

Plant Hazard Assessment Form



Assessment Number: 1	Assessment Date: 4/7/19
Plant Type: 1.5T Trench Roller Plant Make: Wacker Neuson Plant Model: RTX-SC3 Asset/Fleet/Rego No: TRENH RTX-SC3 Plant Serial No. 24443335	Assessment Facilitated by: Leigh Evans (Admin/Accounts Manager) Assessment Participants: Leah Ford (Yard Manager)
Plant Owner Name: Northern Hire Group	Initial Assessment <input type="checkbox"/> Follow up Assessment (See below) <input type="checkbox"/>
Follow up based on change to: Use of plant <input type="checkbox"/> System of work <input type="checkbox"/> Plant Environment <input type="checkbox"/> New or additional information <input type="checkbox"/> Plant through modification <input type="checkbox"/>	

Is the plant designed to perform the task? Yes X No ☐

Has the plant been modified from the original condition? Yes ☐ No X

Is the plant in good working condition and free of weeds & mud? Yes X No ☐

All identified action items closed out/addressed (plant checks)? Yes X No ☐

Is the plant safe to operate? (On completion of PHA and action closure) Yes X No ☐

Date:

Signature:

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Risk / Opportunity Rating Table (see [Risk Management Consultation Process Appendix](#) for a full description of Risk Consequence, Opportunity Consequence and Likelihood Ratings)

Likelihood rating	<i>Almost Certain</i>	D	C	B	A	A
	<i>Likely</i>	D	D	C	B	A
	<i>Possible</i>	E	D	C	C	B
	<i>Unlikely</i>	E	E	D	C	B
	<i>Rare</i>	E	E	D	D	C
		1	2	3	4	5
		Consequence rating				

Action and Approval Scheme

These suggested timings and tolerance levels in the Action Table will be overridden by specific policies of the company that either dictate shorter timeframes for corrective action or zero tolerance. For example, the company has a zero tolerance policy for Safety and Environmental risks.

The decision to tolerate a risk or capture a opportunity should be based on a consideration of:

- Whether the risk / opportunity is being controlled to a level that is reasonably achievable;
- Whether it would be cost-effective to further control risk or capture the opportunity;
- Whether John Holland wishes to tolerate risks / opportunities of that type

Action Table

Residual risk / opp level	Suggested action	Timing of status report and management plans	Authority for continued toleration or improvement of residual rating.
A	Take action to eliminate or implement additional controls to reduce it to acceptable level (ALARP/SFAIRP). "Onsite activities" – Intolerable and activity must not commence	Report as soon as practicable. Normally within hours.	Senior Executive Manager Plus Project Manager / Project Leadership Team
B	Implement additional controls reduce it to ALARP/SFAIRP. "Onsite activities" – must not commence without Corporate Management review	Manage and re-evaluate risk / opportunity to allow reporting days.. Manage and re-evaluate risk / opportunity to allow reporting every two weeks	General Manager and / or Project Manager / Project Leadership Team
C	Implement additional controls reduce it to ALARP/SFAIRP. "Onsite activities" – must not commence without Site Management review	Manage and re-evaluate risk / opportunity to allow reporting monthly	"Specialist" Manager, eg Construction or Design Manager
D	Will still require attention within existing operations to reduce to ALARP/SFAIRP. "Onsite Activities" – Site Management must determine appropriate level of management and supervision prior to commencement of activity	Manage and re-evaluate risk / opportunity to allow reporting every quarter	Team Leader
E	Lower priority. May be tolerable. .	Monitor, manage and carryout activity in accordance with identified controls	Supervisor

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	Y	N	N/A							
1. Are there any specific warnings or conditions (manufacturers or other) relating to potential hazards from the operation of the item of plant? <ul style="list-style-type: none"> Refer to technical or operating manuals, SOPs, safe use instructions List any relevant safety warning hazards & controls 	Y			Potential Hazard	Refer to attached Safety Instructions or pages 15-23 of Operator Manual & site specific controls					
2. Are there any <u>COMMUNICATION</u> requirements in relation to the safe operation of the plant? <ul style="list-style-type: none"> Active signalling processes. Point to point communications. Whistle Spotter (with/without whistles) Flag signalling Labels and signage 	Y			Potential Hazard	Refer to attached Safety Instructions or pages 15-23 of Operator Manual & site specific controls					

