

# Construction Environmental Management Plan

CONTRACT NUMBER                    20288

CONTRACT TITLE                    Tariff St, Manchester

CLIENT                                   Axis RE

| REVIEW RECORD |               |              |
|---------------|---------------|--------------|
| Review Date:  | Reviewed By:  | Details:     |
| 19.06.24      | Paul Brickles | First Issue  |
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| 13.01.25      | Paul Brickles | Third issue  |



## 1.0 INTRODUCTION

United Living Group is committed to managing the environmental impacts associated with the Tariff Street Project and achieving consistently high standard of performance throughout the duration of the project. The Construction Environmental & Sustainability Plan is required for all projects and its purpose is to:

- Ensure Conformance with the Group Environmental and Sustainability Policy (including all Standards and Procedures)
- Achieve Group Objectives and Targets (in line with the Group Sustainability Strategy and Project-Specific Targets where applicable)
- Ensure Compliance with all applicable Legislation & Statutory Controls (including Planning Conditions & Section 106 Agreements)
- Deliver the highest Standard Environmental Performance.

## 2.0 ACCOUNTABILITIES

The Project Director / Project Manager will ensure that the plan is prepared prior to commencement on site and will ensure that it is continually reviewed and updated where required. The Contract / Project Director will record the roles of the key project team members in the table below.

| Role:            | Name:          | Contact number(s): |
|------------------|----------------|--------------------|
| Project Director | Paul Kerry     | 07177 915740       |
| Project Manager  | Alan Stevenson | 07917 915676       |
| SHEQ Advisor     | Graham Tiplady | 07584 148042       |

## 3.0 ENVIRONMENTAL AND SUSTAINABILITY OBJECTIVES AND TARGETS

The following project-specific initiatives will be implemented in line with the group-level strategy. Please refer to the Environment & Sustainability Procedure PRO-4120 for further detail

| Group targets                                                             | Project-specific initiatives                                                                                       |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Reduce carbon emissions.<br>(Reduce carbon emissions to net-zero by 2030) | Encourage the supply chain to use low emission plant                                                               |
| Reduce waste.<br>(Reduce avoidable waste to zero by 2030)                 | Develop SFS design to enable lengths to arrive to site pre-cut to avoid excess waste from ordering 'stock lengths' |
| Eliminate single-use plastics.<br>(Eliminate single-use plastics by 2030) | zero-plastic/biodegradable signage                                                                                 |

## 4.0 Strategy

The strategy for securing more efficient use of non-renewable material resources and reducing the lifecycle impact of materials used in construction is crucial for sustainable development.

This strategy involves the careful selection and management of materials to minimise environmental impacts throughout their lifecycle, from extraction to disposal. The following outlines the key elements of this strategy adopted by United Living.

### 1. Material Selection

#### 1.1 Low Environmental Impact Materials

- Recycled and Reclaimed Materials: Prioritise the use of recycled or reclaimed materials to reduce the need for virgin resources.
- Renewable Materials: Select materials that are renewable and sustainably sourced, such as FSC-certified wood.
- Low-Emission Materials: Use materials that have lower emissions during production, such as KERS heating systems.

#### 1.2 Lifecycle Assessment (LCA)

- Conduct LCAs to evaluate the environmental impacts of materials throughout their lifecycle. This assessment helps in identifying materials with the lowest overall environmental impact.
- Utilise Environmental Product Declarations (EPDs) to compare materials based on their lifecycle data. Each material where applicable will be listed with an EPD for submission within the user guide.

### 2. Design and Construction Practices

#### 2.1 Efficient Design

- Material Optimisation: Optimise designs to use materials efficiently, reducing waste. This is achieved through efficient procurement and
- Durability and Longevity: Design for durability and longevity to extend the lifecycle of buildings and reduce the frequency of replacements and renovations.
- Design for Deconstruction: Implement design strategies that facilitate easy disassembly and reuse of materials at the end of the building's lifecycle.

#### 2.2 Construction Techniques

- Waste Reduction: Implement construction practices that minimise waste generation, such as just-in-time delivery and on-site recycling. Refer to App 2

### 3. Resource Management

#### 3.1 Supply Chain Management

- Sustainable Sourcing: Source materials from suppliers who follow sustainable practices. This includes verifying certifications and ensuring ethical sourcing of non-renewable resources.
- Local Sourcing: Prioritise locally sourced materials to reduce transportation impacts and support local economies.

**3.2 Inventory Control**

- Maintain efficient inventory control to reduce excess material orders and minimize waste.

**4. Implementation and Monitoring****4.1 Training and Awareness**

- All stakeholders, including architects, engineers, and construction workers are aware of the strategy on sustainable material selection and waste management practices.
- Promote awareness of the environmental impacts of materials and the benefits of sustainable practices.

**4.2 Monitoring and Reporting**

- Regularly monitor material use and waste generation throughout the project lifecycle.
- Implement a reporting system to track progress and identify areas for improvement.

**4.3 Continuous Improvement**

- Conduct periodic reviews of material use and sustainability practices.
- Implement feedback mechanisms to incorporate lessons learned into future projects.

**5.0 ENVIRONMENTAL ASPECTS/RISK MANAGEMENT**

To reduce the environmental impact of our activities the project team will identify site-specific environmental risks and record the appropriate control measures on the Project Environmental Risk Evaluation & Assessment FRM-4509 App 9. Appendix A

The project team will use the risk Evaluation table to determine the severity and likelihood of the of the risk, recording each risk as either Low (L), Medium (M) or High (H).

**6.0 ENVIRONMENTAL INCIDENTS AND EMERGENCY PROCEDURES**

All environmental incidents and near misses will be reported in the Airsweb Events module. Where an incident cannot be managed effectively and appropriately by the site team, it must be reported to the relevant regulatory authority (listed in the table below).

The Contract Manager / Project Manager and the SHEQ Advisor will manage investigations of reported incidents.

| Regulatory Authority                            | Country          | Incident Hotline |
|-------------------------------------------------|------------------|------------------|
| Environment Agency (EA)                         | England & Wales  | 0800 807060      |
| Scottish Environmental Protection Agency (SEPA) | Scotland         | 0800 807060      |
| Northern Ireland Environment Agency             | Northern Ireland | 0800 807060      |

## 7.0 SITE WASTE REDUCTION PLAN

The Contract / Project Manager will ensure that a Site Waste Reduction Plan is prepared prior to commencement on site using FRM-4121. Appendix B The main waste streams expected to be produced on this project are.

