

Overall Word Count - 4714

## Feasibility Report – Individual Sections

### 1. Development Constraints

#### 1.1 Listed Buildings and Conservation Areas

The site location is free from any explicit requirements or restrictions which we are to be aware of. Although densely populated with Historic assets and conservation areas, our site of interest does not fall into any categories of development constraints. The closest listed buildings are located across the river Tawe or at the beginning of Kings Road, leading to the site area. The nearest conservation areas are positioned across the Tawe in the maritime quarter in Swansea; both identified through CADW. The tree preservation orders are also located within the conservation areas, which again means we are not within the boundaries of constraint. Being in an area of conservation and heritage, this may influence design considerations but should not restrict development.

As per the Swansea planning portal, this area of proposed development has not been approved. However, with the surrounding work that have been taking place within such close proximity, there is no doubt that this wouldn't be approved for development.

There may be some key planning considerations that need to be considered, these include:

- Flood Risk Mitigation
- High-quality design appropriate to the SA1 Waterfront
- Access, Parking capacity

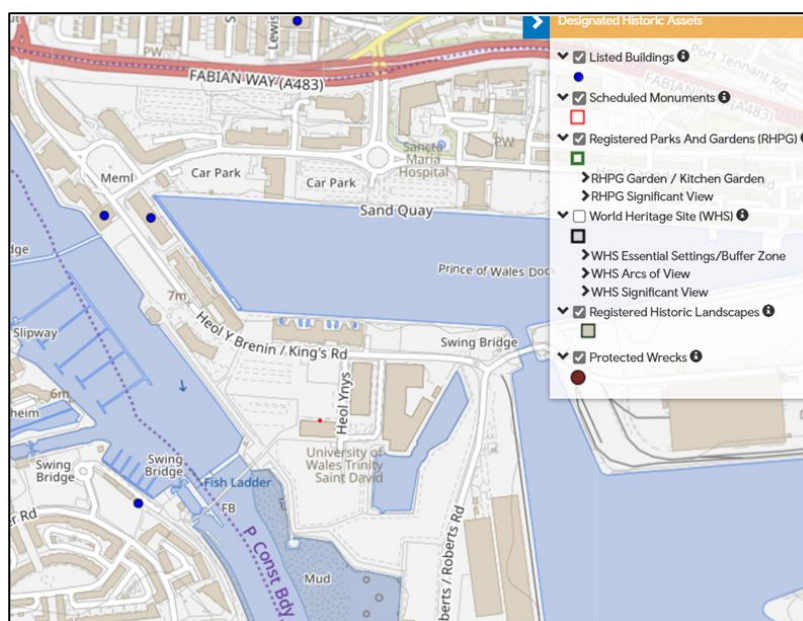




Figure 2 - Conservation Area Boundaries (old) | DataMapWales 2022–  
Conservation Areas

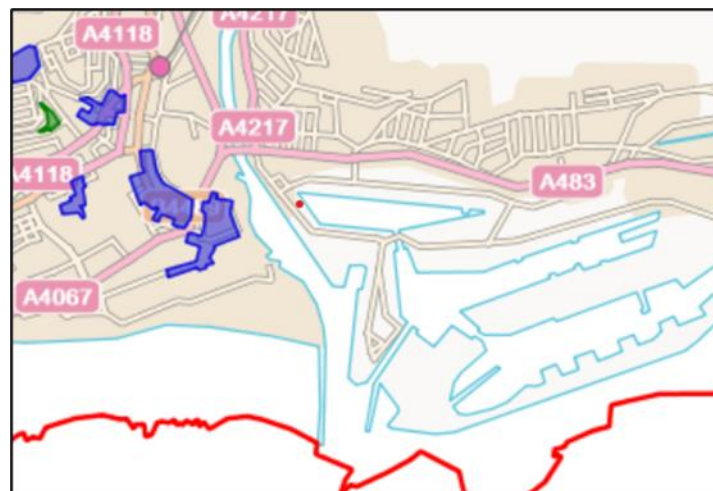


Figure 3 - Tree preservation order (TPO) map - Swansea - Tree  
Preservation Order map

## 1.2 Flood Consequence Assessment - LH

This site is located close to the River Tawe and Prince of Wales Dock. This falls within an area identified by Natural Resources Wales as being vulnerable to tidal flood risk. Due to its proximity to the site location, a Flood Consequence Assessment will be required to support any planning submission, in accordance with the TAN 15

### **Things to be addressed:**

- Potential tidal flooding and storm surge impacts
- Evacuation and safe access/egress
- Finished floor levels and flood-resilient design
- Surface Water Management - SUDS

Works regarding the flood risk and coastal erosion is already underway on the SA1 Waterfront to help mitigate the tidal forces as shown in the photos below:



*Figure 4 - Luke Hunt - Own Photos*

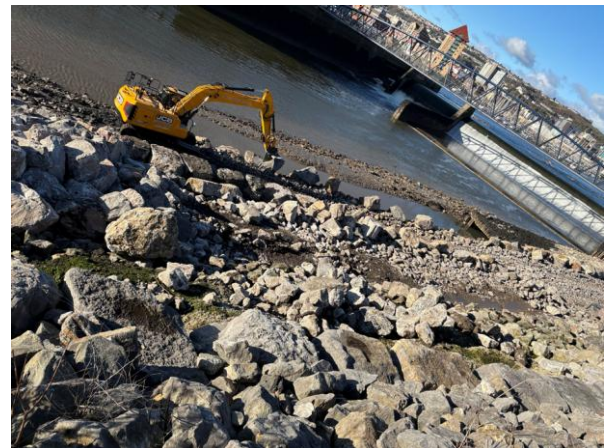


*Figure 5 - Luke Hunt - Own Photos*

## 1.3 Equipment/Fixed and Loose Furniture – LH

The client has not specified what equipment/fixed and loose furniture to be supplied by the contractor. However, as per the contractor's bronze, silver, and gold packages, there is potential for this to be included.

### **This could include:**

- Fixed Workbenches and tool stations
- Secure tool storage and lockable cabinets
- Electrical and mechanical service points (power, ventilation, extraction)
- Classroom Furniture

- ICT and AV Equipment

**External car park equipment includes:**

- Lighting Columns
- CCTV cameras
- Signage

## **1.4 Furnishings – LH**

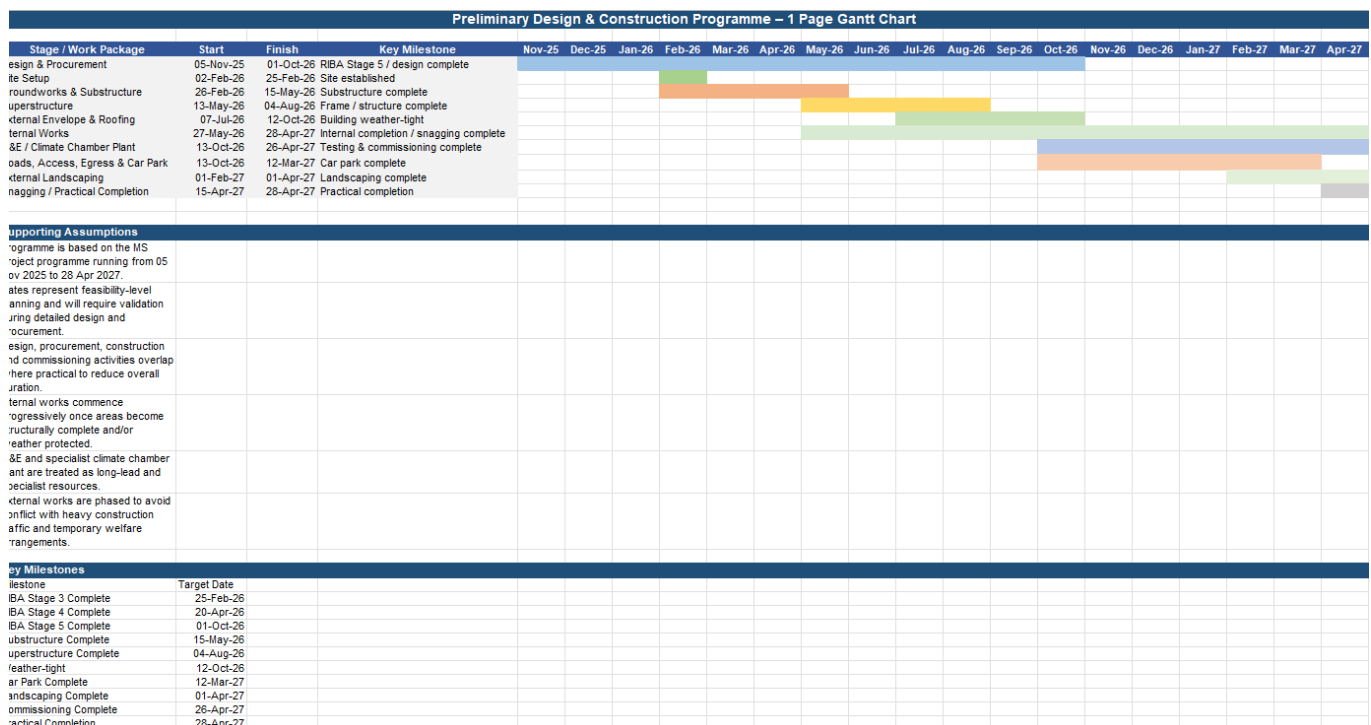
The client has not specified the furnishings to be supplied by the contractor. However, as per the contractor's bronze, silver, and gold packages, there is potential for this to be included.