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	Y	N	N/A							
3. Can anyone be <u>ENTANGLED</u> in the plant? <ul style="list-style-type: none"> ▪ Hair or other body parts caught in moving parts ▪ PPE caught in moving parts ▪ Isolation devices ▪ Warning decals ▪ Guarding ▪ Rotating parts ▪ Emergency stops 	Y			Entanglement risk from moving parts	<p>Exclusion zones and PPE (goggles, mask, protective clothing) will be required and a site specific risk assessment must be undertaken to determine PPE and controls.</p> <p>Machine must be isolated before cleaning or maintenance.</p> <p>Body parts and loose items such as jewellery, fabric, strapping, cables, wires etc. to be kept clear of moving parts..</p>					

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<p>4. Can anyone be CRUSHED or TRAPPED? (e.g. through unexpected movement, lack of capability for plant or equipment to be slowed, stopped or immobilised, plant tipping or rolling, being thrown from plant)</p> <ul style="list-style-type: none"> ▪ Emergency stop (E Stop) ▪ Service or parking brake ▪ Battery isolator ▪ ROPs/FOPs ▪ Being crushed between moving parts ▪ Unexpected movement ▪ Neutral Start ▪ Reversing/travel alarm ▪ Warning horn ▪ Amber flashing beacon ▪ Rear swing warning lights ▪ Pedals non slip surface ▪ Appropriate controls ▪ Rear view mirror ▪ Seat belt ▪ Door inter locks ▪ Crush zone decals ▪ Guarding devices ▪ Mandatory secondary protection device installed on all boomtype MEWP 	Y			<p>Death or serious injury from unexpected movement of plant</p>	<p>Ensure that all operators follow approved SWMS/ SOP when loading and unloading this machine to and from a flat top truck or trailer, low loader or tilt tray.</p> <p>Isolate plant before commencing pre-start. Identify delineation between site personnel and plant. Apply park brake and isolation procedures to be implemented when leaving cabin</p> <p>Exclusion zones will be required and a site specific risk assessment must be undertaken onsite to determine extent of controls</p> <p>High risk Construction work requires the creation and consultation on SWMS –refer to local requirements.</p> <p>Refer to transport load restraint guide or transport</p>					
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	Y	N	N/A							
					SOP/SWMS to determine proper securing of device.					
5. Can anyone be CUT, STABBED or PUNCTURED? <ul style="list-style-type: none"> Flying objects Moving parts Pinch points Sharp edges Isolation devices Warning decals Guarding 	Y			Potential injury from ejected materials	Pre-start inspection must ensure all guards are in place. Exclusion zones and PPE (goggles, mask, protective clothing) will be required and a risk assessment must be undertaken onsite to determine PPE and controls.					
6. Can SHEARING occur? <ul style="list-style-type: none"> Between two moving and rotating parts Between fixed and moving parts Warning decals Guarding 	Y			Body parts can be sheared between two parts of the plant, or plant and structure/obstacle while in operation	Exclusion zones and PPE (goggles, mask, protective clothing) will be required and a risk assessment must be undertaken onsite to determine PPE and controls. Machine must be isolated before cleaning or maintenance					

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	Y	N	N/A							
7. Can ABRASION, TEARING or STRETCHING occur? <ul style="list-style-type: none"> Continuous contact with moving parts Warning decals Guarding Pulling/pushing 	Y			Injury caused by contact with moving parts	Exclusion zones and PPE (goggles, mask, protective clothing) will be required and a risk assessment must be undertaken onsite to determine PPE and controls. Machine must be isolated before cleaning or maintenance					
8. Can anyone be STRUCK whilst operating the plant? <ul style="list-style-type: none"> Plant disintegrating Mobility of plant travelling Reversing/travel alarm Amber flashing beacon Work pieces thrown out Moving parts Warning decals Guarding 	Y			Operator and/or workers/public struck by plant and/or debris	Exclusion zones and PPE (goggles, mask, protective clothing) will be required and site specific a risk assessment must be undertaken to determine PPE and controls.					

