Health and Safety

Traffic Management & Logistics Plan

The London School of Hygiene and Tropical Medicine

Contents

Abbreviations

CCTV	Closed circuit television
FLT	Fork lift truck
H & S	Health & Safety
MHE	Manual handling equipment
WRRR	Work related road risk (standard)
CLOCS	Construction Logistics Community Safety
FORS	Fleet Operator Recognition Scheme

Review and amendments

Review Date	Revision Number	Page Number	Comments / Amendments	Initials
12.12.17	**01**	**All**	**Project Specific**	AK

Reviewed and approved by		
Name	Adam Keys	
Position	Project Manager	
Signature		
Date	12/12/17	

The Traffic Management & Logistics plan is reviewed and revised and signed off as suitable for current activities by the Project Manager & H&S Manager.

The Traffic Management & Logistics plan including records and drawings should be reviewed at least monthly or more frequently if circumstances have changed.

1. Introduction

The Traffic Management and Logistics plan is used to document and demonstrate how Mace, their suppliers and all interested parties will comply with legislation, discharge their duties and comply with industry standards and best practice in traffic and logistics management on their projects.

This document should be treated as live and updated / amended / reviewed at suitable intervals, typically every month or sooner if required.

NOTE;

Each section suggests items / headings for consideration, this is not an exhaustive list and is adaptable for each projects specific needs / requirements / circumstances.

This document is to be read in conjunction with the following:

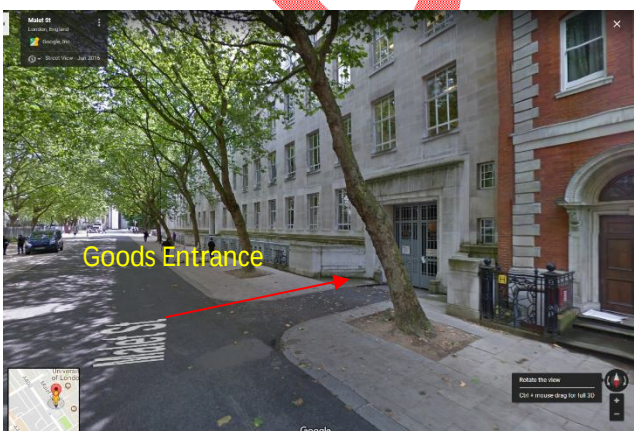
- Strategic lifting plan
- Project fire plan
- Security and Access control documents i.e. Assignment Instruction
- Utility Coordination plan
- Construction Phase Plan
- Environmental Management Plan
- Temporary works design, plan & guidance
- PDP

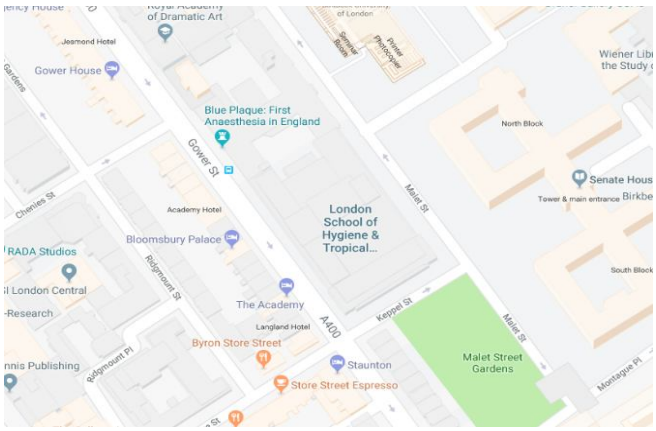
And any other relevant project specific plans.

2. Project details

The London school of hygiene and tropical medicine project is located in Keppel St, Bloomsbury, London WC1E 7HT.

Deliveries will be taken via the goods entrance on Malet street annotated below.





