#### National Space Centre - Risk Assessment Form

#### General Risk Assessment Reference – G300

| **Location** | External Venues / Schools / National Space Centre |
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| **Equipment or Activity to be assessed** | Stardome |
| **Description of Activity** | The Star dome is a portable planetarium. It requires a 6m x 6m floor space with a 4.5m clearance above the dome. The dome is set up inside and is not to be used outside. It recreates a dark night sky with points of light displayed across the inside of the dome. |
| **Date of assessment** | 01/08/2024 |
| **Last review date (if applicable)** | 19/04/2023 |
| **Next review date** | August 2025 but earlier review date required following outcomes of accidents, absences and near misses, or changes to processes, work methods, materials, technology, equipment or legislation. |
| **Risk Assessment created by [name / date]** | Katrina May Neve [01/08/2024] |
| **Authorised by Line Manager [name / date]** | Katrina May Neve [01/08/2024] |
| **Authorised by Health and Safety Manager [name/ date]** | Katrina May Neve [01/08/2024] |

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| **What are the hazards?**  *Something with the potential to cause harm* | **Who might be harmed and how?** | **Control Measures**  *What is already in place to reduce the risk?* | **Additional Control Measures**  *What needs to be put in place to further reduce the risk?* | **Risk Rating**  *Refer to risk matrix below* | **Authorised by Health and Safety Manager** |
| Driving company vehicle on busy roads including motorways in all weather conditions | **Who**  NSC presenters  **How**  Struck by vehicle, fatalities, unconsciousness | All drivers to familiarise themselves with vehicle and to drive supervised with experienced driver before driving solo.  New drivers to undertake driving refresher and review with qualified personnel.  Take regular breaks during longer journeys as necessary.  Plan in advance for travelling distances and adverse weather conditions. |  | Likelihood: 1  Severity: 5  Risk Rating: 5  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Poor vehicle maintenance | **Who**  NSC presenters  **How** | Weekly inspections completed by competent personnel.  Key inspectors for tyres, lights and fluids take place on a regular basis.  Vehicle serviced according to regular service schedule. |  | Likelihood: 1  Severity: 5  Risk Rating: 5  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Tripping hazard from edge of dome, cables and mats  Lighting levels | **Who**  NSC presenters, members of the public  **How**  Cuts, bruises, strains, sprains | Health and safety briefing given to audience / students prior to entry to the stardome, covering the below topics:   * Entry and exit into the stardome * The level of darkness * How sound travels within the dome * What happens if they need to leave the dome   Verbal warnings given to the audience about not sitting on the blue edge of the dome.  Headtorches available for staff.  All wires secured by tape or cable tidies.  Two members of staff work the stardome – one member supervises the students entering the dome and waits at the door, and one staff member waits inside and instructs audience on safe places to sit. |  | Likelihood: 1  Severity: 3  Risk Rating: 3  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Electrocution | **Who**  NSC presenters, members of the public  **How**  Electrocution | All electrical equipment PAT tested on a rolling annual basis by a competent person.  PAT testing completed for any new or existing equipment. |  | Likelihood: 1  Severity: 4  Risk Rating: 4  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Safeguarding | **Who**  NSC presenters and members of the public  **How** | All staff subject to regular / enhanced DBS checked.  Staff have completed an NSPCC ‘child protection’ course.  NSC has appointed designated safeguarding officer trained by the NSPCC. |  | Likelihood: 1  Severity: 4  Risk Rating: 4  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Lone Working | **Who**  NSC presenters  **How** | All staff to contact the team WhatsApp group on arrival and departure to and from the school. If a member of staff have not contacted or responded to messages, destination school to be contacted until member of staff can be traced.  NSC has roadside cover in the event of any breakdowns or accidents. The membership card is kept inside the van.  All members of staff have a mobile phone with them on any journey to ensure they are contactable.  Two members of staff complete the stardome outreach. |  | Likelihood: 1  Severity: 4  Risk Rating: 4  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Loading the stardome into the van | **Who**  NSC presenters  **How**  Musculoskeletal disorders, strains, sprains | Staff have completed Manual Handling e-learning training.  Ramp installed on the van for easier loading.  Trolley available in the van for moving equipment.  Stardome equipment has wheels for easier movement.  Two-person lift completed.  Manual handling risk assessment completed. |  | Likelihood: 2  Severity: 3  Risk Rating: 6  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Taking the stardome from the van into the school | **Who**  NSC presenters  **How**  Musculoskeletal disorders, strains, sprains | Staff have completed Manual Handling e-learning training.  Ramp installed on the van for easier removal.  Trolley available in the van for moving equipment.  Stardome equipment has wheels for easier movement.  Two-person lift completed.  Van to be parked at a reasonable distance from the school to avoid staff manual handling across a long distance.  Manual handling risk assessment completed. |  | Likelihood: 2  Severity: 3  Risk Rating: 6  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Set up and breakdown | **Who**  NSC presenters  **How**  Cuts, bruises, slips, trips, falls, strains, sprains | Headtorches provided to presenters during set up.  Two-person lift completed for manual handling of equipment.  Manual handling risk assessment completed.  Staff have completed manual handling e-Learning. | Knee pads to be provided to all staff as the set up and breakdown requires them to be on their knees. | Likelihood: 3  Severity: 3  Risk Rating: 9  [Medium] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |
| Fire and evacuation | **Who**  NSC presenters, members of the public  **How**  Exposure to smoke, exposure to fire, burns, unconsciousness, fatalities | In the event of an evacuation or a fire, the stardome is lifted up and flipped, causing it to de-inflate.  This can happen if people are inside as there is no floor to the dome.  When the dome has been lifted, standard evacuation procedures to be followed. | Schools to share evacuation procedures with Education presenters prior to their arrival / prior to the stardome activity taking place. | Likelihood: 1  Severity: 5  Risk Rating: 5  [Low] | Katrina May Neve  Health and Safety Officer  [01/08/2024] |

