

# SRL Environmental Maintenance

# Risk Assessment

**TASK: Specialist Vehicle/Compact Mini Tractor/Knapsack** **APPENDIX 2**

**CLIENT: COSTAIN CONTRACT: Highway Weed-control. SITE: Highway hard surfaces- kerb edges, kerb channels, footways, & associates obstacles**

	HAZARD TYPES & CLASSIFICATION OF RISK	Without Controls			EXISTING CONTROL MEASURES/GUIDANCE	With Controls		
		L	C	Total		L	C	Total
1	<p><b>Poor storage of herbicides</b></p> <p>Contamination of operator, other employees, client staff, members of the public, pets, other herbicide, vehicles, plant and PPE.</p> <p>Personal injury, pollution</p>	4	3	12	British Standards Inspection Scheme (BASIS) registered & certificate herbicide store under the control of BASIS Storekeepers. Vehicle storage to BASIS standards and ONLY to be used by National Proficiency Test Council (NPTC) certificate competent operators (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground CropSprayer Module).	2	3	6
2	<p><b>Poor transportation and handling of herbicide</b></p> <p>Contamination of operator, other employees, client staff, members of the public, pets, other herbicide, vehicles, plant and PPE.</p> <p>Personal injury, pollution</p>	3	4	12	<p>Vehicles with herbicide storage conforming to BASIS requirements. Specialist herbicide bins secured to vehicle body within goods compartment.</p> <p>ONLY to be used by NPTC certificate competent operators, (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground Crop Sprayer Module).</p> <p>Vehicles with bulkhead (vapour, liquid proof screen) between driver and goods compartment.</p> <p>All vehicles to be locked when unattended.</p> <p>Training, briefings and tool box talks</p>	2	4	8
3	<p><b>Movement of tractor within support vehicle while in transit</b></p> <p>Tractor ejection through goods compartment rear doors or crashing in to or through front bulkhead.</p> <p>Personal injury to employees, client staff, members of the public.</p>	5	5	25	<p>Prior to vehicle transit tractor always to be secured by the utilisation of the high load capacity webbing straps that are permanently attached to vehicle framework.</p> <p>Training, briefings and tool box talks</p>	2	5	10

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4	<p><b>The loading &amp; unloading of tractor from support vehicle.</b></p> <p>Tractor wheels coming off ramps when driving out of or reversing in to the support vehicle. Personal injury to operator, other employees, client staff, members of the public.</p>	5	4	20	<p>When driving the tractor from or in to support vehicle the operator shall utilize purpose built wheel guiding, high edged ramps c/w solid fixed mounting points for attachment to the vehicle body floor.</p> <p>Training, briefings and tool box talks</p>	2	4	8
5	<p><b>The incorrect setting up and preparation for spray operations.</b></p> <p>Over/under dosing of target with herbicide. Personal injury, contamination. Pollution Person at risk - Operator</p>	5	3	15	<p>ONLY to be carried out by NPTC certificate competent operators, (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground Crop Sprayer Module). Follow appropriate calibration procedures.</p> <p>Spill kits are to be carried at all times on support vehicles for fuel/herbicide spillage</p> <p>Training, briefings and tool box talks</p>	2	3	6
6	<p><b>The herbicide application operation.</b></p> <p>Contamination of operator, other employees, client staff, members of the public and pets. Contact with equipment, vehicle, and street-furniture. Personal injury, contamination, impacts</p>	5	4	20	<p>Utilisation of ONLY NPTC certificate competent operators, (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground Crop Sprayer Module).</p> <p><b>HOLD POINT</b></p> <p>Operator to be continually aware of their immediate environs, looking ahead to monitor, interrupt and make judgment on the safest and best method of application to satisfy the contract specification.</p> <p>Training, briefings and tool box talks</p>	2	4	8

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7	<p><b>The use of tractor hand-lance</b></p> <p>Un safe control of tractor.</p> <p>Personal injury to operator, other employees, client staff, members of the public</p>	3	4	12	<p>ONLY experienced NPTC certificate competent operator (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground Crop Sprayer Module) apply herbicide following NPTC protocols/procedures. Hand-lance use should preferably be when the machine is stationary but may be used in certain situations while in motion where a visual risk assessment shows that it is safe to do so.</p> <p><b>HOLD POINT</b> Check wind strength,public activity</p> <p>The Plant Operator to be continually aware of their immediate environs, looking ahead to monitor, interrupt and make judgment on the safest and best method of application to satisfy the contract specification.</p> <p>The hand lance will only be used to spray around obstacles on the pavement and in the channel while the tractor is moving when the other fixed nozzles are not appropriate. Such obstacles could include parked cars and also when the targeted weed growth within the channel is being shadowed/missed when being treated by a fixed boom nozzle from the pavement.</p> <p>Kerb channel weed growth should preferably be treated by a targeted boom nozzle application from the carriageway. A visual risk assessment must be carried out initially to ascertain plant operator safety from working in live/open traffic before this method of application is adopted. If deemed unsafe treatment to be carried out from the pavement.</p> <p>For a hand-lance to be used safely in motion the situation must comply with the following criteria</p> <ul style="list-style-type: none"> <li>Utilisation of engineering controls for single hand operation. The fixed ball spinning knob on the steering wheel <b>MUST</b> be used when undertaking hand lance application to maintain safe control of plant whilst in motion.</li> <li>Use <b>ONLY</b> when the operational public safety distance on footpaths is maintained at 5m (spray operation to cease until footpath clear).</li> </ul> <p>All large obstacles to be treated while the tractor is stationary e.g. Letter boxes, telephone boxes</p> <p>Staff awareness training, briefings and tool box talks.</p>	2	4	8