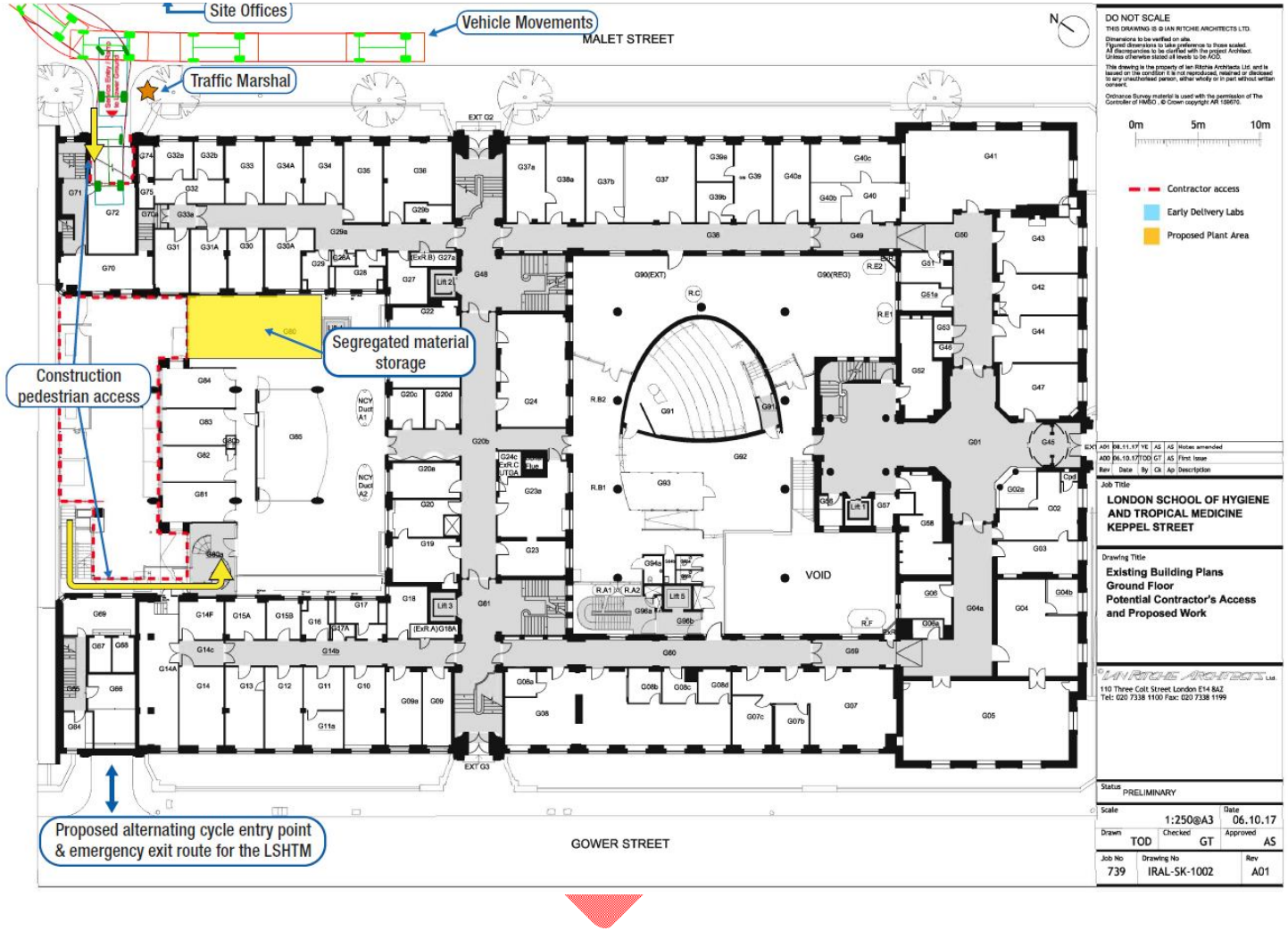
3. Key considerations

The safety of the public, LSHTM users, our operatives and the wider community is our main priority.

The emergency escapes from the school will be maintained as required and checked on a regular basis.

