

Risk Assessment for Adventure Forest Ltd T/as Go Ape! &/or Go Ape! EOT



SUBJECT: Forest Segway
 RISK ASSESSMENT REF: FS01/2024/V1
 WRITTEN BY: Operations Team/Health and Safety Team
 REVIEW DATE: Jan 2025

Risk Matrix								
Risk rating guidance	Likelihood (L)	5	5	10	15	20	25	Likelihood (L) x Severity (S) = Risk Rating (RR).
		4	4	8	12	16	20	
		3	3	6	9	12	15	
		2	2	4	6	8	10	
		1	1	2	3	4	5	
			1	2	3	4	5	
		Severity (S)						
Acceptability of risk guidance	High-risk: 15 – 25		High-risk activities should cease immediately. Further effective control measures to mitigate risks must be introduced.					
	Medium-risk: 8 – 12		Medium-risks are an acceptable level based on the reduced likelihood after sufficient control measures are implemented.					
	Low-risk: 1-6		Low-risks are largely acceptable. Where it is reasonable to do so, efforts should be made to reduce risks further.					
Guidance. When completing a risk assessment, you should:	<ol style="list-style-type: none"> 1. Identify the persons at risk and the significant hazards. 2. Calculate an initial RR for the activity. 3. Identify risk control measures that reduce the risks to an acceptable level. 4. Calculate a revised RR - you should consider how much safer the task will be if the control measures are followed. Here, you should consider changing both the likelihood (L) and the severity (S) ratings. 							
Note. Ideally, you should look to reduce the risks so that the task can be classified as “low-risk”.								

Likelihood	Definition	Points rating
Inevitable	If the work continues as it is, there is almost 100% certainty that an accident will happen, for example, A broken stair or broken rung on a ladder, Bare, exposed electrical conductors, Unstable stacks of heavy boxes	5
Highly likely	Will happen more often than not. Additional factors could precipitate an incident but it is still likely to happen without this additional factor.	4
Possible	The accident may occur if additional factors precipitate it, but it is unlikely to happen without them.	3
Unlikely	This incident or illness might occur but the probability is low and the risk minimal.	2
Remote possibility	There is really no risk present. Only under freak conditions could there be any possibility of an accident or illness. All reasonable precautions have been taken - This should be the normal state of the workplace.	1









Severity	Definition	Points rating
Very high	Causing multiple deaths and widespread destruction eg. fire, course/building collapse.	5

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High	Causing death, serious injury or permanent disability to an individual.	4
Moderate	Temporary disability causing injury (to member of the public, contractor or employees) or disease capable of keeping an employee off work for seven days or more and reportable under RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995).	3
Slight	Minor injury (to member of the public, contractor or employee), which would allow the individual to continue work after first aid treatment on site or at a local surgery. The duration of the stoppage or treatment is such that the normal flow of work is not seriously interrupted.	2
Nil	Very minor injury, bruise, graze, no risk of disease.	1



Personal protective equipment (PPE) assessment								
Type of PPE:								
	Head Helmet	Foot	Eye	Hand	Hearing	Hi-Visibility Vest	RPE	Fall Arrest

SER	HAZARD	L	S	RR	WHO MIGHT BE HARMED	CONTROL MEASURES	FURTHER CONTROL MEASURES: reviewed annually to formulate Risk Reduction Plan	L	S	RR
1	Injury through Manual Handling of Segway	3	3	9	Staff	<ul style="list-style-type: none"> Follow the manual handling training provided. Segway will only be lifted by a minimum of two people. Avoid or minimise lifting or moving Segways by adapting site operations, such as ramps into containers. Inactive Segway must be wheeled one at a time. 		1	3	3
2	Segway fails to function as expected. Segway will not function correctly if: <ul style="list-style-type: none"> The rider is too light or too heavy. The wheels lose traction with the ground. Too much power is requested from the Segway. The rider does not follow the training given. 	2	3	6	Customers	<ul style="list-style-type: none"> Following the manufacturer's Operating Manual, only people between 7 and 18.4 stone may ride the Segway. Scales are available at the site. Instructors are trained on how to ride the Segway in accordance with the Manufacturer's instructions, which have been included in the Forest Segway Operational Policies, Training Package, the Safety Rules and Advice and the Safety Brief. A Disclaimer, Safety Rules and a Safety Brief are provided to participating customers following the above. 		1	3	3