## **1.5 Customer Supplied Equipment/Furniture - LH**

The client has not specified that they will be providing the equipment/furniture either, but again, they have the option for the contractor to provide this through the package options or can request supplementary equipment/furniture at an additional rate.

## 1.6 Preliminary design & construction programme covering appropriate work stages including client approval periods (and phasing, if necessary) – LH.

The preliminary design and construction programme has been developed to provide the client with an indicative route from design development through to practical completion. The programme incorporates key design stages, client approval periods, statutory approvals, procurement, construction sequencing, commissioning and handover. The full detailed programme is included within the project appendix.



The programme is phased to allow works to overlap where appropriate, reducing the overall construction duration while maintaining safe sequencing. Groundworks and substructure works are completed before the main steel frame is erected. Internal works then commence once areas are structurally complete, while M&E installation follows the weather-tight milestone. External works and landscaping are phased towards the latter stages to avoid conflict with heavy site traffic and temporary welfare arrangements.

### Preliminary Design & Construction Programme – 1 Page Gantt Chart

| Stage / Work Package                 | Start     | Finish    | Key Milestone                           |
|--------------------------------------|-----------|-----------|-----------------------------------------|
| Design & Procurement                 | 05-Nov-25 | 01-Oct-26 | RIBA Stage 5 / design complete          |
| Site Setup                           | 02-Feb-26 | 25-Feb-26 | Site established                        |
| Groundworks & Substructure           | 26-Feb-26 | 15-May-26 | Substructure complete                   |
| Superstructure                       | 13-May-26 | 04-Aug-26 | Frame / structure complete              |
| External Envelope & Roofing          | 07-Jul-26 | 12-Oct-26 | Building weather-tight                  |
| Internal Works                       | 27-May-26 | 28-Apr-27 | Internal completion / snagging complete |
| B&E / Climate Chamber Plant          | 13-Oct-26 | 26-Apr-27 | Testing & commissioning complete        |
| Pavements, Access, Egress & Car Park | 13-Oct-26 | 12-Mar-27 | Car park complete                       |
| Landscape Landscaping                | 01-Feb-27 | 01-Apr-27 | Landscaping complete                    |
| Snagging / Practical Completion      | 15-Apr-27 | 28-Apr-27 | Practical completion                    |

## Supporting Assumptions

programme is based on the MS  
project programme running from 05  
ov 2025 to 28 Apr 2027.

ates represent feasibility-level  
anning and will require validation  
ring detailed design and  
ocurement.

design, procurement, construction and commissioning activities overlap more practically to reduce overall duration.

terminal works commence progressively once areas become structurally complete and/or weather protected.

and specialist climate chamber and are treated as long-lead and specialist resources.

external works are phased to avoid conflict with heavy construction affic and temporary welfare arrangements.

## Key Milestones

| Milestone               | Target Date |
|-------------------------|-------------|
| BA Stage 3 Complete     | 25-Feb-26   |
| BA Stage 4 Complete     | 20-Apr-26   |
| BA Stage 5 Complete     | 01-Oct-26   |
| Substructure Complete   | 15-May-26   |
| Superstructure Complete | 04-Aug-26   |
| Weather-tight           | 12-Oct-26   |
| Air Park Complete       | 12-Mar-27   |
| Landscaping Complete    | 01-Apr-27   |
| Commissioning Complete  | 28-Apr-27   |
| Critical Completion     | 28-Apr-27   |

## Main Document – Individual Sections

### Risk Assessment and Method Statement:

| Client:                                                        | Module no:                          |
|----------------------------------------------------------------|-------------------------------------|
| <b>ACE Capital Project LTD</b>                                 | <b>Level 6 – Integrated Project</b> |
| <b>Project: Centre of Excellence for Construction Training</b> |                                     |

| Method Statement Title:   | Ref no. | Revision  |
|---------------------------|---------|-----------|
| <b>Whole Project RAMS</b> |         | <b>01</b> |

#### DOCUMENT STATUS

| Method Statement Validity | Start Date |
|---------------------------|------------|
|                           |            |

| Revision | Amendment details       | Details (Name Print and Sign, date) |      |             |      |                         |      |
|----------|-------------------------|-------------------------------------|------|-------------|------|-------------------------|------|
|          |                         | Prepared by                         | Date | Reviewed by | Date | Checked and approved by | Date |
| 0        | For Review              | L.H                                 |      | D.M         |      | E. E                    |      |
| 1        | To Include DRS comments | L.H                                 |      | D.M         |      | E. E                    |      |
| 2        | Updated Methodology     | L.H                                 |      | D.M         |      | E. E                    |      |

## 1.0 – Contents

|     |                                                  |
|-----|--------------------------------------------------|
| 1.0 | Contents                                         |
| 2.0 | Site Establishment & Enabling Works              |
| 3.0 | Groundworks & Foundations                        |
| 4.0 | Superstructure (Steel Frame)                     |
| 5.0 | Internal Works (Partitions & MEP First Fix)      |
| 6.0 | External Works (Car Park, Drainage, Landscaping) |

*This RAMS must be read in conjunction with the Traffic Management Plan, Construction Phase Plan, and project drawings.*

**Document Purpose:** *This RAMS document outlines the safe work methods and risk assessments for the SA1 Swansea Campus construction project. It is structured into six sections corresponding to key construction phases. Each section provides a Method Statement (step-by-step work process) and a Risk Assessment table identifying hazards, who may be harmed, initial risk rating (Likelihood × Severity), control measures, and residual risk rating. Residual risk levels are indicated with standard color-coding: green for low, orange for medium, and red for high. Blank signature lines are provided at the end of the section for team members to sign, confirming they have reviewed and agreed to the RAMS. This document is intended for client and assessor review, demonstrating a professional and safety-conscious approach to project execution.*

**Temporary Works:** *All temporary works associated with the project (including trench supports, temporary bracing, scaffolding, edge protection and propping) will be designed, installed and inspected by competent persons in accordance with relevant standards and best practice. Where required, temporary works will be subject to a formal design check and approval process before installation. A Temporary Works Coordinator (TWC) will oversee planning, implementation and inspection to ensure stability and safety are maintained at all stages of construction. Temporary works will not be altered or removed without authorisation (British Standards Institution (BSI), 2011).*

**Emergency Procedures:** *Emergency arrangements for the project are detailed within the Construction Phase Plan and will be communicated during site induction. This includes procedures for fire, medical emergencies, structural instability, service strikes and evacuation. First aid facilities and trained first aiders will be available on site at all times. Emergency access routes will remain clear throughout the works. All incidents, near misses and dangerous occurrences will be reported and investigated in accordance with company policy and CDM 2015 requirements (HM Government, 2015).*

## 2.0 - Site Establishment & Enabling Works

**Method Statement:** Site establishment is the initial phase of the project, involving setup of the site with all necessary facilities and safety precautions. The work will be carried out as follows:

Site establishment will begin with pre-start surveys, identification of existing services, site clearance, and installation of secure hoarding around the boundary. Welfare facilities, site offices, storage areas, temporary lighting, fire points and first-aid provision will be set up before main works commence. Access and egress will be controlled through designated gates, with separate pedestrian and vehicle routes wherever practicable. Temporary services will be installed by competent persons and checked before use. Once fencing, signage, welfare and emergency arrangements are confirmed, the site will be released for the next phase of construction.

