

Purpose

The purpose of this Standard is to define the management process that applies to any work activity that utilises vehicles, trailers, plant and work equipment. The Standard also determines how Kier selects, operates, maintains and inspects work equipment. It determines how Kier monitors, assesses, controls and reviews the competencies of mobile plant and equipment operators. It defines the management requirements to ensure the safety and health of personnel using vehicles, trailers, plant and work equipment and others who may be affected by their operation.

This standard covers a range of vehicles, trailers and items of plant and equipment commonly used across Kier Business Units. The list is not exhaustive, additional vehicles, trailers and items of plant must be managed in accordance with their level of risk through Business Stream Minimum Standards and local Business Unit documentation.

Scope

Unless accompanied by an approved derogation this standard is applicable to all business streams and business units identified in [SHEMS-STD-GR-001](#).

Requirements

Plan

Selection and procurement of vehicles, trailers, plant and work equipment

- Vehicles, trailers, plant and work equipment must be suitable for the task in hand, seek advice from SHE Manager/Advisor or other specialists if necessary. Consider:
 - The task for which the work equipment is to be used
 - Type and design of work equipment required
 - Effect of new equipment on existing operations
 - Required safety mechanisms
 - Ergonomic considerations
 - Training needs, or instructions requirements
 - Inspection needs, in terms of competent persons etc.
 - Levels of noise, vibration and dust generation ensuring it is reduced to the lowest practical level
- Requisitions must be assessed to identify any reasonably foreseeable risks or impacts when used at work under normal operating conditions
- Vehicles, trailers, plant and work equipment procured must include such controls so as to minimise the risk/impact to as low as reasonably practicable.
- Vehicles, trailers, plant and work equipment must be procured from a Kier approved source and must comply relevant EU and UK standards, including CE marking

Receipt of vehicles, trailers, plant and work equipment

- Vehicles, trailers, plant and equipment received must be:
 - Checked to ensure they are received in good working order, compliant to UK regulations and suitable for the task intended
 - Supplied with suitable information operational, maintenance and inspection regimes (with the exception of simple hand tools)
 - Supplied with all necessary approved marks, documentation, values, records and certification.



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Training Requirements

- Recognised training schemes are as follows:
 - CPCS (Construction Plant Competency Scheme - Previously CITB)
 - EPCS (EPIC Plant Competency Scheme)
 - NPORS (National Plant Operators Registration Scheme)
 - LANTRA (National Training Organisation)
 - CPCS (Construction Plant Competency Scheme - Previously CITB)
 - EPCS (EPIC Plant Competency Scheme)
 - NPORS (National Plant Operators Registration Scheme)
 - IPAF (International Powered Access Federation)
- During training, persons must only operate mobile plant or equipment under the direct supervision of a qualified operator.
- All training must be re-assessed at specific intervals as required by competence scheme and Kier Standard requirements.
- Subcontractors must provide evidence of training to the satisfaction of management.

Operator Competence – Mobile Plant (including earth moving equipment)

- Operators must hold the relevant Construction Plant Competence Scheme (CPCS) or Build UK approved scheme card and endorsement for the category of plant they are operating
- Authorisation must be recorded on (***SHEMS-FOR-GR-146***) and is site / premises specific and not transferable.
- Evidence must be obtained of familiarisation training in the operation and controls for the specific machine and its attachments and should be detailed in the operators CPCS Log Book or equivalent.
- Managers must review the operator's CPCS or equivalent card and log book before authorisation. Refer to the Training and Competency Standard for further information.
- A qualified operator must:
 - Agree to train the person and take responsibility for the use of the mobile plant or equipment
 - Be in close attendance. This is either riding with the trainee in the case of rider operated plant (if a passenger seat is fitted) or in a position to observe the trainee and communicate with them

New Starters

- Anyone who hold Certificates of Competence when joining Kier must be assessed by either attending a 'refresher' course by a Kier approved training or by a competent Kier trainer/operator as instructed by Kier Management.
- A 6-week probationary must confirm competency in operating the item.
 - If not acceptable the operator must be given re-training or other actions taken as decided by the management team.