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	<ul style="list-style-type: none"> • It is ridden with insufficient charge in the battery. • The Segway is not correctly maintained. 					<ul style="list-style-type: none"> • The Segway has multiple inbuilt safety protocols. the following three are directed towards the rider. • The speed limiter- When you approach the maximum speed of the Segway the speed limiter will push the handlebar back to slow you down- Note: the speed limiter can activate when riding up/down a steep hill, over bumpy terrain, low battery charge, battery temperature outside normal, riding with less than 3 rider detection points active. • Stick Shake Warning- One of the ways that the Segway notifies you when you are at risk of falling is by shaking the Handlebar and making growling noises. This is called the Stick Shake Warning. The Stick Shake Warning can occur in conjunction with, or independent of the Speed Limiter and Safety Shutdown alert, depending on your riding situation. • Safety shutdown- When a Safety Shutdown occurs, the Segway automatically reduces its speed, gives the Stick Shake Warning (shakes the Handlebar and makes growling noises), flashes the Balance Indicator lights, emits a warning tone, and the InfoKey Controller displays an unhappy face. When a Safety Shutdown occurs, the Segway automatically reduces its speed. You have approximately 10 seconds from the start of a Safety Shutdown to come to a controlled stop and step off. After 10 seconds, the Segway will immediately shut down when the Wheels reach zero speed. 				
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						<ul style="list-style-type: none"> All riders are trained to recognise these warnings and how to respond. Segway will not be ridden where it is judged that surface conditions could cause the Segway wheels to lose traction. The Segway will be rotated on charge throughout the day to ensure all units have sufficient power for the session. The Segway will initially be ridden in training mode until such a time that an instructor deems the rider competent. Pre-use/Weekly visual + Monthly physical and post-incident + annual gearbox inspections are undertaken by trained instructors and are recorded to ensure all units are fully functional. The Segway itself will not fully activate unless all internal systems are functioning correctly. An error code will be displayed on the electronic 'key'. Instructors will refer to the manual for error code advice and remove from service as required any items beyond the scope of site-trained staff ready to dispatch to our service technician. 			
3	Falling from a Segway. Segways are safe and stable when ridden correctly over appropriate surfaces. However, a fall could result from; Lack of understanding or capability concerning how to control the Segway when:	3	3	9	Staff & Customers	<p>The Segway will only be ridden by people that have been appropriately trained by a competent and trained Segway instructor.</p> <ul style="list-style-type: none"> They will be ridden under close supervision until the instructor has deemed the rider competent to be led onto the trails. All riders will be briefed that deliberate misuse and inappropriate riding of the Segway will result in curtailment of the session. 			

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	<ul style="list-style-type: none"> • Avoiding other forest users • Stepping off in an emergency • Riding off designated trails/trail boundaries <p>Incorrectly riding the Segway.</p> <ul style="list-style-type: none"> • Riding too close together • Turning too sharply • Not listening to instructions • Not looking up • Not looking forward • Overtaking • Racing • Swerving • Not following the set route <p>Riding into obstacles (most likely with just one wheel) fence/obstacle another Segway</p>					<ul style="list-style-type: none"> • Anyone suspected of being under the influence of alcohol and/or drugs will not be permitted to ride a Segway. • The Segway route will be designed so that the Segway are only ridden on appropriate surfaces and along appropriate routes. • Any trail used, where an instructor does not lead the participants, will be checked by a trained instructor during opening checks. They will principally check for any debris/damage likely to affect safe operation of the Segway. • All other routes used will be led and dynamically assessed by appropriately trained instructors. • All riders will wear a helmet which conforms to standard EN1078 and will be inspected visually prior to use and formally after a dismount/ incident. All helmets are marked with an identification number and a recorded inspection is carried out monthly. • Correct riding procedures and techniques are covered in the Safety Rules and Advice and the Safety Brief. • If a rider requires assistance during their session, they can use the emergency whistle provided. • Group speed is dictated by the Lead Instructor. When not led by an instructor, the unit remains in training mode to limit the speed. • There is vehicular access to the main trails in case of emergency. • Unattended Segway will be de-activated; with Operating Key stored separately. • All instructors are first aid trained and carry a first aid kit, two-way radio and mobile phone in 				
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						the emergency bag. Emergency contact details are attached to the outside of the emergency bag to allow customers to intervene if an instructor were to become incapacitated				
4	<p>Segway colliding with a pedestrian or other forest user.</p> <ul style="list-style-type: none"> Transition from training area to main riding trails may go through some narrow trails. On the main riding trails. 	2	3	6	Staff, Customers, Members of the public	<ul style="list-style-type: none"> Following the Safety Brief, only competent people will be permitted to ride the Segway. They will be assessed by the instructor and must demonstrate control of riding the Segway forwards, turning, appropriate use of speed, correct behaviour, and the ability to step on and off the unit correctly. Following the Safety Brief, customers will be led by an instructor, initially in training mode. All free-ride trails start from a central hub and are signposted to be one-way trails. "No Entry" signs are located at the exit of each trail. Instructors will lead groups on existing trails which have been assessed and they are familiar with – selecting and assessing trails and suitability for the group as they ride. "Give Way" signs are located at the junction of all free ride trails and are checked present as part of our opening procedure 		1	3	3
5	<p>Getting Lost:</p> <ul style="list-style-type: none"> Participants could be separated from the rest of the group Poor visibility 	1	2	2	Customers	<ul style="list-style-type: none"> Free ride trails will be one-way and signposted accordingly. An instructor will be stationed at the central hub whilst riders are on the free ride trails Each participant will be trained during the Safety Brief in: <ul style="list-style-type: none"> Where their whistles are and when to use them to attract the attention of an instructor All instructors will carry a two-way radio and be in contact with each other and base where 		1	2	2