**Risk Assessment:** Key hazards for Site Establishment & Enabling Works are identified below, with proposed control measures to reduce risks to an acceptable level:

| Hazard                                                                                                            | Who May Be Harmed                                           | Initial Risk (L×S) | Control Measures                                                                                                                                                                                                                                                               | Residual Risk (L×S)       |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Vehicle movement during site setup (deliveries, plant moving on site) – risk of collision or struck-by injury.    | Site workers, site visitors, public (if near site entrance) | 4×4 = 16 (High)    | Designate safe routes for vehicles and pedestrians; use trained traffic marshals/banksmen to control vehicle entry/exit; establish a one-way system and speed limits on site; high-visibility PPE for all personnel; restrict public access near site gates during deliveries. | 2×4 = 8 (Medium – orange) |
| Installing perimeter fencing/hoarding – risk of falls or manual handling injuries while erecting panels or posts. | Site operatives (fencing crew)                              | 3×3 = 9 (Medium)   | Use correct access equipment (step ladders or mobile tower) for height work; team lifting techniques or machinery (forklift/crane) for heavy fence panels; wear PPE (gloves, hard hats, safety                                                                                 | 1×3 = 3 (Low – green)     |

|                                                                                                                                       |                                     |                     |                                                                                                                                                                                                                                                                                                                       |                                       |
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|                                                                                                                                       |                                     |                     | boots); follow a safe system of work with one person steadying the post while another secures it.                                                                                                                                                                                                                     |                                       |
| Undetected underground services during ground clearance (electric cables, gas pipes) – risk of electrocution, gas leak, or explosion. | Groundworkers, machine operators    | 4×5 = 20<br>(High)  | Consult service plans and conduct a CAT scan survey before any digging; mark identified service routes; use hand tools (spades) for close digging around known services instead of machines; have service utility company on standby if high-risk lines are present; issue permit-to-dig for any excavation.          | 1×5 = 5<br>(Low – <i>green</i> )      |
| Slips, trips, and falls on uneven ground or over debris during initial works.                                                         | All site personnel                  | 3×2 = 6<br>(Medium) | Clear loose debris and fill minor holes as part of site prep; create defined walkways across the site with signage; ensure good housekeeping (materials stored safely, no tools left in walk paths); provide adequate lighting in low-light areas; require appropriate footwear (ankle-support boots with good grip). | 1×2 = 2<br>(Low – <i>green</i> )      |
| Unauthorised public access to site (especially after hours) – risk of injury to trespassers (e.g. children entering site).            | Members of the public (trespassers) | 3×5 = 15<br>(High)  | Secure the perimeter with continuous hoarding and locked gates; display warning signs (“Danger – Construction Site”); consider 24/7 security measures such as CCTV or periodic guard                                                                                                                                  | 2×5 = 10<br>(Medium – <i>orange</i> ) |

|                                                                                               |                              |                      |                                                                                                                                                                                                                                                                                                                            |                                  |
|-----------------------------------------------------------------------------------------------|------------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                                                               |                              |                      | patrols; ensure no easy gaps or climbable sections in fencing.                                                                                                                                                                                                                                                             |                                  |
| Setting up temporary power supply – risk of electrical shock or fire if improperly installed. | Electricians, all site users | 2×5 = 10<br>(Medium) | All temporary electrics to be installed and certified by a qualified electrician; use robust weather-proof distribution boxes and cable protectors; fit Residual Current Devices (RCDs) on circuits; keep cables off ground or covered to avoid damage; include a routine check of all site electrics before use each day. | 1×5 = 5<br>(Low – <i>green</i> ) |

### 3.0 - Groundworks & Foundations

**Method Statement:** This phase involves all substructure work including bulk excavation, foundation construction, and associated underground services. The work will be executed in a planned sequence as follows:

Groundworks will include setting out, excavation, piling, drainage installation, pile caps, ring beams and slab preparation. Excavations will be planned using service drawings, CAT scanning and permit-to-dig procedures. Trenches and excavations will be battered, supported or protected as required, with spoil stored away from edges. Plant movements will be controlled using exclusion zones and banksmen. Concrete works will be carried out using suitable pumps, formwork and reinforcement, with quality checks completed before backfilling and progressing to the superstructure.

**Risk Assessment:** Groundworks present high-risk activities such as deep excavations and heavy equipment operation. The following hazards and controls are identified for this phase:

| Hazard                                                                                                                                                               | Who May Be Harmed                            | Initial Risk (L×S) | Control Measures                                                                                                                                                                                                                                                                                                                                                                    | Residual Risk (L×S)        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Excavation collapse (cave-in of trench sides) – potential burial/crushing injuries. <b>Note:</b> Trench collapses pose one of the greatest risks in excavation work. | Groundworkers working in or near excavations | 5×5 = 25 (High)    | Shore trench walls with timber supports or trench boxes for any excavation deeper than 1.2m; slope or bench the sides to a safe angle if space permits; appoint a competent person to inspect excavations and supports daily and after rain; never allow personnel to enter an unsupported trench; keep spoil piles and heavy loads away from edges.                                | 2×5 = 10 (Medium – orange) |
| Striking underground utilities (electric shock, gas rupture, water burst) during digging.                                                                            | Excavator operators, groundworkers           | 4×5 = 20 (High)    | Conduct thorough utility surveys and use cable locators before excavation; obtain service plans from utility companies; enforce permit-to-dig system; hand-dig cautiously in areas of suspected services; isolate live services if possible (e.g. shut off power, gas) before work; have emergency procedures in place for utility strikes (evacuation, service authority contact). | 2×5 = 10 (Medium – orange) |
| Plant and vehicle movement (excavators, dumpers, concrete trucks) – risk of striking                                                                                 | Equipment operators, site workers on foot    | 4×4 = 16 (High)    | Define exclusion zones: keep ground workers clear of operating machinery swing radius; use trained and certified operators for all                                                                                                                                                                                                                                                  | 2×4 = 8 (Medium – orange)  |

|                                                                                                                                 |                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                      |                          |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| workers or overturning.                                                                                                         |                                    |                     | plant; all plant to have audible reverse alarms and flashing beacons; employ a banksman to guide reversing vehicles or when vision is limited; maintain stable ground and do not overload dumpers to prevent tip-over; enforce site speed limits and one-way routes.                                                                                                                 |                          |
| Fall into open excavation (person falling into trench or pit).                                                                  | Site workers, inspectors, visitors | 4×4 = 16<br>(High)  | Provide strong physical barriers at all open excavations: use guardrails or barricades at edges, with warning signage ("Open Excavation"); ladder or secured steps for safe access/egress to trenches – no climbing in/out of trench walls; cover or securely fence around any unattended holes at the end of each shift; restrict public/site visitor access near excavation areas. | 1×4 = 4<br>(Low – green) |
| Manual handling of heavy materials (e.g. lifting shoring panels, rebar cages, pipes) – risk of back injuries or crush injuries. | Groundworkers, steel fixers        | 3×3 = 9<br>(Medium) | Use mechanical means to lift and position heavy items (e.g. excavator/crane to place trench shields or lower rebar cages); for manual lifts, use team lifting techniques and proper lifting posture; provide handling aids (dollies, hoists) for heavy or awkward objects;                                                                                                           | 1×3 = 3<br>(Low – green) |

|                                                                              |                                        |                   |                                                                                                                                                                                                                                                                                                                                              |                       |
|------------------------------------------------------------------------------|----------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
|                                                                              |                                        |                   | rotate tasks to reduce repetitive strain; ensure all staff have manual handling training.                                                                                                                                                                                                                                                    |                       |
| Wet concrete and cement handling – caustic burns to skin, concrete splashes. | Concrete workers (pouring foundations) | 3×4 = 12 (Medium) | Require PPE when handling wet concrete: alkali-resistant gloves, long sleeves, waterproof boots, and safety goggles; have clean water and eyewash available for immediate rinsing of skin/eyes if contact occurs; use tools (shovels, vibrators) to move concrete instead of direct hand contact; educate workers on cement dermatitis risk. | 1×4 = 4 (Low – green) |

## 4.0 - Superstructure (Steel Frame)

**Method Statement:** In this phase, the structural steel frame of the building will be erected. Work at height is a major component here, requiring strict controls (Health and Safety Executive, 2006). The erection sequence will be methodical and in accordance with the structural engineer's plan:

The superstructure phase will involve delivery, lifting and erection of the steel frame in accordance with the agreed erection sequence. Steel members will be inspected on arrival and lifted using certified cranes, lifting accessories and trained slinger-signallers. Columns, beams, bracing and decking will be installed progressively to maintain stability. MEWPs, scaffold or suitable access platforms will be used for work at height, and temporary bracing will remain in place until the frame is stable and signed off. Once alignment, bolt tightening and inspections are complete, the frame will be handed over for envelope works.

