

Risk Assessment Number	WRA-ENG-TR-04
Name of Assessor	M Halloran
Date of assessment	13 th November 2022 No Change 02/12/2025
Site or Area being Assessed:	Mainline/Depot
Activity:	Engineering Vehicles (EV) & Road Rail Vehicles (RRV)
Review Date	01 st December 2026

Description of Activity *(Key tasks that support the activity)*

Engineering Vehicles (EV) & Road Rail Vehicles (RRV)

People Involved in the Activity *(Affected parties)*

KAD Employees

Risk Assessment Consultation *(Stakeholders and interested parties)*

Line Management

HSQE Employees

KAD Employees

RMT

References and Associated Documentation *(Additional Documentation to be read in conjunction with this Risk Assessment)*

WRA-ENG-GEN-07 Working in an Isolated Possession

WRA-HSQE-GEN-04 COSHH

WRA-ENG-GEN-03 Working at Height

WRA-ENG-TR-02 Electrical Safety Track General Activities

Working on the Railway Manual (WORM)

SOP PC 3.08 Engineering Vehicles –Working on the Railway Manual

SOP D 1.03 General Rules for Depot Operations

SOP-M3.07 Movement of Engineering Vehicles

Implementation Plan *(Insert actions agreed on how the additional controls identified in the risk assessment are to be implemented)*

Ref.	Priority	Responsibility	Due Date	Status

Identify and list hazards	Identify and list Who are at risk and how harm could occur	Control Measures	Initial assessment			Is the risk reduced as low as reasonable possible? If not, then state what additional measures are to be considered	Residual risk		
			L'hood	Severity	Risk Rating		L'hood	Severity	Risk Rating
Cab Access/Egress	Injuries to employees resulting from falling/slipping while access/egress from drivers cab which could result in sprains and strains, severe bruising, cuts and abrasions	Good lighting available. Handrails & door chains fitted. All staff trained to maintain 3-point contact whilst accessing/egressing cab Steps have anti-slip tape applied. Defined walkways and access points. Staff trained to access/egress cab in a safe manner. In conjunction with WRA-ENG-GEN-03 Working at Height	2	2	4				
Battery Charging	Inappropriate charging regime or battery maintenance regimes resulting in employee injuries which could consist of burns, eye injuries or fire.	Trained and competent EV operators EV properly maintained. Cables stored on Cable Rack. Adequate signage & barriers in charging areas Battery EV's are recharged in designated, well ventilated, secure areas. Ignition sources controlled. Battery maintenance carried out only by competent, authorised staff. Safety Data Sheets and COSHH assessments provided to staff responsible for battery maintenance. Suitable eye, hand PPE is also provided. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. No Smoking Policy in place Fire extinguishers available in the event of a fire.	1	3	3				
Pre-Use Checks	Equipment failure including safety critical systems such as brakes / lights etc. Equipment failure including controls and hydraulic systems	Trained and competent EV and Hi-Ab operators. Emergency stop buttons fitted both sides of Vehicle. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. Pre-use checks to be carried out before use as per the Engineering Vehicle Check List, In compliance with SOP-M3.07 Movement of Engineering Vehicles. Vehicle defect process in place using Metro Engineering Vehicle Operator assist in all aspects of pre-use checks including, checking lighting, securing loads, removing wheel scotches, applying/releasing wagon brakes and any other ancillary tasks.	1	1	1				

Coupling & Marshalling	Employees / visitors/ contractors being trapped / crushed between 2 EVs / wagons when coupling / uncoupling, compressed air line failure which could result in blast injuries from equipment explosion or damage to internal organs if air is introduced into the body, crushing or fatalities	Compliance with SOP-M3.07 Movement of Engineering Vehicles Trained and competent operators Engineering vehicles are maintained only by competent, authorised persons from rolling stock. Pedestrians are prohibited from entering operating area Suitably experienced Engineering Vehicle Assistant will be used. Audible/visual warning alarms fitted All staff trackside wearing full Hi-Visibility clothing (Tops and trousers), safety footwear, hardhats, safety glasses and gloves Danger areas are highlighted on training and familiarisation Condition and connections of airlines checked regularly and before use. Vehicle defect process in place using Metro PPE worn at all times Safety glasses BS EN 166 1B349 and gloves System inspected and serviced every year. Hand signalling Engineering Vehicle Operator, under instruction from Engineering Vehicle Pilot, on un-signalled depot roads in accordance with pre-use checks, coupling duties & shed movements, including through doorways	1	3	3			
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Vehicles – Collision / derailment	Collision between 2 EVs or with other trackside plant and equipment resulting in EV operators being thrown across cab or out of EV with high impact injuries	Trained and competent operators. Compliance with task instruction. Over speed protection fitted Engineering vehicle not to move until confirmation of point setting is confirmed. Points not set correctly Engineering vehicle not to move Compliance with SOP D. 2.13 Maximum speed 20 kph Trained and competent EV operators EV approved for use on DLR Compliance with WORM procedures Trained and competent EV operators EV properly maintained	1	2	2			
Vehicle running away not under control	Runaway EV due to brake failure or other cause resulting in collision or EV operators being thrown across cab or out of EV with high impact injuries	Vigilance alarm fitted to be depressed every 20 secs or emergency brakes will apply. Over-speed protection installed. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. Parking brakes and service brakes to be applied. Vehicle isolated when left unattended and keys removed. Scotch blocks to be used on gradients greater than 2%. Restriction applies as per SOP-M3.07 Movement of Engineering Vehicles Reduced speeds across crossing points and gradients/curvatures	1	1	1			

Use of EV mounted Hiab Crane (Battery Loco and CT30) or RRV to lift and manoeuvre materials/equipment	Overturning due to overloading / gradients or canted track / shock loading or live loads - Machinery / equipment striking personnel / Loco / infrastructure or trackside equipment / Machinery / equipment striking overhead cable equipment / Dropping of load due to failure of Hi-Ab Crane or failure of lifting straps / chains	Hi-Ab approved for use on DLR Trained and competent EVO's Hi-Ab operators, and slinger/signallers. 5% tilt protection installed. Emergency stop buttons installed Slew protection installed Live loads to be supported and controlled Lifting plans available Pre-use checks to be carried out before use. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. Loler inspections carried out Cab protection systems installed Hi-Ab to be unfolded outside of confined area and travel to site at low speed with distance travelled kept to a minimum. Hi-Ab to be kept within EV kinematic envelope. Hi-Ab to maintain minimum 10ft distance from overhead equipment and where possible work from the furthest adjacent road. Travel to be only at low speed with distance travelled kept to an absolute minimum Loads to be kept as close to the EVs centre of gravity as possible EVO, Pilot-man, Hi-Ab Operator and Slinger signaller & PICOW to always maintain all around observations Lifting chains/straps properly maintained and inspected before use	2	3	6			
Loading / Unloading Wagons	Loss of load from height	Trained and competent operators. Loads to be properly secured once loaded with straps and chains. Restrictions applied as per SOP-M3.07 Movement of Engineering Vehicles Trained and competent operators. EVO, Pilot-man, Hi-Ab Operator and Slinger signaller & PICOW to always maintain all around observations Lifting plans available	1	3	3			

CONSIDER THE HIERARCHY OF CONTROLS: (Elimination, Substitution, Engineering Controls, Signage / Administrative Controls / Personal Protective Equipment).			
	Prepared By:	Approved By:	Approved By:
Signature:	<i>Darren Cockle</i>	<i>Tom Mann</i>	<i>Ray McGinn</i>
Name (Print):	Darren Cockle	Tom Mann	Ray McGinn
Job Title:	Senior HSQE Coach Engineering	Track Manager	Night shift Track Manager
Date:	23/09/2024	13 th November 2022	13 th November 2022

			Likelihood				
			Certain	Highly Likely	Probable	Reasonable	Highly Unlikely
			5	4	3	2	1
Consequence	Catastrophic	5	25	20	15	10	5
	Hazardous / Substantial	4	20	16	12	8	4
	Major	3	15	12	9	6	3
	Minor	2	10	8	6	4	2
	Negligible	1	5	4	3	2	1

15 to 25	Intolerable	8 to 12	Tolerable if ALARP	1 to 6	Acceptable
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Red:	(Ranking 15-25)	Indicates the risk is too high and is unacceptable (intolerable). The activity should not be started or should cease until risk reduction improvements or addition control measures are implemented. Periodic review of assessment should occur.
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Amber:	(Ranking 8 to 12)	Indicates that the risk is tolerable if it is 'as low as reasonably practicable' (ALARP). Further risk reduction must be considered in line with industry standards and technological advances. Risk reduction measures involving sensible low-cost measures should be implemented. Higher cost risk reduction measures may require cost benefit analysis before any decision is made on implementing them. Regular monitoring and assessment reviewed.
Green:	(Ranking 1 to 6)	Indicates the risk is broadly acceptable. Sensible low-cost improvements should however be considered where appropriate. General monitoring and periodic review should occur.

Risk Assessment Number	WRA-ENG-TR-03
Name of Assessor	Darren Cockle
Date of assessment	29 th December 2025
Site or Area being Assessed:	Mainline/Depot
Activity:	Engineering Vehicles (EV) & Road Rail Vehicles (RRV)
Review Date	28 th December 2026

Description of Activity *(Key tasks that support the activity)*

This risk assessment cover the general management of movements and operations while utilising Engineering Vehicles (EV) and Road Rail Vehicles (RRV) within the worksite or designated operational areas.

People Involved in the Activity *(Affected parties)*

Maintenance Employees

Risk Assessment Consultation *(Stakeholders and interested parties)*

Line Management
HSQE Employees
KAD Employees
RMT

References and Associated Documentation *(Additional Documentation to be read in conjunction with this Risk Assessment)*

WRA-ENG-GEN-07 Working in an Isolated Possession
WRA-HSQE-GEN-04 COSHH
WRA-ENG-GEN-03 Working at Height
WRA-ENG-TR-02 Electrical Safety Track General Activities
Working on the Railway Manual (WORM)
SOP PC 3.08 Engineering Vehicles –Working on the Railway Manual
SOP D 1.03 General Rules for Depot Operations
SOP-M3.07 Movement of Engineering Vehicles

Implementation Plan *(Insert actions agreed on how the additional controls identified in the risk assessment are to be implemented)*

Ref.	Priority	Responsibility	Due Date	Status

Identify and list hazards	Identify and list Who are at risk and how harm could occur	Control Measures	Initial assessment			Is the risk reduced as low as reasonable possible? If not, then state what additional measures are to be considered	Residual risk		
			L'hood	Severity	Risk Rating		L'hood	Severity	Risk Rating
Cab Access/Egress	Maintenance operative Injuries resulting from falling/slipping while access/egress from drivers cab which could result in sprains and strains, severe bruising, cuts and abrasions	Good lighting available. Handrails & door chains fitted. All staff trained to maintain 3-point contact whilst accessing/egressing cab Steps have anti-slip tape applied. Defined walkways and access points. Staff trained to access/egress cab in a safe manner. In conjunction with WRA-ENG-GEN-03 Working at Height	2	2	4				
Battery Charging	Maintenance operative injuries due to inappropriate charging regime or battery maintenance regimes resulting in employee injuries which could consist of burns, eye injuries or fire.	Trained and competent EV operators EV properly maintained. Cables stored on Cable Rack. Adequate signage & barriers in charging areas. Battery EV's are recharged in designated, well ventilated, secure areas. Ignition sources controlled. Battery maintenance carried out only by competent, authorised staff. Safety Data Sheets and COSHH assessments provided to staff responsible for battery maintenance. Suitable eye, hand PPE is also provided. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. No Smoking Policy in place. Fire extinguishers available in the event of a fire.	1	3	3				
Pre-Use Checks	Equipment failure including safety critical systems such as brakes / lights etc. Equipment failure including controls and hydraulic systems	Trained and competent EV and Hi-Ab operators. Emergency stop buttons fitted both sides of Vehicle. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. Pre-use checks to be carried out before use as per the Engineering Vehicle Check List, In compliance with SOP-M3.07 Movement of Engineering Vehicles. Vehicle defect process in place using Metro. Engineering Vehicle Operator assist in all aspects of pre-use checks including, checking lighting, securing loads, removing wheel scotches, applying/releasing wagon brakes and any other ancillary tasks.	1	1	1				