Operating mobile plant and work equipment in depots and other premises

- Anyone operating mobile plant and equipment in depots and other premises must be over 18 years of age, trained and hold a Certificate of Competency for the particular item of mobile plant or equipment

Operating mobile plant and work equipment on the public highway

- Anyone operating mobile plant and equipment on the public highway must:
 - Be trained and hold an approved Certificate of Competency for the particular item of mobile plant or equipment
 - Hold a full UK issued driving licence in the appropriate category, age restrictions are listed below:

Category	Minimum Age
Vehicles up to 3500kg Gross Vehicle Weight	17
Vehicles 3500 kg to 7500kg including trailer up to 750 kg	18
Vehicles 3500 kg to 7500kg with trailer over 750kg	21
All vehicles over 7500kg	21
Agricultural tractor	16
Road roller	21
Tracked machine	21
Mowing machine or vehicle controlled by a pedestrian	16

Operating mobile plan and work equipment used in construction work

- Kier personnel and subcontractors must be trained and hold a CPCS approved certificate of training or equivalent for the type of equipment being operated and be over the minimum age as identified in the table below.

Plant/Equipment Description	Minimum Age	UK Driving Licence	CPCS Cat Ref
Plant & Equipment used on Construction Work			
Crawler Crane	21 yrs	No	A02
Tower Crane	21 yrs	No	A04
Dragline	21 yrs	No	A05
Concrete pump –Truck Mounted Boom	21 yrs	Yes	A06
Forward Tipping Dumper- Wheeled	18 yrs	Yes	A09 A
Forward Tipping Dumper- Tracked	18 yrs	Yes	A09 B
Excavator 180° < 5 tonnes	18 yrs	Yes	A10
Excavator 180° > 5 tonnes	21 yrs	Yes	A12
Rough Terrain Masted Forklift	21 yrs	Yes	A14
Forklift Side-Loader	21 yrs	Yes	A15
Industrial Forklift Truck	21 yrs	Yes	A16
Telescopic Handler	21 yrs	Yes	A17
Reach Truck	21 yrs	Yes	A18
Grader	21 yrs	Yes	A19
Wheeled Loading Shovel	21 yrs	Yes	A21
Tracked Loading Shovel	21 yrs	Yes	A22
Skid Steer Loader	18 yrs	Yes	A23
Motorised Scraper	21 yrs	Yes	A24
MEWP Scissor	21 yrs	No	A25
MEWP Boom	21 yrs	No	A26
Ride on Roller	21 yrs	No	A31
Soil/Landfill Compactor	21 yrs	No	A32
Agricultural Tractor	18 yrs	Yes	A33
Crawler – Tractor/Dozer	21 yrs	No	A34
Crawler – Tractor/Side Boom	21 yrs	No	A35
Lorry Loader	21 yrs	No	A36
Trencher	21 yrs	No	A37
Skip Handler	18 yrs	No	A39
Loader Compressor	21 yrs	No	A41
Crusher	21 yrs	No	A42
Screener	21 yrs	No	A43

Plant/Equipment Description	Minimum Age	UK Driving Licence	CPCS Cat Ref
Piling Rig – Driven < 15 tonnes	21 yrs	No	A45
Piling Rig – Driven > 15 tonnes	21 yrs	No	A46
Piling Rig – Bored < 15 tonnes	21 yrs	No	A47
Piling Rig – Bored > 15 tonnes	21 yrs	No	A48
Dump Truck – Articulated Chassis	21 yrs	Yes	A56
Dump Truck - Rigid	21 yrs	Yes	A57
Excavator 360° < 10 tonnes	21 yrs	Yes*	A58
Excavator 360° > 10 tonnes	21 yrs	Yes*	A59
Mobile Crane	21 yrs	Yes	A60
Compact Crane	21 yrs	No	A66

Operator Licence Regulation

- Some mobile plant may be subject to operator licence regulation where this is the case the requirements in the Operator's Licence Compliance (***SHEMS-MST-GR-511***) Standard apply
- Mobile plant taken on the public highway will come into the appropriate gross vehicle weight categories and must be registered and insured