- Plasterboard (off cuts/damage)
- Timber (pallets etc)
- Packaging (plastics/cardboard)
- Mixed Metals
- Inert – Bricks/Blocks
- Insulation Materials
- Glass
- Ceramics

|                                          |                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                    |                                                                                      |
|------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------|
|                                          |                                                                                | Principle 1 – Conserve resources, increase efficiency and source sustainably                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                    |                                                                                      |
| Commitment                               | Target                                                                         | Implementation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Responsibility                     | Challenges and conflicts                                                             |
| Minimise Impact of new materials.        | Optimise structural materials. including floor slabs, foundations, and columns | Design of structural element optimised to reduce extent of cast insitu – element of precast allowed for in stairs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Main Contractor.                   | The site and crane access (required for precast elements) may be challenging.        |
| Minimise Resources                       | Water Usage                                                                    | Reduce Water usage within development.<br>- Reduced flush WC's<br>- Restricted Shower flow rates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Main Contractor/<br>M&E Contractor | Education of tenants to usage within HUG                                             |
|                                          | Reduce Carbon Emissions                                                        | The development will implement a KERS heating system which is a low carbon heating system within each apt.<br><br>Energy efficient lighting within apts and communal areas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Main Contractor/<br>M&E Contractor | Education of tenants to usage within HUG                                             |
| Specific Materials                       | 100% timber to be FSC Certified                                                | The main contractor through procurement to ensure all timber is 100% FSC accredited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Main Contractor                    | N/A                                                                                  |
|                                          | Procure materials with Environmental product Declarations                      | Contractor to source materials with relevant EPD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Main Contractor                    | Some systems may not have EDP and will be assessed on an individual basis            |
|                                          |                                                                                | <b>Principle 2 Design to eliminate Waste (and for ease of maintenance)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |                                                                                      |
| Design for Longevity                     | Achieve durability standards for key building elements                         | o ensure that circular economy principles are embedded within the construction process, the development aims to meet long term needs while being durable and resilient. UL has completed an exercise to review durability and resilience of the development. Several measures have been incorporated including:<br>- Ventilation strategy which avoids build-up of moisture.<br>- Overlapping waterproof line to the new elements that connect to existing below ground structure.<br>- Elements assessed and designed to withstand wind stress.<br>- Roof and wall cladding finishes which have excellent corrosion resilience.<br>- Hard-wearing and easily washable floor finishes in areas of heavy circulation.<br>- Key building elements such as external walls, roof and windows will achieve durability standards such as BS7543:2015. | Main Contractor                    | Durable building products and measures may increase upfront carbon and capital cost. |
| Design for easy replacement of materials | Materials to be logged with system for ease of replacement                     | Recording of materials to be electronically available to building maintenance company for ease of replacement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Main Contractor                    | As above                                                                             |
|                                          | Specify materials which can be reused after end of life /Deconstruction        | Many elements of the design can be reused or recycled at end of life. These materials include:<br>- Reinforcement steel – can be melted and recycled.<br>- Plasterboard – Can be directly recycled by manufacturers via take back schemes.<br>- Concrete – crushed and recycled directly on site.<br>- Floor finishes – carpet tiles can be refurbished and re-used, providing low-cost flooring to households and charities.                                                                                                                                                                                                                                                                                                                                                                                                                   | Main Contractor                    | N/A                                                                                  |

|                                             |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design out construction and municipal waste | Reduce Site waste                                                                               | The proposed approach to management of construction waste is to follow the waste and circular economy hierarchies. The proposed development will aim to minimise the total amount of construction waste produced on-site through best practice material handling procedures. The main contractor will produce a Site Waste Management Plan, outlining procedures for the reduction of construction waste generated.                                                                                                                                                                                                                        | Main Contractor | Some responsibility lies with subcontractors and suppliers, who the main contractor should work closely with to reduce waste.                                                                                                                                                                                                                       |
|                                             |                                                                                                 | <b>Principle 3 Manage Waste Sustainable and at the highest value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                                                                                                                                                                                                                                                                                                                                                     |
| Manage Construction Waste                   | 95% construction waste diverted from Landfill                                                   | Careful segregation of waste will occur where space allows on site, which enables higher quality recycled materials and encourages local reprocessing. The main contractor will maximise site segregation of construction waste to enable local reuse of waste materials and increase the quality of recyclable materials.<br>Monthly environmental inspections will take place and KPIs will be monitored via SmartWaste. The KPIs will include waste generation, segregation, and diversion from landfill.<br>Training staff in waste reduction techniques and proper segregation to ensure a cultural shift in attitudes towards waste. | Main Contractor | Many contractors do not evaluate waste disposal further than the first tier waste handler, the subsequent journey and final disposal or recycling site of waste is often unknown. Research may be required into local waste handling facilities and their onward disposal routes to understand opportunities for legal, transparent waste disposal. |
| Manage Municipal Waste                      | Meet or exceed the municipal waste recycling target of 50%, updated upon review of actual rates | Appropriately sized recycling and general waste storage areas have been provided within the design for the apartments and retail areas. They are located for ease of access, both by building occupants and waste collection.<br><br>The client will work with tenants to ensure that internal waste bins are provided to encourage recycling. The management company would be responsible for the monitoring of recycling rates and promote actively high recycling rates in the building, e.g., by providing information on segregation. Commercial tenants will be served by private waste contractors.                                 | Client          | Levels of recycling may be compromised by cross contamination. The apartment and retail units will be occupied by tenants (unknown at this stage) whose behaviours cannot be controlled by the management company. Recycling will be encouraged as far as possible within the control of the client.                                                |
|                                             |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |                                                                                                                                                                                                                                                                                                                                                     |

The project team will arrange for a Waste Management Company to handle and transport the waste from site. These details will be noted in the SWMP (Site Waste Management Plan), and the site will ensure it has copies of the appropriate licences and permits before any waste is moved from site.

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## 8.0 MONITORING

The SHEQ Advisors will complete regular PIT inspections and will monitor the site's compliance with company procedures, legal requirements, and client's requirements. Corrective and preventive measures will be agreed as necessary, to minimise the risk of occurrence and to provide opportunities for future improvements.

The Site management will assist with any internal inspections or external audits and carry out any corrective actions as agreed. Environmental issues will also be raised at the project meetings.

## 9.0 CONCLUSION

The project team at The Joinery has a proactive approach to delivering a building which embraces the principles of the circular economy.

This Circular Economy Statement has been prepared to support the planning application to MCC and demonstrate how the proposed new development at Tariff St site will deliver the principles of circularity as set out .

The following key circular economy commitments have been made and will be monitored through the duration of the project:

- Optimise structural materials including floor slabs, foundations, and columns.
- Eliminate unnecessary internal finishes.
- Reduce water usage by 25% during building operation.
- Reduce regulated carbon emissions by 15% during operation.
- 100% timber to be FSC certified.
- Procure materials with recycled content
- Procure materials with Environmental
- Product Declarations.
- Procure materials with responsible sourcing accreditation such as BES6001, CARES, FSC, ISO14001.
- Source materials in accordance with the Sustainable Procurement Plan.
- Achieve durability standards for key building elements (such as BS 7543:2015).
- Design for easy replacement of materials and adaptability.
- Specify materials which can be reused after end-of-life / deconstruction.
- 95% construction waste diverted from landfill
- Meet or exceed the municipal waste recycling target of 50%, updated upon review of actual rates.