Coupling & Marshalling	Maintenance Operatives / visitors/ contractors being trapped / crushed between 2 EVs / wagons when coupling / uncoupling, compressed air line failure which could result in blast injuries from equipment explosion or damage to internal organs if air is introduced into the body, crushing or fatalities	Compliance with SOP-M3.07 Movement of Engineering Vehicles Trained and competent operators. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. Pedestrians are prohibited from entering operating area Suitably experienced Engineering Vehicle Assistant will be used. Audible/visual warning alarms fitted. All staff trackside wearing full Hi-Visibility clothing (Tops and trousers), safety footwear, hardhats, safety glasses and gloves. Danger areas are highlighted on training and familiarisation. Condition and connections of airlines checked regularly and before use. Vehicle defect process in place using Metro. PPE worn at all times Safety glasses BS EN 166 1B349 and gloves System inspected and serviced every year. Hand signalling Engineering Vehicle Operator, under instruction from Engineering Vehicle Pilot, on un-signalled depot roads in accordance with pre-use checks, coupling duties & shed movements, including through doorways	1	3	3			
Vehicles – Collision / derailment	Collision between 2 EVs or with other trackside plant and equipment resulting in EV operators being thrown across cab or out of EV with high impact injuries	Trained and competent operators. Compliance with task instruction. Over speed protection fitted. Engineering vehicle not to move until confirmation of point setting is confirmed. Points not set correctly Engineering vehicle not to move. Compliance with SOP D. 2.13 Maximum speed 20 kph Trained and competent EV operators EV approved for use on DLR Compliance with WORM procedures. Trained and competent EV operators EV properly maintained	1	2	2			
Vehicle running away not under control	Runaway EV due to brake failure or other cause resulting in collision or EV operators being thrown across cab or out of EV with high impact injuries	Vigilance alarm fitted to be depressed every 20 secs or emergency brakes will apply. Over-speed protection installed. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. Parking brakes and service brakes to be applied. Vehicle isolated when left unattended and keys removed. Scotch blocks to be used on gradients greater than 2%. Restriction applies. as per SOP-M3.07 Movement of Engineering Vehicles Reduced speeds across crossing points and gradients/curvatures	1	1	1			

Use of EV mounted Hiab Crane (Battery Loco and CT30) or RRV to lift and manoeuvre materials/equipment	Overturning due to overloading / gradients or canted track / shock loading or live loads - Machinery / equipment striking personnel / Loco / infrastructure or trackside equipment / Machinery / equipment striking overhead cable equipment / Dropping of load due to failure of Hi-Ab Crane or failure of lifting straps / chains	Hi-Ab approved for use on DLR Trained and competent EVO's Hi-Ab operators, and slinger/signallers. 5% tilt protection installed. Emergency stop buttons installed. Slew protection installed. Live loads to be supported and controlled. Lifting plans available Pre-use checks to be carried out before use. Engineering vehicles are maintained only by competent, authorised persons from rolling stock. Loler inspections carried out. Cab protection systems installed. Hi-Ab to be unfolded outside of confined area and travel to site at low speed with distance travelled kept to a minimum. Hi-Ab to be kept within EV kinematic envelope. Hi-Ab to maintain minimum 10ft distance from overhead equipment and where possible work from the furthest adjacent road. Travel to be only at low speed with distance travelled kept to an absolute minimum Loads to be kept as close to the EVs centre of gravity as possible EVO, Pilot-man, Hi-Ab Operator and Slinger signaller & PICOW to always maintain all around observations. Lifting chains/straps properly maintained and inspected before use	2	3	6			
Loading / Unloading Wagons	Loss of load from height	Trained and competent operators. Loads to be properly secured once loaded with straps and chains. Restrictions applied as per SOP-M3.07 Movement of Engineering Vehicles Trained and competent operators. EVO, Pilot-man, Hi-Ab Operator and Slinger signaller & PICOW to always maintain all around observations Lifting plans available	1	3	3			

CONSIDER THE HIERARCHY OF CONTROLS: (Elimination, Substitution, Engineering Controls, Signage / Administrative Controls / Personal Protective Equipment).			
	Prepared By:	Approved By:	Approved By:
Signature:	<i>Darren Cockle</i>	<i>Tom Mann</i>	<i>Adam Olszewski</i>
Name (Print):	Darren Cockle	Tom Mann	Adam Olszewski
Job Title:	Senior HSQE Coach Engineering	Track Manager	Track Engineer
Date:	29 th December 2025	29 th December 2025	29 th December 2025

			Likelihood				
			Certain	Highly Likely	Probable	Reasonable	Highly Unlikely
			5	4	3	2	1
			25	20	15	10	5
Consequence	Catastrophic	5	25	20	15	10	5
	Hazardous / Substantial	4	20	16	12	8	4
	Major	3	15	12	9	6	3
	Minor	2	10	8	6	4	2
	Negligible	1	5	4	3	2	1

15 to 25	Intolerable	8 to 12	Tolerable if ALARP	1 to 6	Acceptable
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Red:	(Ranking 15-25)	Indicates the risk is too high and is unacceptable (intolerable). The activity should not be started or should cease until risk reduction improvements or addition control measures are implemented. Periodic review of assessment should occur.
Amber:	(Ranking 8 to 12)	Indicates that the risk is tolerable if it is 'as low as reasonably practicable' (ALARP). Further risk reduction must be considered in line with industry standards and technological advances. Risk reduction measures involving sensible low-cost measures should be implemented. Higher cost risk reduction measures may require cost benefit analysis before any decision is made on implementing them. Regular monitoring and assessment reviewed.
Green:	(Ranking 1 to 6)	Indicates the risk is broadly acceptable. Sensible low-cost improvements should however be considered where appropriate. General monitoring and periodic review should occur.

Risk Assessment Number	WRA-ENG-TR-02
Name of Assessor	Darren Cockle
Date of assessment	29 th December 2025
Site or Area being Assessed:	Mainline/Depot trackside
Activity:	Trackside activities carried out by the P-Way Team
Review Date	28 th December 2026

Description of Activity *(Key tasks that support the activity)*

This risk assessment covers electrical safety hazards of general duties and activities undertaken by KAD P-Way employees in their line of duty while completing Maintenance and Corrective works of Track inspections, reactive maintenance, replacement of Track in line with OI-601 Electrical Safety Rules

People Involved in the Activity *(Affected parties)*

KAD Trackside Maintenance Operatives

Risk Assessment Consultation *(Stakeholders and interested parties)*

Permanent Way Team, Electrical Safety Team, HSQE

References and Associated Documentation *(Additional Documentation to be read in conjunction with this Risk Assessment)*

OI-601 Electrical Safety

Implementation Plan *(Insert actions agreed on how the additional controls identified in the risk assessment are to be implemented)*

Ref.	Priority	Responsibility	Due Date	Status

Identify and list hazards	Identify and list Who are at risk and how harm could occur	Control Measures	Initial assessment			Is the risk reduced as low as reasonable possible? If not, then state what additional measures are to be considered	Residual risk		
			L'hoo d	Severity	Risk Ratin g		L'hoo d	Severity	Risk Rating
Electrocution from Conductor Rail and exposed conductive part of rolling stock shoe gear.	Track Team Operatives Injuries sustained whilst accidentally coming into contact with exposed conductive parts while carrying out planned routine track inspections or carrying out running repairs requiring access to trackside when there is no isolation (Live)	The surface of the Conductor Rail not touched by the current collector is protected by means of protective shrouding. Justification for carrying out the works without an isolation Standard Operation Form (Form SOP/M 3.14 (01)). Work Request for trackside works without Possession and isolation (SOP/PC 2.01). Work Request Form (WRF) Site method statement and workplace risk assessment. Use of authorised trackside access points. Appointment of a suitably qualified Person in Charge of Work (PICOW) licensed and trained for working trackside without an isolation. Minimum training competency Cat C iaw OI-601 Electrical Safety Rules. PICOW Automatic Train Hours (ATH) to hold in date competency. All plant and equipment to be correctly certified and in date. Site-brief given to all work party personnel based on the method of work. Follow applicable Maintenance Task Instruction (MTI). Use relevant site method statement and risk assessment. Set up work site limits. Operate under an approved Safe System of Work (SSoW). Application of OI-601. All personnel trained and licensed through the Competence Management System (CMS), to undertake their assigned activities. Site-brief given to all work party personnel based on the method of work.	1	5	5				

Electrocution from Conductor Rail and exposed conductive part of rolling stock shoe gear.	Track Team Operatives Injuries sustained whilst accidentally coming into contact with exposed conductive parts while carrying out planned routine track inspections requiring access to trackside under possession and isolation.	Conductor Rail isolated and in short circuit status via Control Room Technician (CRT). Planned isolation in accordance with OI-601. Local Electrical Protection (LEP) devices to be applied if work tasks take operatives within the Vicinity Zone. PICOW to test Conductor Rail for Dead using an approved tester/prover unit. Testing equipment is calibrated and maintained according to manufacturer and industry standards. Minimum training competency Cat C iaw OI-601 Electrical Safety Rules. The risk of accidental contact is minimised through proper planning and testing, aligning with UK safety legislation. Follow relevant MTI. All work party personnel to hold current Track Awareness Certificate/Competency. PICOW holding in date competency present at all times. Applicable Work Request Form completed. Use relevant site method statement and risk assessment. Operate under an approved Safe System of Work (SSoW). Application of OI-601. All personnel trained and licensed through the Competence Management System (CMS), to undertake their assigned activities. Site-brief given to all work party personnel based on the method of work.	1	5	5			
Electrocution from Conductor Rail and exposed Live parts.	Track Team Operatives Injuries sustained whilst accidentally coming into contact with exposed conductive parts while carrying out planned routine and corrective track maintenance activities under possession and isolation.	Conductor Rail isolated and in short circuit status via CRT. Planned isolation in accordance with OI-601. Local Electrical Protection (LEP) devices to be applied if work tasks take operatives within the Vicinity Zone. PICOW to test Conductor Rail for Dead using an approved tester/prover unit. Testing equipment is calibrated and maintained according to manufacturer and industry standards. Minimum training competency Cat C iaw OI-601 Electrical Safety Rules. Follow relevant MTI. All work party personnel to hold current Track Awareness Certificate/Competency. PICOW holding in date competency present at all times. Applicable Work Request Form completed. Use relevant site method statement and risk assessment. Operate under an approved Safe System of Work (SSoW). Application of OI-601. All personnel trained and licensed through the Competence Management System (CMS), to undertake their assigned activities. Site-brief given to all work party personnel based on the method of work	1	5	5			

Electrocution from Conductor Rail and exposed Live parts	Outside contractors Injuries sustained whilst accidentally coming into contact with exposed conductive parts while carrying out one or more of the following activities: Outsourced track maintenance, Switch & Crossing welding & grinding, Machine Tamping, Machine Grinding, Continuous Welded Rail (CWR) Rail Stressing, Testing, Ultrasonic Inspections, Track Geometry measurement (VTRT) and Corrugation Measurement under possession and isolation.	Conductor Rail isolated and in short circuit status via Control Room Technician (CRT). Planned isolation in accordance with OI-601. Local Electrical Protection (LEP) devices to be applied if work tasks take operatives within the Vicinity Zone. PICOW to test Conductor Rail for Dead using an approved tester/prover unit. Supplier qualification to equivalent Cat C training competency iaw OI-601 Electrical Safety Rules. Applicable Work Request Form completed. Use relevant site method statement and risk assessment. PICOW holding in date competency present at all times. All work party personnel to hold current Track Awareness. Certificate/Competency PICOW presence. Operate under an approved Safe System of Work (SSoW). Application of OI-601. All personnel trained and licensed through the Competence Management System (CMS), to undertake their assigned activities. Site-brief given to all work party personnel based on the method of work.	1	5	5			

