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| **PROJECT** | Bridleway Creation Lomeshaye Industrial Estate |  | **PREPARED BY** | J Austin |
| **DESCRIPTION** | Construction of stone bridleway and bitmac improvements to farm track |  | **DATE** | 26-04-2022 |

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| **ACTIVITY** | **WHO IS AT RISK?** | **CONSEQUENCE** | **RISK BEFORE CONTROL MEASURES** | | | **AVAILABLE CONTROL MEASURES** | | | **RISK AFTER CONTROL MEASURES** | | |
| **C** | **L** | **R** | **PRELIMINARY DESIGN** | **DETAILED DESIGN** | **CONSTRUCTION** | **C** | **L** | **R** |
| Site access and egress. | 1. General public. 2. Construction site staff | 1. Risk of obstruction/striking passing and delivery vehicles. 2. Risk of the public and employees being struck by passing vehicles. 3. Risk of construction site staff being struck by plant/machinery. | 4 | 3 | 12 | Design team considered the likely construction sequences in order to identify the exact locations/details of where hazards are present and where best to site access and egress points/site compounds. Then determined how any residual hazards could be mitigated. | Considered the vehicular movements to and from the specific site areas for locations of compounds, loading and unloading areas etc. | Site to be securely fenced and access/egress points signed to provide clarity to operatives and the general public.  Contractor’s method statement use of banksmen in all public areas. | 4 | 2 | 8 |
| Working close to/around statutory undertakers’ equipment. | 1. General public 2. Construction site staff | 1. Damage to existing services which may result in electrocution, explosion, major water leak. | 5 | 3 | 15 | Design team obtained service drawings from the relevant statutory undertakers to form basis of understanding of where services are present. | Service drawings from the statutory undertakers provided to the contractor as part of the tender process. | Contractor to identify methods and clearly determine then mark the location of any services within the site boundary prior to excavation.  Adequate preventative measures should be in place to minimise the likelihood of coming into contact with/damaging services, e.g. hand excavation to identify exact location of services where appropriate etc. | 5 | 1 | 5 |
| Working at height and use of tree cutting equipment | 1. General public 2. Construction site staff | 1. Risk of falling objects 2. Risk of falls from height 3. Risk of injury from mechanical chainsaws | 3 | 3 | 8 | Ensure footpath is closed to public, full request for construction staff training | Footpath closed in sections to not allow general public access | Contractor to consider as part of method statement and adhere to this during construction activities.  The public to be segregated from the works by suitable fences/barriers, in order to avoid conflict with the works.  Site staff to be provided with appropriate PPE relative to the nature of work. | 1 | 1 | 5 |

