-Related Injuries: Operating heavy machinery poses risks of accidents, including crush injuries or entanglement with moving parts no operatives are to work near to the moving elements of the Paving machine such as to the front or rear when manoeuvring, in between paver and asphalt wagon when readying to receive asphalt or near to the auger of the paving machine.
**Hand Laying Bituminous material-**
Hot Asphalt materials to be loaded directly onto the vehicle by mechanical means either at the yard or at the asphalt dispatch plant, this is to be correctly covered to conserve heat.
Asphalt is to be laid in separate layers compacting each layer separately. i.e. Base, Binder and surface course with a Tack coat added wherever necessary as per HAUC(UK) guidelines.
**Adjusting or installing replacement ironwork-**
Dig out existing encasing materials, using safe digging techniques.
Remove (if appropriate) existing Ironwork using safe lifting techniques using mechanical means where necessary.
Install new bedding materials ready to receive new ironworks.
Install new ironworks and tamp down to the desired level.

## Emergency Procedures

**First Aid**

- Ensure the first aid kit on the vehicle is available and fully stocked.
- If there are no first aiders available ask your supervisor for the nearest one available.
- Know where your nearest A&E hospital is and how to get there. **In an emergency call on your mobile phone 999**

**Fire**

Evacuate work area and contact the Fire Service on 999, giving details of location. Inform Site supervisor and Dowhigh Safety team

**Environmental**

In the event of a minor spill/incident a small spill kit should be used to contain the spill, any contaminated material and the used contents of the spill kit should be disposed of correctly. Inform Dowhigh safety team to ensure spill kit replenishment.

**Damaged utilities**

- STOP WORKS IMMEDIATLY
- Use temporary guarding or barriers to exclude people from the area and prevent unauthorised access.

Report damages to the service provider as soon as practicable.

**Suspected Gas leak**

- Warn others (including people in adjacent buildings)
- Telephone Cadent Gas on 0800 111 999

Ban smoking, naked flames and other sources of ignition within at least 5m of the leak.

**Suspected Damage to Electric cable (HV & LV)**

- Treat all cables as live.
- **Never assume that because a cable appears to be off it will stay off – cables can be re-energised remotely at any time, day or night**
- Do not go near damaged cables or other damaged equipment until the electricity company's authorised representative confirms it is safe.

Telephone 0800 001 5400

**Working with Water (Sewer, rising mains or drainage)**

- If the service is damaged under pressure, it could release a jet of water causing injury. Other risks include contamination or damage to surrounding area caused by flooding and loss of essential services to those who need them.
- If a water pipe or its wrapping is damaged, contact the asset owner immediately. Do not attempt to repair the damage yourself unless trained to do so.
- The main being exposed has been isolated but must be treated as live; any damage caused must be reported to United Utilities immediately.

Should the main release water sandbags must be used to divert the flow away from surrounding properties etc.

**Hazard** is anything that may cause harm, e.g. working at height on a ladder.

**Risk** is the chance that someone or something could be harmed by the hazard, measured by combining (multiplying) the likelihood of it happening with its impact (severity). For example, there may be a 'possible' likelihood that someone that is not competent could fall from a ladder (3 rating – see right) combined with a 'moderate' impact of multiple injuries (2 rating), which creates a score of 6 (low risk). However, the risk should be reduced to as low as reasonably practicable (ALARP) through the implementation of control measures, such as ensuring that only trained people climb the ladder.

**Dynamic Risk Assessment** compliments generic and specific risk assessment. Regardless of completing this AF 5010, it is beholden on the person creating the risk to continue to monitor the activity and the control measures. Any changes to the activity (including the environmental conditions) or the control measures, must be addressed via the mechanism of a dynamic risk assessment such that risks remain ALARP.

