



14.0 Risk Assessment - Basic Delivery and Collection of Accommodation Units

LIKELIHOOD		SEVERITY		S	1	2	3	4	5
L		L							
1	Highly Unlikely	1	Trivial	1	1	2	3	4	5
2	Unlikely	2	Minor Injury	2	2	4	6	8	10
3	Possible	3	Over 7-day injury	3	3	6	9	12	15
4	Probable	4	Major Injury	4	4	8	12	16	20
5	Certain	5	Incapacity or Death	5	5	10	15	20	25

CALCULATIONS	RISK RATING	
The risk rating is calculated by multiplying the likelihood of the event occurring by the severity of any such event. The risk rating has been determined after the required controls have been implemented.	1-5	Low Risk
	6-15	Medium Risk
	16 - 25	High Risk

Document compiled and issued by:	
Spencer Morgan, Director A1 Group Transport	15/03/2021

Document Control				
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1	First issue	Clive Owen	1/1/22	January 2022
2	Re assessment	Sean Whittle	3/1/23	January 2023

SIGNIFICANT HAZARDS	PERSON AT RISK	RISK RATING			CONTROL MEASURES	RISK RATING		
		L	S	RR		L	S	RR
14.1 Possible vehicle collision with onsite plant, equipment, vehicles or personnel	Site Personnel Operator	3	4	12	<ul style="list-style-type: none"> Operatives to contact site representative upon arrival & complete any site induction where necessary and familiarise themselves with any site-specific requirements Site speed limits to be observed at all times and caution to be taken whilst manoeuvring vehicle around site, all reversing to be assisted by a banksman 	1	4	4
14.2 Vehicle unable to proceed to loading/unloading point due to unsuitable site ground conditions	Site Personnel Operator	2	2	4	<ul style="list-style-type: none"> Client to ensure that a suitable route to the collection delivery area is available (A1 Group Transport lorry loader vehicles will not travel over grassed areas) Authorised site routes to be used at all times 	1	2	2
14.3 Obstructions within the vicinity of the lorry loader setting up area may result in collision or impact of plant and equipment	Site Personnel Operator	2	5	10	<ul style="list-style-type: none"> Responsible person on site to ensure lift area is free from any potential hazards Operator to visually check surrounding areas prior to setting up, and complete pre-start check Any obstructions within proximity of the lift to be moved prior to lift commencing 	1	5	5
14.4 Vehicle overturning due to poor ground conditions; excavations or underground services within close proximity to the vehicle and the lift area; or crane stabilisers being set up incorrectly	Site Personnel Operator	2	5	10	<ul style="list-style-type: none"> Operator to ensure that vehicle stabilisers when deployed are 1m away for every 1m deep of the excavation at a 45-degree angle Lorry loaders fitted with a Stabiliser Monitoring Device may operate without the full deployment of all stabiliser legs, as they de-rate the lifting capacity proportionally Loader crane to only be set up on firm level ground, away from any underground services Spreader pads to be used under all stabiliser legs at all times Stabiliser locking mechanisms to be checked during pre-operational checks, and after de-rigging A1 Group Transport vehicles will not drive over or set up on grass or muddy areas. 	1	5	5
14.5 Tipping or overturning of lorry loader in the event of operating above rated capacity	Site Personnel Operator	2	5	10	<ul style="list-style-type: none"> Rated capacity indicator provides operator visual and audible warnings when approaching / reaching 100% of rated capacity. At this point the crane will lockout restricting movement only to that which brings the load back within rated capacity 	1	5	5

