

PLANT RISK ASSESSMENT REPORT



SECTION 1: PLANT IDENTIFICATION

Report Number:	407/75	51	Assessment Date:	5 th May 2015	
Company:	Wacker Neuson Wacker Neuson		Plant Type:	Telescopic Light Tower	Anarchite .
Make:			Model:	LTN6	N. C. C. Martin
Assessment		Operational risks ass	ociated with the unit a	as it stands – On site	
Purpose:		Operational risks associated with the unit as it stands – Desk top		as it stands – Desk top analysis	
		Access Systems			
		Modification/s			
		Other : Group assess	ment of plant type		Contraction of the second second
Assessed by:	Darren	Husson – VEHTEC Pty	y Ltd		

SECTION 2: PLANT SUMMARY

Preamble: This assessment encompasses a trailer based diesel powered telescopic LED light tower. The fully self-contained unit is equipped with jacking and out rigger style legs for on-site stability. Located at the top of the mast are 4 300W IP55 rated LED light heads. The tower can be raised and turned to suit the applicable environment. This risk assessment covers the configuration at the time of inspection. This document is intended to highlight Occupational Health Safety and Welfare related risks that may present during on site set up and operation and has been conducted in accordance with the Work Health and Safety Act 2012 (SA).

Is the plant designed for its intended use?	🖂 Yes 🗌 No	Final Sign off by Employer/Owner user - All actions/recommendations complete
Has the plant been modified from the original design?	🗌 Yes 🔀 No	Name: Position:
Is the plant in good working condition?	🖂 Yes 🗌 No	
Is action required before the plant can be safely used?	🗌 Yes 🔀 No	Signed:Date:
Has the required action / remedy been undertaken?	Yes N/A	



751 Wacker Neuson Telescopic Light Tower Prepared by VEHTEC Pty Ltd – www.vehtec.com.au

Tabl	e 1. Measure o	f Likelihood		Table 2. Measure of Consequences or Impact			
Level	Description	Detail		Level	Description	Detail	
Α	Almost Certain	The event is expected to occur in most circumstances		1	Insignificant	No injuries, low financial loss	
В	Likely	The event will probably occur in most circumstances		2	Minor	First Aid treatment, on site release immediately contained, medium financial loss	
С	Moderate	The event should occur at some time		3	Moderate	Medical treatment required, on site release contained with outside assistance, high financial loss	
D	Unlikely	The event could occur at some time		4	Major	Extensive injuries, loss of production capability, off site release with no detrimental effects, major financial loss	
E	Rare	The event may occur only in exceptional circumstances		5	Catastrophic	Death, toxic release off site with detrimental effect, huge financial loss	

	Table 3. Risk Analysis Matrix											
	Consequences											
	Likelihood	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5						
A	(Almost certain)	S	S	н	Н	н						
В	(Likely)	м	S	S	н	н						
С	(Moderate)	L	М	S	н	н						
D	(Unlikely)	L	L	М	S	н						
Ε	(Rare)	L	L	М	S	S						

*Only hazards with a risk deemed higher than 'low' need to be controlled

Legend:

- **H**= High risk, detailed research and management planning required.
- **S**= Significant risk, senior management attention needed. Continuous review.
- M= Moderate risk, management responsibility. Periodic review
- L= low risk, manage by routine procedures. Periodic review to ensure risk does not increase.