**Risk Assessment:** The steel frame erection involves significant hazards, particularly related to heights, heavy lifting, and large moving elements. Key hazards and controls are:

| Hazard                                                                                                           | Who May Be Harmed                | Initial Risk (L×S) | Control Measures                                                                                                                                                                                                                                                                                                                                                                                                                | Residual Risk (L×S)        |
|------------------------------------------------------------------------------------------------------------------|----------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Falls from height during steel erection (e.g. from unprotected edges or while bolting connections at elevation). | Steel erectors working at height | 5×5 = 25 (High)    | Comprehensive fall protection: all workers at height must wear harnesses and lanyards attached to secure anchor points or static safety lines; install temporary working platforms or nets beneath work areas where feasible; use MEWPs or scaffold towers to access high connections instead of free climbing on steel; follow Work at Height Regulations and ensure staff are trained in working at height and equipment use. | 2×5 = 10 (Medium – orange) |
| Falling objects (tools, bolts, or steel pieces dropped from height) striking people below.                       | Ground workers, other trade      | 4×5 = 20 (High)    | Establish a exclusion zone on the ground below steel erection areas – barricade with red tape or barriers                                                                                                                                                                                                                                                                                                                       | 2×4 = 8 (Medium – orange)  |

|                                                                                                                 |                                                           |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
|                                                                                                                 | workers in vicinity                                       |                             | and post lookouts to keep people out; require all personnel on site to wear hard hats at all times; use tool lanyards to secure handheld tools when working at height; when bolting, use bolt bags or magnetic trays so loose bolts are not dropped; schedule steel lifts when minimal other trades are nearby.                                                                                                                                                            |                                       |
| Crane or lifting operation failure (e.g. crane collapse or load drop) leading to catastrophic injury or damage. | Crane operator, riggers, erectors, anyone in crane radius | $3 \times 5 = 15$<br>(High) | Utilize only certified cranes of adequate capacity with operators licensed for crane operation; each lift planned by a competent lift supervisor (include calculation of load weights and distances); perform daily crane inspections and never exceed safe working load; enforce a lifting zone clear of personnel during lifts; use proper rigging techniques and certified lifting gear (slings, shackles); monitor weather – suspend lifts in high winds or lightning. | $1 \times 5 = 5$<br>(Low – green)     |
| Structural instability or collapse of partially built frame (due to lack of bracing or premature load).         | Steel erection crew (risk of collapse onto workers)       | $4 \times 4 = 16$<br>(High) | Follow the engineered erection sequence strictly – install permanent bracings as early as possible; where needed, use temporary bracing or guy wires to secure freestanding sections; do not allow any external loads (e.g.                                                                                                                                                                                                                                                | $2 \times 4 = 8$<br>(Medium – orange) |

|                                                                                                                                    |                                         |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                   |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
|                                                                                                                                    |                                         |                               | stockpiling materials) on the incomplete frame; have the temporary stability of the frame checked by a competent person at each stage; if high winds are forecast, postpone erection or add extra tie-downs for stability.                                                                                                                                                                                                           |                                   |
| Manual handling and pinch points – injuries while aligning or bolting steel components (finger injuries, musculoskeletal strains). | Steel workers (on ground and at joints) | $3 \times 3 = 9$<br>(Medium)  | Use tag lines to maneuver steel into position rather than hands on steel; provide proper hand protection (cut-resistant gloves) to all steelworkers; utilize drift pins or line-up tools to position bolt holes rather than forcing by hand; if pieces require adjustment, use pry bars or come-along carefully with good communication; rotate tasks to avoid fatigue and use team lifting for smaller components to reduce strain. | $1 \times 3 = 3$<br>(Low – green) |
| Hot works during steel erection (e.g. welding, cutting) – risk of fire or fumes.                                                   | Steel welders, all nearby workers       | $3 \times 4 = 12$<br>(Medium) | If on-site welding or cutting is required: issue a Hot Work Permit for each session; clear flammable materials from the area or shield them; provide a fire watch with extinguisher during and after the operation; ensure welders wear appropriate PPE (welding mask, gloves, FR clothing) and work in well-ventilated                                                                                                              | $1 \times 4 = 4$<br>(Low – green) |

|  |  |  |                                                                                                                |  |
|--|--|--|----------------------------------------------------------------------------------------------------------------|--|
|  |  |  | conditions or use extraction fans to avoid fume accumulation; have gas detectors if working in enclosed areas. |  |
|--|--|--|----------------------------------------------------------------------------------------------------------------|--|

## 5.0 - External Envelope & Roofing

**Method Statement:** This stage includes constructing the building's external walls/façade, installing windows and doors, and completing the roof system – making the structure weather-tight. The procedure will be as follows:

External envelope and roofing works will include installation of external walls, cladding, windows, doors, roof coverings, gutters, downpipes and associated weatherproofing. Safe access will be provided using scaffolding, MEWPs or suitable working platforms, with edge protection and fall-arrest measures in place where required. Materials such as cladding panels, glazing units and roofing membranes will be lifted and handled using suitable mechanical aids to reduce manual handling risks. Roof works will be planned around weather conditions, with activities stopped during high winds, heavy rain or unsafe conditions. Once the envelope, roof coverings and seals are complete, inspections will be carried out to confirm the building is weather-tight before progressing with internal finishes.

**Risk Assessment:** Working on the building envelope and roof involves significant work at height and handling of heavy materials in sometimes challenging conditions. Key identified hazards are:

| Hazard                                                                                          | Who May Be Harmed                                     | Initial Risk (L×S) | Control Measures                                                                                                                                                                                       | Residual Risk (L×S)        |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Falls from height (roof edges, scaffold platforms, openings) during external wall or roof work. | Cladders, roofers, bricklayers, any workers at height | 5×5 = 25 (High)    | Full edge protection in place: scaffolds with top/mid rails and toe boards for façade works; temporary guardrails or parapet protection around roof edges; personal fall-arrest systems (harnesses and | 2×5 = 10 (Medium – orange) |

|                                                                                                   |                                                                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
|                                                                                                   |                                                                 |                             | lifelines) for roof workers, especially if working near edges or on an incomplete roof; all openings (floor or roof) to be securely covered or barricaded; ensure workers are trained in working at height and equipment use.                                                                                                                                                                                                                                                                                           |                                       |
| Objects falling from height (tools, materials) onto people below during façade/roof installation. | Personnel working below, site visitors, public adjacent to site | $4 \times 4 = 16$<br>(High) | Use toe boards and brick guards on scaffolding to prevent items kicking off; attach netting or debris mesh to scaffold where necessary (especially during any demolition of scaffold materials or cutting that produces off-cuts); secure loose materials on roof to prevent them blowing off; define exclusion zones on ground level below roof edge or active façade work – barricade these areas and post warning signage; prohibit simultaneous working directly above/below different trades without coordination. | $2 \times 3 = 6$<br>(Medium – orange) |

|                                                                                                                                                     |                                        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Manual handling of heavy façade components or roofing materials (e.g. large cladding panels, glass, rolls of membrane) – risk of strains or injury. | Cladding installers, glaziers, roofers | 3×4 = 12<br>(Medium) | Plan lifts for heavy components: use mechanical aids like glass suction lifters, material hoists, or cranes for panels and glass units; team lift with sufficient number of workers for bulky items, following good lifting technique; store materials close to point of installation to minimize carrying distance; rotate tasks to avoid fatigue and overexertion; provide handling aids (trolleys, panel carriers) for moving items on site. | 1×4 = 4<br>(Low – <i>green</i> ) |
| Adverse weather impacting external work (high winds, rain, ice) – risk of loss of balance, materials becoming uncontrollable, or weather damage.    | All workers at site (envelope/roofing) | 3×5 = 15<br>(High)   | Monitor daily weather forecasts. Stop roof work during strong winds or storms – winds above safe limits (e.g. >23 mph) will halt crane lifts of panels or working on open roofs; secure or tie down materials and scaffold sheeting in case of sudden wind gusts; in rain or icy conditions, ensure work platforms and roofs are cleared or gritted to                                                                                          | 1×5 = 5<br>(Low – <i>green</i> ) |

|                                                                                                    |                                           |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                             |
|----------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
|                                                                                                    |                                           |                                                | <p>prevent slips; adjust work schedules to avoid the worst weather periods; if necessary, use temporary weather protection (tents or tarps) to shield critical work areas, but ensure they are secured.</p>                                                                                                                                                                                                                                                                                                                                                                                  |                                                             |
| <p>Hot works during roofing (e.g. torch-on felt, hot bitumen) – fire hazard and burn injuries.</p> | <p>Roofers, anyone nearby (fire risk)</p> | <p><math>4 \times 4 = 16</math><br/>(High)</p> | <p>Strict hot work controls: obtain Hot Work Permits for any torching or use of open flame on the roof; clear the roof of flammable debris before starting; have at least one fire extinguisher (and a fire watch person) on the roof during and after the operation (monitoring for any smoldering material); use heat-resistant gloves and face protection for workers handling torches or hot bitumen; if possible, use alternative cold-applied products to eliminate open flames; ensure propane tanks or bitumen boilers are secured upright and kept away from edges and traffic.</p> | <p><math>1 \times 4 = 4</math><br/>(Low – <i>green</i>)</p> |

|                                                                                                                                           |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Use of power tools for cladding/roofing (e.g. drills, grinders, nail guns) – risk of cuts, eye injuries, or noise-induced hearing damage. | Cladding/roofing workers | 3×3 = 9<br>(Medium) | All power tools to be in good condition and 110V or battery-operated for safety; workers to wear task-specific PPE: safety glasses/face shields when cutting or grinding, gloves for handling sharp metal, hearing protection when using loud tools like nail guns or grinders; ensure blades/discs are appropriate for the material to avoid kick-back; provide work-platforms or clamps to secure materials being cut to avoid slips; enforce proper usage as per manufacturer instructions and provide training or toolbox talks on these tools. | 1×3 = 3<br>(Low – <i>green</i> ) |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|

