**1. General Information:**

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| --- | --- | --- | --- | --- | --- |
| **Location/Building:** | Queen’s Buildings, School of Engineering | **Room No:** | Engineering Forum Room | **Assessment No:** |  |

**2. Description of Procedure/Activity:**

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| --- |
| *The use of a wearable walking aid, designed for a blind person, will be used to navigate a user, that has been blindfolded, around a simple obstacle course which consists of one singular obstacle. The obstacle in use will be a large cardboard box. The user will be unaware of the boxes location and the wearable walking aid will guide them around the obstacle to a specified goal point which will be predetermined within the software. The obstacle course will be sectioned off and only allow for the user and one device operator to enter the area. The people who will be watching the demonstration will be held behind a large board and they will not be allowed to enter the obstacle course* |

**3. Evaluation of Risk:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Work Activity/Equipment/Physical Location** | | **Identified Hazards** | **Who might be Harmed?** (e.g. Staff, Student, Contractor or new/expectant mother) | **Current Control Measures?** | | | **Likelihood**  **(1 to 5)** | | **Severity**  **(1 to 5)** | **Risk Factor** |
| Cardboard Box | | Potential tripping of the user or people walking around in the area | Student | There will only be one cardboard box and the walking speed of the user will be very slow to limit the seriousness of any potential collisions | | | 2 | | 2 | 4 |
| Walking through the course | | User could potentially trip on the box if the device doesn’t function as desired | Student | Walking speed of the user will be very slow to limit the seriousness of any potential collisions | | | 2 | | 2 | 4 |
| Surrounding walls | | User could walk into the wall if the device doesn’t function as desired | Student | Walking speed of the user will be very slow to limit the seriousness of any potential collisions | | | 2 | | 3 | 6 |
| Surrounding people watching | | The user could walk into the people watching the demo if device doesn’t function as desired | Student, Staff | Walking speed of the user will be very slow to limit the seriousness of any potential collisions and there will be a board put up to separate any people watching the demonstration from the obstacle course | | | 1 | | 2 | 2 |
| Equipment malfunction | | The device feedback systems could not function and there is a potential of tripping or falling for the user | Student | Walking speed of the user will be very slow to limit the seriousness of any potential collisions and there have been extensive preparation and checks to minimise the chances of any malfunction occurring | | | 2 | | 1 | 2 |
| Enterance to the course by unauthorised person(s) | | Contact between the tester and the person in the demonstration area | Student, Staff | There will be a clear barrier between the people watching demonstration area. This will be enforced by a couple of people from the project team | | | 1 | | 2 | 2 |
| Software and hardware failure | | No navigation to the user, chance of collision resulting in trip or fall | Student | Walking speed of the user will be very slow to limit the seriousness of any potential collisions and there have been extensive preparation and checks to minimise the chances of any failure occurring | | | 2 | | 2 | 4 |
| Power failure | | No navigation to the user, chance of collision resulting in trip or fall | Student | Walking speed of the user will be very slow to limit the seriousness of any potential collisions and there have been extensive preparation and checks to minimise the chances of any failure occurring | | | 2 | | 2 | 4 |
| **Scoring Criteria for Likelihood**  1 – Insignificant, 2 – Unlikely, 3 – Likely, 4 – Very Likely, 5 Almost Certain | | | | **Scoring Criteria for Severity of Injury (or illness)**  1 – Trivial (self-help recovery), 2 – Minor Injury (minor first aid), 3 - Moderate First Aid or Medical Treatment at A&E, 4 – Major Injury (e.g. Hospital admission), 5 – Severe (Fatality or life changing) | | | | | | |
| **List any PPE Required:** | N/a | | | **Risk Factor Scores from table:** | **1 to 6 No Further Action Required** | **7 to 11 Additional Control Measures should be implemented** | | **12 to 25 STOP Additional Controls MUST be Implemented** | | |
| **All Task Participants MUST sign at the end of this form to confirm they have understood the content and have received instruction and safety advice that relates to this task** | | | | | | | | | | |

**4. Are any other Assessments required?**

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| --- | --- | --- | --- | --- |
| **Type of Assessment** | **Yes** | **No** | **Has this assessment been completed?** | **Location of Assessment** |
| **Environmental Risk** |  | **X** | N/A | N/A |
| **CoSHH** |  | **X** | N/A | N/A |
| **Noise** |  | **X** | N/A | N/A |
| **Manual Handling** |  | **X** | N/A | N/A |
| **Vibration** |  | **X** | N/A | N/A |
| **Any additional Emergency Arrangements required?** |  | **X** | N/A | N/A |
| **Other e.g. DSE – Cleaning of commonly touched surfaces** |  | **X** | N/A | N/A |

**5. Additional Control Measures**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Work Activity/Equipment/Physical Location** | **Hazards** | **New/Additional Control Measures Required** | **Likelihood**  **(1 to 5)** | **Severity**  **(1 to 5)** | **Residual Risk Factor** |
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**6. Declaration:**

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| --- | --- | --- | --- | --- |
|  | **Name** | **Signature** | **Position** | **Date** |
| **Assessment Completed By:** | **Samuel Griffin** | **Samuel Griffin** | **Undergraduate Engineer** | **10/04/2025** |
| **Reviewed By:** |  |  |  |  |

**7. Review:**

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Name** | **Position** | **Date** |  | **Name** | **Position** | **Date** |
| **Reviewed By:** |  |  |  | **Reviewed By:** |  |  |  |
| **Reviewed By:** |  |  |  | **Reviewed By:** |  |  |  |

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| Risk Matrix Table | | | | | | | |
| **Likelihood** | 5 | Almost Certain | 5 | 10 | 15 | 20 | 25 |
| 4 | Very Likely | 4 | 8 | 12 | 16 | 20 |
| 3 | Likely | 3 | 6 | 9 | 12 | 15 |
| 2 | Unlikely | 2 | 4 | 6 | 8 | 10 |
| 1 | Insignificant | 1 | 2 | 3 | 4 | 5 |
| **Severity** | | | Trivial | Minor Injury | Moderate Injury | Major Injury | Severe |
| 1 | 2 | 3 | 4 | 5 |

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| **Name** | **Signature** | **Date** |
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**By signing this document you agree that you understand the topic and the Risks and Hazards of the task, any clarification required you must discuss with your supervisor before continuing.**