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		L	S	RR		L	S	RR
14.6 Connecting the lifting equipment to the load prior to the lifting of the unit. Falling from height whilst ascending/descending the ladder to gain access to the unit Falling from height whilst connecting/disconnecting the chains to the lifting points Fall from height when securing staircase	Operator	3	4	12	<ul style="list-style-type: none"> Ladder to be checked for defects and stabilised prior to use, three rungs / 1 metre to protrude above work level Ladder to be checked as part of pre-operational checks, and prior to each use; and stored in dedicated area on lorry loader vehicle Fall arrest system using the loader crane hook as anchor point to be attached to safety harness should roof access be required for top lift method All certification for height safety equipment to be current & available The anchor point should be held as high as possible above the working area. Additionally, the angle of the cable line should not exceed 45 degrees from the vertical, to limit the swing effect in the event of a fall. For rescue plan refer to Appendix E 	1	4	4
14.7 Loss of load during movement of unit Failure of lifting accessories	Site Personnel Operator	2	5	10	<ul style="list-style-type: none"> Lifting equipment to have current 6 monthly thorough examination certification available; Loader crane has annual certificate of thorough examination certification available as required by the LOLER regulations Pre-operational checks on lorry; loader crane; PPE and lifting accessories completed at the start of each working day / shift A1 Group Transport units not to be lifted using jacklegs If collecting via a bottom lifting method, the roof must be checked for materials prior to any lifting. Lifting points and lifting accessories to be examined prior to lift commencing and during test lift under tension; damaged / stretched lifting points not to be used and reported to A1 Group Transport management Correct length chains to be used to achieve correct angle of slings; units may never be 'short-chained' Lifting equipment must not be used beyond its Safe Working Load (SWL) or Working Load Limit (WLL) Unit to be lifted and moved with caution and kept as low as is reasonably practicable to the ground 	1	5	5
14.8 Manual handling Small cuts, abrasions, trapping injuries, sprains and fractures	Operator	3	4	12	<ul style="list-style-type: none"> Caution to be exercised when handling materials and lifting equipment. Correct posture to be adopted at all times to prevent/ minimise the possibility of any manual handling associated injuries No operatives may walk or place any body part including hands under a suspended load. 	1	4	4

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SIGNIFICANT HAZARDS	PERSON AT RISK	RISK RATING			CONTROL MEASURES	RISK RATING		
		L	S	RR		L	S	RR
14.9 Fallen operative wearing harness suspended from fall arrest system Risk of suspension trauma	Operator	2	5	10	<ul style="list-style-type: none"> All operatives to have received working at height training Where achievable the bottom lift method is used by default to prevent roof access All A1 Group Transport lorry loader vehicles are equipped with Fall Arrest type blocks, which in the event of a fall lower the operator to the ground in a controlled manner In the event that a fall arrest-only type block is used, a fallen operative is lowered to the ground slowly by use of the lorry loader crane; the nearest suitable working level platform; MEWP; Forklift with man basket etc; and emergency services are contacted. Refer to Appendix E. 	1	5	5
14.10 Collision with buildings, vehicles, plant, equipment or personnel with suspended load	Site Personnel Operator	3	5	15	<ul style="list-style-type: none"> Client to ensure the lifting route is free from obstructions Units not to be lifted over buildings or in extreme proximity to plant, equipment, vehicles personnel etc Area for unit to be sited clear from obstructions View of lifting path to be visible otherwise assistance is required Unit roofs to be checked clear of materials prior to any lift 	1	5	5
14.11 Unit becoming difficult to control whilst slewing into position due to high winds, increasing the possibility of a collision Instability of loader crane caused by wind, and sail effect of load	Site Personnel Operator	3	4	12	<ul style="list-style-type: none"> Weather conditions to be assessed prior to lift commencing. A1 Group Transport Operatives carry hand-held anemometers to measure wind speeds Tag lines to be used where appropriate Load to be kept as close to the ground as reasonably practicable Lift shall be postponed in extreme conditions, including storms and lightning All lifting operations to be suspended should the wind speed reach Beaufort scale level 5 or above to prevent suspended loads being swung out of radius, making the loader crane unstable. Refer to Appendix F 	1	4	4
14.12 Contact with overhead obstructions power cables, telephone cables, overhead pipes, fixed structures	Operator	3	5	15	<ul style="list-style-type: none"> Pre-lift visual checks to be undertaken prior to work commencing Minimum distances to be maintained between crane and power cables: <ul style="list-style-type: none"> 9m for lines on wooden poles + maximum jib length + any protruding load 15m for lines on steel structures + maximum jib length + any protruding load 	1	5	5