## 6.0 - Internal Works (Partitions & MEP First Fix)

**Method Statement:** With the building shell completed, internal construction commences. This phase covers erection of internal partitions (walls), and first-fix installation of Mechanical, Electrical, and Plumbing (MEP) services, prior to finishes. Work steps include:

Internal works will begin once the building is sufficiently weather-tight and safe for follow-on trades. This phase will include installation of internal partitions, plasterboard systems, mechanical and electrical first fix, plumbing routes, ductwork, containment, and service openings. Works will be coordinated to avoid clashes between trades, with access equipment used where required for overhead services. Materials will be stored safely in designated areas to maintain clear walkways and reduce fire load. Electrical and mechanical works will be carried out by competent operatives, with temporary supplies, isolation procedures and permits used where necessary. Once first-fix works are complete, inspections will be undertaken before boarding, closing up walls, and progressing to finishes.

**Risk Assessment:** Internal works still present safety hazards, although generally less severe than structural work. Key hazards include working at height indoors, electrical safety during installation, and health hazards from dust and noise. The risk assessment for this phase is as follows:

| Hazard                                                                                                                                 | Who May Be Harmed                                             | Initial Risk (L×S) | Control Measures                                                                                                                                                                                                                                                                                                                                                                                                                                             | Residual Risk (L×S)       |
|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Work at height inside building (e.g. using ladders or platforms to install overhead cables, ducts, or ceiling boards) – risk of falls. | Electricians, plumbers, HVAC installers, partition carpenters | 4×4 = 16 (High)    | Use proper access equipment for overhead work: ladders only for short-duration tasks and must be industrial grade, secured and footed; prefer mobile tower scaffolds or podium steps for sustained work at ceiling level; ensure any work at height follows the same principles as external works (no lone working at height, maintain three points of contact on ladders, etc.); all openings in floors (for service risers, etc.) to be covered or guarded | 2×4 = 8 (Medium – orange) |

|                                                                                                                                                                   |                                                                                                              |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
|                                                                                                                                                                   |                                                                                                              |                      | to prevent falls between levels.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |
| Electric shock or arc flash from working on or near electrical installations (especially as systems begin to be energized for testing).                           | Electricians, any workers in vicinity                                                                        | 3×5 = 15<br>(High)   | Strictly enforce Lock-Out/Tag-Out (LOTO) procedures: any circuit being worked on must be isolated at the distribution board and locked off with personal padlocks and tags; use battery-powered tools or 110V equipment to minimize risk; do not energize any circuit until all persons are clear and an authorized electrician conducts testing; provide insulated tools for electricians; ensure temporary site electrical system has residual current devices (RCDs) and is regularly inspected. | 1×5 = 5<br>(Low – green) |
| Airborne dust from cutting/sawing materials (plasterboard, concrete drilling) and fumes from solvent glues or paint – respiratory hazards and reduced visibility. | Partition installers, MEP installers (especially drilling concrete or soldering pipes), other nearby workers | 3×4 = 12<br>(Medium) | Implement dust control: cut materials outside where possible or use dust-extraction attachments on tools (vacuum systems); provide N95/FFP2 dust masks or half-mask respirators to workers cutting or sanding drywall; for drilling concrete (creating chases or holes), use water suppression or vacuum drills to capture silica dust; ensure the building is well-ventilated – open windows or use fans to exhaust dusty air;                                                                     | 1×4 = 4<br>(Low – green) |

|                                                                                                                                                                                              |                                                                                |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
|                                                                                                                                                                                              |                                                                                |                              | enforce use of fume extraction or ventilation when soldering (flux fumes) or using any solvent-based products inside.                                                                                                                                                                                                                                                                                                                                               |                                   |
| Manual handling and repetitive work – e.g. lifting plasterboard sheets, carrying heavy pipes or duct sections, repetitive screwing and drilling – leading to strains or cumulative injuries. | Partition crews, plumbers, electricians (anyone moving heavy or awkward items) | $3 \times 3 = 9$<br>(Medium) | Use mechanical aids and team lifts: employ panel lifts or drywall lifts for ceiling boards; use trolleys or carts to move multiple boards or bundles of pipe; store materials as close to installation point as possible (e.g. distribute boards across floor near where walls will be built); train workers in safe lifting techniques and rotate tasks among team to vary muscle use; schedule sufficient breaks during intensive manual work to prevent fatigue. | $1 \times 3 = 3$<br>(Low – green) |
| Trips, slips, and falls on same level due to scattered materials, cables, or slippery surfaces.                                                                                              | All personnel working inside                                                   | $4 \times 2 = 8$<br>(Medium) | Enforce good housekeeping at all times: keep walkways clear of obstructions and coil or elevate extension cords/cables off the floor; clean up sawdust or drywall scraps frequently (which can cause slips or mask tripping hazards); provide adequate site lighting in all rooms/hallways being worked in; use warning signage or barrier tape around any temporary floor                                                                                          | $1 \times 2 = 2$<br>(Low – green) |

|                                                                                                                                           |                                            |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|                                                                                                                                           |                                            |                              | openings or uneven surfaces; require appropriate footwear with good grip.                                                                                                                                                                                                                                                                                                                                                                                                  |                                           |
| Noise from tools and equipment (drilling, hammering, cutting) in enclosed areas – potential hearing damage or communication difficulties. | Workers using loud tools or working nearby | $3 \times 3 = 9$<br>(Medium) | Identify particularly noisy tasks (e.g. drilling concrete, hammer drilling, power saws) and ensure those using such tools wear hearing protection (ear plugs or defenders); if noise levels are very high, consider scheduling those tasks at times when fewer people are on site or isolate the area; post signage "Hearing Protection Required" in areas with ongoing heavy drilling; provide quiet break areas away from constant noise to mitigate prolonged exposure. | $1 \times 3 = 3$<br>(Low – <i>green</i> ) |

## 7.0 - External Works (Car Park, Drainage & Landscaping)

**Method Statement:** This final phase covers the external site finishing works: construction of the car park and access roads, installation of site drainage, and landscaping of the surrounding areas. The sequence of operations is as follows:

External works will include formation of access roads, car parking areas, drainage connections, kerbs, surfacing, paving, soft landscaping and final site reinstatement. Excavations for drainage and services will be planned using service drawings, CAT scanning and permit-to-dig procedures, with trenches protected or backfilled as soon as practicable. Plant and vehicle movements will be controlled through designated routes, exclusion zones and banksmen where required. Surfacing works will be carried out using suitable rollers, compactors and paving equipment, with attention given to levels, falls and drainage performance. Landscaping and final clean-up will be completed once heavy works are finished, ensuring the site is safe, accessible and ready for handover.