Do

- Manufacturers operator manuals/instructions (with the exception of simple hand tools) must be readily available to the operator and sufficient time allocated for familiarisation.
- Vehicles, trailers, plant and work equipment must be checked prior to use in accordance with manufacturer's instructions by a competent person (normally the operator).
- All operators must take time to familiarise themselves with plant with varying controls.
 - An assessment/practise must be carried out prior to commencing work. This should be at least 15 minutes, in a 'safe' area and cover all operations.
- Mobile plant must not be left running, or with the key in the ignition when unattended

Storage of vehicles, trailers, plant and work equipment

- Vehicles, trailers, plant and work equipment must be stored safely, securely and in accordance with manufacturers/suppliers' recommendations, to prevent damage and deterioration of equipment.

Key Control

General Requirements	Additional requirements for projects of 20 days or more
<ul style="list-style-type: none"> All plant keys must be under the supervision of the on-site supervisor/ganger All plant keys will be removed from the plant when left unattended All keys must be kept in a secure area of site 	<ul style="list-style-type: none"> Key safe to be present on site and locked and controlled by the site manager A process adopted and communicated for the logging in and out plant keys Nominated on-site personnel to issue plant keys on a shift to shift basis A recognised system in place to identify registered keys (e.g. cable tie)

Maintenance of vehicles, trailers, plant and work equipment

- Maintenance of vehicles, trailers, plant and work equipment must:
 - Be in-line with the manufacturers/suppliers' recommendations
 - Ensure all service schedules/programmes are compliant with respective legislative maintenance requirements
- Repairs and non-routine maintenance must be undertaken by authorised and competent personnel

Additional requirements associated with commonly used plant and work equipment

<p>Compressed Air Systems</p>	<ul style="list-style-type: none"> ▪ The requirements within Pressurised Systems (<i>SHEMS-STD-GR-056</i>) apply to compressed air systems ▪ Air receivers must be examined, and a written scheme of examination must be prepared by a competent person. Pressure systems, where permanent, are to be treated as air receivers. ▪ Air receivers including those integrally fitted to compressors must be marked with their safe working pressure and a distinguishing number and fitted with a safety valve, pressure gauge and drain cock ▪ Mobile compressors must be set up level with all guards and covers correctly fitted ▪ Periodic checks must be undertaken by a competent person that lubrication, coolant and fuel levels are adequate. ▪ Hoses must be maintained in good order and should be inspected before use ▪ Hose whip checks must be used on all hoses greater than 15mm diameter or when required by risk assessment.
<p>Mobile Plant (including Earth Moving Equipment)</p>	<ul style="list-style-type: none"> ▪ For specific information, refer to the CIP Manual. ▪ Operating areas must, where practicable, be segregated from pedestrian routes to provide safe work places ▪ Signs on restrictions of use or other directions must be provided. ▪ All mobile plant must be fitted with an amber warning beacon ▪ Operators must have 360° field of vision from the operating position sufficient to see an object 1m high, 1m from the machine ▪ This can be achieved by use of mirrors, Fresnel lenses or CCTV ▪ Ride on mobile plant must be fitted with a roll over protection (ROP) cab or a rollover bar and a seat belt ▪ All seat belts must be worn and other safety devices correctly used in accordance with the manufacturer's instructions. ▪ Demolition plant must be fitted with Falling Object Protection (FOP) <ul style="list-style-type: none"> ▪ This may also apply to other plant not involved in demolition and should be identified through risk assessment. ▪ Ride on mobile plant when reasonably practicable, must carry an appropriate fire extinguisher ▪ Plant containing burners e.g. pavers, bitumen boilers or lining equipment must carry suitable fire extinguishers.

