PLANT RISK ASSESSMENT REPORT

SECTION 1: PLANT IDENTIFICATION

Report Number:	407/752		**Assessment Date:**	5th May 2015
Company:	Wacker Neuson		**Plant Type:**	Telescopic Light Balloon
Make:	Wacker Neuson		**Model:**	LBS80M
Assessment Purpose:	☒	Operational risks associated with the unit as it stands – On site		
	☐	Operational risks associated with the unit as it stands – Desk top analysis		
	☐	Access Systems		
	☐	Modification/s		
	☐	Other : Group assessment of plant type		
Assessed by:	Darren Husson – VEHTEC Pty Ltd			

SECTION 2: PLANT SUMMARY

Preamble: This assessment encompasses a telescopic 240V light balloon. The light balloon is supplied with a variable height tripod, ballast and 80,000-lumen halogen lamp. A range of accessories can be supplied including a carry case and anchoring set. Two tripod's are available, either max height 3,400mm or 5,000mm. 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**	

SECTION 3: RISK ANALYSIS LIKELIHOOD AND CONSEQUENCES

Table 1. Measure of Likelihood		
Level	**Description**	**Detail**
A	Almost Certain	The event is expected to occur in most circumstances
B	Likely	The event will probably occur in most circumstances
C	Moderate	The event should occur at some time
D	Unlikely	The event could occur at some time
E	Rare	The event may occur only in exceptional circumstances

Table 2. Measure of Consequences or Impact		
Level	**Description**	**Detail**
1	Insignificant	No injuries, low financial loss
2	Minor	First Aid treatment, on site release immediately contained, medium financial loss
3	Moderate	Medical treatment required, on site release contained with outside assistance, high financial loss
4	Major	Extensive injuries, loss of production capability, off site release with no detrimental effects, major financial loss
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**	**H**	**H**	**H**
B (Likely)	**M**	**S**	**S**	**H**	**H**
C (Moderate)	**L**	**M**	**S**	**H**	**H**
D (Unlikely)	**L**	**L**	**M**	**S**	**H**
E (Rare)	**L**	**L**	**M**	**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	C	Risk
1	**Plant in its current state has potential to cause injury/illness due to:**				
1.1a	Entanglement **(Operator/bystander inadvertent involvement with raising/lowering light balloon)**	**Yes**	**D**	**3**	**M**
1.1b	**(Operator/bystander inadvertent involvement with 240V power cord)**	**Yes**	**D**	**3**	**M**
1.2	Puncturing	No			
1.3	Cutting **(Pinch point when raising, securing, lowering and closing tripod)**	**Yes**	**D**	**3**	**M**
1.4	Stretching **(Operator when moving and locating the ballast)**	**Yes**	**D**	**3**	**M**
1.5	Stabbing	No			
1.6	Trapping **(Pinch point when raising, securing, lowering and closing tripod)**	**Yes**	**D**	**3**	**M**
1.7	Abrasion **(Operator/bystander when lowering the light balloon)**	**Yes**	**D**	**3**	**M**
1.8	Engulfment **(Operators/bystander when lowering the light balloon)**	**Yes**	**D**	**3**	**M**
1.9a	Crushing **(Operators/bystander when lowering the light balloon)**	**Yes**	**D**	**3**	**M**
1.9b	**(Operator when moving and locating the ballast)**	**Yes**	**D**	**3**	**M**
1.10	Shearing **(Operators/bystander when lowering the light balloon)**	**Yes**	**D**	**3**	**M**
1.11	Tearing **(Operator when moving and locating the ballast)**	**Yes**	**D**	**3**	**M**
1.12	Asphyxiation	No			
1.13	Slips, Trips **(Operator/bystander inadvertent involvement with 240V power cord)**	**Yes**	**D**	**3**	**M**
1.14	Falls	No			
1.15	Falling Objects **(Light balloon when attached to tripod)**	**Yes**	**D**	**4**	**S**
1.16a	Expelled Parts	No			
2	**Plant in its current or intended state has the potential to create a hazardous condition due to:**				
2.1	Pressured Content	No			
2.2	Explosion **(Light head to be handled as per manufacturer's instructions)**	**Yes**	**D**	**2**	**L**
2.3	Radiation	No			
2.4	Vapour	No			
2.5	Dust **(Use controlled by Employer/Owner SWP)**	No			
2.6	Moisture **(Use controlled by Employer/Owner SWP)**	**Yes**	**C**	**1**	**L**
2.7	Gases	No			
2.8	Fire	No			
2.9	Vibration	No			
2.10a	Electricity **(Raised light balloon could contact overhead power lines)**	**Yes**	**C**	**5**	**H**
2.10b	**(240V power required to operate unit)**	**Yes**	**D**	**5**	**H**
2.11	Friction	No			
2.12	Ice Formation	N/A			
2.13	Laser Beams	N/A			