## Appendix A

|                 |         |                  |               |
|-----------------|---------|------------------|---------------|
| CONTRACT NUMBER | 20288   | CONTRACT TITLE   | Tariff Street |
| CLIENT          | AXIS RE | CLIENT REFERENCE |               |

## EVALUATION OF RISK

| RISK                                                                                                                                  | LIKELIHOOD |        |        |
|---------------------------------------------------------------------------------------------------------------------------------------|------------|--------|--------|
| SEVERITY                                                                                                                              | LOW        | MEDIUM | HIGH   |
| <b>LOW (L)</b><br>Impact resulting in minimal damage in both the short-term and long-term                                             | LOW        | LOW    | MEDIUM |
| <b>MEDIUM (M)</b><br>Impact resulting in damage contained within the site boundaries but requiring immediate action (e.g. fuel spill) | LOW        | MEDIUM | HIGH   |
| <b>HIGH (H)</b><br>Significant impact resulting in off-site damage and / or long-term damage (e.g. watercourse pollution)             | MEDIUM     | HIGH   | HIGH   |

**Low** (combined risk): the activity does not require further management beyond standard best practice controls.

**Medium** (combined risk): the activity could be significant and management control is important. Additional training or resources may be required.

**High** (combined risk): the activity is deemed significant and senior management control is high priority. Best practice measures should be adopted. Manage through other plans or procedures specific to the activity plus specialist knowledge and planning.

## RISK ASSESSMENT

Project-specific risks and control measures will be determined and recorded in the table below. Where a risk is identified, record the risk level as High (H), Medium (M) and Low (L) depending on the severity and likelihood of the risk as determined by the Risk Valuation. If the risk does not exist record it as 'N/A'.

Identify the appropriate control measures to mitigate the risk and identify who is responsible for actioning them.

The significant impacts can be summarised under the following headings in no particular order of significance;

- Part 1 - Waste Management
- Part 2 - Pollution Prevention (land, air & water)
- Part 3 - Nuisance Control
- Part 4 - Wildlife & Biodiversity protection
- Part 5 - Responsible Use of Materials & Resources

| PART 1 - WASTE MANAGEMENT            |                                                                                                                                                                              |                                    |          |            |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |          |            |             |           |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------|------------|-------------|-----------|
| Aspect / risk                        | What is the impact?                                                                                                                                                          | Initial risk<br>(without controls) |          |            |             | What controls are required?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Residual risk<br>(with controls) |          |            |             | Action by |
|                                      |                                                                                                                                                                              | N/A                                | Severity | Likelihood | Risk rating |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N/A                              | Severity | Likelihood | Risk rating |           |
| Waste storage (Duty of Care)         | Waste which is incorrectly stored could escape and cause pollution, odour and attract vermin                                                                                 |                                    | M        | M          | M           | <ul style="list-style-type: none"><li>- Ensure Duty of Care when storing waste in accordance with the Environmental Protection Act, 1990 and the Waste (England &amp; Wales) Regulations, 2011.</li><li>- Ensure that waste is stored in suitable containers both on site and during transportation.</li><li>- Check if the relevant permit or exemption is obtained prior to storing (these may be required for storing certain waste types).</li></ul>                                                                                                                     |                                  | L        | L          | L           | SM        |
| Waste disposal (Duty of Care)        | Waste is disposed of in a way which causes harm to the environment. For example, disposal of waste material by unlicensed carriers and in unlicensed locations               |                                    | H        | H          | H           | <ul style="list-style-type: none"><li>- Ensure a Duty of Care when disposing of waste in accordance with the Environmental Protection Regulations, 1991; the Waste (England &amp; Wales) Regulations, 2011 and List of Waste Regulations, 2005.</li><li>- Ensure that Duty of Care documentation (e.g. certificates licences, WTNs with EWC codes) is obtained and checked prior to removal of waste from site. All waste leaving site must be accompanied by waste transfer evidence.</li><li>- Record details of waste removal in the Site Waste Reduction Plan.</li></ul> |                                  | L        | L          | L           | SM        |
| Hazardous waste (storage & disposal) | Duty of Care is not followed. This could lead to the contamination of other waste streams and the material being disposed of in a landfill site not engineered to contain it |                                    | H        | H          | H           | <ul style="list-style-type: none"><li>- Ensure that hazardous waste is stored, transported and disposed of in accordance with the Hazardous Waste (England &amp; Wales) Regulations, 2005 and all other legislation which imposes a Duty of Care of the producer.</li><li>- Ensure hazardous waste is stored safely and securely to prevent pollution and is stored separately to non-hazardous waste.</li><li>- Ensure hazardous waste is packaged and labelled correctly.</li></ul>                                                                                        |                                  | L        | L          | L           | SM        |

|                       |                                                                                                                                                                                    |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |   |   |   |    |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|---|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|---|---|----|
|                       |                                                                                                                                                                                    |  |   |   |   | <ul style="list-style-type: none"><li>- Store liquid hazardous waste with a bund or barrier to contain spills.</li><li>- Regularly check storage areas for leaks and deteriorating containers</li><li>- Ensure that collections are made by a registered carrier and that the waste leaving site is accompanied by a consignment note (CN). Copies of the CN must be kept by the producer for at least three years.</li><li>- Run Toolbox Talks on hazardous waste management.</li></ul>                                             |  |   |   |   |    |
| Asbestos removal      | Duty of care is not followed leading to the disposal of asbestos waste by unlicensed carriers at an inappropriate site. Potential environmental exposure                           |  | H | H | H | <ul style="list-style-type: none"><li>- Ensure that asbestos is stored, transported and disposed of in accordance with the Hazardous Waste (England &amp; Wales) Regulations, 2005.</li><li>- Carry out an asbestos survey and controlled removal of contaminated material.</li><li>- Ensure that the removal of asbestos is carried out under a specific method statement that that has been reviewed and approved.</li></ul>                                                                                                       |  | L | L | L | PM |
| Demolition activities | Re-use of demolition waste on site could be inappropriate or illegal without the relevant permit(s). On-site crushing of demolition waste could result in excessive noise and dust |  | H | H | H | <ul style="list-style-type: none"><li>- Carry out a pre-demolition / asbestos survey and controlled removal before demolition.</li><li>- Obtain relevant permits or exemption prior to storing and/or reusing demolition waste on site in accordance with the Environmental Permitting (England &amp; Wales) Regulations, 2016.</li><li>- Ensure crusher plant licences / permits are in place prior to crushing demo waste on site.</li><li>- Segregate recyclable materials for recycling to minimise landfill disposal.</li></ul> |  | L | L | L | PM |
| WEE Waste             | Potential pollution from components if not disposed of correctly                                                                                                                   |  | H | H | H | <ul style="list-style-type: none"><li>- Ensure the reuse, recycling and recovery of WEEE in accordance with the Waste Electrical &amp; Electronic Equipment (WEEE) Regulations, 2006.</li><li>- Identify all electronic and electrical equipment for removal and recycling.</li><li>- Check that the EWC code for WEEE waste is on the Waste Transfer Notes.</li></ul>                                                                                                                                                               |  | L | L | L | SM |