	<ul style="list-style-type: none"> The requirements within Telehandlers - Planning and use of (<i>SHEMS-MST-GR-0029</i>) apply to telehandlers
Excavators Used as Lifting Equipment	<ul style="list-style-type: none"> The requirements within Lifting Equipment (<i>SHEMS-STD-GR-045</i>) apply
Quick Hitches	<ul style="list-style-type: none"> The requirements within Quick Hitches (<i>SHEMS-MST-GR-0002</i>) apply
Piling Equipment	<ul style="list-style-type: none"> Piling rigs and associated equipment must be selected based on design requirements and proposed work methods e.g. installation/extraction etc Piling mats for piling rig operations are temporary works and must be managed in accordance with the Temporary Works Standard (<i>SHEMS-STD-GR-048</i>). All piling rigs must be thoroughly examined before use, and as a minimum, at 12 monthly intervals and records maintained with the equipment. Regular maintenance and statutory inspections must be carried out and records maintained. When a second line is used to handle objects the piling rig and all equipment used as lifting accessories must be subject to the same statutory requirements as lifting equipment
Electrical Equipment	<ul style="list-style-type: none"> The requirements within <i>SHEMS-STD-GR-071</i> Electrical Compliance apply Refer also to Premises Management Standard (<i>SHEMS-STD-GR-019</i>).
Portable Tools	<ul style="list-style-type: none"> Records of portable electrical equipment and their test frequency should be recorded on Electrical Equipment PAT Register (<i>SHEMS-FOR-GR-138</i>).
Hand Tools	<ul style="list-style-type: none"> Hand tools must be selected to suit the work, be appropriate to the task and be maintained in a serviceable condition Consideration must be given to where the tools will be used, e.g. avoiding sparks in flammable atmospheres Cutting edges must be sharp, handles free from cracks and splinters Chisel heads and hammers must be free of burrs or splits
Power Tools	<ul style="list-style-type: none"> Power tools must be selected by risk assessment, giving due regard to hazards associated with the power source, e.g. compressed air, explosive cartridges, electricity, high-pressure hydraulics, internal combustion engines Additional hazards of heat, noise, vibration and high velocity debris may arise during operation Health surveillance may be required where personnel are exposed to dust, noise and vibration. Refer to the Occupational Health Standard and the Hand Arm Vibration (HAVS) Standard.
Cartridge Operating Tools	<ul style="list-style-type: none"> Cartridge operated tools must only be used by competent personnel who can provide evidence of suitable training Personnel must not suffer from defective colour vision as cartridges are colour coded

	<ul style="list-style-type: none"> ▪ Cartridges and cartridge tools must not be used in explosive atmospheres and when not in use they must be stored in a separate secure location ▪ Cartridge tools must be overhauled at least annually, and records maintained
Electrically Operated Tools	<ul style="list-style-type: none"> ▪ Preference must be given to battery operated tools. <ul style="list-style-type: none"> ▪ If practicable they must be earthed or double insulated and the power source where reasonably practicable restricted to 110volts. ▪ Tools are rated above 110volts must be subject to further risk assessment and controls ▪ Portable electrical tools and battery chargers must be inspected before use and subjected to portable appliance testing not exceeding 3 months. ▪ Evidence of inspection must be readily available with the use of tags fixed to the item of equipment recording the last inspection being recommended ▪ Records of inspection must be entered in the Project SHE Register / Premises Management Register (<i>SHEMS-REG-GR-119</i>).
Hydraulic Tools	<ul style="list-style-type: none"> ▪ Pressure must be released from the system before attempting to disconnect hoses.
Pneumatic Tools	<ul style="list-style-type: none"> ▪ Couplers must be fully locked and a hose whip check fitted between the hose and the tool to prevent the hose whipping should the coupling fail ▪ Pressure must be released from the system before attempting to disconnect hoses. ▪ The compressor will be subject to inspection in accordance with the written scheme, refer to Pressure Systems (<i>SHEMS-STD-GR-056</i>) ▪ Compressors should be set up level with all guards and covers correctly fitted ▪ Periodic checks must be made by a competent person that lubrication, coolant and fuel levels are adequate. ▪ Vibration dampened tools must be selected, and operators subjected to health surveillance and monitoring
Petrol and Diesel Engine Tools	<ul style="list-style-type: none"> ▪ Petrol and diesel engine tools must only be used in well ventilated areas because of the hazard of toxic exhaust gases. ▪ Refuelling must be in a dedicated area ▪ Drip trays must be used to contain any spillage ▪ Spill kits must be readily available on site.
Chainsaws and Benchtop Saws	<ul style="list-style-type: none"> ▪ The use of chainsaws must be limited to arboriculture activities ▪ Operators of chain saws must demonstrate that they have received appropriate training and obtained a relevant certificate of competence or national competence award. ▪ The certificate or award must be issued by either a Lantra or City and Guilds NPTC approved training provider <ul style="list-style-type: none"> ▪ Further guidance on chainsaws is provided within HSE guidance Chainsaws at Work INDG31(rev2) published 01/13 ▪ Bench top-cut saws must be securely fixed to a suitable work bench.