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SIGNIFICANT HAZARDS	PERSON AT RISK	RISK RATING			CONTROL MEASURES	RISK RATING		
		L	S	RR		L	S	RR
14.13 Lone working	Operator	3	5	15	<ul style="list-style-type: none"> Wherever possible lifting operations should be on sites where there are other operatives or customer representatives present If lone working is totally unavoidable, follow the lone working procedure in Appendix H Only single units may be delivered / collected whilst lone working. Working on double stacks alone is not permitted. The top lift method may only be used whilst working alone if equipped with an 'fall arrest block. Only the four-corner or bottom lift methods may be used if equipped with a <i>fall-arrest only</i> type block, as a rescue plan would not be achievable. 	2	5	10
14.14 Use of remote controls for lorry loader crane Accidental operation of the loader crane resulting in unexpected movement / loss of load through failure to isolate the controls Trapping / crushing injuries as a result of accidental / unintentional operation Radio interference affecting sensitive sites equipment	Site Personnel Operator	2	5	10	<ul style="list-style-type: none"> Check site rules to see if remote controls are acceptable for use Always carry the umbilical cord in good condition. Some sites such as hospitals and petrochemical sites may require the use of the umbilical cord; and protects against battery failure. Store in the designated place Always use the belt / neck strap provided. Carry out pre-operational checks daily before work commencing Select a standing position with a clear view of the vehicle, load, and its intended path at all times. If unachievable a signaller should be used, or further persons to ensure the working area is not breached Make sure at all times you are not in such a place where an incorrect or unintended movement of the lorry loader can trap or crush you. Do not walk under the boom whether a load is attached or not Remote control levers operated progressively and gently at all times The remote control must be isolated at all times when not in use 	1	5	5
14.15 Diesel or Hydraulic oil spills COSHH Damage to the environment from hydraulic oils or diesel spills. Contact with operators and others	Site Personnel Operator Environment	2	2	4	<ul style="list-style-type: none"> Contact with skin, eyes and the ingestion of diesel and hydraulic oil must be avoided. Correct PPE to be worn, including hand and eye protection Refer to Safety Data Sheets: Gas Oil / Diesel; and Hydraulic Oils available from local A1 Group Transport Depot All diesel and hydraulic oil spills must be cleaned up immediately using one of spill kits held on A1 Group Transport lorry, as per manufacturer's instructions Diesel and hydraulic oil spillages must not be discharged down drains 	1	2	2

END

Appendix E: Rescue plan in the event of a fall using inertia block and harness (non-auto descender)

All A1 Group Transport lorry loader vehicles are equipped with Fall Arrest type blocks, which in the event of a fall lower the operator to the ground in a controlled manner.

In the event of a *fall-arrest only* block being used, fallen operative should be lowered to the ground slowly at a controlled rate of descent by use of the lorry loader crane, ensuring they do not come into contact with obstructions; or the nearest suitable working level platform; ladder; MEWP; Forklift with man basket etc; and emergency services are contacted.

Pre-Rescue Action:

- **Be aware that anyone who is suspended in a harness may be at risk of suspension trauma ('orthostatic shock' or 'intolerance') if they were to hang motionless in the harness. Suspension trauma is life threatening.**
- If the person who is suspended is un-injured and is fully conscious, they should be encouraged to mobilize all four limbs by flexing the leg muscles until they can be brought to a position of safety. Frequent 'pumping' of the legs against a firm surface will also activate the muscles and improve blood circulation.
- It is extremely important to reassure the person hanging helpless on the rope. If capable, the casualty should assist by advising the rescuer how they feel or of any changes in how they feel.
- For suspended persons, if available the use of a foot loop will alleviate pressure (and therefore pain) on parts of the body such as the waist and thighs, and delay fainting. The foot loop would also provide support to facilitate "muscle pumping". In the same way, elevation and support of the legs where safely possible may prolong tolerance of suspension.
- Pre-fainting symptoms of suspension trauma may include: faintness; breathlessness; sweating; paleness; hot flushes; increasing pulse rate and blood pressure; nausea; dizziness; unusually low pulse rate and blood pressure (usually occurring after the incidence of increased pulse rate; loss or "greying" of vision).