**Risk Assessment:** External works involve heavy civil construction activities often adjacent to public areas. The key hazards and controls for this phase include:

| Hazard                                                                                                                           | Who May Be Harmed             | Initial Risk (L×S) | Control Measures                                                                                                                                                                                                                                                                                                                                                                                   | Residual Risk (L×S)       |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Excavation/trenching for drainage – risk of trench collapse or confined space hazards (lack of oxygen, toxic gases in manholes). | Groundworkers (drainage crew) | 5×4 = 20 (High)    | Use trench shoring or trench boxes for any trench deeper than 1.2m; never enter an unsupported trench; shore as you go when digging; appoint a competent person to inspect trench supports daily; for manhole work, treat it as a confined space: test atmosphere for hazardous gases (use gas detector) and ensure adequate ventilation; provide a tripod and harness for rescue when a worker is | 2×4 = 8 (Medium – orange) |

|                                                                                                                                                                        |                                                                                   |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
|                                                                                                                                                                        |                                                                                   |                 | entering a deep manhole; keep entry time short and always have an observer top-side.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |
| Contact with existing underground services or overhead lines during external excavations (for drainage or lighting) – risk of electrocution, fire, or service outages. | Machine operators, site workers, possibly nearby public (if service is disrupted) | 4×5 = 20 (High) | Before any digging, obtain service drawings and perform CAT & Genny scans for cables/pipes in the area; mark locations of any known utilities; hand dig when in close proximity to expected services; have utility companies isolate or protect lines if possible (e.g. temporary electrical shutdown, or use insulated tools around live cables); use a banksman to guide machine digging near services; keep excavator booms clear of any overhead power lines (follow minimum approach distances, or have lines temporarily shut off). | 2×5 = 10 (Medium – <i>orange</i> ) |
| Construction traffic and interface with public road – risk of accidents with vehicles or pedestrians (particularly during                                              | Site vehicle drivers, site workers, general public (road users, pedestrians)      | 4×5 = 20 (High) | Implement robust traffic management: create a traffic management plan approved by local authorities if                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2×5 = 10 (Medium – <i>orange</i> ) |

|                                                                                                                                                                           |                                           |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| tie-in works at entrance).                                                                                                                                                |                                           |                      | needed; use signage, cones, barriers to separate work areas from live traffic; station trained traffic marshals to control vehicle movements where construction traffic crosses public paths; all site drivers to be briefed on the plan and adhere to speed limits (5-10 mph on site, appropriate speed on approach to gate); schedule deliveries and road works during off-peak hours to reduce interaction; ensure high-visibility clothing is worn by anyone near moving vehicles. |                          |
| Hot asphalt and heavy paving operations – risk of burns from hot materials, fumes inhalation, or asphalt burns, and risk of injury from paving machinery (paver, roller). | Paving crew (asphalt or concrete workers) | 3×4 = 12<br>(Medium) | Provide appropriate PPE for asphalt work: heat-resistant gloves, long-sleeve shirts, face/eye protection against splashes; workers stay clear of the hopper and augers of the paver (never reach in while it's running); ensure asphalt                                                                                                                                                                                                                                                | 1×4 = 4<br>(Low – green) |

|                                                                                                                                              |                                        |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
|                                                                                                                                              |                                        |                                                 | <p>temperature is within safe working range (not excessively hot to cause severe burns); rotate personnel to limit fume exposure and ensure air flow (work upwind when possible); use exhaust ventilation or respirators if working in a confined area with asphalt fumes; keep a burn first aid kit on site; all machinery operators (paver, roller) to be trained and keep vigilant for nearby crew, with a spotter if needed.</p> |                                                             |
| <p>Manual handling and repetitive tasks in landscaping (lifting soil, moving plants, installing kerbs) – risk of strains, back injuries.</p> | <p>Landscaping crew, groundworkers</p> | <p><math>3 \times 3 = 9</math><br/>(Medium)</p> | <p>Use machinery to handle heavy loads whenever possible: small excavator or loader to move soil piles, crane or excavator with straps to place heavy trees or large planters; use two-person lifts or special tools (kerb lifter clamps) for installing kerbstones and edging units; educate the team on proper lifting techniques;</p>                                                                                             | <p><math>1 \times 3 = 3</math><br/>(Low – <i>green</i>)</p> |

|                                                                                                     |                                                                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                           |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|                                                                                                     |                                                                 |                              | <p>alternate tasks among workers (e.g. digging, planting, raking) to avoid continuous strain on the same muscle groups; provide supportive tools (wheelbarrows, trolleys) to move materials over distances rather than carrying; allow short rest breaks during intensive manual works.</p>                                                                                                                                                                                   |                                           |
| Slips, trips, and falls on external works (uneven ground, mud, wet surfaces, or tools left around). | All personnel on site, potentially visitors during walk-through | $4 \times 2 = 8$<br>(Medium) | <p>Maintain housekeeping outdoors just as rigorously as indoors: fill or clearly mark any holes immediately; install temporary walkway boards or paths if ground is very uneven or muddy; require appropriate waterproof safety boots with good tread; clean up any spillage (like mud on a road) promptly or use slip-resistant mats; coil up hoses and cables when not in use; adequate lighting for any early morning or evening work outside; fence off or cover open</p> | $1 \times 2 = 2$<br>(Low – <i>green</i> ) |

|  |  |  |                                          |  |
|--|--|--|------------------------------------------|--|
|  |  |  | pits each day<br>before leaving<br>site. |  |
|--|--|--|------------------------------------------|--|

## Team Members Sign-Off

### Acknowledgement

I have read, understand and been given verbally by a Manager/Supervisor the attached method statement and risk assessments. I understand my requirements as an employee under the Health and Safety at Work Act 1974 and will work to all Health, Safety and Environmental conditions required in this document.

Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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\_\_\_\_\_

**Note:** This RAMS document is specific to the SA1 Swansea Campus project and is to be reviewed by all project team members. All work must be carried out in compliance with relevant health and safety legislation (e.g. CDM 2015 Regulations) and guidance.

If any change in methodology is required, or new hazards emerge, this document will be updated and re-approved. All team members are required to sign each section as confirmation of their understanding and commitment to the safe working practices and risk control measures described above.

## 8.0 – References

Work Related documents used to provide layout and scope within the works

British Standards Institution (BSI), 2011. *BS 5975 – Temporary Works Procedures*. [Online]

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Available at: <https://www.legislation.gov.uk/uksi/2015/51/contents/made>

[Accessed 26th 02 2026].

## Traffic Management Plan:

**Client: ACE Capital Project LTD**

**Project: Centre of Excellence for Construction Training**

# **Traffic Management Plan**

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## 1.0 - Introduction

This Traffic Management Plan (TMP) sets out the arrangements for managing all construction-related traffic associated with the proposed development.

It explains how construction vehicles, plant/equipment deliveries, and pedestrians shall be safely controlled and directed in and around the site throughout the construction phase.

The main aims of the TMP are to:

- Protect the safety of workers, students, staff, and the general public
- Minimise disruption to local traffic movement and access
- Ensure compliance with relevant regulations, local authority expectations, and industry best practice

This TMP shall be used as a live guiding document during the project and are to be reviewed and updated where necessary to reflect changes in site activities and logistics.

The plan aligns with local authority requirements and recognised industry standards for safe and effective traffic management on construction projects.

### **Project Location:**

The Site is in a built-up city area; the main entrance is: A right turning off of Kings Road, just before the side road called Heol Ynys

Postcode being: SA1 8EW

Eastings: **266,788** m

Northings: **192,705** m

What3Words///: tanks.neat.basket

## 2.0 - Scope

This Traffic Management Plan covers all traffic and transport arrangements related to the construction works.

It applies for the full duration of construction, from site setup through to project completion.

### **The scope includes management of:**

- Construction vehicle routes to and from the site
- On-site vehicle movements and circulation
- Pedestrian access around and adjacent to the work area
- Delivery scheduling and logistics
- Parking arrangements for workers and visitors

### **The plan addresses both:**

- On-site traffic (vehicles, plant, and personnel within the site boundary)
- Off-site traffic (construction vehicles using public roads)

### **It also includes measures for:**

- Temporary signage
- Road cleanliness
- Environmental impact mitigation related to construction traffic
- This TMP excludes operational traffic once the project is complete and is focused solely on the construction phase.

### 3.0 – Design

All traffic management measures have been designed in line with relevant safety standards, guidance, and legislation.

The TMP has been developed with full consideration of the site layout and local road conditions.

Construction traffic is designed to be segregated from public areas wherever practicable.

**The traffic management design prioritises safety and clarity through:**

- Clear and compliant temporary signage
- Physical barriers and hoarding
- Clearly defined vehicle and pedestrian routes

**Key design principles include (Health and Safety Executive (HSE), 2015):**

- Safe and adequate site access and egress points
- Use of one-way systems or turning areas to minimise reversing
- Maintaining clear sight lines at the site entrance

**Temporary traffic control arrangements comply with:**

- Chapter 8 of the Traffic Signs Manual (Department for Transport (DfT), 2013)
- Local Highway Authority requirements

**The TMP design aligns with:**

- Construction (Design and Management) Regulations 2015 (HM Government, 2015)
- Considerate Constructors Scheme (CCS) (Considerate Constructors Scheme (CCS), 2023)
- CLOCS (Construction Logistics and Community Safety) standards for protecting vulnerable road users (CLOCS (Construction Logistics and Community Safety), 2022)

## 4.0 - Access to Work

### **Site Access Point:**

- All construction traffic is to access the site via the designated main gate (Point D).
- The entrance connects to the local road network via the adjacent car park and Island Road.
- The gate will serve as both entry and exit for construction vehicles.
- Access will be secured with solid hoarding and controlled gates.
- A trained gate person/traffic marshal will be present during working hours to manage vehicle movements and prevent unauthorised access.