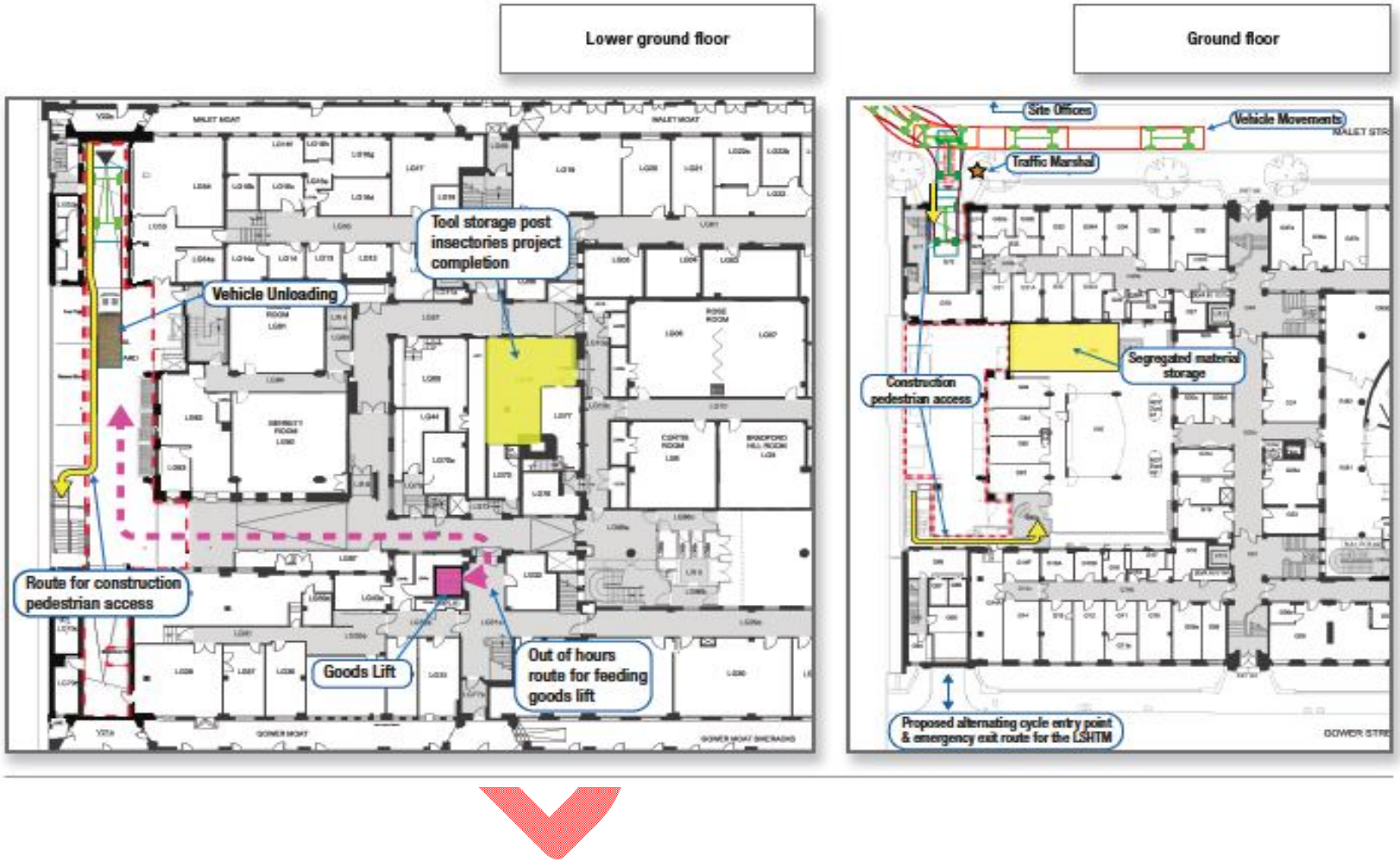
It is proposed that the project office facilities would be located on the opposite site of the street to the Malet Street entrance and these facilities would include a security office for all construction site visitors to attend prior to accessing the main facility building. The use of this ‘off site’ area for welfare, will allow us to centrally locate the combined project offices for Mace and contractors associated with the works. This set-up will facilitate construction delivery with no disruption/down time to the construction programme. All hoarding lines around the welfare, will be secure and clean to form robust separation between public and construction workers. All operatives will be advised that no parking is available on or around the immediate site for the duration of the works.