| Waste management via subcontractor                | Lack of documentation (Duty of Care) and control over waste disposal, leading to an increased risk of fly tipping and other illegal activities |                                 | M        | M          | M           | <ul style="list-style-type: none"> <li>- Ensure all subcontractor Duty of Care documentation is in place (e.g. carrier's licence).</li> <li>- Ensure waste loads are monitored by trained site-based staff to ensure Duty of Care and legal compliance.</li> </ul>                                                                                                                                                                                                                                                                                                                                                 |                               | L        | L          | L           | SM        |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------|------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------|------------|-------------|-----------|
| PART 2 - POLLUTION PREVENTION (LAND, AIR & WATER) |                                                                                                                                                |                                 |          |            |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |          |            |             |           |
| Aspect / risk                                     | What is the impact?                                                                                                                            | Initial risk (without controls) |          |            |             | What controls are required?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Residual risk (with controls) |          |            |             | Action by |
|                                                   |                                                                                                                                                | N/A                             | Severity | Likelihood | Risk rating |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | N/A                           | Severity | Likelihood | Risk rating |           |
| Watercourses / open water                         | Run-off from a sloping site to a watercourse (e.g. river), likely to occur during heavy rainfall events, leading to pollution of watercourses  |                                 | H        | H          | H           | <ul style="list-style-type: none"> <li>- Ensure that no pollutant is allowed to enter a watercourse / open water in accordance with the Water Resources Act 1991 and the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009.</li> <li>- Install cut-off trenches or bunds along bank tops to prevent ingress of water.</li> <li>- Reduce overland flow with use of lined channels to collect and channel water.</li> <li>- Install straw-bale bunds along bank tops to filter water entering the water body.</li> <li>- Locate stockpiles a minimum of 10 metres away from waterways</li> </ul> |                               | L        | L          | L           | SM        |
| Surface water drains                              | Discharge of silty water and mud from site and roads washed into road gullies, causing pollution of watercourses                               |                                 | M        | M          | M           | <ul style="list-style-type: none"> <li>- Ensure that no pollutant is allowed to enter surface water drains in accordance with the Water Resources Act 1991 and the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009.</li> <li>- Use the source-pathway-receptor model to identify the site risk.</li> <li>- Plan mud removal from wheels (sprays, wheel wash).</li> <li>- Implement road sweeping if road surfaces are contaminated with mud, silt or excessive dust</li> <li>- Provide emergency gulley and manhole covers on site.</li> </ul>                                               |                               | L        | L          | L           | SM        |

|                                         |                                                                                                                               |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |   |   |   |    |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--|---|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|---|---|----|
| <b>Concrete washdown</b>                | Loss of cementitious products into watercourses and surface water drains, causing pollution and blockage of pipes and sewers  |  | H | H | H | <ul style="list-style-type: none"> <li>- Ensure that concrete washout does not enter a watercourse or surface water drain(s) in accordance with the Water Resources Act 1991 and the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009.</li> <li>- Require concrete lorries to wash out the container and chute at the batching plant or in a designated washout area on site.</li> <li>- Ensure concrete washout area is located away from watercourses and on an impermeable surface.</li> <li>- Use of lined skip/container or secured lined pit for washout.</li> </ul>                                                                                                                         |  | L | M | L | SM |
| <b>Fuel &amp; oil storage</b>           | Fuel and oil spillages leading to the contamination of land and nearby watercourses via surface water drains                  |  | H | M | H | <ul style="list-style-type: none"> <li>- Ensure that the pollution of water due to oil spills is prevented in accordance with the Control of Pollution (Oil Storage) Regulations, 2001; Water Resources Act 1991 and the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009.</li> <li>- Work in accordance with PPG6 guidance on how to prevent pollution.</li> <li>- Ensure fuel and oil storage facilities are located on impermeable surfaces away from watercourses.</li> <li>- Ensure spill response kits are kept on site.</li> <li>- Ensure all oil storage tanks are bunded and / or have drip trays.</li> <li>- Ensure that drip trays/plant nappies are used under mobile plat.</li> </ul> |  | L | M | L | SM |
| <b>Refuelling plant &amp; equipment</b> | Fuel spills causing ground contamination and pollution of watercourses via entry into surface water drains                    |  | H | M | H | <ul style="list-style-type: none"> <li>- Ensure that any fuel spills caused by refuelling are prevented in accordance with the Control of Pollution (Oil Storage) Regulations, 2001; Water Resources Act 1991 and the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009.</li> <li>- Ensure that all refuelling near to the watercourses is banned.</li> <li>- Try to establish the refuelling area in locations where they do not need to be moved during the course of the project.</li> <li>- Ensure funnels are used to prevent spills during refuelling.</li> <li>- Provide and identify trained site-based staff to supervise and carry out refuelling training.</li> </ul>                    |  | L | L | L | SM |
| <b>Disposal / discharge to water</b>    | Contaminated water containing silt, oil and grease produced from activities such as wheel washing may enter controlled waters |  | H | M | H | <ul style="list-style-type: none"> <li>- Ensure that any disposal / discharge to water is carried out in accordance with the Environmental Permitting Regulations (England &amp; Wales), 2016 and pollution is prevented in accordance with the Water Resources Act 1991 and the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009.</li> <li>- Contact the environmental regulator to confirm if a permit/licence/consent is required.</li> </ul>                                                                                                                                                                                                                                                   |  | L | L | L | SM |

|                                            |                                                                                                                                                                                      |  |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |   |   |   |    |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|---|---|----|
|                                            |                                                                                                                                                                                      |  |   |   | <ul style="list-style-type: none"><li>- Ensure the discharge is only made to drains following legal approval by the way of a permit/licence/consent from the environmental regulator (e.g. sewerage provider, Environment Agency)</li><li>- Where possible, discharge to foul sewer rather than surface water drains.</li><li>- Ensure that any contaminated water is pumped into a tanker for disposal at an appropriately licenced facility.</li></ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |   |   |   |    |
| Abstraction of water                       | Abstraction of surface water can lead to increased pollution due to reduced dilution of pollutants                                                                                   |  | H | M | H                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"><li>- Ensure that any abstraction of water is carried out in accordance with the Environmental Permitting Regulations (England &amp; Wales), 2016 and the Water Resources (Abstraction &amp; Impounding) Regulations, 2006.</li><li>- Contact the environmental regulator to confirm if a permit/licence/consent is required.</li><li>- Ensure the abstraction only takes place following legal approval by the way of a permit/licence/consent from the environmental regulator (Environment Agency)</li></ul>                                                                                                                                                                                                                                                                                                                                                      |  | L | L | L | PM |
| Contaminated land                          | If contaminated land is not recognised and controlled appropriately, the disposal of contaminated soil may contaminate other land causing damage to ecology and ground/surface water |  | H | M | H                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"><li>- Ensure that contaminated land is managed in accordance with the contaminated land regime under Part 2A of the Environmental Protection Act, 1990; the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009 and the Environmental Liability Regulations, 2009.</li><li>- Carry out a land contamination investigation and remediation before construction starts (planning requirements).</li><li>- Develop a risk control strategy where there is potential for construction activities to mobilise contaminants (e.g. excavation of soil that brings contamination to surface)</li><li>- Ensure that the site team and affected package contractors are aware of the contamination and the planned control measures.</li><li>- Ensure that any contaminated material is dealt with as hazardous waste and Duty of Care is applied.</li></ul> |  | L | L | L | SM |
| Demolition, groundwork, construction works | These activities may result in reduced air quality and pollution due to the emission of odours, smoke, dust and particulate matter                                                   |  | H | H | H                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"><li>- Identify sensitive receptors and activities likely to give rise to dust, particulate matter etc.</li><li>- Develop a strategy to stop dust generation (e.g. damping down, manual sweeping, use appropriate speed limits).</li><li>- Undertake daily monitoring and respond immediately to any significant increases in odour, smoke, dust, particulate matter etc.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | L | L | L | SM |