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		L	C	Total		L	C	Total
8	<p><b>Terrain</b></p> <p>Overturning on slopes, herbicide movement in spray tank, unbalanced unit.</p> <p>Impacts. Personal injury. Contamination to Operatives</p>	4	4	16	<p>Tractor speed on footpath NEVER to exceed 8kph. Tractor speed on highways NEVER to exceed 12 kph.</p> <p>Tractors ONLY to be operated on flat surfaces. Tractors NEVER to transit across slopes in excess of 1:6. Tractors ONLY to utilise drop down kerb edges to access/egress footways. All pavements WITHOUT DROP DOWN KERBS TO BE LEFT and recorded to be treated at a later date by knapsack.</p> <p>Tractors are restricted to spraying on flat surfaces. Tractor operation under this risk mitigation measure is risk assessed as 'low risk' of overturn. Tractors working under this risk mitigation measure the provision of Roll over Protection/ROPS and the retrospective fitting of lap belts are not fitted.</p> <p>Experienced NPTC certificate competent operators, (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground Crop Sprayer Module).</p> <p>Staff awareness training, briefings and tool box talks.</p>	2	4	8
9	<p><b>Traffic</b></p> <p>Impacts-being struck by other vehicles on the road, being struck by vehicles exiting driveways across the pavements. Personal injury to Operatives</p>	4	4	16	<p>Hi-Viz PPE clothing (As specified by client). 2 x Flashing Yellow LED Xenon warning 360-degree Beacon Lightbar Strobe (24 bulbs) and mandatory blue directional arrow and hazard warning signage "weed spraying" fitted to tractors. Illuminated tractor Headlights. <b>HOLD POINT</b> Suitable TM to be in place The Plant Operator to be continually aware of their immediate environs, looking ahead to monitor, interrupt and make judgment on the safest and best method of application to satisfy the contract specification and comply with risk mitigation. Experienced NPTC certificate competent operators, (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground Crop Sprayer Module).</p> <p>Follow Chapter 8 principles</p>	2	4	8

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		L	C	Total		L	C	Total
10	<p><b>Disposal of surplus concentrate or diluted spray mixture</b></p> <p>Pollution to the environment.</p>	4	2	8	<p>Never mix up more dilute herbicide than you will use up that day, better to be short and finish off with an individual knapsack mix. Any surplus tank mix to be used on the next job All empty containers must be returned back to the depot along with any packaging and disposed of in the skip(s) provided. Any concentrate herbicide not used on a job, must be returned back to the store and booked back on to store stock register All empty containers are to be triple rinsed and returned to depot for the correct disposal.</p> <p>Follow NPTC, (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground Crop Sprayer Module) protocols</p>	2	2	4

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		L	C	Total		L	C	Total
12	<p><b>Public Interface</b></p> <p>Potential/perceived spray drift</p> <p>Contamination to general public</p>	4	3	12	<p>Treatment to high sensitivity areas, high foot traffic areas, environs of school etc. to be carried out in accordance with SRL Guidelines Herbicide Application Neighbouring Areas. Treatments to be undertaken early morning/weekends/school holidays etc. If necessary re schedule timing of treatment.</p> <p>Operational public safety distance on footpaths to be maintained at 5m</p> <p><b>HOLD POINT</b></p> <p>Operator to be continually aware of their immediate environs, looking ahead to monitor, interrupt and make judgments on the safest and best method of application to satisfy the contract specification. Keep road/footpath accesses as open &amp; clear, stop operations and allow passage of pedestrians.</p> <p>All operatives shall at all times be courteous to all members of the public regardless of their attitudes. If questioned operators should stop, turn off their tractor and provide the main office number for any queries to be answered.</p>	2	3	6