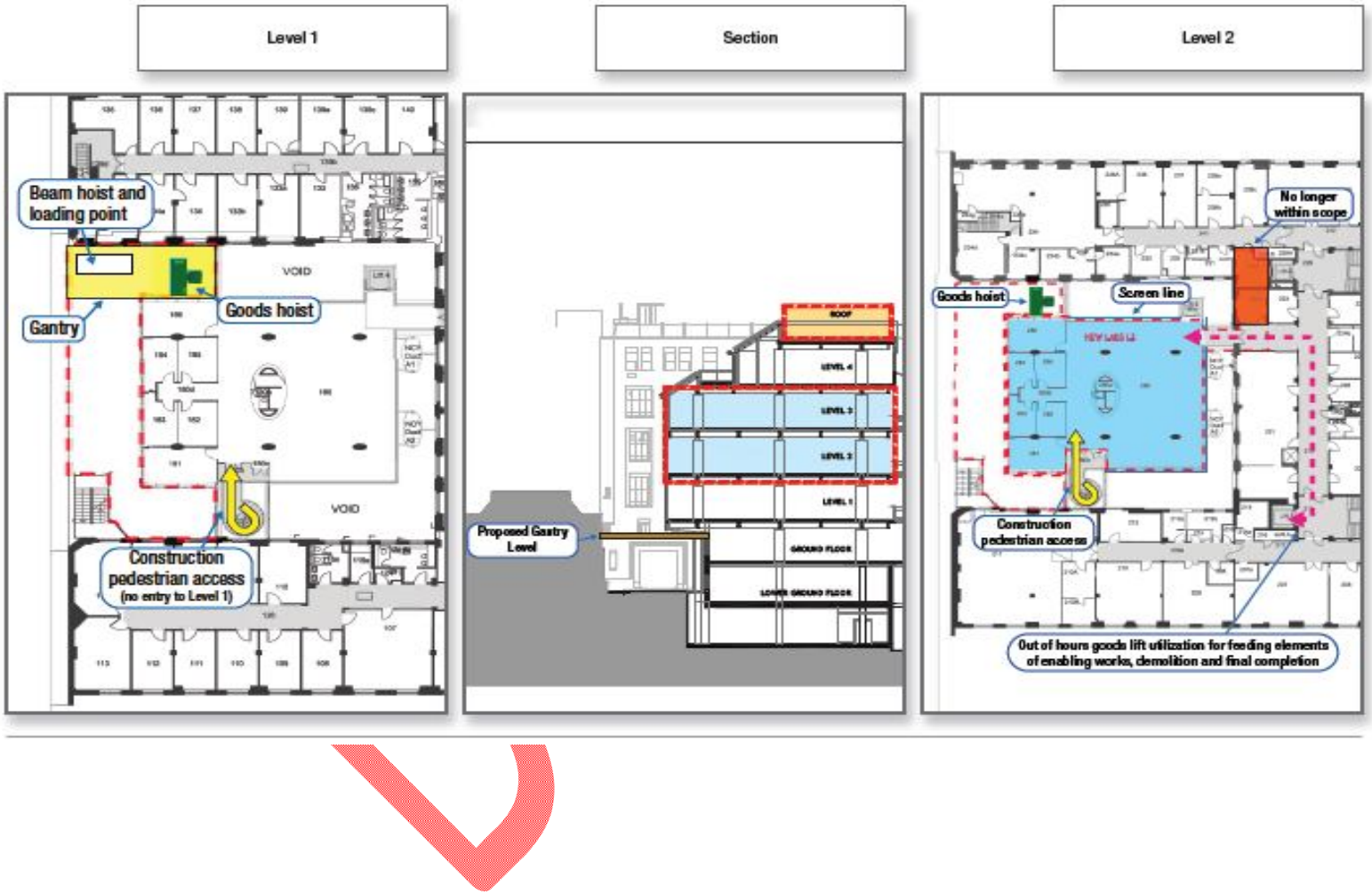
Delivery Access Via Malet Street

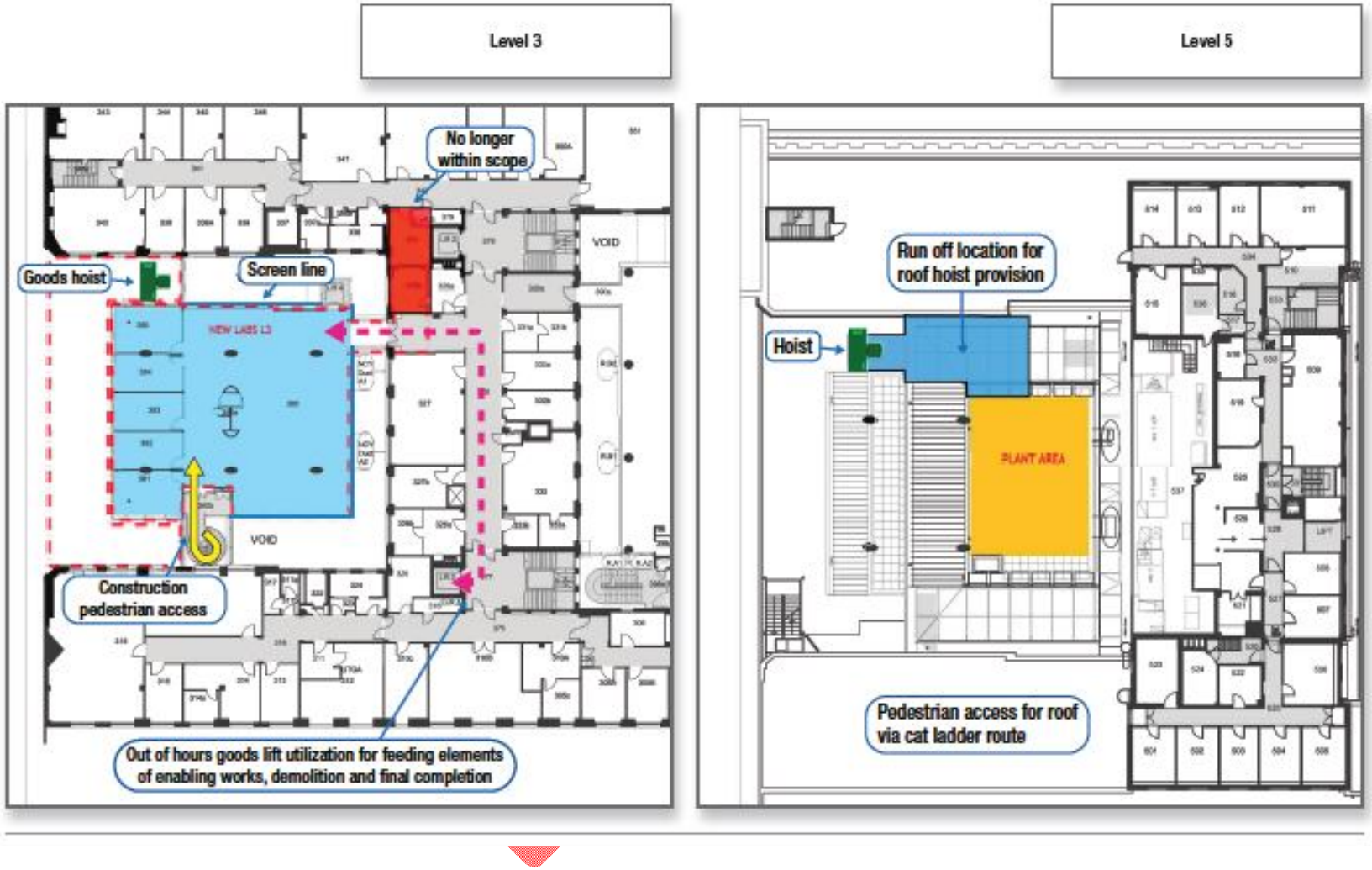


Pedestrian Route to Workface

Workface plans

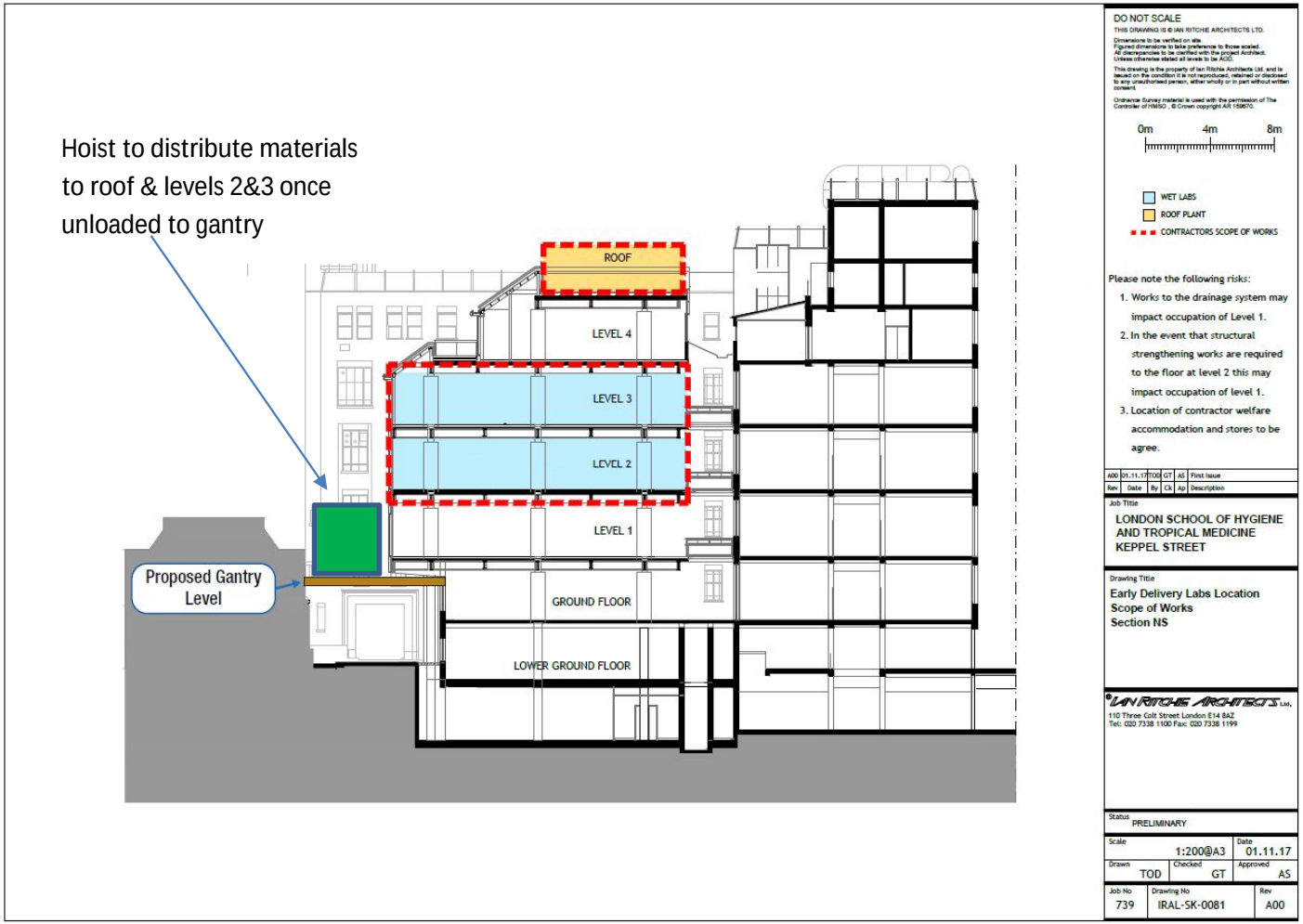



Level 1
Section
Level 2
Beam hoist and loading point
Gantry
Goods hoist
VOID
VOID
Construction pedestrian access
(no entry to Level 1)
Proposed Gantry Level
ROOF
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
GROUND FLOOR
LOWER GROUND FLOOR
No longer within scope
Goods hoist
Screen line
Construction pedestrian access
Out of hours goods lift utilization for feeding elements of enabling works, demolition and final completion


Level 3
Level 5
No longer within scope
Goods hoist
Screen line
VOID
Construction pedestrian access
Out of hours goods lift utilization for feeding elements of enabling works, demolition and final completion
Run off location for roof hoist provision
Hoist
PLANT AREA
Pedestrian access for roof via cat ladder route

Hoist/Gantry

A hoist will be located at ground floor level for material distribution to the roof & levels 2&3. Materials will be lifted to the scaffold gantry via lifting beam the loaded to the hoist



4. Roles & responsibilities

Project Manager

- Assist with planning and preparation of project traffic management strategy, and updating where required
- Make specific reference to the strategy in the project health & safety and environmental plan's
- Ensure a site specific risk assessment is carried out for all traffic activities (arrival, departure, (un)loading, movement, maintenance)
- Ensure a project induction is available to all pedestrians and drivers, which shows key routes, restrictions etc.
- Monitoring and reviewing health and safety performance of all parties
- Ensure there are adequate emergency procedures in place for all foreseeable events i.e. traffic issues, spills, medical evacuation, fire