|                                  | causing damage to ecology.                                                                                                                  |                                 |          |            |             | - Ensure that all processes that emit fumes, odours or smoke comply with regulatory limits.                                                                                                                                                                                                                                                                                                                                                                                          |                               |          |            |             |           |
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| <b>Diesel powered plant</b>      | The generation of electricity creates air pollutants such as sulphur dioxide, nitrous oxides and carbon dioxide, resulting in air pollution |                                 | M        | H          | H           | <ul style="list-style-type: none"> <li>- Ensure all plant vehicles comply with emission limits for their vehicle class and are regularly maintained.</li> <li>- Ensure any plant and equipment emitting black smoke is taken out of service immediately and that the defect is rectified.</li> <li>- Locate plant as far away as possible from sensitive receptors (e.g. ecology).</li> <li>- Where possible, use mains or battery powered equipment over diesel powered.</li> </ul> |                               | L        | L          | L           | SM        |
| <b>PART 3 - NUISANCE CONTROL</b> |                                                                                                                                             |                                 |          |            |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |          |            |             |           |
| Aspect / risk                    | What is the impact?                                                                                                                         | Initial risk (without controls) |          |            |             | What controls are required?                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Residual risk (with controls) |          |            |             | Action by |
|                                  |                                                                                                                                             | N/A                             | Severity | Likelihood | Risk rating |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N/A                           | Severity | Likelihood | Risk rating |           |

|                                        |                                                                                                                                                                                                    |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |   |   |   |    |
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| <b>Noise generating activities</b>     | <p>Disturbance to sensitive receptors (e.g. schools, hospitals etc) which could result in complaints and enforcement action.</p>                                                                   |  | M | M | M | <ul style="list-style-type: none"> <li>- Ensure that noise generating activities are managed in accordance with the Environmental Protection Act, 1990; Control of Pollution Act, 1974; The Noise Emissions in the Environment by Equipment for use Outdoors Regulations, 2001 and the Construction Plant &amp; Equipment Regulations 1985 &amp; 1988.</li> <li>- Monitor ambient and background noise levels at locations around the site as part of the noise survey (pre-construction).</li> <li>- Ensure that the results of the noise survey are used to plan the location of noisy operations that could cause nuisance to sensitive receptors.</li> <li>- Where required (e.g. Section 106 Agreement), undertake noise monitoring at the start of each new activity.</li> <li>- Use noise data from monitoring to assess compliance with any specified noise limits, noise level predictions within a Section 61 consent application, or change to noise levels compared to pre-construction noise monitoring.</li> <li>- Ensure on site management during the construction phase using best practicable means (BPM) to minimise noise (e.g. local screening of plant and site perimeter hoarding, selection of quiet or low noise equipment, keeping plant as far away from sensitive receptors as possible, arrange delivery times to suit the area).</li> <li>- Carry out noise inspections to check that BPM has been adopted, ensuring that non-BPM practices are identified and recorded so they can be rectified (more frequently during noisy activities).</li> <li>- Continually revise working practices to ensure BPM is adopted at all times.</li> <li>- Ensure that community engagement takes place in advance of any noisy works (e.g. letter drops).</li> </ul> |  | L | L | L | PM |
| <b>Vibration generating activities</b> | <p>Activities such as piling, demolition operations and heavy traffic, could result in damage to buildings and disturbance to neighbours. This could lead to complaints and enforcement action</p> |  | M | M | M | <ul style="list-style-type: none"> <li>- Ensure that vibration generating activities are managed in accordance with the Environmental Protection Act, 1990; Control of Pollution Act, 1974; The Noise Emissions in the Environment by Equipment for use Outdoors Regulations, 2001 and the Construction Plant &amp; Equipment Regulations 1985 &amp; 1988.</li> <li>- Evaluate the potential for vibration and damage (e.g. transmission of vibration is highly dependent on ground conditions). Review site operations due to take place and establish the sensitive locations and structures that need to be monitored (pre-construction).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | L | L | L | PM |

|                               |                                                                                                                                                                                                |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |   |   |   |    |
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|                               |                                                                                                                                                                                                |  |   |   |   | <ul style="list-style-type: none"><li>- Before starting operations ensure that any sensitive locations and structures are surveyed (e.g. existing cracks and other damage including broken pipes and tiles).</li><li>- Ensure that neighbours are informed of any potential vibration from planned activities (e.g. letter drops).</li><li>- Ensure the effects of vibration are minimised during works using best practicable means (BPM) (e.g. use plant that generates less low frequency vibration and where possible, use plant on a heavy base).</li><li>- Carry out vibration inspections to check that BPM has been adopted, ensuring that non-BPM practices are identified and recorded so they can be rectified.</li></ul>                                             |  |   |   |   |    |
| Dust generating activities    | Disturbance to sensitive receptors (e.g. schools and hospitals) and wildlife, leading to complains and resulting in enforcement action. Contamination of open water and to goods and materials |  | M | M | M | <ul style="list-style-type: none"><li>- Ensure that dust generating activities are managed in accordance with the Environmental Protection Act, 1990 and the Control of Pollution Act, 1974.</li><li>- Identify sensitive receptors and activities likely to give rise to dust.</li><li>- In liaison with the local authority develop a dust management plan / strategy and adopt control measures to mitigate any negative effects (e.g. damping down, manual sweeping, dust screens, use appropriate speed limits).</li><li>- As a minimum carry out daily visual assessments and respond immediately to any significant increases in dust.</li><li>- Respond to monitoring results and any complaints received and notify the local authority of any actions taken.</li></ul> |  | L | L | L | SM |
| Litter & wind-blown materials | Wind-blown litter from skips and other site activities could lead to complains and enforcement action                                                                                          |  | M | M | M | <ul style="list-style-type: none"><li>- Ensure that waste materials generated on site are prevented from causing litter in accordance with the Environmental Protection Act, 1990.</li><li>- Ensure good housekeeping requirements for light materials (e.g. daily skip / bin inspections).</li><li>- Where possible use covered skips if containing light materials that are likely to escape during high winds.</li></ul>                                                                                                                                                                                                                                                                                                                                                      |  | L | L | L | SM |
| Lighting                      | Disturbance to sensitive receptors (e.g. residential properties and wildlife) could lead to complains and enforcement action.                                                                  |  | M | M | M | <ul style="list-style-type: none"><li>- Ensure that lighting on site does not cause nuisance to neighbours in accordance with the Environmental Protection Act, 1990.</li><li>- Identify sensitive receptors surrounding the site.</li><li>- Position/direct lighting away from the sensitive receptors and use directional lighting where possible.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                   |  | L | L | L | SM |