Post-Rescue Action:

Following any suspension, once the casualty has been rescued:

- They should be placed in the seated position if they are **fully conscious and mobile**, and encouraged to exercise their legs gently.
- If the casualty is **unconscious**, or cannot maintain a seated position, then they are best managed in an inclined position, with the head at the highest point of the body, and steps taken to ensure their airway is open, until the emergency services are in attendance.
- All restrictive belts and clothing should be unfastened.
- The basic principles of trauma management must always be followed whatever the injury, namely ABC (airway, breathing, circulation as an order of priority).

The casualty must NEVER be laid flat in a horizontal position after being rescued from suspension.

- Prevent the casualty from trying to walk.
- Advise the ambulance service that the patient needs to be treated for suspension trauma (medical term: orthostatic shock or intolerance, which should be treated similarly to crush injuries).
- All personnel who have been suspended in an arrested fall should be treated as a medical emergency and immediate medical attention sought, even if they feel okay.

Adapted from:

'Harness suspension: review and evaluation of existing information', HSE Contract Research Report 451/2002 (2002)

'Evidence-based review of the current guidance on first aid measures for suspension trauma' HSE Research Report RR708 (2009)

'Guidance on rescue during work at height', WAHSA Technical Guidance Note 5

Appendix F: Wind Speeds and 'Sail Effect' guidance

All of A1 Group Transport's lorry loader cranes are made by Fassi. Their guidance is that without a load attached their cranes can operate in 13.8m/s (metres per second) of wind speed. However, our units have a considerable 'sail area', which means that our suspended loads could be swung out of balance and radius, making the loader crane potentially unstable.

The following has been calculated using the ALLMI guidance note 021 'Determining the Sail Effect for Wind' using a coefficient of resistance of 1.1; and a height speed multiplier of 1.0 (under 10m).

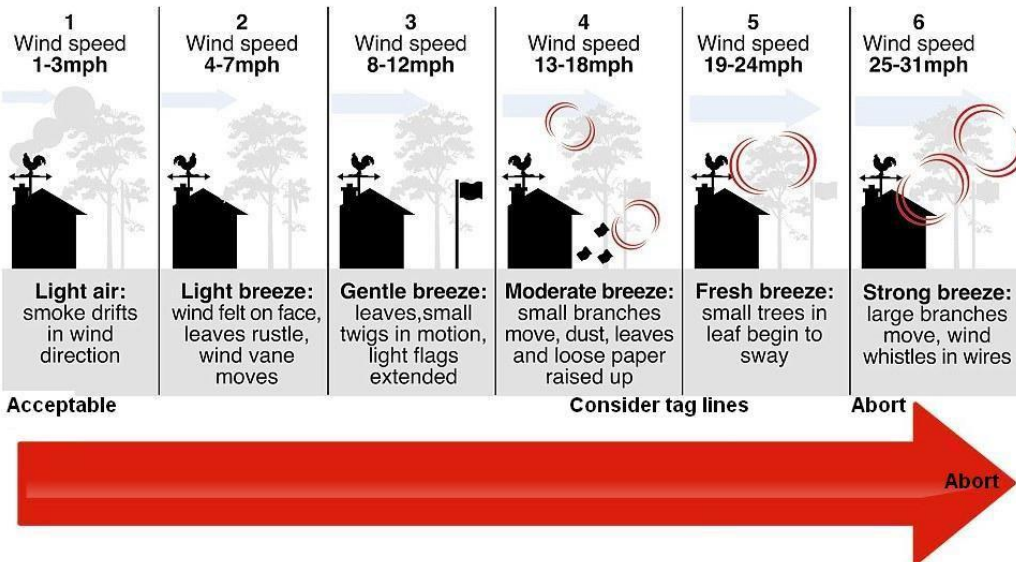
All A1 Group Transport lorry loader drivers carry anemometers (wind speed measuring devices) to assess wind speeds prior to lifting; alternatively, the conditions can be assessed using the 'Beaufort Scale' which describes easily observed physical conditions. If our operators are unsure or need further guidance they should contact their Lifting Operations Manager in the first instance.