CONSIDER THE HIERARCHY OF CONTROLS: (Elimination, Substitution, Engineering Controls, Signage / Administrative Controls / Personal Protective Equipment).			
	Prepared By:	Approved By:	Approved By:
Signature:	<i>Darren Cockle</i>	<i>Tom Mann</i>	<i>Adam Olszewski</i>
Name (Print):	Darren Cockle	Tom Mann	Adam Olszewski
Job Title:	Senior HSQE Coach Engineering	Track Manager	Track Engineer
Date:	29 th December 2025	29 th December 2025	29 th December 2025

			Likelihood				
			Certain	Highly Likely	Probable	Reasonable	Highly Unlikely
			5	4	3	2	1
			25	20	15	10	5
Consequence	Catastrophic	5	25	20	15	10	5
	Hazardous / Substantial	4	20	16	12	8	4
	Major	3	15	12	9	6	3
	Minor	2	10	8	6	4	2
	Negligible	1	5	4	3	2	1

15 to 25	Intolerable	8 to 12	Tolerable if ALARP	1 to 6	Acceptable
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Red:	(Ranking 15-25)	Indicates the risk is too high and is unacceptable (intolerable). The activity should not be started or should cease until risk reduction improvements or addition control measures are implemented. Periodic review of assessment should occur.
Amber:	(Ranking 8 to 12)	Indicates that the risk is tolerable if it is 'as low as reasonably practicable' (ALARP). Further risk reduction must be considered in line with industry standards and technological advances. Risk reduction measures involving sensible low-cost measures should be implemented. Higher cost risk reduction measures may require cost benefit analysis before any decision is made on implementing them. Regular monitoring and assessment reviewed.
Green:	(Ranking 1 to 6)	Indicates the risk is broadly acceptable. Sensible low-cost improvements should however be considered where appropriate. General monitoring and periodic review should occur.

Risk Assessment Number	WRA-ENG-TR-01
Name of Assessor	Darren Cockle
Date of assessment	29 th December 2025
Site or Area being Assessed:	Mainline/Depot trackside while fully Isolated or while Live areas are present
Activity:	Trackside activities carried out by the P-Way Team
Review Date	28 th December 2026

Description of Activity *(Key tasks that support the activity)*

This risk assessment covers general duties and activities undertaken by KAD engineering in their line of duty while completing Maintenance and Corrective works while working trackside in a possession using plant and equipment

Activities include:

Maintenance and Corrective works,

Installation projects,

POP & BED TVA areas Mainline within isolated possession entering the 50m exclusion zone adjacent to live depot including BED - 1325A, 1320, 1322, 1324 Points, Track Walk 18 to check the loop from mainline into the TVA's, Axle counters BU 18, BU 22 BU 64, BU 65 BU 17 & BU 09. POD - 1151a, 1150B, 1221a, 1401, 1402A & 1481 Points Inspections

People Involved in the Activity *(Affected parties)*

KAD Trackside Maintenance Operatives

Risk Assessment Consultation *(Stakeholders and interested parties)*

Permanent Way Team, Signalling and Response Team, Signalling Installation Team, Electrical Safety Team, HSQE

References and Associated Documentation *(Additional Documentation to be read in conjunction with this Risk Assessment)*

Working on the Railway Manual (WORM)

SOP OC 3.08 Engineering Vehicles

WRA-HSQE-GEN-02 Driving at Work

WRA-HSQE-GEN-01 Manual Handling

WRA-HSQE-GEN-04 COSHH

WRA-ENG-GEN-02 Hand Arm Vibration

OI-601 Electrical Safety

WRA-ENG-GEN-03 Working at Height

WRA-ENG-GEN-05 Hot Works

WRA-ENG-GEN-08 Portable, Power & Hand Tools

WRA-ENG-GEN-07 Working Trackside in an isolated possession

WRA-ENG-TR-02 Electrical Safety General Activities

Implementation Plan *(Insert actions agreed on how the additional controls identified in the risk assessment are to be implemented)*

Ref.	Priority	Responsibility	Due Date	Status

Identify and list hazards	Identify and list Who are at risk and how harm could occur	Control Measures	Initial assessment			Is the risk reduced as low as reasonable possible? If not, then state what additional measures are to be considered	Residual risk		
			L'hoo d	Severity	Risk Ratin g		L'hoo d	Severity	Risk Rating
Engineering Vehicles movements while working around 1151a, 1150B, 1221a, 1401, 1402A & 1481 points	Maintenance staff being struck by engineer vehicle moving in possession which could result in sprains and Strains Severe bruising, cuts, abrasions or fatality	Maintenance staff to be in possession of a KAD Track Awareness certification WORM procedure implemented (SOP OC 3.08 Engineering vehicle). Formal management plan approved issued to the PICOW, including vehicle route planning, tagging, and signaling. Maintenance staff certified and competent in automatic traffic hours. Lookout protection to be put in place. PICOW briefing Engineering Vehicle used at reduced speed. Engineering Vehicle horn to be sounded prior to movement to inform work party of presence. Designated spotters (banksman) are equipped with appropriate communication devices. The PICOW requests the DC blocks signals and reserves 1402A/1401/1481 points to protect from shunt moves onto the TVA. Maintenance staff to wear Hi-Visibility clothing/PPE. PICOW to carry out full 3rd party briefing. Work party to remain together at all times. Work party to remain on allocated track. Work to method statement at all times. Work to PICOW briefing & SSOW at all times. KAD Pilotman to conduct all movements outside of worksite limits. Tracksider marker boards to be positioned to protect worksite. This activity is not undertaken in poor visibility and inclement weather such as continuous heavy rain or snow fall, high winds, fog or icy underfoot conditions. Regular refresher training on vehicle movement safety, including simulation or site-specific briefings. Routine audits to verify adherence to movement controls.	1	5	5				
DLR Main line vehicle movements while working on 1151a, 1150B, 1221a, 1401, 1402A & 1481 points	Maintenance staff being struck by train on Network which could result in sprains, strains, severe bruising, cuts, abrasions, fatality.	Maintenance staff to be in possession of a KAD Track Awareness certification WORM procedures implemented. Maintenance staff certified and competent in automatic traffic hours. Lookout protection to be put in place. PICOW briefing to include worksite boundaries. Clear communication protocols with control centre, including use of standardised phraseology. PICOW supervision of worksite Demarcation marker boards and posts. Inspection is only carried out when mainline is under possession and isolation, meaning ATO movements are not possible. Clearly defined actions for personnel to take if a train or vehicle movement occurs unexpectedly. The PICOW requests the DC blocks signals and reserves 1401/1481/1402A/1151/1150B/1221 points to protect from ATO moves onto the TVA. Conductor rail is shrouded on 3 sides. All maintenance staff are aware of live shoe gear and locations. No personal to be within the vicinity zone of live conductors. Maintenance staff to wear Hi-Visibility clothing/PPE. Contact Control Centre to implement appropriate protection. This activity is not undertaken in poor visibility and inclement weather such as continuous heavy rain or snow fall, high winds, fog or icy underfoot conditions.	1	5	5				

Working close to moving trains when working on 1151a, 1150B, 1221a, 1401, 1402A & 1481 points	Maintenance staff being struck by train on Network which could result in sprains, strains, severe bruising, cuts, abrasions, fatality.	Mainline LRVs to have Vehicle Operators working from Lead Emergency Position. Ensure formal line blockages and signaling arrangements are in place, documented, and communicated. Vehicle Operators advised of work parties on track. Maintenance staff certified and competent in automatic traffic hours. Maintenance staff to be in possession of a KAD Track Awareness certification WORM procedures implemented. Enforced minimum safe working distances based on train speed and type. Lookout protection to be put in place. Maintenance staff to wear Hi-Visibility clothing/PPE. Contact Control Centre to implement appropriate protection. PICOW briefing to include worksite boundaries. PICOW in receipt of ATW from IAC. PICOW briefing of worksite hazards to work party with signed acknowledgement. PICOW supervision of worksite Demarcation marker boards and posts. This activity is not undertaken in poor visibility and inclement weather such as continuous heavy rain or snow fall, high winds, fog or icy underfoot conditions.	1	5	5			
Isolator Maintenance	Maintenance staff injuries sustained whilst accidentally coming into contact with exposed live conductive parts which could result in electrocution	All works conducted under planned isolations and possessions. Standard isolation DC circuits breaker open and controlled by Scada by CRT. Feeder isolation in short circuit position and controlled by Scada by CRT. 2 stage de-energisation authentication by CRT. 3 stage re-energisation process on Scada by CRT. PICOW informed by CRT of authority to go trackside. PICOW to Test for Dead with approved tester prover. PICOW briefing to work party with signed acknowledgement. Approved work request form which includes MTI and risk assessment. Implementation of PTW systems requiring detailed risk assessments, method statements, and approval signatures. PICOW in receipt of ATW from IAC. All maintenance staff in possession of Track Awareness certification checked by sentinel. All tools are certified for live work and maintained regularly. Conductor rail is shrouded on 3 sides continually. PICOW reports line clear to CRT recorded online clear sheet. Protection maintenance of breakers carried out every 24 months. Signalling protection controlled by CRT. LEP fitted to conductor rail and running rail. Trained maintenance team verify electrical isolation as a secondary protection.	1	5	5			
Potential to come in contact with live electrical conductor rails	Maintenance staff conducting planned and corrective maintenance activities trackside while in a Main Line possession / isolation within the 50m exclusion zone adjacent to POD and BED TVA's when Depot conductor rails are live or Potential to come in contact with live conductor rails outside of the isolated possession area which could result in electrocution.	All Maintenance staff in possession of Track Awareness and LEP certification and have understanding of vicinity zone, dynamic risk assessment and control measures. PICOW briefing conducted with work party prior to entering the 50m exclusion zone from within mainline possession/isolation. Documented procedures for lockout/tagout during maintenance. PICOW briefing to include all exposed live conductors and vicinity zones. Approved work request form which includes MTI and risk assessment. PICOW in receipt of ATW from IAC. Conductor rail is shrouded on top and sides (3 sides) continually. No tooling to enter the vicinity zone of the exposed conductor. No part of the body to enter the vicinity zone of the exposed conductor. Insulated tooling to be used when ever possible near to the vicinity zone. Correct KAD trackside PPE to be worn at all times.	1	5	5			