- Ensure there is adequate lighting on all access routes and common user areas

Traffic Management Coordinator/Contractor

- Traffic management control
- Provide segregated pedestrian and vehicle routes
- Provision of materials / equipment to support the strategy
- Provision of competent resources
- Liaise with Principal Contractor with regard to production of traffic management strategy
- Performance measurement / feedback to CM team regarding traffic management strategy and contractor compliance
- Carry out risk assessment for traffic activities
- Facilitate deliveries and management of delivery / logistics strategy
- Provide wheel cleaning facilities and road sweeping arrangements if required

Contractors

- Comply with traffic management strategy
- Report issues with strategy
- Ensure all personnel attend project induction
- Provide competent workforce and supervision
- Investigate any accidents / incidents and ensure necessary control measures are put in place and communicated to the Principal contractor.
- Provide plant / equipment which complies with relevant statutory obligations
- Adhere to the driver site specific rules

Drivers / plant operators

- Should be competent and trained to the appropriate standard required within the KHSS

- Drive with care and comply with the requirement of project strategy
- Use the correct equipment for the task, ensuring they are suitable for use, marked with safe working load, properly maintained, inspected and thoroughly examined regularly

5. Vehicle management

As an essential part of the Traffic Management Strategy, all applicable routes in to, through and out of the site will be adequately signed, illuminated and guarded as appropriate.

The provision and maintenance of adequate barrier fencing and or diversionary routes will ensure that both vehicular and pedestrian traffic are segregated as far as is practically possible.