|  |                                                                                                     |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |
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|  | Excessive or inefficient lighting is also a waste of energy and indirectly brightens the night sky. |  |  |  |  | <ul style="list-style-type: none"> <li>- Use appropriate levels of illumination and only light areas when and where required.</li> <li>- Use the minimum amount of lighting possible without compromising health &amp; safety.</li> <li>- Where practicable install shields, reflectors and baffles to reduce light spillage.</li> <li>- Implement a 'switch off' scheme involving training and posters advising staff and subcontractors to turn off lighting when a room or area is not in use.</li> </ul> |  |  |  |  |
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## PART 4 - WILDLIFE &amp; BIODIVERSITY PROTECTION

| Aspect / risk                                                                     | What is the impact?                                                                                     | Initial risk<br>(without controls) |          |            |             | What controls are required?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Residual risk<br>(with controls) |          |            |             | Action by |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------|----------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------|------------|-------------|-----------|
|                                                                                   |                                                                                                         | N/A                                | Severity | Likelihood | Risk rating |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N/A                              | Severity | Likelihood | Risk rating |           |
| <b>Protected wildlife (e.g. reptiles, badgers, bats, Great Crested Newts etc)</b> | On site activities could disturb and / or harm plant and animal species leading to loss of biodiversity |                                    | H        | H          | H           | <ul style="list-style-type: none"> <li>- Ensure that wildlife is protected in accordance with the Wildlife &amp; Countryside Act, 1981; Wild Mammals Protection Act, 1996; Protection of Badgers Act, 1992 and The Environmental Damage (Prevention &amp; Remediation) Regulations, 2009).</li> <li>- Employ an ecologist (pre-construction) to identify protected species that are present on site and advise on proposals for mitigation and enhancement in line with applicable legislation (usually required for the project to receive planning permission).</li> </ul> |                                  | L        | L          | L           | PM        |

|                                       |                                                                                                                                 |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |   |   |   |    |
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|                                       |                                                                                                                                 |  |   |   |   | <ul style="list-style-type: none"><li>- Ensure that where protected species are identified (pre-construction) through the ecological survey, a protection / control strategy is put in place and that the site team are aware of the strategy.</li><li>- Run Toolbox Talks for affected trade packages to ensure that personnel are aware of the controls.</li><li>- Where protected species are discovered during the works, work must be stopped immediately and expert advice on how to proceed must be obtained.</li><li>- If there are indications that animals are being harmed or injured due to on-site activities then work must stop immediately and advice sought from an ecologist (e.g. bats or nocturnal animals seen during daylight hours, injured birds, dead fish etc).</li></ul>                                                                                                               |  |   |   |   |    |
| Invasive / noxious plant species      | Invasive species (e.g. Japanese Knotweed) may be inadvertently spread due to on site activities, causing harm to native species |  | M | M | M | <ul style="list-style-type: none"><li>- Ensure that invasive plant species are controlled in accordance with the Wildlife &amp; Countryside Act, 1981 and the Weeds Act, 1959.</li><li>- Employ an ecologist (pre-construction) to identify invasive species that are present on site and advise on proposals for mitigation and control in line with applicable legislation.</li><li>- Ensure that where invasive species are identified (pre-construction) through the ecological survey, an eradication / removal strategy is put in place.</li><li>- Where invasive / noxious plant species are discovered during works, immediately cordon off the area to prevent inadvertent spreading and notify the environmental regulator that the plant is present.</li><li>- Where vehicles have been in an affected area ensure that their wheels / tracks are thoroughly washed before leaving the area.</li></ul> |  | L | L | L | PM |
| Use of herbicides (near watercourses) | Incorrect use (quantity and type) of herbicides could lead to pollution of watercourses and other wildlife habitats             |  | M | M | M | <ul style="list-style-type: none"><li>- To ensure that herbicides do not cause damage to the environment (e.g. through 'spray drift', seepage into soil etc) the user must have appropriate training and a recognised certificate of competence in accordance with the DEFRA Code of Practice.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | L | L | L | SM |
| Presence of trees on site (with TPOs) | Potential damage to trees due to on site activities (vibrations, dust etc)                                                      |  | H | H | H | <ul style="list-style-type: none"><li>- Ensure that trees on site (with TPOs) are protected in accordance with the Town &amp; Country Planning Act, 1990 and the Town &amp; Country Planning (Tree Preservation) Regulations, 2012.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | L | L | L | PM |

|                          |                                                                                                                                                              |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |   |   |   |    |
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|                          |                                                                                                                                                              |  |   |   |   | <ul style="list-style-type: none"><li>- Where TPOs are present ensure the tree is protected (e.g. avoid traffic below the canopy, storing materials beneath canopy, cutting roots).</li><li>- Ensure that consent is obtained from the local planning authority before any removal of trees with a TPO takes place (even if dead or dying).</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |  |   |   |   |    |
| Nesting birds            | Disturbance to nesting birds due to on site activities (vibrations, dust etc) may cause them to abandon their nests                                          |  | M | M | M | <ul style="list-style-type: none"><li>- Ensure that nesting birds are protected in accordance with the Wildlife &amp; Countryside Act, 1981 and the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009).</li><li>- Ensure programming of tree and hedge removal falls outside of the nesting season (March – August inclusive) and where this isn't possible, an ecologist should check vegetation for signs of breeding bird activity before clearance.</li><li>- Where possible remove nesting opportunities on site before the nesting season begins. Once nesting has commenced the nest zones should be protected (e.g. avoid noisy activities close to the nests).</li></ul>                                                                      |  | L | L | L | SM |
| Hedgerow removal on site | Removal of hedgerows will result in loss of habitat causing disturbance / harm to protected species and could inadvertently allow invasive species to spread |  | M | M | M | <ul style="list-style-type: none"><li>- Ensure that hedgerows on site are protected in accordance with the Hedgerow Regulations, 1997 and the Environmental Damage (Prevention &amp; Remediation) Regulations, 2009.</li><li>- Ensure the removal of any hedgerow longer than 20 metres in done so with planning permission (if the hedge is significant in terms of its age, historical importance etc then the Local Planning Authority can refuse permission).</li><li>- Provision of replacement habits and relocation of protected species where hedgerows are removed (seek advice from Ecologist).</li><li>- Identification and removal of invasive species that may be inadvertently spread when the hedgerows are removed (seek advice from Ecologist).</li></ul> |  | L | L | L | SM |