**Risk Rating Matrix**

**Risk = Likelihood of injury x Severity of injury**

**R = L x S**

**Low risk = 1 – 6, Medium risk = 8 - 12, High risk = 15 - 25**

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|  | | **S = Severity of injury** | | | | |
| **Minor injury or illness (1)** | **First aid injury or illness (2)** | **3-day injury or illness (3)** | **Major injury or illness (4)** | **Fatality, disabling injury, etc (5)** |
| **L = Likelihood of injury** | Very unlikely (1) | 1 = Low | 2 = Low | 3 – Low | 4 = Low | 5 = Low |
| Unlikely (2) | 2 = Low | 4 = Low | 6 = Low | 8 = Medium | 10 = Medium |
| Likely (3) | 3 = Low | 6 = Low | 9 = Medium | 12 = Medium | 15 = High |
| **Very likely (4)** | 4 = Low | 8 = Medium | 12 = Medium | 16 = High | 20 = High |
| **Almost certain (5)** | 5 = Low | 10 = Medium | 15 = High | 20 = High | 25 = High |

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|  | **Risk Rating Definitions and Guidelines** |
| **Low** | **Minor to no injury.**  This is an acceptable level of risk. No further controls are required as the risk rating cannot be reduced any further. However, it is advised continual monitoring occurs to ensure that no changes/deviation of control measures occur. |
| **Medium** | **An injury requiring further medical assistance or is a RIDDOR related incident.**  It is advised that further control measures are implemented to reduce the risk rating to a low a level as possible. If the risk cannot be reduced to lower than a medium, then on-site monitoring should occur to ensure that all stipulated controls are bring adhered to. |
| **High** | **Death, paralysis, long term serious ill health.**  This is an unacceptable risk rating. Urgent interim controls should be implemented to reduce the risk so far as is reasonably practicable. If the risk rating cannot be reduced to lower than high, then a documented safe system of work should be implemented to control the activity. It may be necessary to seek further professional advice. Serious consideration should be given to the validity of carrying out the activity at all. Regular Monitoring of the activity should occur. |