All Sub Contractors shall adhere to the agreed booking in system for all deliveries. A pre- determined period of 24 hr notice in advance of the delivery is required. Datascope delivery booking system will be used. This will allow the Mace and Sub Contractor manager to be aware of and manage any delivery with sufficient planning and foresight.

Upon arrival at the site entrance, all delivery vehicles will report to the Security/ Banksman at entrance to site to sign in. All delivery drivers must have a contact name and number so that contact can be made and the load or off load done in a speedy manner so that delays could be kept to a minimum. If vehicles arrive outside of the booked slot, they may be held away from site until access can be given. In order to simplify this, all contractors are to ensure that contact number is on the booking form. Under certain circumstances, it may be necessary to turn away deliveries.

The provision for waiting vehicles may be restricted; therefore any deliveries that arrive unannounced may be refused entry to the site.

Trained and competent sub-contractor operatives will be provided for the purpose of Traffic Control and Management. These operatives will be required for the manoeuvring of vehicles into and out of site. They will also assist with the introduction of vehicles back onto the public highway where necessary.

Reversing is only to be carried out on the project under the following conditions;

1. Deploy banksman during reversing operation and ensure pedestrian access routes are closed off with a barrier or banksman while reversing is taking place.
2. Drivers and bankmen should be in constant communication during reversing.
3. Banksmen should never stand directly behind reversing vehicles.
4. Ensure that all reversing warning lights and alarms are in good working order.