Note however that persons undergoing training cannot be deemed competent until their capability is properly assessed

| Likelihood (L) | Multiplied by (X) | Impact (I) | Equals |
|---|---|---|---|
| 1 – Remote / Rare<br>2 – Unlikely<br>3 – Possible<br>4 – Probable<br>5 – Highly Probable (Almost Certain) | | 1 – Minor<br>2 – Moderate<br>3 – Major<br>4 – Severe<br>5 – Critical<br>*Note: impact number is unlikely to change with control measures* | |

**Risk Score Calculation**

| Impact \ Likelihood | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 5 | 5 | 10 | 15 | 20 | 25 |
| 4 | 4 | 8 | 12 | 16 | 20 |
| 3 | 3 | 6 | 9 | 12 | 15 |
| 2 | 2 | 4 | 6 | 8 | 10 |
| 1 | 1 | 2 | 3 | 4 | 5 |

**5 Step Process** → Step 1 – Identify the hazards → Step 2 – Decide who might be harmed and how → Step 3 – Evaluate the risks and decide on precautions (control measures) → Step 4 – Record your significant findings and include instructions as necessary. Implement control measures → Step 5 – Review your risk assessment and update as necessary

| | | | |
|---|---|---|---|
| **Company** | Dowhigh | **Assessor** | Tony Davies |
| **Activity** | Machine laying asphalt | **Assessor's signature:** | T.Davies |
| **Generic or Specific Risk Assessment:** | Specific | **Assessment Date:** | 12/11/2024 |

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ref** | **Activity / element** | **Hazards identified** | **Who or what might be harmed and how** | **Existing control measures** | **Assessment with existing controls** | | | **Is residual risk acceptable in the context of risk appetite for the activity? (Yes / No)** | **Reasonable additional controls that can be implemented to reduce risk to ALARP** | **Reassessment with additional control measures** | | |
| | | | | | **L (1 to 5)** | **I (1 to 5)** | **Score (L x I)** | | | **L (1 to 5)** | **I (1 to 5)** | **Score (L x I)** |
| 1 | Working near a residential area | Altercations caused from disruption and ongoing works | Members of the public/local residents | Dowhigh will provide adequate signage and contact numbers to alert residents and members of the public to the ongoing works. This will be erected in advance of works commencing on site.<br>All work areas must be adequately cordoned off with barriers and clear signage provided to show alternative routes. | 3 | 1 | 3 | yes | Plant and equipment will not be left running and music will not be played on site as per the contractual agreements | 2 | 1 | 2 |

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | | | | | **L (1 to 5)** | **I (1 to 5)** | **Score (L x I)** | | | **L (1 to 5)** | **I (1 to 5)** | **Score (L x I)** |
| | | | | Employees will not engage in confrontational conversations with residents and will vacate the area if they feel threatened at any point.<br>Foul and abusive language will not be permitted on site and employees will be mindful of the fact they are working within a residential area. | | | | | | | | |
| 2 | Burns from Hot Materials: | Hot asphalt is typically heated to temperatures between 150-200°C | Dowhigh operatives, subcontractors and members of the public | PPE issued is heat resistant and no bare skin should be exposed to hot materials. | 3 | 1 | 3 | yes | | 3 | 1 | 3 |
| 3 | Working in and around undergroun d services | Inadequate information and instruction or unchartered services | Dowhigh operatives, subcontractors and members of the public | All gangs carry a CAT scanner which should be in date and calibrated.<br>Should any excavations be required to be deeper than –<br>300mm on private land<br>400mm on footpaths or verges<br>700mm in roadways<br>A suite of utility drawings should be made available for the work area.<br>Teams dig cautiously looking for evidence of unchartered services. | 3 | 4 | 12 | yes | Toolbox talks by supervisors to reenforce the need to be vigilant when working around utilities.<br>Gangs reminded that if uncharted services are found work is to cease immediately, their supervisor/ manager is to be informed. | 2 | 4 | 8 |
| 4 | Works on the highway | Traffic management, vehicle/ pedestrian segregation | Operatives/ pedestrians struck by moving plant/ vehicles | Traffic management will be erected in line with the new roads and street works act.<br>Traffic management and set up will always be monitored.<br>Those working with or erecting traffic management must be NRSWA certified (supervisor/operative) | 3 | 2 | 6 | yes | Pedestrian routes must be monitored during construction works for damage causing potential trip hazards.<br>Loose or raised pieces must be removed, and voids temporarily repaired with 'cut back' to ensure the pedestrian route is level.<br>Designated person to check periodically | 2 | 2 | 4 |