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<p>9. Can a hazardous PRESSURE be produced?</p> <ul style="list-style-type: none"> Hydraulic hoses Radiator Come into contact with fluids under high pressure 	Y			Potential Hazard	<p>This item of plant has hydraulic hoses. These hoses must be inspected each day or before each use for wear and tear. If there are visible signs of wear immediate action must be taken to control the risk arising from this wear. These inspections must be documented.</p> <p>Hydraulic fluid at high pressure can penetrate the skin, never use any part of your body to check for leaks.</p> <p>If oil penetrates the skin seek medical advice immediately. Always use a piece of cardboard or similar to check for suspected leaks. Hydraulic pressure can be stored and is a hazard. Before disconnection or connection of hydraulic hoses complete the following steps -</p> <ol style="list-style-type: none"> 1. Stop engine 2. Keep all bystanders clear of the work area 					
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	Y	N	N/A							
					3. Refer to operators manual as to methods to release pressure 4. Wait 5 minutes Ensure that a sturdy, permanent shield is installed to prevent injury due to fluid jet or movement (whiplash) of all hydraulic hoses as a result of fluid leakage or component failure. Once installed this shield(s) must be present and fully functional at all times whilst this item of plant is in operation.					

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<p>10. Can an ELECTRICAL hazard be created?</p> <ul style="list-style-type: none"> ▪ Lack of insulation ▪ Contact with electrical conductors ▪ Poor earthing ▪ Water near equipment ▪ Lack of isolation ▪ Warning decals 	Y			Contact with overhead and/or underground electrical services	<p>Determine location of overhead and underground hazards and clearly mark above ground with minimum approach distances. These distances must be adhered to strictly. Spotters are required when working within 5 metres of the minimum approach distance of any live electrical apparatus. Any encroachment within the minimum approach distances must only occur if the following provisions have been met –</p> <ol style="list-style-type: none"> 1. The machine is designed to work within the minimum approach distances 2. Permission has been granted by the electricity company and 3. Safe systems of work have been documented and approved. 					
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	Y	N	N/A							
					Establish exclusion zone.					
11. Can an EXPLOSION or LOSS OF CONTENTS occur? <ul style="list-style-type: none"> ▪ Gas emission, ▪ Dusts ▪ Vapours, lubricants ▪ Fuel tank ▪ Storage of haz chemicals/ DG's near plant ▪ Warning decals ▪ Ejection of workpiece ▪ Collapse or fragmentation 	Y			Potential Hazard	Please refer to Operator Manual					
12. Can anyone using or near the plant SLIP, TRIP or FALL? <ul style="list-style-type: none"> ▪ Uneven surface ▪ Fall from a height ▪ Weather conditions ▪ Slippery surfaces 	Y			Potential Hazard	A site specific risk assessment must be undertaken by client prior to operating plant					
13. Are there ERGONOMIC - MANUAL HANDLING hazards associated with the plant? <ul style="list-style-type: none"> ▪ Poor posture ▪ Repetitive or sustained movements ▪ Awkward positions ▪ Strained movements ▪ Poorly designed seating ▪ Access and egress ▪ Access for maintenance ▪ Routine inspections and adjustments 	Y			Potential Hazard	Refer to attached Safety Instructions or pages 15-23 of Operator Manual & site specific controls					

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14. Are there ERGONOMIC - OPERATING CONTROL hazards associated with the plant? <ul style="list-style-type: none"> ▪ Difficult to understand ▪ Inappropriate colouring ▪ Function not identified ▪ Inappropriate controls & switches ▪ Access and egress ▪ Labelling of controls and indicators ▪ Variation in operators ▪ Operation by two or more persons 	Y			Potential Hazards - Strains	All controls including all levers, buttons, pedals, switches etc, are placed near the operator work position and are easy to reach and operate during the execution of the operator's normal duties. This applies for all persons within the 95th percentile of the normal population distribution.					
15. Are there specific requirements for ISOLATION of energy sources? <ul style="list-style-type: none"> ▪ Hydraulic pressure ▪ Compressed gases ▪ Electrical feeds/capacitors ▪ Motive power systems ▪ Suspended loads ▪ Operation by two or more persons 	Y			Potential Hazard	All controls including all levers, buttons, pedals, switches etc. are clearly labelled as to their purpose and method of operation. These labels must be maintained in a clean and serviceable condition at all times					