6. Vulnerable road user management

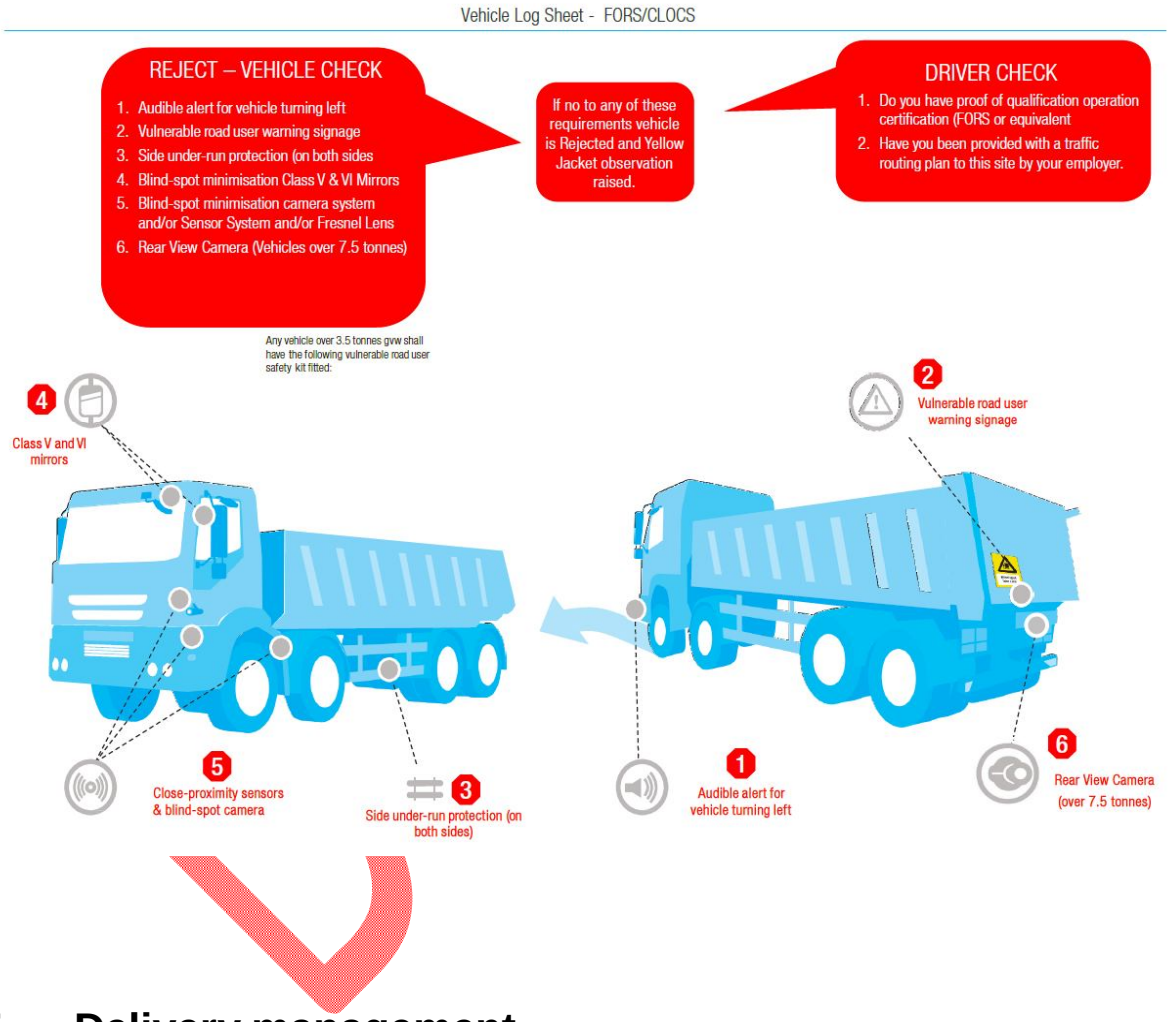
All supplier and subcontractor vehicles above 3.5 tonnes delivering to Mace project sites must:

- Have achieved CLOCS (Construction Logistics Community Safety) Bronze Standard and clearly display the badge.
- ensure that all drivers hold a valid license for the category of vehicle they are tasked to drive;
- Are equipped with enhanced audible means to warn other road users of a vehicle's left maneuver.
- Ensure that all drivers undergo approved progressive training and continued professional development specifically covering the safety of vulnerable road users;

- Have front, side and rear blind-spots completely eliminated or minimized as far as is practical
- Ensure fitment of side-guards to all rigid mixer, tipper and waste type vehicles
- Visually warn other road users not to get too close to the vehicle
- Appropriate certification for HIAB and Operators certificate.

It is important to remember that for the movement of plant, site vehicles and pedestrians a risk assessment should be carried out.

All vehicles that have held the bronze standard for a year should now apply for silver.