Staff being struck by trains leaving the depot	Maintenance staff conducting planned and corrective maintenance activities trackside while in a Main Line possession / isolation within the 50m exclusion zone adjacent to POD and BED TVA's when Depot conductor rails are live which could result in sprains, strains, severe bruising, cuts, abrasions, fatality.	All maintenance staff will be in possession of Track Awareness certification and have understanding of vicinity zone control measures. PICOW to contact the DC and confirm all TVA Depot Slots are closed and no train movements are made onto the adjacent TVA's. Established clear radio or visual signals to prevent inadvertent intrusion into other trades' work zones. PICOW briefing conducted with work party prior to entering the 50m exclusion zone from within mainline possession/isolation. PICOW briefing to include all exposed live conductors and vicinity zones and confirm suspension of all train movements onto TVA's. PICOW to place Marker boards as required. Approved work request form which includes MTI and risk assessment. PICOW in receipt of ATW from IAC. Correct KAD trackside PPE to be worn at all times.	1	5	5			
Using Iron Man	Maintenance staff using Iron Man which could lead to crush injuries, cuts, falling shackles or clamps contact with live energy, serious injury.	Isolation of DC conductor rail. Maintenance staff trained and competent in the use of Iron Man. Maintenance operatives to visually check their equipment at the start of each shift and report any damage or faults Brake test completed before use. Plant Approval Notices issued for all Iron Man. Plant properly maintained. Iron men approved for use on DLR steep gradients. Trolley to be braked and chocked on gradients.	2	3	6			
Track jacks, lifting and slewing, hydraulic and mechanical	Maintenance staff using equipment where a jack failure or topples under load resulting in impact/crush injury to body from track (hands, fingers, arms, legs etc).	Maintenance staff trained and competent. Compliance with task instruction. Jacks properly maintained and in date as per LOLER Requirements. Maintenance operatives to visually check their equipment at the start of each shift and report any damage or faults. In conjunction with WRA-ENG-GEN-08 Portable, Power & Hand Tools.	2	3	6			
Environmental Incidents	Pollution, and environmental incidents due to leaking plant or equipment	Drip trays located under plant. Plant pre use checks. Plant maintained as per manufacturer's instructions. PICOW or Supervision will report and incidents via an IRF. Spill response plans, including spill kits located at strategic points. Waste disposal procedures compliant with environmental legislation. In conjunction with WRA-HSQE-GEN-04 COSHH	2	3	6			
Re-fuelling	Fire, spills or burns due refuelling unit which could affect employees and the environment	Fuel must be in approved containers, up to 5 litres in plastic and 10 litres in metal jerry can. Refuel only when tools have cooled. Refuelling to occur 3 metres away from ignition source, work area and water course or drain. Spill kit must be present. In conjunction with WRA-HSQE-GEN-04 COSHH	2	3	6			
Petrol/Diesel machinery	Maintenance staff using tools and equipment which could lead to eye injuries, cuts, entanglement, contact with live energy, serious injury	Loose clothing and long hair to be kept clear of moving parts of power tools. Maintenance operatives trained and competent in the correct use of portable tools. Maintenance operatives to visually check their equipment at the start of each shift and report any damage or faults. RPE to be worn where there is a foreseeable dust hazard. Tools must be used in accordance with manufacturer's instructions. Direct exhaust away from body. Use guards where appropriate. The correct PPE including hand, eye, hearing must be in place at all times. Eye protection to EN 166 B standards is the minimum when using power tools. Isolate area with barriers, tape etc. where necessary. Supervisors should inform users of risks from noise. Warning labels on portable tooling.	2	3	6			

Arc Welding and burning equipment (Gas bottles, torches, welding generator)	Maintenance staff, Other Contractors, or Visitors being affected by Arc eye from looking at welding glare, Burns from fire/explosion or from sparks or hot metal splashes igniting flammable materials in area, Smoke and toxic gases and manual handling injuries.	Trained and competent contractors used to undertake all welding activities (see separate RAMS & Risk Assessments). PPE (flame retardant clothing, welder's gauntlets/ boots/gloves, Welder's visor to be worn). 20 metre exclusion zone must be set up either side of the working area by Maintenance Staff while undertaking PICOW duties. Welding screens to be placed around area. Contractors to visually check their equipment at the start of each shift and report any damage or faults First aid kit on site. Fire Fighting equipment to be located at the site of Welding. All welding to be undertaken in well-ventilated areas. Work area clear of flammable materials. Hot work permits to be issued prior to work commencing. All work areas must be suitably segregated to ensure no task becomes harmful to other trades. All maintenance operatives must not work below or above any trades at any time. PICOW briefing to include worksite boundaries. PICOW supervision of worksite Demarcation marker boards and posts. In conjunction with WRA-ENG-GEN-05 Hot Works. In conjunction with WRA-HSQE-GEN-02 Manual Handling	1	4	4			
Storage of gas cylinders		Cylinders will be stored upright, in a well-ventilated and drained open area but with some weather protection which is away from fire risk and sources of heat and ignition. Cylinders to be separated empty and full. Oxygen cylinders will be stored at least 3 metres from acetylene and LPG cylinders. Suitable and sufficient firefighting equipment should be made available. Faulty equipment or cylinders will be withdrawn from service immediately for repairs/replacement or returned to the supplier. Cylinders in use will be kept and moved in purpose-built trolleys. Keep any source of ignition away from the storage area. COSHH Assessments should be carried out and made available to maintenance staff. All storage facilities must have the adequate signage (4Y, 2Y etc). All storage facilities must be locked at all times. Access for authorised personnel only. Maintain an up-to-date inventory of all materials stored	1	4	4			

Electrocution from Conductor Rail and exposed conductive part of rolling stock shoe gear.	Maintenance staff injuries sustained whilst accidentally coming into contact with exposed conductive parts during planned routine track inspections or carrying out running repairs requiring access to trackside when there is no isolation (Live)	The surface of the Conductor Rail not touched by the current collector is protected by means of protective shrouding. Justification for carrying out the works without an isolation Standard Operation Form (Form SOP/M 3.14 (01)). Work Request for trackside works without Possession and isolation (SOP/PC 2.01). Work Request Form (WRF) Site method statement and workplace risk assessment. Use of authorised trackside access points. Appointment of a suitably qualified Person in Charge of Work (PICOW) licensed and trained for working trackside without an isolation. Minimum training competency Cat C iaw OI-601 Electrical Safety Rules. PICOW Automatic Train Hours (ATH) to hold in date competency. All plant and equipment to be correctly certified and in date. Site-brief given to all work party personnel based on the method of work. Follow applicable Maintenance Task Instruction (MTI). Use relevant site method statement and risk assessment. Set up work site limits. Operate under an approved Safe System of Work (SSoW). Application of OI-60. All personnel trained and licensed through the Competence Management System (CMS), to undertake their assigned activities	1	4	4			
Electrocution from Conductor Rail and exposed conductive part of rolling stock shoe gear.	Maintenance staff injuries sustained whilst accidentally coming into contact with exposed conductive parts during planned routine track inspections requiring access to trackside under possession and isolation & missing running repairs.	Conductor Rail isolated and in short circuit status via Control Room Technician (CRT). Planned isolation in accordance with OI-601. Local Electrical Protection (LEP) devices to be applied if work tasks take maintenance operatives within the Vicinity Zone. PICOW to test Conductor Rail for Dead using an approved tester/prover unit. Minimum training competency Cat C iaw OI-601 Electrical Safety Rules. Follow relevant MTI. All work party personnel to hold current Track Awareness Certificate/Competency. PICOW holding in date competency present at all times. Applicable Work Request Form completed. Use relevant site method statement and risk assessment. Operate under an approved Safe System of Work (SSoW). Application of OI-601. All personnel trained and licensed through the Competence Management System (CMS), to undertake their assigned activities. Site-brief given to all work party personnel based on the method of work	1	4	4			

Electrocution from Conductor Rail and exposed Live parts	Maintenance staff injuries sustained whilst accidentally coming into contact with exposed conductive parts planned routine and corrective track maintenance activities under possession and isolation.	Conductor Rail isolated and in short circuit status via CRT. Planned isolation in accordance with OI-601. Local Electrical Protection (LEP) devices to be applied if work tasks take maintenance operatives within the Vicinity Zone. PICOW to test Conductor Rail for Dead using an approved tester/prover unit. Minimum training competency Cat C iaw OI-601 Electrical Safety Rules. Follow relevant MTI. All work party personnel to hold current Track Awareness Certificate/Competency. PICOW holding in date competency present at all times. Applicable Work Request Form completed. Use relevant site method statement and risk assessment. Operate under an approved Safe System of Work (SSoW). Application of OI-601. All personnel trained and licensed through the Competence Management System (CMS), to undertake their assigned activities	1	4	4			
Electrocution from Conductor Rail and exposed Live parts	Outside contractors Injuries sustained whilst accidentally coming into contact with exposed conductive parts while carrying out one or more of the following activities: Outsourced track maintenance, Switch & Crossing welding & grinding, Machine Tamping, Machine Grinding, Continuous Welded Rail (CWR) Rail Stressing, Ultrasonic Inspections. Track Geometry measurement (VTRT) and Corrugation Measurement under possession and isolation.	Conductor Rail isolated and in short circuit status via Control Room Technician (CRT). Planned isolation in accordance with OI-601. Local Electrical Protection (LEP) devices to be applied if work tasks take maintenance operatives within the Vicinity Zone. PICOW to test Conductor Rail for Dead using an approved tester/prover unit. Supplier qualification to equivalent Cat C training competency iaw OI-601 Electrical Safety Rules. Applicable Work Request Form completed. Use relevant site method statement and risk assessment. PICOW holding in date competency present at all times. All work party personnel to hold current Track Awareness. Certificate/Competency PICOW presence. Operate under an approved Safe System of Work (SSoW). Application of OI-601. All personnel trained and licensed through the Competence Management System (CMS), to undertake their assigned activities.	1	4	4			

Slips, trips and fall	Maintenance staff working around uneven, slippery surfaces. Cables/rails Rails/components. Raised loop cable/cables. Ballast Wet Sleepers Stored materials Track section markers in adverse weather. Snow and ice, wet sleepers Frost/Ice on slab track which could result in sprains and strains Severe bruising Cuts and abrasions.	Maintenance staff to wear appropriate PPE/footwear. Maintenance staff to have a KAD Track awareness certification. PICOW briefing to include any obstructions present. Adequate lighting. Tidy trackside. Step from track to track by ballast-to-ballast movement only. Use head torch/lighting supplied. Use authorised walking routes where possible. Always use authorised access points.	2	2	4			
Biological Health Hazards	Maintenance staff being affected by harmful bacteria, such as Hepatitis, HIV or leptospirosis from contact with contaminated standing water or finding discarded needles on worksite.	Track Awareness certification. Maintenance staff to wear appropriate PPE gloves and masks. PICOW briefing to include briefing on this hazard. No smoking/eating. Safety training. Method statement briefing and toolbox talk. Individual site assessment to be carried out. The worksite to be surveyed for syringes prior to the commencement of work. If any needles are found on site, PICOW is to be notified. Always wash hands thoroughly before breaks (eating, drinking, smoking). All maintenance operatives shall be briefed during toolbox talks on the dangers of Leptospirosis. All cuts and abrasions must be cleaned and covered.	1	3	3			
Physical Assault	Maintenance staff being exposed to verbal and physical assault from railway neighbour's projectiles thrown from trackside.	PICOW briefing. Noise kept to a minimum. Low noise tools/equipment. Advance notification to trackside neighbours. Maintenance staff able to call for assistance. Maintenance staff encouraged to 'Walk Away' from confrontational situations	1	2	2			
Engineering Vehicles movements while working around 1401 / 1481 / 1402A points	Maintenance staff being struck by engineer vehicle moving in possession which could result in sprains and Strains Severe bruising, cuts, abrasions or fatality.	Maintenance staff to be in possession of a KAD Track Awareness certification WORM procedure implemented (SOP OC 3.08 Engineering vehicle). PICOW briefing Engineering Vehicle used at reduced speed. Engineering Vehicle horn to be sounded prior to movement to inform work party of presence. The PICOW requests the DC blocks signals and reserves 1402A/1401/1481 points to protect from shunt moves onto the TVA. Maintenance staff to wear Hi-Visibility clothing/PPE. PICOW to carry out full 3rd party briefing. Work party to remain together at all times. Work party to remain on allocated track. Work to method statement at all times. Work to PICOW briefing & SSOW at all times. KAD Pilotman to conduct all movements outside of worksite limits. Trackside marker boards to be positioned to protect worksite	1	5	5			

