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| **Lifting Plan** | |
| School/Professional service: School of Engineering and Physical Sciences  Lifting Activity: 3D Printer Lifting  Location: B13  Date of plan: 18/10/2024  Date of operation: [ADD DATE OF LIFTING PLAN] | |
| Work Safely - Reduce Risks | |
| This form is intended to assist in the production of a lifting plan for lifting operations (using lifting equipment) as required by the LOLER Regulations. It should be read in conjunction with **Lifting Equipment Policy**, and the **Lifting Operations & Equipment Guidance**   * For a routine, basic lift, a generic plan and procedure is sufficient, it must be reviewed at least annually. * An intermediate lift requires a detailed plan and procedure, it should be reviewed each operation. * A complex lift requires a detailed plan and procedure, it should be specific to each operation. | CompetencyThe person planning the operation must have adequate practical and theoretical knowledge, and experience of planning lifting operations.This plan must be drawn up with the assistance of those having adequate knowledge of the loads and competent in the use of the lifting equipment. |

**A suitable and sufficient risk assessment must be completed before completing this Lifting Plan**

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| **1** | Overview of the operation *– items to be lifted – equipment to be used – location – lifting from moving to – risk level basic – intermediate – complex. (see Guidance – “Lifting operations & Lifting Equipment”)* |
|  | Two 3D printers – Trolley used – From [ADD LOCATION] to B13 1015 – risk level: basic. |
| **2** | Description of the load - *including if palletised, crated or shrink wrapped etc. and the materials* |
|  | Two Prusa 3.5s 3D Printers |
| **3** | Weight of the load – *indicate if estimated and basis/ accuracy of estimation* |
|  | Total weight of 14 kg |
| **4** | Dimensions of the load *- if not a rectangular load give some indication of the shape* |
|  | 550x500x400cm |
| **5** | Location of Centre of Gravity *– note any asymmetric weight distribution or movement of centre of gravity* |
|  | Roughly within geometric centre but closer to the printer’s base. |
| **6** | Provision of lifting eyes or locations *– give details of any engineered lifting points* |
|  | N/A |
| **7** | Equipment to be used for the lift *– assess if it is suitable in terms of strength and stability - give details of capacity of equipment Safe Working Load (SWL), Manufacturers Rated Capacity MRC), Working Load Limit (WLL) - Statutory inspection and maintenance status* |
|  | Transport trolley |
| **8** | Accessories to be used for the lift - *such as fork extensions, slings, hooks, shackles - assess if they are suitable in terms of strength and stability - give details of capacity of equipment (SWL) (MRC) (WLL) Statutory inspection and maintenance status* |
|  | N/A |
| **9** | Derating – *consider where and how the equipment is used. Consider: the attachments to be used, how the accessories are to be used, lifting people, wind, environmental hazards e.g. a railway line* |
|  | N/A |
| **10** | Step by step description of how the task will be performed safely, *including but not limited to the: erection, dismantling and the positioning of the equipment, technique for attaching/detaching and securing the load and measures taken to avoid overturning, restricting access to the area, managing hazards including the environment, PPE requirements* |
|  | Load 3D printers onto trolley – Transport loaded printers to B13 1015 – Unload 3D printers onto workspace. |
| **11** | Pre-use checks – *give details of procedure such as inspecting the condition of the equipment* |
|  | Check that printers are correctly assembled and that no connectors are missing. |
| **12** | Lifting people – *note equipment suitability (designed for people), measure to prevent a person from being crushed, trapped or struck, devices to prevent the carrier from falling, communication methods, plans for equipment failure (not being exposed to danger and means of rescue)* |
|  | N/A |
| **13** | Effects of weather conditions *- note any restrictions due to wind or rain, hot or cold, consideration for floating cranes, methods of assessing/measuring the conditions* |
|  | If raining a cover should be placed on the printers to prevent them from getting wet during transportation outdoors. |
| **14** | Limited visibility – *note measures to guide the operator, communication equipment, CCTV and visual markers* |
|  | Only perform transport during clear visibility conditions |
| **15** | Location from which the load is to be moved from- *include notes on access, headroom, terrain, pedestrian or vehicle traffic* |
|  | [ADD LOCATION] |
| **16** | **Route along which the load is to be moved** *– include notes on obstructions, headroom, terrain, pedestrian or vehicles traffic* |
|  | [ADD ROUTE] |
| **17** | Location to which the load is to be moved to- *include notes on access, headroom, terrain, pedestrian or vehicle traffic* |
|  | B13 1015 |
| **18** | **Proximity Hazards** – *consideration to overhead power lines, other work equipment, excavations, other lifting operations, low bridges, public highways, speed retarders/humps, racking and underground services such as drains and sewers* |
|  | None |
| **19** | **Exceptional Hazards** – *such as: Railways, Chemical plant, Nuclear installations, Risk assessment required, (competence in this area required)* |
|  | None |
| **20** | **Precautions to avoid the load being lifted over people** – *give details of controls e.g. barriers, signage and restricting access* |
|  | N/A |
| **21** | **Controls in place for people working under suspended loads (to be avoided whenever practicable)** – *Ensure that this hazard is adequately controlled within your risk assessment. Give details of secondary means to contain the load and overhead protection, Safe System of Work (SSoW)* |
|  | N/A |
| **22** | **Training/ experience required operate the lifting equipment** *- Level of training required to perform the task – (Please see the Training and competence section of the: Lifting Operations & Equipment Guidance)* |
|  | N/A |
| **23** | **Training/ experience required to supervise the lift** *– Level of training required to supervise the task - (Please see the Training and competence section of the: Lifting Operations & Equipment Guidance).* |
|  | N/A |
| **24** | **Training/ experience required to assist the lift** – *Level of training required to assist with the task - (Please see the Training and competence section of the: Lifting Operations & Equipment Guidance).* |
|  | N/A |
| **25** | **Have all the hazards identified in the Risk Assessment been eliminated or adequately controlled** *– including the hazards identified above. Consider slips trips and falls – operator protection – access and egress to and from the equipment.* |
|  | Yes |
| **26** | **Are there sufficient resources to complete the lifting activity safely** *– (in terms of equipment and people)* |
|  | Only requirement is the trolley and potentially covers if there is rain. |

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| **27** | **Name and job title of person completing this plan** | **Signature** | **Date** |
|  | **Alejandro Parra Pintado – Head of Product & External Relations** |  | **18/10/24** |

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| **28** | **Name and job title of person authorising this operation** - *Operations should be approved by a person with oversight of the operations within that area.* | **Signature** | **Date** |
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| **29** | **Name and job title of person(s) supervising this operation** | **Signature** | **Date** |
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| **30** | **Name and job title of person(s) undertaking this operation** | **Signature** | **Date** |
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VERSION CONTROL

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| **Type:** | Guidance | **Hazard Group:** | Lifting | **Version:** | 1.0 |
| **Date:** | | October 2024 | | | |
| **Author/ Job Title:** | | V1.0 Alejandro Parra Pintado | | | |