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13	<b>Adverse Weather Conditions</b> Sun burn, dehydration, overheating, cold and wet Herbicide drift, wash off  Personal injury to Operative	5	3	15	Sun protection creams must be worn. Staff awareness training, tool box talks. Spraying does not continue in extreme weather. PPE and water is provided (free of charge) and water breaks to be programmed in to the Schedule of Works.  Operators to cease application in wet weather and high winds to avoid drift. Follow NPTC guidelines.  <b>HOLD POINT</b>  To minimise spray drift, low drift nozzles are set at the lowest optimum height and a vegetable oil is added as an approved adjuvant to the formulation to increase droplet size, which also reduces the likelihood of drift. (Avoid spraying in unsuitable weather conditions e.g. When wind speed at nozzle height is greater than scale 2.5 (15km/hour) on the Beaufort scale).  Staff awareness training, briefings and tool box talks	2	3	6		
									<b>HAZARD TYPES &amp; CLASSIFICATION OF RISK</b>	
		<b>L</b>	<b>C</b>	<b>Total</b>				<b>L</b>	<b>C</b>	<b>Total</b>

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14	<b>Safety of herbicide and area of use</b>	4	3	12	SRL only use BASIS certificate advice on herbicide selection.	2	3	6		
	<p>Incorrect choice of herbicide</p> <p>Failure to fulfill contract obligation</p> <p>Potential environmental damage, pollution, injury to operator, other employees, client staff, members of the public and pets</p>				<p><b>For COSTAIN</b>  <b>Herbicide:</b> Gallup Amenity. Application rate as per label  Max. 5 ltr per 10000m2 (360g/ltr Glyphosate)  <b>Adjuvant:</b> Green Oil. Rate 2% of diluted solution  (950g/ltr Rape Seed oil)</p> <p>NPTC certificate competent operators, (Pa1, Foundation Module, Pa6a, Knapsack Module, Pa2a, Ground Crop Sprayer Module).  Herbicide application in accordance with product label and compliance with EU sustainable use directive 2009/128/EC, Regulatory Update 42/201.  Tractors to spot and sectional spray only. Blanket spraying is NOT acceptable, apart from odd areas where weed growth is overall, for example: Slab/brick set areas with a high percentage of weed growth in cracks</p> <p>Staff awareness training, tool box talks</p> <p>MHSDS and COSHH Assessments are held in vehicle safety file</p>					
15	<b>Poor maintenance and checking spray equipment</b>	4	4	16	Complete mini tractor/spray equipment daily check list in accordance with PUWER Regulations.	1	4	4		
	<p>Under/over dosing of target.  Contamination and pollution to the environment.</p> <p>Personal injury.</p>				<p>All maintenance to be carried while tractor is turned off. Always ensure all equipment and guards are fixed and secure</p> <p>First Aid kits carried within vehicle &amp; on the tractor.  All plant to be checked before use in accordance with Costain's procedures. Faulty plant to be quarantined until repaired and deemed fit for use.</p>					
<b>HAZARD TYPES &amp; CLASSIFICATION OF RISK</b>		<b>Without Controls</b>			<b>EXISTING CONTROL MEASURES/GUIDANCE</b>			<b>With Controls</b>		
		<b>L</b>	<b>C</b>	<b>Total</b>				<b>L</b>	<b>C</b>	<b>Total</b>

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16	<p><b>Site hazards, slips and trips</b></p> <p>Personal injury to Operative</p>	3	4	12	<p>Staff awareness induction, training &amp; tool box talks Environmental &amp; H&amp;S Toolbox Talks Directory, S 128 Slips, Trips, Falls and Voids GH02 Underfoot conditions, keep walkways clear.</p>	2	4	8
17	<p><b>Noise</b></p> <p>Personal injury, hearing loss to Operative</p>	3	3	9	<p>Ear defenders must be worn as the operation of the tractor has noise levels of between 82 and 84 dB Ear protection provided free of charge Staff awareness training, tool box talks</p>	2	3	6
18	<p><b>Access Egress: Vehicle and Tractor</b></p> <p>Personal injury to Operator</p>	3	4	12	<p>Maintain three-point contact at all times while boarding or alighting.</p> <p>A three-point contact means that two hands and one foot are used to position the body for safe boarding or alighting. Two hands are gripping secure hand-holds or handles while one foot is safely supporting the body's weight during boarding or alighting. The three-point contact should be broken only after reaching the desired destination: ground, vehicle cab, stable platform, exit from operational machine to be in a backward motion maintaining the three point contact.</p> <p>Do not enter and exit or ascend and descend moving equipment.</p> <p>While entering or exiting, movement should be slow and steady to avoid injury from slips, falls, and striking other objects.</p>	2	4	8

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19	Manual Handling	3	4	12	Staff Induction, awareness training and tool box talks	2	4	8
	Personal Injury to Operator				Environmental & H&S Toolbox Talks Directory. S003 Manual Handling, SRL Employee Operators Induction Manual HSQE AWARENESS Introduction to Manual Handling <ul style="list-style-type: none"> <li>• Mechanical Lifting and Safe Lifting Procedures, if in doubt, stop work and consult appropriate appointed person or Supervisor.</li> <li>• Safe Lifting Procedure, always undertake a test lift to assess capability.</li> </ul>			

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