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | | | | | **L (1 to 5)** | **I (1 to 5)** | **Score (L x I)** | | | **L (1 to 5)** | **I (1 to 5)** | **Score (L x I)** |
| | | | | Only authorised persons will be permitted to enter the area.<br>All operatives will wear class 3 hi vis.<br>If pedestrians must be diverted off the carriageway, ensure that a safe passage route has been constructed using pedestrian diversion signs and rigid barriers to ensure that pedestrians are segregated from live traffic. | | | | | that rigid barriers and signage is still in place. | | | |
| 5 | Site Cleanliness | Slips, Trips and fall due to poor house keeping | Dowhigh operatives, sub-contractors and members of the public. | Housekeeping will always be maintained throughout the duration of the works<br>Spoil and materials will be stored in a designated area until loading onto the vehicle for disposal at Hawthorn depot. | 2 | 2 | 4 | yes | | 2 | 2 | 4 |
| 6 | Manual handling | Muscular injuries caused by lifting heavy loads or poor lifting techniques | Dowhigh operatives and subcontractors | Operatives will ensure safe manual handling techniques are adopted at all times; operatives will not attempt to lift a load that is beyond their capability.<br>Where possible loads will be moved by mechanical means only<br>Heavy loads will be lifted mechanically where possible. | 2 | 2 | 4 | yes | | 2 | 2 | 4 |
| 7 | PPE | Damaged or incorrect PPE | Dowhigh operatives and subcontractors | The following PPE is to be worn at all times as a minimum-<br>Hard Hat<br>Class 3 trousers and top (long sleeve)<br>Task specific PPE is to be used where necessary such as-<br>Cut off saw – Dust mask (FFP3), high impact eye protection, ear defence | 4 | 2 | 8 | yes | Supervisors to monitor and enforce PPE use on their site, Managers to monitor and enforce. | 2 | 2 | 4 |
| 8 | Use of Plant<br><br>Use of Plant | Plant striking operatives or members of the public | Dowhigh operatives, subcontractors and members of the public | Only qualified and competent operators to use plant on site, site supervisors to enforce.<br>Barriers erected and clipped together forming a clear work area, keeping members of the public out. | 2 | 4 | 8 | yes | Qualifications kept on file in office and checked periodically to ensued expiry dates. No plant to operate without a banksman. | 1 | 3 | 3 |

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | | | | | **L (1 to 5)** | **I (1 to 5)** | **Score (L x I)** | | | **L (1 to 5)** | **I (1 to 5)** | **Score (L x I)** |
| 9 | | Poorly maintained plant leaking fuel, oil or hydraulic oil. | Dowhigh operatives, subcontractors and environment. | All plant to be maintained in line with manufacturers guidelines. On site operatives are to carry out daily pre use checks and report any faults/ leaks/ damages. | 2 | 3 | 6 | yes | Plant maintenance schedule to be maintained to ensure a high standard, reducing the possibility of breakdowns. Spill kits to be carried by all vehicles. | 1 | 3 | 3 |
| 10 | Working at night | Working in low light conditions at night | Dowhigh operatives, Subcontractors and members of the public | Night workers are to ensure Hi vis class 3 PPE is worn<br>All plant and vehicles to ensure lighting works correctly including flashing beacons. | 3 | 3 | 9 | yes | Additional lighting will be adopted where streetlighting isn't available. | 2 | 3 | 6 |
| 11 | Environmental | Operatives using diesel to ensure asphalt doesn't stick to tools and equipment | Dowhigh operatives, sub-contractors, members of the public and environment | The use of Diesel as a none stick or asphalt removal chemical is strictly prohibited | 4 | 1 | 4 | no | T99 or similar release agents to be used as opposed to diesel. | 3 | 1 | 3 |
| 12 | Crush or entrapment in machinery/ plant | Operatives unfamiliar with plant coming into contact with moving plant or equipment | Dowhigh operatives, Subcontractors and members of the public | No untrained or vulnerable operatives/ members of the public to be near to plant or machinery. | 3 | 4 | 12 | no | Barriers erected to negate members of public walking into work area.<br>Training records monitored to ensure compliance | 2 | 4 | 8 |