Engineering Vehicles	Maintenance staff being struck by engineer vehicle moving in possession which could result in sprains and Strains Severe bruising, cuts, abrasions or fatality.	Maintenance staff to be in possession of a KAD Track Awareness certification WORM procedure implemented (SOP OC 3.08 Engineering vehicle). PICOW briefing Engineering Vehicle used at reduced speed through the worksite. Engineering Vehicle horn to be sounded prior to movement to inform work party of presence. Maintenance staff to wear Hi-Visibility clothing/PPE. PICOW to carry out full 3rd party briefing. Work party to remain together at all times. Work party to remain on allocated track. Work to method statement at all times. Work to PICOW briefing & SSOW at all times. KAD Pilotman to conduct all movements outside of worksite limits. Trackside marker boards to be positioned to protect worksite.	1	4	4			
DLR Main line vehicle movements while working on 1401 / 1481 / 1402A points	Maintenance staff being struck by train on Network which could result in sprains, strains, severe bruising, cuts, abrasions, fatality.	Maintenance staff to be in possession of a KAD Track Awareness certification WORM procedures implemented. PICOW briefing to include worksite boundaries. PICOW supervision of worksite Demarcation marker boards and posts. Inspection is only carried out when mainline is under possession and isolation, meaning ATO movements are not possible. The PICOW requests the DC blocks signals and reserves 1401/1481/1402A points to protect from ATO moves onto the TVA. Emergency Position. Lookout protection to be put in place. Appropriate PPE to be worn. Contact Control Centre to implement appropriate protection.	1	4	4			
Main line vehicle movements	Maintenance staff being struck by train on adjacent network rail tracks (Limehouse to Tower Gateway and Bow Church to Stratford) which could result in sprains, strains, severe bruising, cuts, abrasions, fatality.	Maintenance staff to be in possession of a KAD Track Awareness certification WORM procedures implemented. PICOW briefing to include worksite boundaries. PICOW supervision of worksite Demarcation marker boards and posts. Clear boundary line between DLR and NR. Maintenance staff member not allowed outside of worksite boundary. Mainline LRVs to have Vehicle. Operators working from Lead Emergency Position. Lookout protection to be put in place. Appropriate PPE to be worn. Contact Control Centre to implement appropriate protection.	1	4	4			
Lone Working	Maintenance staff unable to raise alarm in the event of an accident or injury from slips, trips or falls or other causes which could result in sprains, strains, severe bruising, cuts, abrasions.	Maintenance staff to work in pairs whenever possible. WORM procedures implemented. Maintenance staff member to be in possession of a PICOW Certification. Radio contact with CRT to inform if location and duration of works. CRT to raise alarm when call back not received. In conjunction with WRA-HSQE-GEN-03 Lone Working.	2	2	4			
Environmental Incidents	Pollution, and environmental incidents due to refuelling/leaking plant or equipment.	PICOW or Supervision will report and incidents via an IRF. Drip trays located under plant. Plant pre use checks. Fuelling will be completed with drip trays. In conjunction with WRA-HSQE-GEN-04 COSHH.	2	1	2			
Noise	Maintenance staff being exposed to noise over 80db which could result on noise Induced Hearing Loss, Tinnitus	Maintenance staff shall be aware of the noise emissions from the tools being used. Hearing protection shall be used by the maintenance operatives where required. If third parties' activities are causing excessive noise you must leave the area and contact your PICOW. Exclusion zones erected as necessary. Briefing to all maintenance staff re noise. Machines to be turned off when not in use.	2	2	4			

Cuts & Abrasions	Maintenance staff using tools or materials which could result in lacerations, serious injuries.	All maintenance operatives to wear suitable hand and forearm protection for the task in hand. Tools and equipment must be used as per the manufacturer's instructions. Some metal containment can be very sharp and will need to be assessed and covered to reduce the hazards at the workplace.	2	2	4			
Use of Power Tools and Equipment	Maintenance staff using tools and equipment which could lead to eye injuries, cuts, contact with live energy, serious injury.	All maintenance operatives shall be trained and competent in the use of the tools and equipment. The tools and equipment shall only be used as per the manufacturer's instructions. The correct PPE including hand, eye, hearing must be in place at all times. Eye protection to EN 166 B standards is the minimum when using power tools. Maintenance staff to visually check their equipment at the start of each shift and report any damage or faults. Electrical tools 110 v or battery powered and have a valid P.A.T cert. In conjunction with WRA-ENG-GEN-08 - Portable, Power & Hand Tools	2	2	4			
Limitation of lighting	Maintenance staff working in low lighting areas which could result in slips, trips, falls, serious injury.	Lighting in the main areas will be provided. Additional task lighting available. Head torches used. Maintenance operatives are not to work in dark conditions, and the levels of lighting must be suitable for the task in hand.	2	2	4			
Working near third parties tasks	Maintenance staff working near 3rd parties work areas which could result in sprains, strains, severe bruising, cuts, abrasions, noise induced hearing loss.	All work areas must be suitably segregated to ensure no task becomes harmful to other trades. All maintenance operatives must not work below or above any trades at any time. If noise or dust is an issue the works must cease and the PICOW contacted. PICOW briefing to include worksite boundaries. PICOW supervision of worksite Demarcation marker boards and posts.	1	3	3			
Adverse Weather	Maintenance staff injured due to changing weather cycles which could lead to cuts, bruising, fatigue.	Communication and monitoring of weather conditions – weather alerts. Maintenance staff briefing before start of works. Maintenance staff provided with all necessary wet weather gear and clothing so that they can remain dry and warm during cold and wet conditions. Keep Hydrated during the working activity. The Generic Method Statement will be consulted for identified hazards associated with the environment. Work site assessed by competent personnel to identify appropriate controls. No works to be undertaken on electrically powered equipment in areas exposed to elements during adverse weather condition. No works to be undertaken in external areas if underfoot conditions have an increased likelihood of slip hazard due to adverse weather. No works to be undertaken in external areas if visibility has been severely reduced due to adverse weather conditions such as fog or mist in order to avoid collision hazard.	2	2	4			
Use of rail trolley(s)	Maintenance staff using track trolleys which could lead to crush injuries, cuts, contact with live energy, serious injury.	Isolation of DC conductor rail. Maintenance staff trained and competent in the use of track trolleys. Pre user inspection. Brake test completed before use. Plant Approval Notices issued for all track trolleys. Track trolleys only used on gradients which they are approved on up to 6%. Track trolley to be used in its safe working load. Trolley to be braked and chocked on gradients. In conjunction with WRA-HSQE-GEN-01 Manual Handling	2	3	6			

Working in Tunnels	Maintenance staff working in restricted clearance and poor lighting conditions with Dust / fumes Poor visibility which could cause dust inhalation, crush injuries, cuts, contact with live energy, serious injury.	Trained and competent maintenance staff to only use equipment. RPE to be worn where there is a foreseeable dust hazard. Compliance with task instruction/ method statement. Gas monitoring equipment to be present when using petrol/diesel equipment. Tunnel fans need to be operational when equipment is being used. Lighting in the main areas will be provided. Additional task lighting available & Head torches used. Maintenance operatives are not to work in dark conditions, and the levels of lighting must be suitable for the task in hand.	1	3	3			

CONSIDER THE HIERARCHY OF CONTROLS: (Elimination, Substitution, Engineering Controls, Signage / Administrative Controls / Personal Protective Equipment).			
	Prepared By:	Approved By:	Approved By:
Signature:	<i>Darren Cockle</i>	<i>Tom Mann</i>	<i>Adam Olszewski</i>
Name (Print):	Darren Cockle	Tom Mann	Adam Olszewski
Job Title:	Senior HSQE Coach Engineering	Track Manager	Track Engineer
Date:	29 th December 2025	29 th December 2025	29 th December 2025

			Likelihood				
			Certain	Highly Likely	Probable	Reasonable	Highly Unlikely
			5	4	3	2	1
Consequence	Catastrophic	5	25	20	15	10	5
	Hazardous / Substantial	4	20	16	12	8	4
	Major	3	15	12	9	6	3
	Minor	2	10	8	6	4	2
	Negligible	1	5	4	3	2	1

15 to 25	Intolerable	8 to 12	Tolerable if ALARP	1 to 6	Acceptable
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Red:	(Ranking 15-25)	Indicates the risk is too high and is unacceptable (intolerable). The activity should not be started or should cease until risk reduction improvements or addition control measures are implemented. Periodic review of assessment should occur.
Amber:	(Ranking 8 to 12)	Indicates that the risk is tolerable if it is 'as low as reasonably practicable' (ALARP). Further risk reduction must be considered in line with industry standards and technological advances. Risk reduction measures involving sensible low-cost measures should be implemented. Higher cost risk reduction measures may require cost benefit analysis before any decision is made on implementing them. Regular monitoring and assessment reviewed.
Green:	(Ranking 1 to 6)	Indicates the risk is broadly acceptable. Sensible low-cost improvements should however be considered where appropriate. General monitoring and periodic review should occur.

Risk Assessment Number	WRA-ENG-GEN-02
Name of Assessor	M Halloran
Date of assessment	3 rd December 2025
Site or Area being Assessed:	Company Wide
Activity:	Hand Arm Vibration - HAVs
Review Date	2 nd December 2026

Description of Activity *(Key tasks that support the activity)*

This risk assessment covers Hand Arm Vibration when working with tooling undertaken by KAD employees in their line of general duties

People Involved in the Activity *(Affected parties)*

KAD Employees

Risk Assessment Consultation *(Stakeholders and interested parties)*

RMT Union
Line Management
HSQE Employees

References and Associated Documentation *(Additional Documentation to be read in conjunction with this Risk Assessment)*

Implementation Plan *(Insert actions agreed on how the additional controls identified in the risk assessment are to be implemented)*

Ref.	Priority	Responsibility	Due Date	Status

Identify and list hazards	Identify and list Who are at risk and how harm could occur	Control Measures	Initial assessment			Is the risk reduced as low as reasonable possible? If not, then state what additional measures are to be considered	Residual risk		
			L'hood	Severity	Risk Rating		L'hood	Severity	Risk Rating
Inadequate information, instruction and training	Employees developing carpal tunnel syndrome or vibration white finger	All operatives and supervisors are provided with hand arm vibration training. Toolbox Talks HAVs testing on equipment	1	3	3				
Vulnerable employees e.g. young persons, new and expectant mothers, staff with disabilities or health conditions that might increase risk	Employees developing carpal tunnel syndrome or vibration white finger	Individual risk assessments to be carried out by line manager in conjunction with HSQE for vulnerable employees e.g. Staff with pre-existing medical conditions such as Reynolds syndrome, heart disease, high blood pressure, diabetes, pregnancy, arthritis, back/ limb injuries. Employees to inform manager of any changes in health conditions Pre-employment screening carried out in the relevant units.	1	4	4				
Poor health surveillance	Employees developing carpal tunnel syndrome or vibration white finger	Annual screening carried out by Occupational Health Service of employees assessed by local unit to be at risk. Employees to inform manager of any changes in health conditions	1	4	4				
Poorly maintained equipment	Employees developing carpal tunnel syndrome or vibration white finger	All tools are regularly inspected and properly maintained. Cutting tools kept sharp. Yearly HAVs testing of equipment	1	3	3				
Unsuitable equipment	Employees developing carpal tunnel syndrome or vibration white finger	Supervisors to ensure that the equipment provided is suitable for the intended use. When selecting new equipment preference is given to equipment with low vibration levels Pre-use inspection of equipment prior to any work commencing.	2	2	4				
Monitoring	Employees developing carpal tunnel syndrome or vibration white finger	HAV levels measured for rotary and percussive equipment Yearly assessments of equipment due wear and tear HSE Vibration Calculator used	2	2	4				