| PART 5 - RESPONSIBLE USE OF MATERIALS & RESOURCES |                                                                             |                                    |          |            |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                  |          |            |             |           |  |
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| Aspect / risk                                     | What is the impact?                                                         | Initial risk<br>(without controls) |          |            |             | What controls are required?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Residual risk<br>(with controls) |          |            |             | Action by |  |
|                                                   |                                                                             | N/A                                | Severity | Likelihood | Risk rating |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | N/A                              | Severity | Likelihood | Risk rating |           |  |
| Inefficient use of materials                      | Depletion of natural resources and unnecessary production of waste material |                                    | M        | M          | M           | <ul style="list-style-type: none"><li>- Reduce materials through design and specification (e.g. prefabrication &amp; off-site manufacturing).</li><li>- Where possible implement take-back schemes for high waste materials (e.g. offcuts from plasterboard and insulation).</li><li>- Where possible reduce and reuse waste materials through methods such as direct donation to charities, community groups and material use social enterprises (Community Wood Recycling).</li><li>- Ensure the ‘Waste Hierarchy’ is implemented on site (prioritise prevention &amp; reuse)</li><li>- Implement a Site Waste Reduction Plan to record and monitor waste materials and the methods employed to reduce material consumption.</li></ul> |                                  | L        | L          | L           | SM        |  |

|                                                             |                                                                             |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |   |   |   |    |
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| <b>Damage to materials</b>                                  | Depletion of natural resources and unnecessary production of waste material |  | M | M | M | <ul style="list-style-type: none"> <li>- Where practicable provide material storage areas dedicated to each work package.</li> <li>- Provide covered storage areas for sensitive materials and locked storage for higher value materials.</li> <li>- Store materials away from waste storage containers and from vehicle movements.</li> <li>- Where possible consider just-in-time delivery options to avoid damage to lack of storage capacity</li> <li>- Correct supervision and control to ensure that material handling is kept to a minimum and that materials are handled correctly.</li> <li>- Protect storage areas from the elements (e.g. weather).</li> <li>- Implement a Site Waste Reduction Plan to record and monitor waste materials and the methods employed to reduce material damage.</li> </ul> |  | L | L | L | SM |
| <b>Over-ordering of materials</b>                           | Depletion of natural resources and unnecessary production of waste material |  | M | M | M | <ul style="list-style-type: none"> <li>- Require removal rather than skipping of surplus materials at end of project (e.g. donation to schools and colleges).</li> <li>- Where possible implement take-back schemes for high waste materials (e.g. plasterboard and insulation).</li> <li>- Encourage "common specification" for repeat clients to ensure surplus materials can be used on the next job.</li> <li>- Implement a Site Waste Reduction Plan to record and monitor waste materials and the methods employed to reduce material over-ordering.</li> </ul>                                                                                                                                                                                                                                                |  | L | L | L | SM |
| <b>Use of materials / products with excessive packaging</b> | Depletion of natural resources and unnecessary production of waste material |  | M | M | M | <ul style="list-style-type: none"> <li>- Substitute virgin materials used in packaging for packaging with recycled content.</li> <li>- Control by supplier and specification (procurement decision).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | L | L | L | SM |
| <b>Use of illegal timber</b>                                | Destruction of forests due to unsustainable harvesting of trees             |  | H | M | H | <ul style="list-style-type: none"> <li>- Ensure that only legally harvested timber is purchased in accordance with the Timber &amp; Timber Products Regulations, 2013).</li> <li>- Implement United Living sustainable timber requirements (e.g. FSC / PEFC certified).</li> <li>- Check timber delivery notes / invoices for legal compliance and report to relevant authority if illegal timber is suspected.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                           |  | L | L | L | PM |
| <b>Recycled / recyclability of materials</b>                | Reduction in consumption of resources due to                                |  | M | M | M | <ul style="list-style-type: none"> <li>- Substitute virgin materials for those with recycled content.</li> <li>- Control by supplier and specification (procurement decision).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | L | L | L | PM |

|                                                                  |                                                                             |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |   |   |   |    |
|------------------------------------------------------------------|-----------------------------------------------------------------------------|--|---|---|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|---|---|----|
|                                                                  | improved potential to recycle waste material                                |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |   |   |   |    |
| Use of consumables for site office, welfare & general management | Depletion of natural resources and unnecessary production of waste material |  | M | M | M | <ul style="list-style-type: none"><li>- Maintain electronic copies of documents and only print if absolutely necessary.</li><li>- Discourage use of single-use plastic bottles and polystyrene cups by encouraging staff and subcontractors to use reusable cups / mugs (e.g. by displaying posters).</li><li>- Preference for high efficiency hand dryers instead of paper towels in the WCs.</li><li>- Reusable signage where possible and if new signage is required, use biodegradable signage instead of plastic (procurement).</li><li>- Consider procurement of reusable materials i.e. site hoarding.</li></ul>                                                                                                                                                                                                                                                                                                                                                     |  | L | L | L | PM |
| Use of fuel & electricity on site                                | Depletion of non-renewable resources contributing to climate change         |  | M | M | M | <ul style="list-style-type: none"><li>- Where possible use Eco site/welfare cabins (procurement).</li><li>- Implement a 'switch off' scheme involving training and posters advising staff and subcontractors to turn off lighting and plant equipment when not in use.</li><li>- Ensure grid connection as early as practicable (grid is more energy efficient than relying on power from diesel generators).</li><li>- Consider use of fuel efficient and low energy plant and equipment.</li><li>- Avoid use of oversized / undersized plant that could be inefficient.</li><li>- Consider using hybrid or fully electric vehicles where possible.</li><li>- Ensure efficient use of plant / vehicles through advanced operator training and good positioning of plant to avoid unnecessary movements.</li><li>- Where possible incorporate low or zero energy (e.g. in the form of solar photovoltaic panels, wind turbines &amp; low carbon fuels for plant).</li></ul> |  | L | L | L | PM |
| Use of water (inc. abstraction from a controlled source)         | Depletion of a natural resource, especially during periods of low rainfall) |  | M | M | M | <ul style="list-style-type: none"><li>• Ensure the 'Water Hierarchy' is implemented on site (prioritise elimination and non-potable sources).</li><li>• Discourage use of water by staff and subcontractors unless necessary (e.g. by displaying posters).</li><li>• Use of water-efficient fittings and equipment in the site welfare areas (e.g. low flow taps).</li><li>• Monitor consumption and identify control and management methods (i.e. determine how water will be used efficiently).</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | L | L | L | PM |