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| Ground conditions and existing site conditions.  Contaminated land  Removal of Himalayan Balsam | 1. Construction site staff. | 1. Exposure to contaminated material. 2. Uneven and unstable areas. 3. Uneven and soft ground. | 3 | 1 | 3 | Site boggy and wet and covered in Himalayan Balsam. | Use of lined geogrid to dissipate effects of soft ground.  Ensuring any disposal works are carried out to supplied methods.  Strictly following the ‘INNS’ Management Plan for contaminated materials | Although no areas have been identified, it is always a possibility that contaminated land may be uncovered during the construction phase.  Contractor to follow ‘INNS’ Management Plan and adhere to this during construction activities for both possible contamination and Himalayan Balsam. | 3 | 1 | 1 |
| Working over or adjacent to water. | 1. Construction site staff. | 1. Risk of tripping or falling into adjacent water. 2. Disturbance of silt. | 4 | 3 | 12 | Early discussion with EA and LCC to clarify the requirements of any potential works.  Consideration of construction sequences in regard to safe construction and maintenance. | Consideration given to specific construction sequences to improve the safety of the works.  Use of silt prevention measures. | Contractor to consider as part of method statement and adhere to this during construction activities. | 4 | 1 | 4 |
| Deep trenches. | 1. Construction site staff. | 1. Risk of collapsing excavation. 2. Falling debris into excavation. 3. Risks associated with working in confined spaces. | 4 | 2 | 8 | Proposed alignment to be adjusted wherever possible to minimise the possible collapse of trenches. | Stated requirements in Bill of Quantities. | Contractor to consider as part of method statement and adhere to this during construction activities. | 4 | 2 | 8 |
| Effects of noise, dust or vibration of the construction works. | 1. General public. 2. Construction site staff. 3. Adjacent properties. | 1. Risk of health problems to the general public. 2. Risk of health problems to construction site staff. 3. Annoyance to general public. | 2 | 4 | 8 | Appropriate mitigation measures identified. | Times and days when works can be carried out to be limited to weekdays and this is stated in the bill of quantities, in order to minimise disruption to adjacent properties. | Contractor to determine safe methods of working as part of method statement.  The public to be segregated from the works by suitable fences/barriers, in order to avoid conflict with the works.  Site staff to be provided with appropriate PPE relative to the nature of work. | 2 | 2 | 4 |
| Resurfacing/laying aggregates, concrete, grouts, mortars and bituminous materials. | 1. Construction site staff. | 1. Workers injured by machinery. 2. Workers injured by hazardous materials. | 2 | 3 | 6 | Identified locations where surfacing improvement works are to take place on scheme drawings and estimated quantities of materials required. | Identified specifications/British Standards to be adhered to for each item in the Bill of Quantities as part of the tender process. | Contractor to determine safe methods of working as part of method statement, identifying  suitable substance handling arrangements, the use of appropriate PPE and adequate storage and disposal.  Contractor to identify emergency procedures (e.g. if spillage occurs).  Contractor to ensure competence of operatives before carrying out all surfacing, repair and laying works. | 2 | 2 | 4 |

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| General public/children trespassing on site. | 1. General public. 2. Children. | 1. Risk of public injury on site from trips, falls, falling from height, uncovered manholes/trenches. | 4 | 3 | 12 | Considered the effects of restricting footway usage during the scheme and construction methods. | Construction sequences assessed to minimise the duration of any obstruction/severance to footways. | Site to be securely fenced and signed to provide clarity to operatives and the general public.  Publicise works in advance of construction works commencing. | 4 | 2 | 8 |
| Future maintenance. | 1. General public. 2. Construction site staff. | 1. Injury to the public. 2. Workers injured by machinery. | 2 | 3 | 6 | Designed works and specified materials to maximise the design life of asset and minimise future maintenance, i.e. use durable materials that comply with specifications and adoptable standards. | Management to ensure their satisfaction with the design and specification of the works. | PBC to check works to ensure they are undertaken to their required standards.  Maintenance responsibility to be with LCC upon completion of the works. | 2 | 2 | 4 |
| Future accidents. | 1. General public. | 1. Injury to the public. | 2 | 3 | 6 | Designed works and specified materials to maximise the design life of asset and minimise future maintenance, i.e. use durable materials that comply with specifications and adoptable standards. | Management to ensure their satisfaction with the design and specification of the works. | Ensure the site is handed over by the contractor having completed the works to the satisfaction of the Engineer.  Maintenance responsibility to be with LCC upon completion of the works. | 2 | 2 | 4 |

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| **CONSEQUENCE (C )** | |  | **LIKELIHOOD (L)** | |  | **RISK RATING (R ) = C x L** | |
| 1 | Minor injury, sickness or damage | 1 | Very Unlikely | R < 8 | Low Risk |
| 2 | First aid injury or lost time illness | 2 | Unlikely | 8 < R < 15 | Medium Risk |
| 3 | Reportable injury, sickness or substantial damage | 3 | Possible | R > 15 | High Risk |
| 4 | Major injury, amputation or long term absence | 4 | Likely |  | |
| 5 | Fatal injury, catastrophic damage | 5 | Very Likely |