SECTION 4: HAZARD IDENTIFICATION

Hazard Item N°	Hazard Item Observation Detail	Hazard	L	С	Risk
1	Plant in its current state has potential to cause injury/illness due to:				
1.1	Entanglement (Operator/bystander inadvertent involvement with raising/lowering light tower)	Yes	D	3	М
1.2	Puncturing	No			
1.3a	Cutting (Pinch point when closing engine cover(s), and locating fold-a-way drawbar)	Yes	С	2	М
1.3b	(Operator/bystander caught in the raising/lowering action of light tower)	Yes	D	3	Μ
1.3c	(Operator when deploying or retracting stabiliser and jacking legs)	Yes	D	3	М
1.4	Stretching	No			
1.5	Stabbing	No			
1.6a	Trapping (Pinch point when closing engine cover(s), and locating fold-a-way drawbar)	Yes	D	4	S
1.6b	(Operator/bystander trapped by raising/lowering action of light tower)	Yes	D	4	S
1.6c	(Operator when deploying or retracting stabiliser legs)	Yes	D	3	М
1.6d	(Operator/bystander trapped by uncoupled trailer rolling)	Yes	D	3	М
1.6e	(Wheel nuts coming loose after wheel removal or tyre air pressures incorrect)	Yes	D	4	S
1.6f	(When loading trailer to tow vehicle)	Yes	D	5	н
1.7	Abrasion	No			
1.8a	Engulfment (Bystander involved with trailer/light tower whilst lowering unit)	Yes	D	3	М
1.8b	(When loading trailer to tow vehicle)	Yes	D	5	н
1.9a	Crushing (Pinch point when closing engine cover(s), and locating fold-a-way drawbar)	Yes	D	4	S
1.9b	(Operator/bystander trapped by raising/lowering action of light tower)	Yes	D	4	S
1.9c	(Operator when deploying or retracting stabiliser legs)	Yes	D	3	м
1.9d	(Operator/bystander trapped by uncoupled trailer rolling)	Yes	D	3	М
1.9e	(Wheel nuts coming loose after wheel removal or tyre air pressures incorrect)	Yes	D	4	S
1.9f	(When loading trailer to tow vehicle)	Yes	D	5	Н
1.10a	Shearing (Operator/bystander trapped by raising/lowering action of light tower)	Yes	D	3	М
1.10b	(Pinch point when locating fold-a-way drawbar)	Yes	D	3	М
1.10c	(When loading trailer to tow vehicle)	Yes	D	5	н
1.11	Tearing	No			
1.12	Asphyxiation (Not to be used in a confined space – Controlled by Employer/Owner SWP)	No			
1.13	Slips, Trips	No			
1.14	Falls	No			
1.15	Falling Objects (Wheel nuts that are not tensioned correctly may come loose and cause a runaway wheel which can impact other road users or bystanders)	Yes	D	4	S
1.16a	Expelled Parts (No external storage facility exists on the unit)	No			

2	Plant in its current or intended state has the potential to create a hazardous condition due to:				
2.1	Pressured Content (Engine – Manufacturers instruction to be used at all times)	Yes	D	2	L
2.2	Explosion (Battery generates explosive gases – no smoking near battery. Correct battery charging procedures shall be employed – Refueling to be undertaken strictly as per manufacturers instruction and Employer/.Owner SWP)	Yes	D	2	L
2.3	Radiation	No			
2.4	Vapour (Open area during operation)	No			
2.5	Dust (Rated to IP55 – Use controlled by Employer/Owner SWP)	No			
2.6	Moisture (Rated to IP55 – Use controlled by Employer/Owner SWP)	Yes	С	1	L
2.7	Gases (Exhaust vented to rear of unit)	No			
2.8	Fire	No			
2.9	Vibration (Supported by tyres and secured to a frame, vibrations minimal)	No			
2.10a	Electricity (Raised light tower could contact overhead power lines)	Yes	С	5	н
2.10b	(12V battery fitted to unit for starting purposes. All battery access to be strictly as per Employer/Owner SWP)	Yes	D	1	L
2.10c	(240V output on unit – Circuit breaker fitted)	Yes	D	5	н
2.11	Friction (Stabiliser and jacking legs to be fully and securely retracted prior to travelling)	Yes	D	2	L
2.12	Ice Formation	N/A			
2.13	Laser Beams	N/A			
2.14	Hot and Cold Parts (Engine when performing maintenance checks, checks to be undertaken when unit is cold. Never open radiator cap when unit is hot. Exhaust system outlet at rear can reach high temperatures at times)	Yes	с	2	м
2.15	Temperature Extremes (Open air operational environment, subject to employers internal policies)	No			
2.16	Noise (Low dB levels) (The running engine creates a noisy working environment – Decal stating 91dB affixed)	Yes	Α	3	S
3	Manual handling requirements have been assessed as acceptable (Motorised raising, positioning and lowering of light tower)	Yes			
4	Repetitive, forceful, awkward, sustained movements have been minimised/ eliminated	Yes			
5	The current guard (s) and their condition are adequate for this plant (Designed for application)	Yes			
6	Is the guarding appropriate for all work requirements (Designed for application)	Yes			
7	Operator controls are located for ease of use by operators (Controls located to give operator good vision of task being undertaken)	Yes			
8	Operator controls are identified and marked appropriately	Yes			
9	Emergency stops are clearly marked (Emergency stop button is obvious and detailed within operators manual, however consideration should be given to labelling – Overall unit has excellent warning and instructional decals)	No	E	2	L
10	Emergency stops are located at the most likely place (s) for emergency use (Emergency Stop placed in obvious position – but not clearly marked - refer 9)	Yes			
11	The power source of the plant has been designed, constructed, installed, protected, maintained as to minimise the risk of harm to employees (Unit to be maintained as per Operators manual)	Yes			
12	There is provision to lock out the plant, and dissipate energy	Yes			
13	Access platforms/ladders/handrails are provided	N/A			
14	Access to moving parts from the platform can be performed safely	N/A			
15	Access platforms/ladders/handrails provide secure, non-slipping access	N/A			