|                                        |                                                                                                                                                |  |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |   |   |   |    |
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|                                        |                                                                                                                                                |  |   |   |   | <ul style="list-style-type: none"><li>Adopt an emergency response plan, for example if any issue arise such as leaks or spills.</li></ul>                                                                                                                                                                                                                                                                                                              |  |   |   |   |    |
| Site accommodation                     | Inefficient units contributing to high energy consumption                                                                                      |  | M | M | M | <ul style="list-style-type: none"><li>Where possible use Eco site/welfare cabins (procurement).</li><li>Ensure that office waste is segregated (e.g. cardboard, food waste, dry mixed etc).</li><li>Encourage behavioural change to reduce unnecessary energy consumption and creation of waste in the welfare areas.</li></ul>                                                                                                                        |  | L | L | L | PM |
| Travel to site (staff & subcontractor) | Unnecessary journeys and carbon intensive modes of travel (e.g. private vehicles) depletes natural resources and contributes to climate change |  | M | M | M | <ul style="list-style-type: none"><li>Implement a 'Green Travel Plan' for staff and subcontractors (to encourage use of public transport etc).</li><li>Ensure that virtual meetings / conference calls are used where travel to site is not absolutely necessary.</li><li>Where possible order materials from local suppliers and use local trade / subcontractors.</li><li>Consider using hybrid or fully electric vehicles where possible.</li></ul> |  | L | L | L | PM |

## Appendix B

### Site Waste Reduction Plan

| PROJECT / CONTRACT DETAILS   |                                                                                                                                            |                           |       |                 |          |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-----------------|----------|
| Project / Contract Name      | Tariff Street                                                                                                                              | Project / Contract Number | 20288 | Floor Area (m²) |          |
|                              |                                                                                                                                            |                           |       | Value           |          |
|                              |                                                                                                                                            |                           |       |                 |          |
| Project / Contact Address    | Tariff Street, Manchester, M1 2FJ                                                                                                          |                           |       | Start Date      | 22.11.23 |
|                              |                                                                                                                                            |                           |       | Finish Date     | 27.4.26  |
|                              |                                                                                                                                            |                           |       |                 |          |
| Description / Scope of Works | Constructing two apartment blocks. Block 1 has 10 stories consisting of 205 apartments. Block 2 has 12 stories consisting of 56 Apartments |                           |       | Design & Build  | X        |
|                              |                                                                                                                                            |                           |       | Build Only      |          |

| PROJECT CONTACT DETAILS    |                |              |              |                   |                |
|----------------------------|----------------|--------------|--------------|-------------------|----------------|
| Contract / Project Manager | Alan Stevenson | Site Manager | Jake Johnson | Quantity Surveyor | Faried d’Kadik |

| ON-SITE WASTE REDUCTION CONTACT |
|---------------------------------|
|---------------------------------|

|                     |              |                  |              |                  |            |             |         |
|---------------------|--------------|------------------|--------------|------------------|------------|-------------|---------|
| <b>Contact Name</b> | Jake Johnson | <b>Job Title</b> | Site Manager | <b>Signature</b> | J. Johnson | <b>Date</b> | 19.6.24 |
|---------------------|--------------|------------------|--------------|------------------|------------|-------------|---------|

| 1. PLANNING |                                                                                                            |                                                                                                                                               |
|-------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| REF         | QUESTIONS TO CONSIDER                                                                                      | DETAILS                                                                                                                                       |
| 1.1         | Please provide details of how the project will prevent waste production (e.g. prefabrication)?             | Prefabricated materials to be constructed offsite and delivered JIT for usage                                                                 |
| 1.2         | Please provide details of how the project will minimise waste production (e.g. takeback schemes)?          | Take back schemes are discussed by commercial at subcontractor/supplier appointments                                                          |
| 1.3         | Please provide details of how site materials will re-used (e.g. donation to charities / community groups)? | Community Wood recycling will be engaged on the project to remove all timber waste for recycling                                              |
| 1.4         | Can unused materials be returned to purchaser or used on another job (e.g. surplus building materials)?    | Surplus building materials to be redistributed to other UL sites                                                                              |
| 1.5         | Please provide details of planned material storage locations and waste segregation                         | Material delivery will be just in time due to space constraints. A designated area will be set up for the storage of segregated skips on site |
| 1.7         | Has disposal of liquid wastes such as wash-down water and lubricants been considered?                      | Spill kits are available onsite, Hazardous waste drums to be installed if necessary                                                           |
| 1.9         | Where relevant, has discharge consent been obtained from the Environment Agency / water supplier?          | N/A                                                                                                                                           |

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|      |                                                                           |     |
|------|---------------------------------------------------------------------------|-----|
| 1.10 | Where relevant, has agreement for trade effluent discharge been obtained? | N/A |
|------|---------------------------------------------------------------------------|-----|

| 2. WASTE PRODUCTION – PLANNING & ACTUAL |                           |                           |                    |                              |                  |                  |          |                     |
|-----------------------------------------|---------------------------|---------------------------|--------------------|------------------------------|------------------|------------------|----------|---------------------|
| WASTE DESCRIPTION                       | European Waste Code (EWC) | QUANTITY*                 |                    | DISPOSAL ROUTE (please tick) |                  |                  |          |                     |
|                                         |                           | Estimate at design review | Actual at handover | Reused On-site               | Recycled On-site | Transfer Station | Landfill | Charity / Reuse Co. |
| Mixed Waste                             | 17 09 04                  |                           |                    |                              | X                | X                | x        |                     |
| Wood                                    | 17 02 01                  |                           |                    | X                            | X                | X                |          | x                   |
| Plasterboard                            | 17 08 02                  |                           |                    |                              | X                | X                |          |                     |
|                                         |                           |                           |                    |                              |                  |                  |          |                     |
|                                         |                           |                           |                    |                              |                  |                  |          |                     |

\*Please note the unit e.g. tonnes / m3 / skip size

The European Waste Code (EWC) system should be used to classify and describe the type of waste

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| 3. WASTE DISPOSAL & TREATMENT CONTRACTORS |                            |                        |              |                  |                         |                           |
|-------------------------------------------|----------------------------|------------------------|--------------|------------------|-------------------------|---------------------------|
| WASTE STREAM                              |                            | WASTE BROKER / CARRIER |              | WASTE MANAGEMENT |                         |                           |
| Description                               | Contractor Producing Waste | Company Name           | Licence No.  | Company Name     | Licence No. / Exemption | Recycling Rate (if known) |
|                                           |                            | Kenny waste            | EPR/HB3207GK | Kenny waste      | EPR/HB3207GK            | 80-100%                   |
|                                           |                            |                        |              |                  |                         |                           |
|                                           |                            |                        |              |                  |                         |                           |

| 4. POST CONTRACT REVIEW |                                                                                                                         |         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------|---------|
| Ref                     | Questions to consider                                                                                                   | Comment |
| 4.1                     | Are there any learning points which could be considered in future to improve waste prevention, minimisation and re-use? | N/A     |
| 4.2                     | Were there any discrepancies between the planned and actual waste volumes? Please provide details.                      | N/A     |