Excessive vibration Exposure	Employees developing carpal tunnel syndrome or vibration white finger	Restrictions in place to limit duration and frequency of using high vibration equipment. Job rotation used to limit exposure of individual workers and provide variety of movement to work activities Outdoor workers provided with clothing appropriate to weather including gloves	1	3	3			
Incorrect use of equipment	Employees developing carpal tunnel syndrome or vibration white finger	All vibrating tools to be used in accordance with manufactures instructions. Equipment must not be overworked above and beyond its intended function and design. The right tool used for the task being undertaken. Staff provided with all necessary training on the correct use of any vibrating tools	2	2	4			
Adverse weather conditions	Employees developing carpal tunnel syndrome or vibration white finger	Staff provided with all necessary wet weather gear and clothing so that they can remain dry and warm during cold and wet conditions. Correct PPE gloves issued	2	2	4			
Terrain, ground surfaces and working environment	Employees developing carpal tunnel syndrome or vibration white finger	All ground surfaces to be factored into the task to be performed. Removal or modification of any adverse ground or floor conditions that may impact or worsen the effects of the vibrating tools	2	2	4			

CONSIDER THE HIERARCHY OF CONTROLS: (Elimination, Substitution, Engineering Controls, Signage / Administrative Controls / Personal Protective Equipment).			
	Prepared By:	Approved By:	Approved By:
Signature:	<i>Darren Cockle</i>	<i>Neil Stroud</i>	
Name (Print):	Darren Cockle	Neil Stroud	
Job Title:	Senior HSQE Coach Engineering	Head Of HSQE	
Date:	3 rd December 2025	3 RD December 2025	

			Likelihood				
			Certain	Highly Likely	Probable	Reasonable	Highly Unlikely
			5	4	3	2	1
			25	20	15	10	5
Consequence	Catastrophic	5	25	20	15	10	5
	Hazardous / Substantial	4	20	16	12	8	4
	Major	3	15	12	9	6	3
	Minor	2	10	8	6	4	2
	Negligible	1	5	4	3	2	1

15 to 25	Intolerable	8 to 12	Tolerable if ALARP	1 to 6	Acceptable
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Red:	(Ranking 15-25)	Indicates the risk is too high and is unacceptable (intolerable). The activity should not be started or should cease until risk reduction improvements or addition control measures are implemented. Periodic review of assessment should occur.
Amber:	(Ranking 8 to 12)	Indicates that the risk is tolerable if it is 'as low as reasonably practicable' (ALARP). Further risk reduction must be considered in line with industry standards and technological advances. Risk reduction measures involving sensible low-cost measures should be implemented. Higher cost risk reduction measures may require cost benefit analysis before any decision is made on implementing them. Regular monitoring and assessment reviewed.
Green:	(Ranking 1 to 6)	Indicates the risk is broadly acceptable. Sensible low-cost improvements should however be considered where appropriate. General monitoring and periodic review should occur.

Risk Assessment Number	WRA-HSQE-GEN-04
Name of Assessor	D Cockle
Date of assessment	5 th December 2025
Site or Area being Assessed:	Companywide
Activity	Working with Substances Hazardous to Health
Review Date	4 th December 2026

Description of Activity *(Key tasks that support the activity)*

This risk assessment covers general activities when using COSHH products by KAD employees in their line of general duties

People Involved in the Activity *(Affected parties)*

KAD Employees

Risk Assessment Consultation *(Stakeholders and interested parties)*

RMT Union
Line Management
HSQE Employees

References and Associated Documentation *(Additional Documentation to be read in conjunction with this Risk Assessment)*

Implementation Plan *(Insert actions agreed on how the additional controls identified in the risk assessment are to be implemented)*

Ref.	Priority	Responsibility	Due Date	Status

Identify and list hazards	Identify and list Who are at risk and how harm could occur	Control Measures	Initial assessment			Is the risk reduced as low as reasonable possible? If not, then state what additional measures are to be considered	Residual risk		
			L'hood	Severity	Risk Rating		L'hood	Severity	Risk Rating
Toxicity exposure	User - Unaware of the potency of the chemical's toxicity and health effects caused by the chemical	Prevent or adequately control exposure of employees to hazardous substances based on risk assessment and appropriate control measures. Individual chemical compounds, byproducts and preparations (mixtures of two or more substances) are registered in a COSHH register. An inventory of hazardous substances from the organisation's activities have been drawn up. Staff who are exposed to substances hazardous to health have been identified. Only competent persons (COSHH Assessor) are employed to undertake risk assessment. A risk assessment is carried out for each substance using the services of Sygol or HSE COSHH Essentials and appropriate risk controls are applied. All employees are informed who use or likely to come into contact with chemicals. Where relevant, engineering controls are maintained and monitored. Health surveillance is provided to those that are listed on a health surveillance register, where appropriate. Training and supervision is provided for to ensure exposure is minimised according the risk assessment.	2	2	4				
Toxicity exposure	User - Exceeding the duration and frequency of exposure limits that determine the amount of chemical entering the body	Only competent persons (COSHH Assessor) are employed to undertake risk assessment. A risk assessment is carried out for each substance using the services of Sygol or HSE COSHH Essentials and appropriate risk controls are applied.	2	2	4				

Toxicity exposure	User - Inadequate or incorrect protection for the route of exposure where it contacts or enters the body (eye, skin contact, ingestion, inhalation, injection)	Correct methodology is adopted for handling chemical products or from activity by-products. Where relevant, engineering controls are maintained and monitored. SP-2.01f - Suitable personal protection equipment has been determined for the task, including specific protective grading, where appropriate. The task is regularly supervised to ensure correct methods are adopted and correct PPE is selected and worn.	2	2	4			
Toxicity exposure	User - Not using the safest form of the substance (solid, liquid, gas) for the task.	All employees are informed who use or likely to come into contact with chemicals. Training is provided to ensure exposure is minimised according the risk assessment. The task is regularly supervised to ensure correct methods are adopted and correct PPE is selected and worn	2	2	4			
Toxicity exposure	User - Skin (or eye) contact which can range from mild dermatitis, destruction of skin tissue to systemic damage to internal organs.	Training and supervision are provided to ensure exposure is minimised according the risk assessment. Wear protective gloves/protective clothing/eye protection/face protection that meets the level of protection for hazard. If on skin: wash with plenty of soap and water If in eyes: rinse cautiously with water for several minutes. Remove contact lens, if present and easy to do. Continue rinsing. Avoid eating, drinking or smoking when using these substances. The task is regularly supervised to ensure correct methods are adopted and correct PPE is selected and worn	2	2	4			

Toxicity exposure	User – Inhalation of vapours, gases, mists or particulates (asphyxiants, irritants, necrosis or fibrosis producers, allergens, carcinogens).	Only competent persons (COSHH Assessor) are employed to undertake risk assessment. A risk assessment is carried out for each substance using the services of Sypol or HSE COSHH Essentials and appropriate risk controls are applied All employees are informed who use or likely to come into contact with chemicals. Training is provided to ensure exposure is minimised according the risk assessment. Avoid breathing dust / fume /gas / mist / vapours / spray Use only outdoors or in a well-ventilated area, where practicable Use RPE where there remains a risk of breathing contaminated air (short-term or infrequent exposure) and using engineering controls is impractical. Fit testing to ensure that the equipment selected is suitable for the wearer. If inhaled: remove victim to fresh air. Keep at rest in a position comfortable for breathing The task is regularly supervised to ensure correct methods are adopted and correct PPE is selected and worn	2	2	4			
Toxicity exposure	User – Chemicals inadvertently swallowed (Ingestion), insoluble – damage to gastro tract), soluble – damage to internal organs via blood)	Training and supervision are provided to ensure exposure is minimised according the risk assessment. Avoid handling until all safety precautions have been read and understood Avoid eating, drinking or smoking when using these substances. Follow handwashing hygiene arrangements and wash thoroughly after handling. Get medical advice/attention if you feel unwell. Call a POISON CENTER (NHS Direct in England or Wales 0845 46 47) or a doctor/physician. Avoid induced vomiting The task is regularly supervised to ensure correct methods are adopted and correct PPE is selected and worn	2	2	4			

Toxicity exposure Fire Explosion	User - Using incompatible substances in preparations	Individual chemical compounds, byproducts and preparations (mixtures of two or more substances) are registered in a COSHH register. An inventory of hazardous substances from the organisation's activities have been drawn up. Supply of premixed preparations or correct dilutions for the task should be used. Substances are labelled and prepared in small quantities in a well-ventilated preparation area (separate from storage area). All employees are informed who use or likely to come into contact with chemicals. Training and supervision is provided to ensure exposure is minimised according the risk assessment. SP-2.011 – Fire precautions and evacuations are provided	2	2	4			
Toxicity Fire Explosion	User - Storing incompatible substances in proximity	Individual chemical compounds, byproducts and preparations (mixtures of two or more substances) are registered in a COSHH register. An inventory of hazardous substances from the organisation's activities have been drawn up. Training and supervision is provided to ensure exposure is minimised according the risk assessment. Written instructions of storage practices and waste management Storing chemicals should be kept to a minimum (enough quantity for the task) and suitably segregated. Storing large quantities for inventory purposes should be avoided. Do not handle until all safety precautions have been read and understood Restricted access – store locked up and in a well-ventilated area. Protect from sunlight. Keep away from heat/sparks/open flames/hot surfaces. – No smoking Use personal protective equipment as required Explosion risk in case of fire is included in a fire risk assessment in accordance with SP-2.011 – Fire precautions and evacuations	2	2	4			

Toxicity exposure	User - Decanting substances	Supply of correct quantities or correct dilutions for the task should only be used. Substances are labelled and prepared in small quantities in a well-ventilated preparation area (separate from storage area). All employees are informed who use or likely to come into contact with chemicals. Training and supervision is provided to ensure exposure is minimised according the risk assessment	2	2	4			
Toxicity exposure	User - Individual's susceptibility sensitive to a chemical (Asthma, Dermatitis, Anaphylactic shock)	All employees are informed who use or likely to come into contact with chemicals to notify HR of any relevant disorders Persons notifies the organisation where they are known to develop symptoms such as asthma, rhino conjunctivitis or eczema / dermatitis. Medical diagnosis confirms disorder Avoid exposure, adjust work accordingly.	2	2	4			

CONSIDER THE HIERARCHY OF CONTROLS: (Elimination, Substitution, Engineering Controls, Signage / Administrative Controls / Personal Protective Equipment).			
	Prepared By:	Approved By:	Approved By:
Signature:	<i>Darren Cockle</i>	<i>N Stroud</i>	
Name (Print):	Darren Cockle	Neil Stroud	
Job Title:	Senior HSQE Coach Engineering	Head Of HSQE	
Date:	5 th December 2025	5 TH December 2025	

			Likelihood				
			Certain	Highly Likely	Probable	Reasonable	Highly Unlikely
			5	4	3	2	1
Consequence	Catastrophic	5	25	20	15	10	5
	Hazardous / Substantial	4	20	16	12	8	4
	Major	3	15	12	9	6	3
	Minor	2	10	8	6	4	2
	Negligible	1	5	4	3	2	1

15 to 25	Intolerable	8 to 12	Tolerable if ALARP	1 to 6	Acceptable
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Red:	(Ranking 15-25)	Indicates the risk is too high and is unacceptable (intolerable). The activity should not be started or should cease until risk reduction improvements or addition control measures are implemented. Periodic review of assessment should occur.
Amber:	(Ranking 8 to 12)	Indicates that the risk is tolerable if it is 'as low as reasonably practicable' (ALARP). Further risk reduction must be considered in line with industry standards and technological advances. Risk reduction measures involving sensible low-cost measures should be implemented. Higher cost risk reduction measures may require cost benefit analysis before any decision is made on implementing them. Regular monitoring and assessment reviewed.
Green:	(Ranking 1 to 6)	Indicates the risk is broadly acceptable. Sensible low-cost improvements should however be considered where appropriate. General monitoring and periodic review should occur.