16	Lighting is adequate for plant operation, maintenance and cleaning at any time (No external work lights fitted for on-site set- up)	No			
17	Noise levels have been assessed as below 85dB (A) (Decals indicate 91dB - Use of noise attenuating PPE is required. Employer/Owner responsibility)	No	D	2	L
18	Personal Protective Equipment (PPE) has been provided for safe operation of this plant (Employer/Owner responsibility)	N/A			
19	PPE requirements are signposted	No			
20	There is provision for safe cleaning of this plant (NB availability of cleaning devices)	N/A			
21	Safe access to areas to be cleaned has been provided	N/A			
22	There is provision for easy and safe scrap removal	N/A			
23	The plant has the potential to jam/block (Mechanical failure when elevated)	Yes	С	2	М
24	A safe system of work has been established to remove jam/blockage (Only trained operators should attempt to lower the light tower if it is jammed. Employer/Owner responsibility)	No			
25	Safe system of work has been established for any sample retrieval	N/A			
26	There is adequate provision to properly service and routinely grease and oil the plant (Unit to be maintained by appropriately trained personnel)	Yes			
27	Safe systems of work have been established for hazards associated with any necessary maintenance of the plant (Employer/Owner responsibility)	N/A			
28	The rigidity and stability of the plant and supporting structure is adequate. (Unit to be operated within constraints as outlined within the Operators Manual)	Yes			
29	The environment in which the plant is situated has been assessed for its interrelationship with this plant as acceptable (Employer/Owner responsibility)	N/A			
30	Ventilation and/or other air flow needs are adequate	Yes			
31	Static electricity hazards have been assessed and controlled	Yes			
32	Workplace substances associated with the use of the plant have been assessed	N/A			
33	Authorised entry systems for the plant and surrounds have been established	N/A			
34	The upstream and downstream effects of malfunction or unscheduled stoppage of the plant have been considered (Employer/Owner responsibility)	N/A			

			Summary of Hazards Identified and solution(s	s) to adequately	manage the respective ri	sk.	
Hazard Item No		el of isk	Action Required / Comments				
			HazardThe light tower unit and its operation present entanglement, cutting, stretching, trapping, crushing, shearing and tearing hazards.CommentsLight tower location must be assessed for its suitability prior to operation. The trailer drawbar 'folds' up when on site. Front outrigger style stabiliser legs and front and rear jacking legs support and stabilise the unit for safe operation.	Action Required	Employ controls. Consider incl Procedure (SWP).	usion within	a Safe Working
1.1 1.3a 1.3b 1.3c 1.6a 1.6b	ate	ant	Controls Operator is to perform a Jobsite Safety Analysis (JSA) prior to on-site set-up and operation. Work Zone Traffic Management (WZTM) procedures need to be implemented prior to operation. Non-essential persons and bystanders must be removed from	Responsible Person	Employer/Owner / Operator	Due Date	As required
1.6c 1.8a 1.9a 1.9b 1.9c 1.10a 1.10b	Moderate	Significant	provides a clear view of the work zone. Operator to ensure stabiliser legs are correctly fitted and	Actioned by: (Name & Date)			
			exercise care to ensure that they will not be impacted by the light heads. Care to be taken when closing the side covers and locating the fold-a-way drawbar. <u>Revised Risk Assessment</u> With the above controls in place the risk is considered controlled.	Verified by: (Name & Date)			

			Hazard Trailer/Light Tower rolling when cconnecting/disconnecting the trailer. Comments Light tower location must be assessed for its suitability prior to operation.	Action Required	Employ controls. Consider inclu Procedure (SWP)	ision within a	Safe Working
1.6d 1.6f	a		Non-essential persons and bystanders must be removed from the work zone prior to disconnection and deployment. The	Responsible Person	Employer/Owner/Operator	Due Date	As Required
1.8b 1.9d 1.9f	Moderate	High	operator must select a position for operation that is stable, clear of obstacles and provides a clear view of the work zone. Unit is designed to be setup in a flat ground situation. Trailer manual brake is to be applied before the trailer/light tower is disconnected from the tow vehicle. Brake to be	Actioned by: (Name & Date)			
			correctly adjusted and maintained as required. When connecting the trailer, the operator can utilise a 'Look Out' if required. The lookout must position themselves out of harm's way. <u>Revised Risk Assessment</u>	Verified by: (Name & Date)			
			With the above controls in place the risk is considered controlled.				
			<u>Hazard</u> Hot parts.	Action Required	Employ controls. Consider inclu Procedure (SWP).	ision within a	Safe Working
2.14	.14		Controls Exhaust outlet at the rear is unguarded and can be contacted. Ensuring bystanders are kept clear of the equipment and good work zone layout will reduce the potential for burning hazards resulting from contact with the exhaust outlet. Revised Risk Assessment	Responsible Person	Employer/Owner / Operator	Due Date	As required
2.17				Actioned by: (Name & Date)			
			With the above controls in place the risk is considered controlled.	Verified by: (Name & Date)			