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	Y	N	N/A							
16. Can unplanned LOSS of POWER create a hazard? <ul style="list-style-type: none"> ▪ Engine shutdown ▪ Loss of electrical supply ▪ Loss of steering systems ▪ Ability to apply brakes and stop ▪ Ability to lower suspended loads 	Y			Potential Hazard	Please refer to Operator Manual					
17. Can anyone be SUFFOCATED? <ul style="list-style-type: none"> ▪ Lack of oxygen ▪ Contaminated atmosphere ▪ Confined spaces ▪ Spaces where air flow is inadequate 		N								
18. Does operation of the plant cause extreme TEMPERATURE changes? <ul style="list-style-type: none"> ▪ Fire ▪ Burns through conduction ▪ Convection ▪ Cryogenic burns ▪ Operation in extreme heat or cold 		N								

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	Y	N	N/A							
19. Can a FIRE occur? <ul style="list-style-type: none"> Friction Ingress of materials/fluids Build-up of materials/lubricants Fuels Fire extinguisher 	Y			Potential Hazard	Fire extinguisher(s) to AS 1841 must be present and fully functional and serviceable at all times. They must be readily accessible to the operator. Regular inspections must also be carried out in accordance with the manufacturer's requirements and AS 1851					
20. Can certain WEATHER conditions create a hazard? <ul style="list-style-type: none"> Hypothermia / extreme cold Heat stroke / extreme hot Wet conditions Electrical storms Dirt & mud on roads at egress points 	Y			Potential Hazard	Please refer to Operator Manual					
21. Does VIBRATION of the plant create a hazard? <ul style="list-style-type: none"> Plant becomes unstable Causes physical problems for the operator whilst operating Vibration of equipment Operation could cause unacceptable vibration levels in nearby structures 	Y			Potential Hazard to operator over prolonged use	Modify work methods to reduce exposure					

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	Y	N	N/A							
22. Can the plant emit toxic FUMES or VAPOURS? <ul style="list-style-type: none"> ▪ Exhaust fumes ▪ Chemicals ▪ Haz chemicals/DG's 	Y			Potential Hazard from exhaust fumes	Do not use in enclosed spaces. Ensure adequate ventilation					
23. Carry out NOISE survey on page 14. Is the plant noisy? <ul style="list-style-type: none"> ▪ Emit >85 dBA at the operator ▪ Effects operator communication ▪ Noise impacts on community during out-of-hours work (including reversing beepers) 	Y			Potential hazard with prolonged use	A site specific risk assessment must be undertaken to determine PPE and controls.					
24. Carry out the LIGHT survey on page 14. Is there poor visibility <ul style="list-style-type: none"> ▪ At the controls ▪ At the task ▪ Darkens surrounding areas ▪ Light impacts on community or sensitive natural environment during out-of-hours work 			N/A							
25. Does the plant emit RADIATION? <ul style="list-style-type: none"> ▪ Eg X-rays ▪ EMR ▪ Laser 		N								

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	Y	N	N/A							
26. Can operation of the plant create DUST? <ul style="list-style-type: none"> Explosive atmosphere Breathing hazard Reduced visibility Nuisance dust at nearby community Impact on local flora and fauna Loss of topsoil and spread of weeds and pathogens 	Y			Exposure to hazardous dust	Site risk assessment must be undertaken by client to ensure hazardous dust is not disturbed by plant/task (e.g. asbestos) Exclusion zones and PPE (goggles, mask, protective clothing) will be required and a risk assessment must be undertaken onsite to determine PPE and controls					
27. Can the plant become UNSTABLE during operation? <ul style="list-style-type: none"> Working on uneven / unstable ground Shifting load Lack of plant support Outriggers 	Y			Potential Hazard	A site specific risk assessment must be undertaken by client onsite to determine PPE and controls					
28. Could LOSS of LOAD occur? <ul style="list-style-type: none"> Failure of ropes/slings Overloading Entanglement in surrounding structures Maintenance requirements 	Y			Potential Hazard	Refer to Operator manual for pre-operational checks, maintenance & load capacity					