2.14	Hot and Cold Parts **(Light head when lowering and packing away. Operator to only lower and store light balloon as per Manufacturer's instructions. All use to be strictly as per Employer/Owner SWP)**	**Yes**	**D**	**2**	**L**
2.15	Temperature Extremes **(Open air operational environment, subject to employers internal policies)**	No			
2.16	Noise (Low dB levels	N/A			
3	Manual handling requirements have been assessed as acceptable **(Raising, positioning and lowering of light balloon)**	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 **(On/off switch on ballast)**	Yes			
8	Operator controls are identified and marked appropriately	Yes			
9	Emergency stops are clearly marked	N/A			
10	Emergency stops are located at the most likely place (s) for emergency use	N/A			
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	Yes			
17	Noise levels have been assessed as below 85dB (A)	Yes			
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)	Yes			
21	Safe access to areas to be cleaned has been provided	Yes			
22	There is provision for easy and safe scrap removal	N/A			
23	The plant has the potential to jam/block **(Failure when being elevated or lowered)**	**Yes**	**E**	**2**	**L**
24	A safe system of work has been established to remove jam/blockage **(Refer manufacturers operating instruction. Employer/Owner responsibility)**	**No**	**E**	**2**	**L**
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 Manufacturers operational 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	N/A			
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			

SECTION 5: RISKS AND CONTROLS

<table>
<tr><th colspan="7">Summary of Hazards Identified and solution(s) to adequately manage the respective risk.</th></tr>
<tr><th>Hazard Item No</th><th colspan="2">Level of Risk</th><th colspan="4">Action Required / Comments</th></tr>
<tr><td rowspan="4">1.1a
1.1b
1.3a
1.4
1.6
1.7
1.8
1.9a
1.9b
1.10
1.11
1.13
1.15</td><td rowspan="4">Moderate</td><td rowspan="4">Significant</td><td rowspan="4">Hazard
The light balloon unit and its operation present entanglement, cutting, stretching, trapping, crushing, shearing and tearing hazards.

Comments
Light tower location must be assessed for its suitability prior to operation. Tripod legs can be ‘pegged’ to the ground for added stability and security.

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 the work zone prior to operation. The operator must select a position for operation that is stable and clear of obstacles.

Operator to ensure stabiliser legs are correctly engaged and secured prior to raising of the light balloon.

The operator is to take care when locating the ballast, and ensure that all securing points are correctly engaged prior to raising the balloon.

Revised Risk Assessment
With the above controls in place the risk is considered controlled.</td><td>Action Required</td><td colspan="3">Employ controls. Consider inclusion within a Safe Working Procedure (SWP).</td></tr>
<tr><td>Responsible Person</td><td>Employer/Owner / Operator</td><td>Due Date</td><td>As required</td></tr>
<tr><td>Actioned by:
(Name & Date)</td><td colspan="3"></td></tr>
<tr><td>Verified by:
(Name & Date)</td><td colspan="3"></td></tr>
</table>

<table>
<tr><td rowspan="4">2.10a
2.10b</td><td rowspan="4">High</td><td rowspan="4">Hazard
Electrocution.

Comments
Raised light balloon can come into contact with overhead power lines. 240V power required to power light.

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.

Operators to analyse the area for operation prior to doing so. “Look Up and Live” methodology to be used. Information is available from SA Power Networks.

Extreme care to be taken when positioning light balloon 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/safety/look_up_and_live.jsp

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</table>

SECTION 5: CONTROL MEASURES AND TRAINING

Control Measures

Pre-Operation	A Safe Working Procedure (SWP) should be developed for the correct use of the plants' systems prior to deployment. Complete familiarisation of the Operators Manual and all systems shall be considered Mandatory. The plant is intended for relatively flat ground deployment only.
Modifications	Any modification 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. Modifications should only be undertaken by suitably qualified or experienced persons.
Operational Risk	This risk assessment does not negate the requirement of the operator/supervisor to conduct an operational risk assessment of this piece of plant for its 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 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 Management	This risk assessment has been prepared with the knowledge that effective Work Zone Traffic Management (WZTM) systems will be employed in line with 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 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:	
Competency Assessed Skills:	
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
240V Electrical cord	As per WorkSafe inspection guidelines for 240V electrical cables
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*