Risk Assessment Number	WRA-HSQE-GEN-02
Name of Assessor	M Halloran
Date of assessment	03 rd December 2025
Site or Area being Assessed:	Company Wide
Activity:	Driving Company Vehicles
Review Date	02 nd December 2026

Description of Activity *(Key tasks that support the activity)*

This risk assessment covers driving company vehicles undertaken by KAD employees in their line of general duties

Persons involved in the activity *(Affected parties)*

All personnel within Keolis Amey Docklands who are required to drive Fleet or Company vehicles as part of their duties.

Risk consultation *(Stakeholders and interested parties)*

RMT Union
Line Management
HSQE Employees

References and Associated Documentation *(Additional Documentation to be read in conjunction with this Risk Assessment)*

Implementation Plan *(Insert actions agreed on how the additional controls identified in the risk assessment are to be implemented)*

Ref.	Priority	Responsibility	Due Date	Status

Identify and list hazards	Identify and list Who are at risk and how harm could occur	Control Measures	Initial assessment			Is the risk reduced as low as reasonable possible? If not, then state what additional measures are to be considered	Residual risk		
			L'hood	Severity	Risk Rating		L'hood	Severity	Risk Rating
Road traffic collision/property damage while Exceeding speed limits/ breach of the Highway Code	Damage to vehicles or property which could affect employees, members of the public	Vehicle policy and briefing by line manager; Driver monitoring speeding. Driver behaviour education Driver handbook CBT FORS training Safe Urban Driving Drivers re-briefed by line managers if they incur penalty points for traffic offences etc.	2	2	4				
Tiredness, fatigue, stress which could lead to reduced alertness and possibility of falling asleep resulting in road traffic collision.	Damage to vehicles or property which could affect employees, members of the public	Monitoring of work hours. Managers to review all exceeded hours. Communication between managers regarding scheduling of operative's work hours. Drivers must report to managers if they feel unfit to drive. The Highway Code recommends that driver should take 15-minute break every 2 hours. KAD Fatigue process in place Personnel Monitoring – specifically sec 4.2) Driver handbook (sec 20	1	3	3				
Driving in adverse weather condition which could lead to a road traffic collision due to changed condition of the road	Damage to vehicles or property which could affect employees, members of the public	Drivers to modify their driving to suit weather condition. In exceptionally bad conditions drivers to pull off the road, not continue until is safe to do so Vehicles maintained Driver behaviour Driver Handbook (sec 40) & Toolbox talks Daily inspection checks completed by all drivers Regular servicing at main dealer as part of lease MOTs (all vehicles new) All defective vehicles temporarily replaced with hire vehicles Vehicles changed every 2-3 years on lease Winter kits provided for each vehicle and winter toolbox talk briefed to all drivers	2	2	4				
Driving under the influence of drugs or alcohol while on company business	Damage to vehicles or property which could affect employees, members of the public	Drugs & alcohol policy applies to all employees. Random D&A testing for all employees	1	3	3				

Danger from Mechanical failure, resulting in road traffic collision.	Damage to vehicles or property which could affect employees, members of the public	Regular Planned Preventative maintenance. Drivers to report any faults in vehicles. Stop driving if vehicle unsafe. Roadside assistance available to all drivers. Vehicles not to exceed maximum load weight. Driver to familiarise himself/herself with vehicle handbook, vehicle features and controls. WRRR Vehicle checks undertaken and recorded Vehicle pre check before using MOTs (all vehicles new) All defective vehicles temporarily replaced with hire vehicles Vehicles changed every 2-3 years on lease	2	2	4			
Unqualified or inexperienced drivers, Mechanical failure, vehicle breakdown, driving under the influence resulting in road traffic collision.	Severe/major/minor injury due road traffic collision which could affect employees, members of the public	Regular Planned Preventative maintenance. Drivers to report any faults in vehicles. Stop driving if vehicle unsafe. Roadside assistance available to all drivers. Vehicles not to exceed maximum load weight. Driver to familiarise himself/herself with vehicle handbook, vehicle features and controls. WRRR Vehicle checks undertaken and recorded Vehicle pre check before using MOTs (all vehicles new) All defective vehicles temporarily replaced with hire vehicles Vehicles changed every 2-3 years on lease All drivers undertake FORS assessment including sight tests All staff required to drive have licenses checked (DP20 forms) All staff complete CBT provided by FORS New staff required to drive as part of duties work assessed by team leaders Staff required to drive Fleet vehicles as part of their daily duties to attend Safe Urban Driver training Driving At Work Handbook issued Highway code provided to all staff Once staff have completed CBTs and DP20 checks completed then Authorised to drive Assurance checks Drugs & alcohol policy applies to all employees. Random D&A testing for all employees	2	4	8			

Vehicle break down resulting in a collision	Damage to property which could affect employees	Driver to pull in side of road as much as possible; Keep lights on and hazard warning lights on; Driver to remove himself/herself to a safe area as far as possible from the road whilst waiting for road assistance	2	2	4			
Distraction while using a mobile phone/sat nav resulting in road traffic collision	Damage to property which could affect employees, members of the public, visitors	Only hands-free mobile phones to be used; Do not use any hands free or handheld device when working on or travelling to site in accordance with the Life Saving Rules. To be supplied to all who require it for their work. Phone call should not be made whilst vehicle is moving. If phone call received driver to stop vehicle to continue conversation. Drivers not to use two-way communication radios when driving – (colleague in vehicle to deal with radio calls or if driver on own then to respond to radio call once safely parked) Satnavs journeys to be programmed prior to setting off.	2	3	6			
Unqualified or inexperienced drivers resulting in collision	Damage to vehicles or property Which could affect employees, Members of the public	All drivers undertake FORS assessment including sight tests All staff required to drive have licenses checked (DP20 forms) All staff complete CBT provided by FORS New staff required to drive as part of duties work assessed by team leaders Staff required to drive Fleet vehicles as part of their daily duties to attend Safe Urban Driver training Driving At Work Handbook issued Highway code provided to all staff Once staff have completed CBTs and DP20 checks completed then Authorised to drive Assurance checks	1	4	4			
Driving whilst disqualified	Damage to vehicles or property which could affect employees	Checks upon recruitment and regular checks thereafter Employees are to advise company of any disqualifications	1	1	1			

Reversing into someone either in the depot or when attending to/delivering to site	Major/minor injury Damage to property which could affect employees, members of the public, visitors	Driver to check for pedestrians, use hazard warning lights when reversing. Depots have safe walking routes, blind spot mirrors and speed limits in place Driver education (CBT, Safe urban driving) Drivers to reverse into parking bays where practical/safe to do so Drivers to use a reversing assistant if available Drivers to always carry out a visual assessment of their surroundings and hazards before attempting to reverse Audible reversing alarm in use if fitted If you have a 'drivers mate', use your colleague as a look out to ensure the route is clear. Drivers handbook (Sec 28, 29 & 30)	2	3	6			
Theft of vehicle and/or equipment stolen Stolen vehicle used to gain access to DLR property	Major/minor injury Damage to property which could affect employees, members of the public	Engines to be switched off Vehicles kept locked at all times Stolen vehicles / equipment reported immediately Access to main depots controlled by security and staff pass needed. Drivers handbook safety & security (Sec 26)	2	2	4			
Manual handling / slip/trip/falls while loading of vehicles removing goods from vehicle	Minor injury Damage to property which could affect employees, members of public, visitors	All Fleet drivers to complete manual handling training Heavier items to be handled by two or more persons Driver to look around before removing items from vehicle. Extra care to be taken when moving larger items. Also, refer to Manual handling Risk assessment. Hi-Vi Clothing-BS EN 471-2 correctly fastened when outside of vehicle Flatbeds to have drop down sides Drivers not to climb onto flatbeds unless they are fitted with working at height bars and drop-down steps to gain access. Larger item to be loaded via mechanical handling equipment where applicable	2	2	4			
Key hot spots where collisions more likely to occur or more vulnerable road users likely to be at a higher frequency (e.g. outside schools at the start/end of school day)	Major/ minor injury due road traffic collision which could affect employees, members of the public	Known hotspots if identified to be circulated to all drivers Where practical schools to be avoided during start and finish of school day Satnavs journeys to be programmed prior to setting off. Blind spot mirrors on vehicles Quartix tracking of speed, excessive acceleration / braking and idling Safe Urban driver training	1	4	4			

Driver impairment due medical conditions	Major/minor injury Damage to property which could affect employees, members of the public	All staff undergo company medical (HR002 Medical Fitness Standard) Eyesight checking (20 metres) in place Drugs & alcohol policy and random testing on place All staff required to drive have licenses checked on e-approval system Drugs & alcohol policy and random testing in place (SOP316) Driver handbook (sec 18) and DVLA guidance (www.gov.uk/dvla-medical-enquiries) All staff required to notify line manager of any medication they are on	1	3	3			
Vehicle not fit for work purpose (e.g. load/equipment or ill-equipped for conditions, requirements of work/personnel) resulting in collision or damage	Major/minor injury Damage to property which could affect employees, members of the public	All vehicles assessed by Amey Fleet and KAD personnel prior to introduction. Modifications specified (e.g., racking & restraints where required) Hire vehicles trialed prior to firming up fleet and long-term leasing Vehicle pre check before using MOTs (all vehicles new) All defective vehicles temporarily replaced with hire vehicles Vehicles changed every 2-3 years on lease	1	1	1			
Shedding or movement of load resulting in collision.	Major/minor injury Damage to property which could affect employees, members of the public	All vehicle loads to be assessed (maximum loading determined) Loads to be evenly distributed over axles Toolbox talk on safe loading All equipment/materials to be secured with restraints if required or placed in a position where damage cannot occur in the event of a collision (e.g. bulkhead)	1	4	4			
Carrying of chemicals, fuels, gas cylinders Release of harmful substances or explosion in event of collision	Major or minor injury or environment which could affect employees, members of the public	Small quantities carried (e.g. diesel jerry cans no more than 5 litres) Items secure at all times Spill kits in place for any accidental releases Employees trained in the storage and carrying of COSHH Items	1	4	4			
Use of Tail lifts, Cherry pickers, Forklift Trucks and Hiab's, MEWPs resulting in a fall from height, striking of building, stationary objects etc.	Major/minor injury Damage to property which could affect employees, members of the public	Licensed and/or trained staff only to use fork lifts, cherry pickers and tail lifts, MEWPs HIAB vehicles hired in with qualified staff Work specific risk assessments completed with safe systems of work in place with PICOWs	1	4	4			

Poor air quality on roads potentially causing irritation to lungs and long term health effects Poor air quality caused by industrial emissions / traffic fumes combined with certain weather conditions	Minor irritation to eyes and lungs short term Potential long term health impacts which could affect employees	Anti-idling of vehicles in depots and or when parked on work sites Anti-idling on roads when stuck in stationary traffic Stop/Start technology on the majority of new fleet (2018>) Fleet moving to electric or hybrid vehicles	2	2	4			
Slip, trip or fall from vehicle when loading and unloading a vehicle	Serious or minor injury which could affect employees	Flatbeds to have drop down sides Drivers not to climb onto flatbeds unless they are fitted with working at height bars and drop-down steps to gain access. Refer to WRA-ENG-GEN-03 working at height	2	3	6			
Charging Electric Vehicles via charging units	Electric shock Burns, Palpitation, Heart attack, which could affect employees	Training on use of equipment. Intrinsically safe design of charging units. Conformity certificates held by KAD Vehicle connection and disconnection from charging units is completed when unit has been switched off..	1	5	5			
Tripping hazards from cables and ground conditions at electric charging bays	Sprains, strains, head injuries, lacerations which could affect employees	Anti-slip paint in charging bay. Vehicles to drive into bays to minimise trailing cables. Engineer anti-slip SRC S3 footwear Adverse weather indicators on site Depot treated with anti-ice	2	3	6			
Collision involving:- Cyclists, Motorcyclists, E-Scooters Pedestrians (particularly children)	Fatality or severe/ major/minor injury due road traffic collision which could affect employees, members of the public	Driver behaviour CBTs with FORS Safe Urban driving Driver handbook – speeding, (sec 18, 19) Blind spot mirrors on vehicles Quartix tracking of speed, excessive acceleration / braking and idling	1	5	5			