2.10a 2.10c	High	Extreme care to be taken when positioning light tower around power lines. When required to be positioned around power lines ensure minimum distances are adhered to and utilise a look-out as required. Detailed information is available from SA Power Networks: http://www.sapowernetworks.com.au/centric/corporate/safet y/look_up_and_live.jsp <u>Revised Risk Assessment</u> With the above controls in place the risk is considered controlled.	Actioned by: (Name & Date) Verified by: (Name & Date)		
1.6e 1.9e 1.15	Significant	Hazard Falling objects. Controls Wheel nuts are to be visually checked prior to operation and physically checked after a wheel has been removed for maintenance as per the manufacturer's recommendations. Consideration should be given to fitting wheel nut checkers. Revised Risk Assessment With the above controls in place the risk is considered controlled.	Action Required Responsible Person Actioned by: (Name & Date) Verified by: (Name & Date)	 Consideration to fitting visu Employ controls. Consider Working Procedure (SWP). Employer/Owner / Operator 1. 1. 2. 1. 2. 	

			Hazard Noise.	Action Required	Employ controls. Consider incl Procedure (SWP).	usion within	a Safe Working
2.16	Low	Moderate	<u>Comments</u> Decals indicate 91dB so appropriate PPE shall be worn by the operator when in close proximity to the light tower. Light tower location must be assessed for its suitability prior to operation.	Responsible Person	Employer/Owner / Operator	Due Date	As required
17	Ľ	Mod	Controls Use of noise attenuating PPE to be evaluated prior to operation.	Actioned by: (Name & Date)			
			Revised Risk Assessment With the above controls in place the risk is considered controlled.	Verified by: (Name & Date)			
			<mark>Hazard</mark> Jam/block.	Action Required	Employ controls. Consider incl Procedure (SWP).	usion within	a Safe Working
	23 Moderate		Comments The unit can jam/block due to mechanical failure when operating light tower. Controls	Responsible Person	Employer/Owner / Operator	Due Date	As required
23			effective and safe removal of jam/blocks as required when actioned correctly.				
				Verified by: (Name & Date)			

SECTION 5: CONTROL MEASURES AND TRAINING

Control Measures

		rocedure (SWP) should be developed for the correct use of the plants' systems prior to deployment.					
Pre-Operation		Complete familiarisation of the Operators Manual and all systems shall be considered Mandatory. The plant is intended for relatively flat ground					
	deployment only.						
Modifications		to the factory unit should be strongly considered to ensure that it will not have any detrimental effect to the stability, safety or operation					
	of the plant. Mod	ifications should only be undertaken by suitably qualified or experienced persons.					
Transportation	When transportin	g the Light Tower, designated lifting point is fitted and identified. Operator's manual details how to safely lift and weight.					
	This risk assessme	ent does not negate the requirement of the operator/supervisor to conduct an operational risk assessment of this piece of plant for its					
Operational Risk	intended use and its interface with the operators and the suitability of this piece of plant to integrate and complete the required task.						
	This document ha	his document has been prepared with due care, however cannot be considered complete given the limited knowledge of the intended operational					
	environment for which the plant has been selected.						
Work Zone Traffic	This risk assessment has been prepared with the knowledge that effective Work Zone Traffic Management (WZTM) systems will be employed in line with						
Management	AS1742.3, WH&S Act 2012 (SA), WH&S Regulations 2012 (SA), Road Traffic Act 1961 and internal Standard Operating Procedures.						
Continuous Review	This document is not intended to be static, nor is it intended to be considered complete for all situations. This document forms the basis to allow the						
Continuous Review	Employer/Owner	of the asset to have an informed position. A system of continuous review should be embraced in line with Management Policies.					
Operator Competencies							
Formal Qualifications:		Must comply with the regulations enforced by the WorkSafe authority within the state that the plant is being operated.					
C	d Chiller	Skills must comply with the requirements of the guidelines established by the relevant state based WorkSafe authority and assessed by					
Competency Assesse	a Skills:	the state WorkSafe body's authorised assessor.					

	the state WorkSafe body's authorised assessor.
General Training Instruction:	On the job training by experienced trainer or operator
Experience:	As appropriate and assessed (as above)
Standard Work Procedure (s):	To be developed by the client/user

SECTION 6: PLANT INSPECTIONS, MAINTENANCE AND TESTING			
Inspection, Maintenance and Testing Requirements	Frequency		
Manufacturers Operator and Service manuals as supplied with the unit	Refer Operator Manual		
Trailer, Engine and Inverter are to be regularly maintained	As per Manufacturers guidelines		
Tyre pressures – refer to Operator Manual or Placard for recommended pressures	Visually - Daily		
	Physically - Monthly		
Wheel nuts to be checked for correct tension	Visually - Daily		

*This is not a definitive list and may need to be revised over time