| **Authorised by** | **Position** | **Date** | **Signature[1]** |
|---|---|---|---|
| | | | |

1. Can be signed electronically.

**Risk = Likelihood x Impact**

| Likelihood | | Definition |
|---|---|---|
| 5 | **Highly Probable (Almost Certain)** | Is expected to occur in most circumstances |
| 4 | **Probable** | Will probably occur at some time, or in most circumstances |
| 3 | **Possible** | Fairly likely to occur at some time, or some circumstances |
| 2 | **Unlikely** | Is unlikely to occur, but could occur at sometime |
| 1 | **Remote / Rare** | May only occur in exceptional circumstances |
| **Impact** | | **Definition (Health Safety and Environment)** |
| 5 | **Critical** | • Multiple fatalities or permanent, life changing injuries.<br>• Permanent loss or damage beyond remediation of an important and publicly high-profile natural resource, area or species.<br>• Multiple incidents causing a major environmental impact. |
| 4 | **Severe** | • A single death or multiple life-threatening injuries.<br>• Severe damage over a wide area and/or on a prolonged basis to a natural resource, including controlled waters, or geography requiring multi-year remediation.<br>• Single incident causing a major environmental effect or multiple incidents causing significant effect. |
| 3 | **Major** | • Single life changing injury or multiple injuries which have a short-term impact on normal way of or quality of life.<br>• Moderate damage to an extended area and/or area with moderate environmental sensitivity (scarce/ valuable) requiring months of remediation.<br>• Single incident causing significant environmental impact. |
| 2 | **Moderate** | • Multiple injuries requiring first aid.<br>• Moderate damage to an area, and that can be remedied internally.<br>• Multiple incidents causing minor environmental effect. |
| 1 | **Minor** | • An Injury requiring first aid<br>• Limited short-term damage to an area of low environmental significance/ sensitivity<br>• Incidents causing minor environmental impacts |

Review the generic risk assessment and update if necessary - All generic risk assessments should be regularly reviewed at a frequency proportional to the risk prior to any controls being proposed. In practice generic risk assessments should be reviewed at least annually, or more frequently:

- where required by local instructions/procedures.
- if the safe execution of the activity relies on stringent supervision and/or adherence to a safe system of work;
- if there is reason to doubt the effectiveness of the assessment.
- following an accident or near miss.
- following significant changes to the task, process, procedure, equipment, personnel or management.
- following the introduction of more vulnerable personnel (e.g. persons under 18 or pregnant persons).

| Risk Management | |
|---|---|
| **Risk Rating** | **How Risk should be managed** |
| **1 – 3 (Very Low)** | **Review periodically** to ensure conditions have not changed and working within ALARP and risk assessment. |
| **4 – 9 (Low)** | |
| **10 – 14 (Medium)** | **Good risk mitigations** to ensure that the impact remains ALARP and tolerable. Re-assess frequently to ensure conditions remain the same. |
| **15 – 19 (Medium to High)** | **Requires active management** – review of desired outcome with additional resources or change to output requirements. |
| **20 (High)** | **Consider different means** may suffice together with limited risk mitigations to achieve risk ALARP and tolerable. |
| **25 (Very High)** | **No works to be undertaken** |

**Please sign to acknowledge understanding of the contents of these RAMS**

| Ser | Name | Date | Sign |
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