CONSIDER THE HIERARCHY OF CONTROLS: (Elimination, Substitution, Engineering Controls, Signage / Administrative Controls / Personal Protective Equipment).			
	Prepared By:	Approved By:	Approved By:
Signature:	<i>Darren Cockle</i>	<i>Neil Stroud</i>	
Name (Print):	Darren cockle	Neil Stroud	
Job Title:	HSQE Senior Coach	Head of HSQE	
Date:	03 rd December 2025	03 rd December 2025	

			Likelihood				
			Certain	Highly Likely	Probable	Reasonable	Highly Unlikely
			5	4	3	2	1
Consequence	Catastrophic	5	25	20	15	10	5
	Hazardous / Substantial	4	20	16	12	8	4
	Major	3	15	12	9	6	3
	Minor	2	10	8	6	4	2
	Negligible	1	5	4	3	2	1

15 to 25	Intolerable	8 to 12	Tolerable if ALARP	1 to 6	Acceptable
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Red:	(Ranking 15-25)	Indicates the risk is too high and is unacceptable (intolerable). The activity should not be started or should cease until risk reduction improvements or addition control measures are implemented. Periodic review of assessment should occur.
Amber:	(Ranking 8 to 12)	Indicates that the risk is tolerable if it is 'as low as reasonably practicable' (ALARP). Further risk reduction must be considered in line with industry standards and technological advances. Risk reduction measures involving sensible low-cost measures should be implemented. Higher cost risk reduction measures may require cost benefit analysis before any decision is made on implementing them. Regular monitoring and assessment reviewed.
Green:	(Ranking 1 to 6)	Indicates the risk is broadly acceptable. Sensible low-cost improvements should however be considered where appropriate. General monitoring and periodic review should occur.

Risk Assessment Number	WRA-HSQE-GEN-01
Name of Assessor	D Cockle
Date of assessment	05/12/2025
Site or Area being Assessed:	Company Wide
Activity:	Manual Handling
Review Date	04/12/2026

Description of Activity *(Key tasks that support the activity)*

This risk assessment covers Manual Handling activities undertaken by KAD employees in their line of general duties

People Involved in the Activity *(Affected parties)*

All KAD Employees across the business including office activities

Risk Assessment Consultation *(Stakeholders and interested parties)*

RMT Union
Line Management
HSQE Employees

References and Associated Documentation *(Additional Documentation to be read in conjunction with this Risk Assessment)*

Implementation Plan *(Insert actions agreed on how the additional controls identified in the risk assessment are to be implemented)*

Ref.	Priority	Responsibility	Due Date	Status

Identify and list hazards	Identify and list Who are at risk and how harm could occur	Control Measures	Initial assessment			Is the risk reduced as low as reasonable possible? If not, then state what additional measures are to be considered	Residual risk		
			L'hood	Severity	Risk Rating		L'hood	Severity	Risk Rating
Twisting	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries, falls, fatigue which could affect employees.	Only employees trained in manual handling to carry out tasks Employees to follow good handling techniques as detailed in SP-201d Work areas should be kept clear of obstructions to allow movement. Reduce the weight of the object where possible by breaking down loads Avoid twisting by moving your feet and whole body Any spillages should be cleaned up immediately. All areas are to be adequately lit. Employees to report hazards or if accidents occur.	2	2	4				
Stooping	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries, falls, fatigue which could affect employees.	Only employees trained in manual handling to carry out tasks Employees to follow good handling techniques as detailed in SP-201d Work areas should be kept clear of obstructions to allow movement. Reduce the weight of the object where possible by breaking down loads Place load down under control Any spillages should be cleaned up immediately. All areas are to be adequately lit. Employees to report hazards or if accidents occur.	2	2	4				

Long carrying distances	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries., injuries to feet from falling objects, contact injuries cuts, bruises, falls, fatigue which could affect employees.	Only employees trained in manual handling to carry out tasks Plan your route. Ensure route is clear of obstacles Ensure that any lifting aids available are used where available. Ensure suitable issued PPE gloves/boots are used to minimise risk of injury to hands and feet Employees to follow good handling techniques as detailed in SP-201d Have 'set-down' points to split up long travel distances Team lifting techniques to be adopted where required Employees to report hazards or if accidents occur.	2	2	4			
Individual Capability Hazardous to those with health problems	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries, falls, fatigue which could affect employees.	Employees to inform manager of any health conditions which may affect ability to move and handle objects. Manager to carry out individual assessment if problems reported if necessary revise/restrict moving and handling tasks until further advice from occupational health obtained. Only employees trained in manual handling to carry out tasks Employees to follow good handling techniques as detailed in SP-201d Employees to report hazards or if accidents occur.	1	3	3			

Individual Capability Risk to those who are pregnant	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries, falls, fatigue which could affect new and expectant mothers.	Employees to inform line manager. Manager to carry out individual assessment when reported as necessary revise/restrict moving and handling tasks until further advice from occupational health and HSQE is obtained. Complete new and expectant mothers risk assessment.	1	1	1			
Heavy Loads	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries., injuries to feet from falling objects, contact injuries cuts, bruises, falls, fatigue which could affect employees.	Only employees trained in manual handling to carry out tasks Ensure that any lifting aids available are used where available. Plan your route. Ensure route is clear of obstacles Reduce the weight of the object where possible by breaking down loads Ensure suitable issued PPE gloves/boots are used to minimise risk of injury to hands and feet Employees to follow good handling techniques as detailed in SP-201d Team lifting techniques to be adopted where required Employees to report hazards or if accidents occur.	2	2	4			

Bulky/Unwieldy Loads	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries., injuries to feet from falling objects, contact injuries cuts, bruises, falls, fatigue which could affect employees.	Only employees trained in manual handling to carry out tasks Ensure that any lifting aids available are used where available. Plan your route. Ensure route is clear of obstacles Test loads before lifting Reduce the weight of the object where possible by breaking down loads Employees to follow good handling techniques as detailed in SP-201d Team lifting techniques to be adopted where required Employees to report hazards or if accidents occur.	2	2	4			
Difficult to grasp Loads	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries., injuries to feet from falling objects, contact injuries cuts, bruises, falls, fatigue which could affect employees.	Only employees trained in manual handling to carry out tasks Ensure that any lifting aids available are used where available. Check the load is balanced and secure before lifting Adjust your grip as necessary Re-pack contents to improve stability Team lifting techniques to be adopted Employees to report hazards	2	2	4			

Constraints on posture i.e. restricted space	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries, cuts, bruises, which could affect employees.	Only employees trained in manual handling to carry out tasks Remove obstructions to free movement Avoid steps and steep ramps Team lifting techniques to be adopted where required Employees to report hazards Avoid repetitive amount of twisting and stooping Make use of workers' skills to enhance competence Supervisor to assess task if good posture cannot be achieved	2	2	4			
Unsteady / unpredictable loads	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries., injuries to feet from falling objects, contact injuries cuts, bruises, falls, fatigue which could affect employees.	Only employees trained in manual handling to carry out tasks Check the load is balanced and secure before lifting Break load down into more manageable sizes where possible Team lifting techniques to be adopted Re-pack contents to improve stability Employees to report hazards or if accidents / incidents occur	2	2	4			
Harmful e.g. sharp, hot, contaminated	Injuries to feet from dropping objects, contact injuries cuts, bruises, which could affect employees.	Ensure suitable issued PPE gloves/boots are used to minimise risk of injury to hands and feet Tape up sharp edges where required	2	2	4			

Poor floors e.g. uneven, slippery, unstable, variations in levels e.g. steps	Injuries to feet from dropping objects, contact injuries cuts, bruises, falls, fatigue which could affect employees.	Plan your route. Ensure route is clear of obstacles Avoid steps and steep ramps where possible e.g. by using a suitable lift or re-plan and use alternative route Employees to report hazards	2	2	4			
Hot, Cold, Humid conditions	Fatigue which could affect employees.	Maintain good ventilation Employees to inform manager of any health conditions which may affect ability to move and handle objects. Ensure suitable issued PPE gloves/boots are worn Have 'set-down' points to split up long travel distances.	2	2	4			
Strong air movements – Environmental Conditions	Contact injuries cuts, bruises, falls, fatigue which could affect employees.	Plan your route. Ensure route is clear of obstacles Team lifting techniques to be adopted Assessment on environmental conditions before lifting Ensure that any lifting aids are used where available.	2	2	4			

Strenuous pushing or pulling of objects	Musculoskeletal disorders i.e. Neck and upper limb disorders, Lower limb disorders, Back pain and back injuries., injuries to feet from falling objects or wheels, contact injuries cuts, bruises, falls, fatigue which could affect employees	Only employees trained in manual handling to carry out tasks Employees to inform manager of any health conditions which may affect ability to carry out task and restrict individuals where necessary. Only trained employees to carry out manual handling tasks, Records to be kept. Plan your route. Ensure route is clear of obstacles Consider extra force and fitness required for longer distances or slopes Employees to follow good pushing/pulling techniques as detailed in below guidance e.g. Check trolley/barrow/lifting aid is in good working order, check wheels, tyres, handgrips in place (maintenance checks) Check weight of load and stability prior to task Break down loads/weight to transport. Get assistance e.g. with doors Consider environment and weather Apply force at approximately waist height and avoid lower or above shoulder height forces Ensure suitable issued PPE gloves/boots are used to minimise risk of injury to hands and feet Employees to report hazards or if accidents occur	2	2	4			

CONSIDER THE HIERARCHY OF CONTROLS: (Elimination, Substitution, Engineering Controls, Signage / Administrative Controls / Personal Protective Equipment).			
	Prepared By:	Approved By:	Approved By:
Signature:	<i>Darren Cockle</i>	<i>N Stroud</i>	
Name (Print):	Darren Cockle	Neil Stroud	
Job Title:	Senior HSQE Coach Engineering	Head of HSQE	
Date:	5 th December 2025	5 th December 2025	

			Likelihood				
			Certain	Highly Likely	Probable	Reasonable	Highly Unlikely
			5	4	3	2	1
			25	20	15	10	5
Consequence	Catastrophic	5	25	20	15	10	5
	Hazardous / Substantial	4	20	16	12	8	4
	Major	3	15	12	9	6	3
	Minor	2	10	8	6	4	2
	Negligible	1	5	4	3	2	1

15 to 25	Intolerable	8 to 12	Tolerable if ALARP	1 to 6	Acceptable
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Red:	(Ranking 15-25)	Indicates the risk is too high and is unacceptable (intolerable). The activity should not be started or should cease until risk reduction improvements or addition control measures are implemented. Periodic review of assessment should occur.
Amber:	(Ranking 8 to 12)	Indicates that the risk is tolerable if it is 'as low as reasonably practicable' (ALARP). Further risk reduction must be considered in line with industry standards and technological advances. Risk reduction measures involving sensible low-cost measures should be implemented. Higher cost risk reduction measures may require cost benefit analysis before any decision is made on implementing them. Regular monitoring and assessment reviewed.
Green:	(Ranking 1 to 6)	Indicates the risk is broadly acceptable. Sensible low-cost improvements should however be considered where appropriate. General monitoring and periodic review should occur.