Allowed Operating Wind Speed Adjusted for Sail Effect ^{business}				
Unit Size (m)	Unit Size (Ft)	Metres / Second	MPH	Beaufort
3.0 x 2.4	10 x 8	6.29	14.07	4
4.8 x 2.4	16 x 8	5.75	12.86	4
6.1 x 2.4	20 x 8	5.69	12.72	4
7.3 x 2.4	24 x 8	5.7	12.75	4
8.9 x 2.4	30 x 8	5.58	12.48	4
12.2 x 2.4	40 x 8	5.4	12.07	3
7.3 x 2.7	24 x 9	6.22	13.91	4
9.8 x 3.0	32 x 10	6.42	14.36	4
7.92 x 3.1	26 x 10 Welfare	7.14	15.97	4
3.6x 2.75	12 x 9 2+1	8.14	18.2	5
4.8 x 2.75	16 x 9 3+1	7.617	17.03	4

Note these calculations are based on a freely suspended load and do not consider the load being stabilised, such as by the use of tag lines.

Beaufort wind scale for land

The Beaufort wind scale begins at zero with wind speeds of less than one mile per hour



Appendix G: Lone working procedure

Working alone should be avoided wherever possible, from a security perspective as much as a safety concern. There are few occasions that this should happen as the majority of our work is carried out on manned sites. Sometimes, however, it is unavoidable, and in such cases certain precautions must be taken.

If the risk is too great, or the risk of an accident is high you may have to consider not carrying out the job until assistance is obtained. Aborting a job should only be considered after all other options have been explored; our objective is not to let the customer down, but we must achieve this as safely as possible.

Procedure:

- Only single units may be delivered / collected whilst lone working.
- **Working on double stacks alone is not permitted.**
- Always ensure you have an effective means of communication, such as a charged mobile phone
- Always know the post code / address of the site you are working on
- Secure your vehicle at all times
- Always contact a designated individual giving all relevant information relating to the location prior to any lifting operation commencing
- State approximately how long you will take to complete the task
- Should you have an accident, contact the designated individual with all the relevant information
- Once the lifting operation is complete, call back the designated individual to inform them that the task is completed safely. **Failure to do so may instigate a call to the emergency services**
- **Never access a unit roof and place yourself in a fall arrest situation when you are working alone, unless equipped with a fall arrest block**
- **Fall-arrest only blocks must not be used whilst lone working: use the four corner or bottom lift methods only**

The frequency of working alone in our industry is minimal, but in the instances that you do find yourself working alone please ensure you follow the above procedures to safeguard your own personal Health and Safety.

Appendix H: Standard Cabin Weights

The following will be checked against the lorry loader Duty Chart and lifting accessories SWL to ensure the lift radius required does not exceed the loader crane or lifting accessories capacities. Consideration should also be given to the effects on the unit weight of custom / heavily fitted out units; furniture; standing water or snow on the roof; and lifting accessory weights:

Dimensions / Description	Imperial Dimensions	Weight te
3.66m x 2.745m 2+1 steel WC unit	12' x 9'	3.0te
4.875m x 2.745m 3+1 steel WC unit	16' x 9'	3.5te
9.8m x 3.0m steel accommodation unit	32' x 10'	5.0te
7.3m x 2.7m steel accommodation unit	24' x 9'	3.5te
6.1m x 2.4m steel accommodation unit	20' x 8'	2.5te
4.875m x 2.4m accommodation unit	16' x 9'	2.0te
3.0m x 2.4m steel accommodation unit	10' x 8'	1.5te
6.1m x 2.4m steel container unit	20' x 8'	2.5te
3.0m x 2.4m steel container unit	10' x 8'	1.5te
7.3m x 2.4m steel container unit	24' x 8'	3.0te
9.1m x 2.4m steel container unit	30' x 8'	3.5te
12.0m x 2.4m steel container unit	40' x 8'	4.0te
6.1m x 2.745m steel welfare unit	20' x 9'	3.5te
7.925m x 3.1m steel welfare unit	26' x 10'	5.5te
Steel staircase and landing	N/A	800kg
Steel waste tank	N/A	750kg
Plastic waste tank	N/A	250kg
WC steps	N/A	250kg