Brush Cutters and Strimmers	<ul style="list-style-type: none"> Individuals operating brushcutters or strimmers must have received appropriate training and be in possession of a City and Guilds NPTC level 2 Certificate of competence in Brushcutting Operations or Lantra equivalent.
Abrasive Wheels	<ul style="list-style-type: none"> Individuals whose duties will include the mounting of abrasive wheels must demonstrate that they have received appropriate training and have obtained a certificate of training in accordance with the schedule contained within HSE guidance Safety in the use of Abrasive Wheels. NB HSE advise that organisations usually issue certificates of attendance of this training and not competence.
Powered Access Equipment	<ul style="list-style-type: none"> The Management of Lifting Operations Standard (<i>SHEMS-STD-GR-045</i>) must be followed when using powered access equipment e.g. Mobile Elevated Work Platforms, Mast Climbing Work Platforms etc. The Temporary Works Standard (<i>SHEMS-STD-GR-048</i>) must be followed when considering ground conditions for Powered Access Equipment.

Check

Inspection and Examination

- Vehicles, trailers, plant and work equipment must be inspected/examined by a competent organisation and/or person to identify any faults or defects
- Vehicles, trailers, plant and work equipment subjected to deterioration, stresses and rigours by the nature of works being performed will be subjected to more frequent recorded inspections including but not limited to:
 - Operational/use safety
 - Excessive Vibration
 - Corrosive activities
 - Induced Stress-Strain
 - Fatigue
 - Wear
 - Breakage
 - Specific Site Conditions
- Records of inspection/examination must be:
 - Undertaken using the prescribed documentation, be legible and available for review
 - maintained on site or at the area office and be available for the duration of the works/contract and for a minimum 3 years for DVSA and liability requirements

Mobile Plant (including earth moving equipment) defects

- Defects must be recorded in the defect sheet
- A record of weekly inspection must be recorded in the Project SHE Register / Premises Management Register or when used remotely, held with the contract records.

Act

- Machines with defects affecting safe operation must be withdrawn from use.

Responsibilities

- **Directors, Senior Managers and Line Managers:** Are responsible for ensuring the requirements within this standard are adopted in all areas under their control. They should also ensure that this process is cascaded to employees and contractors and that it is complied with along with any relevant Kier Minimum Standards.
- **Directors/Senior managers:** Are also responsible for ensuring that vehicles, trailers, plant and work equipment specification will be consistent with CE marking, manufacturer's instructions, health and safety legislation, associated guidance and company requirements.
- **Competent Person(s):** Are responsible for ensuring that vehicles, plant and equipment are operated in-line with the requirements of this standard

Related Documents

IMS Documents

- [SHEMS-REG-GR-119](#) Premises Management Register
- [SHEMS-STD-GR-019](#) Premises Management Standard
- [SHEMS-STD-GR-045](#) Lifting Equipment
- [SHEMS-STD-GR-048](#) Temporary Works Standard
- [SHEMS-STD-GR-056](#) Pressure Systems
- [SHEMS-STD-GR-059](#) Underground Services
- [SHEMS-STD-GR-071](#) Electrical Compliance
- [SHEMS-MST-GR-511](#) Operator's Licence Compliance
- [SHEMS-MST-GR-0002](#) Quick Hitches
- [SHEMS-MST-GR-0029](#) Telehandlers - Planning and use of
- [SHEMS-FOR-GR-138](#) Electrical Equipment PAT Register
- [SHEMS-FOR-GR-146](#) Plant Operators Authorisation Permit

External Resources

- [HSG107](#) Maintaining Portable Electrical Equipment