### **Pedestrian Access (Health and Safety Executive (HSE), 2015):**

- Pedestrian access for workers will be via a separate pedestrian gate or protected walkway, segregated from vehicles.
- The site office and welfare facilities will be located near Point C.
- Where required, a temporary diversion or closure of the public footpath at Point A will be implemented, using barriers and signage to ensure safe pedestrian movement.

### **Public Interface:**

- The access location provides good visibility and avoids high-risk road features.
- Vehicles will enter and exit the site in forward gear only; reversing onto the public road is prohibited.
- Additional marshals will be deployed during peak activity or large deliveries to safely manage pedestrians and traffic.

Under CDM 2015 (HM Government, 2015), the Principal Contractor has a duty to plan, manage and monitor the construction phase to ensure, so far as reasonably practicable, the safety of workers and members of the public. This Traffic Management Plan forms part of the Construction Phase Plan and demonstrates how site logistics risks have been identified, assessed and controlled.

## 5.0 - Route to be Used by Construction Traffic

All construction traffic will use a designated and agreed route to minimise disruption to the surrounding area (HM Government, 1988).

Vehicles approaching from outside the area will:

- **Use the M4 motorway**
- **Exit at Junction 42 or Junction 45**
- **Travel via the A483 (Fabian Way)**

From Fabian Way, construction vehicles will access the site via approved local roads, including Island Road, leading directly to the site entrance.

The primary route for HGVs will be along Fabian Way and Island Road, avoiding smaller residential streets.

All suppliers and subcontractors will be issued with a route map and written instructions prior to arrival.

### **The designated route:**

- Avoids residential areas, schools, and narrow streets
- Accounts for road width, weight, and height restrictions

Construction vehicles must not deviate from the approved route or use unauthorised shortcuts.

Where multiple access options exist, the preferred route will be clearly communicated and signposted.

## 6.0 - Temporary Traffic Control and Management

Temporary traffic control measures will be implemented to ensure the safe movement of vehicles and pedestrians during construction. The Site Manager will review the effectiveness of this TMP weekly and following any incident, near miss or significant change in works (HM Government, 2015).

### **Public Highway Controls (Department for Transport (DfT), 2013):**

- Construction vehicles will mainly use existing roads, limiting the need for major traffic control.
- A trained traffic marshal will manage vehicle entry and exit at the site access on Island Road.
- Stop/slow paddles or hand signals will be used to briefly hold traffic when large vehicles are manoeuvring.
- Any traffic holds will be short and only as required for safety.
- Warning signage and flashing amber lights will be installed if required by the local authority.
- No full road closures or permanent traffic signals are anticipated
- Any temporary lane closures or crane operations will be planned and approved in advance with the local council.

### **On-Site Traffic Controls (Department for Transport (DfT), 2013):**

- One-way systems and defined haul routes will be implemented where practicable.
- Vehicle routes will be segregated from pedestrian areas using barriers or fencing.
- A 5-mph site speed limit will be enforced.
- All reversing movements will be supervised by a banksman.
- Pedestrian diversion routes will be clearly signed where footpaths are affected.

Key performance indicators (KPIs) for traffic management will include zero vehicle–pedestrian incidents, no substantiated community complaints relating to traffic, and no enforcement notices from the Highway Authority.

## 7.0 - Parking Facilities

Construction parking will be managed to prevent congestion and disruption to surrounding areas (Department for Transport (DfT), 2013).

### **On-Site Parking:**

- Extremely limited due to space constraints.
- Restricted to essential vehicles only (e.g., Site Manager, First Aider).
- Located in designated areas clear of access routes and work zones.

### **Off-Site / Workforce Parking:**

- Primary parking located on adjacent land to the North-West of the site.
- Within walking distance and used for staff and visitors.
- Permit system may be implemented.
- Car sharing and public transport encouraged.

### **Public Road Restrictions:**

- No contractor parking permitted on Island Road or nearby residential streets.
- Non-compliance may result in removal from site.

### **Visitor & Delivery Parking:**

- Designated unloading area inside the site gate.
- Prevents obstruction of public roads.

### **Cycle Parking:**

- Secure bicycle storage provided within the site compound.

## 8.0 - Pavements Crossovers

Where construction vehicles cross existing footways or pedestrian routes, safety measures will be implemented.

### **At the main site entrance, vehicles will cross an existing pavement:**

- Temporary crossover protection will be installed (e.g., steel road plates or ramp sections).
- This prevents damage to paving and underlying services.

### **Where regular crossing is required:**

- Approval will be obtained from the local authority.
- A temporary dropped kerb or ramp (tarmac or compacted stone) may be installed.
- Warning signage – e.g. “Heavy Vehicle Crossing” - will be positioned in advance.

### **A trained banksman will control vehicle movements across the pavement:**

- Pedestrians will be stopped while vehicles manoeuvre.
- Clear signage and barriers will segregate public routes.
- If the footpath at Point A is closed, a signed diversion route will be provided.

### **Pavement condition will be monitored throughout:**

- Any damage will be repaired promptly.
- Temporary crossovers will be removed and surfaces reinstated on completion.

## 9.0 - Temporary Traffic Signs

A comprehensive range of temporary traffic signs will be installed to guide and warn road users and site personnel (Department for Transport (DfT), 2013).

All signage will comply with Traffic Signs Regulations and highway standards (correct size, symbols, and reflectivity) (HM Government, 2016).

### **Advance Warning Signs:**

- Installed 50–100m from the entrance.
- E.g. “Construction Traffic Turning Ahead”.

### **Site Entrance Signs (Point D):**

- “Construction Site Entrance – STOP and Report”.
- “No Unauthorised Access”.
- Directional signage within the car park if required.

### **Speed & Traffic Control Signs:**

- 5 mph speed limit within site.
- One-way and No Entry signs where applicable.
- Stop/Go paddles used by marshals.

### **Pedestrian Signage:**

- “Footpath Closed” and “Pedestrian Diversion” signs.
- Clear marking of safe pedestrian routes.

### **Logistics Signage:**

- Directional signs for deliveries, parking, offices, and first aid.

All temporary signs will be maintained and removed when no longer required.

## 10.0 - Restrictions, Road Crossing / Site Access Assessment

### **Time Restrictions:**

- Deliveries limited to approx. 9:30am–3:30pm (weekdays).
- No large vehicles during peak hours (8–9am / 4:30–6pm).
- No early morning, late evening, Sunday or Bank Holiday deliveries.

### **Route Restrictions:**

- All vehicles must use the approved route only.
- No use of residential streets or shortcuts.
- Routes avoid weight limits, low bridges, and high pedestrian areas.

### **Vehicle Size & Loads:**

- Standard articulated HGVs permitted.
- Abnormal loads require advance planning and authority approval.
- All vehicles must be capable of safely turning within the site.

### **Site Entrance Safety:**

- Access at Point D assessed for adequate visibility and safe geometry.
- Reversing onto the public road prohibited.
- Traffic marshal present during operating hours.

### **Road Crossing Measures:**

- Controlled by marshals or temporary signals if required.
- Pedestrian diversions implemented where necessary.

### **General Controls:**

- No engine idling, unnecessary noise, or mud on highways.
- Operate in line with Considerate Constructors Scheme principles.

## 11.0 - Road Cleaning

Maintaining clean public roads is a key priority throughout construction (British Standards Institution (BSI), 2011)

### **Wheel Washing:**

- Wheel wash installed at the site exit.
- All heavy vehicles must pass through before leaving.
- Strictly enforced during wet or muddy operations.

### **Shake-Down Area:**

- Stabilised surface or rumble grid at exit.
- Removes excess mud and allows water runoff before reaching highway.

### **Road Sweeping:**

- Regular mechanical sweeping of Island Road and nearby routes.
- Additional cleaning carried out if debris is identified.
- Cleaning log maintained.

### **Dust Suppression:**

- Water used on haul routes during dry conditions.
- All loose loads covered during transport.

### **Spill Response:**

- Immediate clean-up of any spills or debris.
- Spill kits and manual cleaning equipment available on site.

### **Monitoring:**

- Daily inspections by site management.
- Immediate action taken if concerns are raised.

Following assessment of visibility, pedestrian interface, traffic volumes and proposed control measures, the residual risk associated with construction traffic is considered Low to Medium and tolerable under controlled site conditions.