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	Y	N	N/A							
29. Is there anything in the SURROUNDING ENVIRONMENT that may produce a hazard? <ul style="list-style-type: none"> ▪ Power lines ▪ Low ceiling ▪ Other plant ▪ Storage areas ▪ Co-located equipment ▪ Isolation requirements ▪ Potential for flash flooding if operating adjacent to waterways ▪ Operating in known areas of weeds, pathogens or contamination ▪ Operating in sensitive environments requiring protection from offsite weeds/pathogens or spills 	Y			Potential Hazard	A site specific risk assessment must be undertaken by client to determine controls, PPE & exclusion zones.					
30. Can CHEMICALS create a hazard? <ul style="list-style-type: none"> ▪ Leaking from plant ▪ Splashing ▪ Explosion ▪ PPE considerations ▪ Spill kit considerations 	Y			Potential Hazard	Please refer to Operator Manual.					

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31. Operator TRAINING / QUALIFICATIONS? <ul style="list-style-type: none"> ▪ Training requirements ▪ Qualification requirements ▪ Competency assessments ▪ Documentation ▪ Operator's manual ▪ Equipment experience ▪ Product knowledge 	Y			<p>Operation by persons who are not suitably qualified or experienced may result in injury to person, damage to property, and may also void insurance cover.</p>	<p>This equipment may only be moved and operated by persons who meet the following requirements:</p> <ul style="list-style-type: none"> • 18 years or older. • Physically and mentally suited for this work. • Persons have been instructed in driving and servicing the earth moving machinery and have proven their qualifications to the owner/contractor • Persons are expected to perform work reliably. • Persons who have been appointed by the contractor for driving and servicing the earth moving machinery. • They are informed on and follow the legal regulations of the relevant authority. <p>All operators must completely read and</p>					
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	Y	N	N/A							
					understand the Operator Manual prior to operating plant. Undertake a Job Safety and Environmental Analysis before use of plant, and use to determine that the relevant safety procedures are in place before commencing work.					
32. Are there ANY OTHER potential hazards generated by or during the use of this item of plant and/or any attachments?	Y			Plant Failure	<i>Pre – Operational Inspection</i>	D	DAILY - Operators must complete Start-up checklist Operation checklist Parking Checklist	E		

ALL OPERATORS OF THE PLANT OR EQUIPMENT MUST BE BRIEFED ON THE PLANT HAZARD ASSESSMENT (PHA) PRIOR TO FIRST TIME USE.

ANY RELEVANT CONDITIONS WHICH MAY IMPACT ON THE OPERATION OF THIS ITEM OF PLANT OR EQUIPMENT MUST BE TRANSFERRED TO THE AMS/TRA.

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NOISE REPORT			
Equipment Type:	1.5T Trench Roller	Serial/Asset No.	24443335
Make:	Wacker Neuson	Model:	RTX-SC3
Test by (print):	Leigh Evans	Date:	8/7/19
Signature:			
Sound Level Meter Unit Used:			
Manufactures specified noise level:	109 dBA		
Background level:	BA		
Results – Operator's Station (Equipment Operating)	83 dBA	High Idle	
	dBA	Low Idle	
Comments:			
Results – Bystander Position: At 7 metres from side of equipment – Equipment Operating (High Idle)			
Front			dBA
Rear			dBA
Left			dBA
Right			dBA
Comments:			

LIGHTING REPORT			
Test by (print):		Date:	
Signature:			
Lux Meter used:			
Results – Operator's station			
At controls		Lux	
At emergency control		Lux	
In front/over task		Lux	
Left side task		Lux	
Right side task		Lux	
Comments:			
Results – Surroundings:			
Clearly seen by others?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Decrease lighting in walkways?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Decrease lighting to other workstations?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:			

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