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						<p>possible. Each group will have a mobile phone to contact the base in case of an emergency.</p> <p>An instructor will accompany all customers in a ratio of at least 1:10.</p> <ul style="list-style-type: none"> With groups of 10 or less the lead instructor will stop regularly to ensure the group is together. With groups exceeding 10, a second instructor will ride at the back of the group to ensure no one is left behind and assist with the supervision of the group. 				
6	<p>Solo riding/Lone working</p> <p>The risks of riding a Segway remain constant. However, with lone working the consequences may be greater but can be mitigated with proper preparation.</p>	1	3	3	Staff	<ul style="list-style-type: none"> A planned route or area with an estimated return time must be logged with someone who can assist if necessary. (FE, Bike hire, etc) A means of communication; e.g mobile phone, FE radio First aid/emergency kit to be carried. Segway must be ridden at appropriate speeds for the terrain and weather conditions 				
7	<p>Clothing & Jewellery</p>	3	3	9	Customers, Employees, Contractors	<ul style="list-style-type: none"> Prohibit sandals, high heels & bare feet. Instructor check. Written Safety Rules and Advice. 		1	3	3
8	<p>Darkness and inadequate lighting</p> <ul style="list-style-type: none"> Disorientation Inability to read safety signs. Unable to see instructor and trails. Impaired supervision 	2	3	6	Customers, Employees, Contractors	<ul style="list-style-type: none"> Careful planning of session availability Provision of sufficient, well-sited, and effective lighting. Adequate supervision Staff assistance Termination of the activity 		1	3	3

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9	<p>Inclement Weather</p> <ul style="list-style-type: none"> • Lightning • High Wind • Ice and snow • Extreme Cold • Heat stroke 	3	3	9	<p>Customers Employees Contractors</p>	<ul style="list-style-type: none"> • Course closure for lightning, high winds, heavy ice, and snow. Duty Manager guidelines on cold weather. GAD • Evacuation Plans • Suitable clothing • Communications and use of radios and phones • Rest periods • Training • Staff breaks • Consultation with weather experts • Consultation with tree expert • Inspection policy following inclement weather • instructors' observations (Beaufort land scale) 		1	3	3
10	<p>Medical conditions</p> <ul style="list-style-type: none"> • Pregnancy • Fatigue • Other 	2	2	4	<p>Course users Employees</p>	<ul style="list-style-type: none"> • Medical and Disability Policies and Pregnancy Policy • Disclaimers self-certification • Pregnancy self-certification • Terms and Conditions • Staff training • Written/digital Safety Rules and Advice • Systematic assessment of risk • Dynamic assessment of risk • Patrolling and observation • Users advised to seek medical advice 		1	2	2
11	<p>Rowdy Groups</p>	2	3	6	<p>Course Users</p>	<ul style="list-style-type: none"> • Exclusion from activity • Written/digital Safety Rules and Advice • Terms and Conditions • group observation and management 		1	3	3
<p>Refs HSE Information Sheet Entertainment Sheet No 14</p>										

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HSE 5 Steps to Risk assessment INDG 163

HSE A Guide to Risk Assessment requirements INDG 218

Go Ape Generic Risk Assessments

GAD = Go Ape Company Handbook and further library documents listed on the Document Library

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