## 12.0 - Measures to minimise Environmental Impacts

Construction traffic impacts (noise, dust, emissions) will be actively managed.

### **Noise Control:**

- Deliveries restricted to approved hours.
- No engine idling, unnecessary horn use, or engine braking.
- Staggered arrivals to prevent queuing.
- Use of newer, quieter vehicles where possible.

### **Dust & Air Quality:**

- Water suppression on haul routes in dry weather.
- Strict wheel wash procedures.
- All loose loads covered.
- Preference for electric or hybrid vehicles.

### **Vibration Management:**

- Use of main HGV routes only.
- Avoid narrow residential roads.
- Controlled plant operation near site boundaries.

### **Run-Off Control:**

- Silt protection and controlled drainage at site exit.
- Wheel wash water contained and managed appropriately.

### **Community Engagement:**

- Advance notice of major deliveries.

- Contact details provided for concerns.
- Operate in line with Considerate Constructors Scheme standards.

## 13.0 - Training Requirements

All personnel involved in traffic management must be trained and competent.

### **Traffic Marshals / Banksmen:**

- Must hold recognised Vehicle Banksman/Traffic Marshal certification.
- Site-specific briefing provided (e.g., pedestrian risks, gate procedures).

### **Plant & Vehicle Operators:**

- Valid UK driving licence (where applicable).
- CPCS or NPORS certification for plant.
- HGV drivers must hold CPC qualification.
- Preference for CLOCS-trained (CLOCS (Construction Logistics and Community Safety), 2022) or FORS-accredited operators (Fleet Operator Recognition Scheme (FORS), 2023)

### **Site Induction:**

- Mandatory for all workers and drivers.
- Covers TMP requirements, routes, speed limits, parking rules, and pedestrian segregation.
- Non-compliance may result in removal from site.

### **Toolbox Talks:**

- Regular briefings on reversing safety, load security, and route updates.

### **Specialist Training:**

- Additional training for highway works or unusual operations.

**Records & Verification:**

- Training register maintained.
- Drivers' credentials checked at site entrance.

## 14.0 - Construction Traffic

Construction traffic will include a range of vehicles throughout the project lifecycle (Health and Safety Executive (HSE), 2015).

**Vehicle Types:**

- **HGVs:** tipper trucks, concrete mixers, flatbeds, articulated lorries.
- **Low-loaders:** delivery/removal of heavy plant (e.g., cranes, excavators).
- **Light commercial vehicles:** vans and pickups for daily materials.
- **On-site plant:** telehandlers, dumpers, rollers (restricted to site).

**Volume & Frequency:**

- Peak periods may generate approximately 10–20 HGV deliveries per day. This volume has been considered against the capacity of Island Road and Fabian Way and is not expected to materially impact network performance when managed within defined delivery windows. Increased activity during groundworks, concrete pours, and steel erection.
- Deliveries scheduled via a booking system to prevent congestion.
- No queuing permitted on public roads.

**Traffic Management:**

- Managed by the Site/Logistics Manager (Institution of Civil Engineers (ICE), 2019).
- Drivers report to gate and follow marshal instructions.
- One-way internal routes and turning areas minimise reversing.
- Delivery timings adjusted to avoid clashes with nearby developments.

## 15.0 - Access Schedule

The Access Schedule defines permitted construction and delivery hours in line with local authority requirements (HM Government, 1974).

### **Working Hours:**

- Monday–Friday: 8:00am–6:00pm
- Saturday: 8:00am–1:00pm
- No routine works on Sundays or Bank Holidays (unless approved).

### **Delivery Hours:**

- Weekdays: 9:30am–4:00pm (avoiding peak traffic).
- Saturday: mid-morning only.
- No evening or night-time deliveries.

### **Staggered Arrivals:**

- Delivery booking system in place.
- No two large HGVs scheduled at the same time.
- No queuing permitted on public roads.

### **Peak Traffic Avoidance:**

- Avoid 8–9am and 4:30–6pm periods.
- Adjust schedule for local events or university activity.

### **After-Hours Access:**

- Only for emergencies or essential works with approval.

### **Gate Control:**

- Gates open before 8:00am; heavy vehicles after 9:30am.
- Early arrivals directed to wait off-site.

## 16.0 - Route Maps

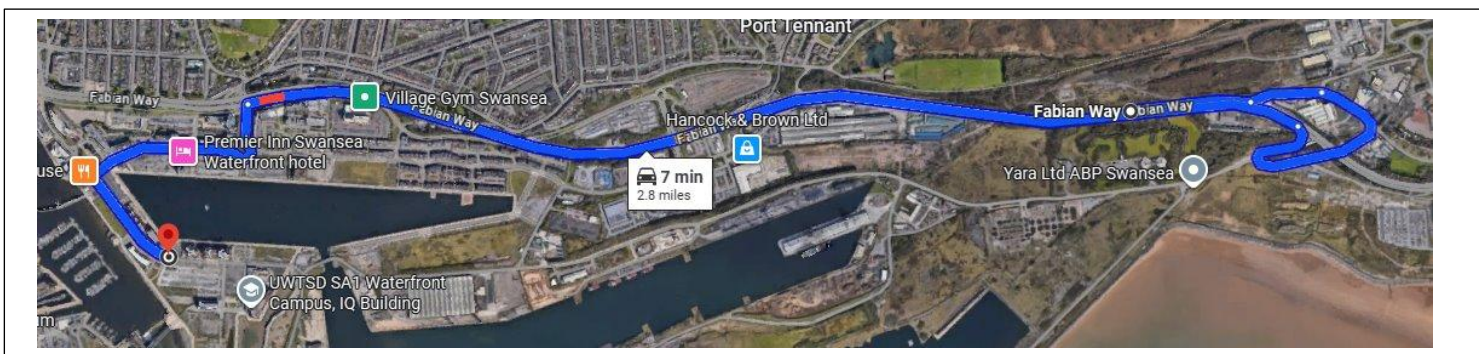
*Route maps for construction traffic will be provided in this section.* These maps will illustrate the designated haul route from the main highway to the site, as well as any internal site circulation plan.

**External Route Map:** A map is included (see Appendix or attached figure) showing the route from the M4 motorway to the site. The route is highlighted, starting at M4 Junction 42 and following the A483 (Fabian Way) into Swansea. The map then indicates the turn-off into the SA1 area via local roads (e.g., a turn towards Island Road leading to the site entrance). Key landmarks, road names, and any restricted areas to avoid are marked on the map. This will be distributed to all delivery drivers in advance to ensure they approach via the correct roads.

**Internal Site Traffic Plan:** Another diagram illustrates the site layout and internal traffic flow (this overlaps with the Layout section below). It marks the location of the site entrance gate, the on-site haul road or track (from the gate to various parts of the site), the material storage zone, unloading areas, and turning areas for vehicles. It also highlights pedestrian walkways, the site office location, and any one-way direction for vehicles inside the site. Arrows on the plan indicate permitted vehicle directions, and symbols denote positions of warning signage or barriers.

These route maps serve as a visual companion to the written TMP. All personnel involved in logistics will be briefed using these maps to ensure clear understanding of where vehicles should travel.

### External Route Map



## Internal Site Traffic Plan



## 17.0 - Layout

The site layout is designed to ensure safe and efficient traffic flow, with clear segregation between construction and public areas.

### **Hoarding & Access:**

- Full perimeter hoarding between Points E–C.
- Defined haul road from Point E
- Main vehicle access at **Point D** for students and staff
- Main Site access at **Point E to point C** (controlled gate).
- Separate pedestrian access provided.

### **Site Office & Welfare:**

- Located near **Point C**.
- Secure walkway provided if outside main hoarding.
- Visitors report to site office before entry.

### **Internal Traffic Routes:**

- Turning area provided to avoid reversing onto public road.
- One-way system implemented where possible.

### **Loading & Storage Areas:**

- Designated unloading zones near entrance.
- Clearly marked material storage areas.

### **Pedestrian Segregation:**

- Barrier-protected walkways within site.
- Controlled crossing points where required.

### **Public Interface & Emergency Access:**

- Managed car park interface.
- Footpath diversion at Point A if required.

- Emergency access maintained at main gate.



## 18.0 – Conclusion

This Traffic Management Plan has been developed to ensure the safe coordination of construction traffic while protecting pedestrians, maintaining university operations, and minimising disruption to the surrounding SA1 area. Through controlled access, delivery scheduling, segregation measures and ongoing monitoring, risks associated with construction traffic have been reduced to an acceptable level. The TMP will be reviewed regularly and updated in line with project progression to maintain compliance with CDM 2015 (HM Government, 2015) and local authority requirements.

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