7. Delivery management

We understand the need to minimise disruption especially during peak traffic periods, therefore we have developed the following traffic management strategy to cater for this;

1. All vehicles will abide by the traffic management system.
2. All vehicles will enter site through the dedicated site entranrance.

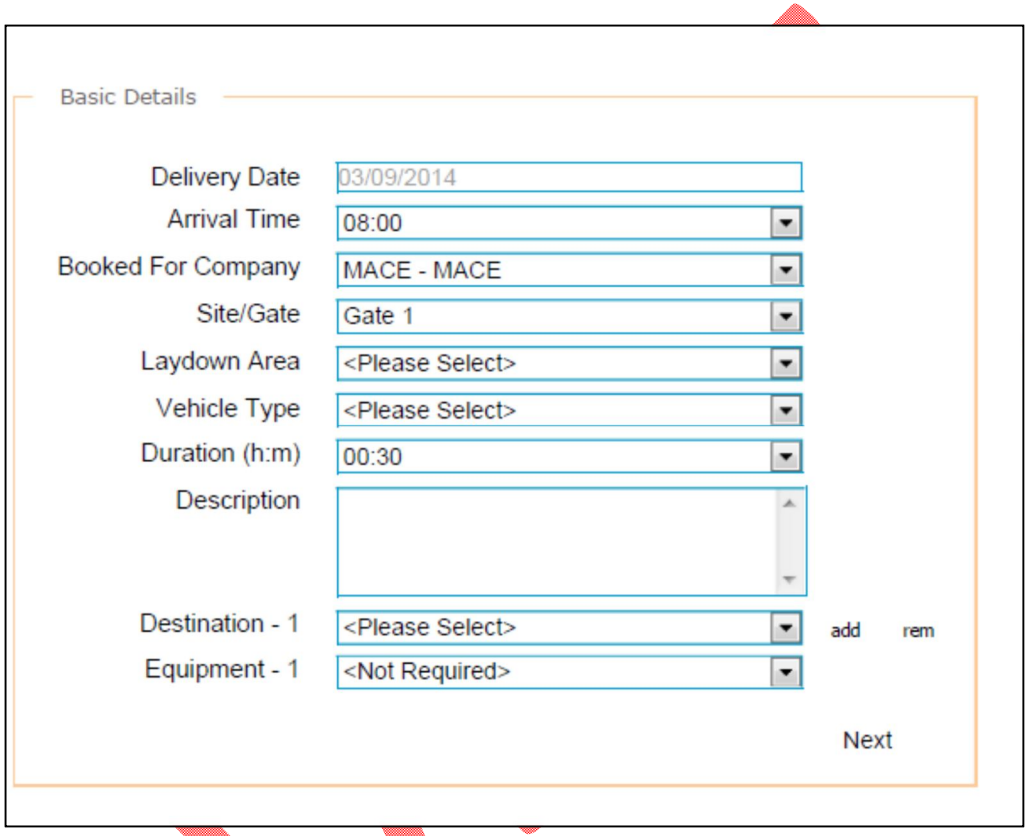
In addition to the above we will have a dedicated logistics and construction manager on site.

Following a review of pedestrian and vehicle movements in London we have observed that there is a rush hour in the morning from 8.00am to 9.30am and 4.30pm to 6.30pm in the afternoon.

Deliveries during these hours will be avoided where possible but to ensure the optimal operation of the site during approved working hours. Deliveries between these times will be required and will not exceed 2 deliveries per hour.

We understand the need to minimise disruption especially during peak traffic periods therefore we have developed the following Traffic Management Strategy to manage this process.

All deliveries will be booked 24 hours in advance of delivery on Datascope delivery booking system. A full description of the delivery item, vehicle, off load requirements, weights etc.



On arriving to site the gateman will issue the driver with a copy of the site rules. It is the Sub Contractors responsibility to make the delivery drivers aware of the following points before they arrive on site.

- Awareness of the site access requirements and approach route to site.
- Strict procedures for reversing - Controlled by a suitably attired (i.e. colored hi-vi vest/hat/ safety footwear) banksman
- Ensure clear route free of obstructions and other hazards
- Selection of the right type of vehicle for the site conditions
- Rigid flat-bed delivery Lorries where possible.
- Limited turning circle.
- Width restrictions – 4m at entrance gate.
- All vehicles to pull on to site, no waiting on Malet Street.
- All deliveries will be planned and offloaded where necessary into the designated storage area.

8. Material distribution / storage

Procedure for Storage of Materials

- Sub-Contractors are to ensure that they have sufficient means of unloading/ loading materials.
- No labour will be supplied by Mace apart from the hoist driver
- After delivery it is the Sub Contractors responsibility to distribute materials to their place of storage or installation.
- Deliveries must be distributed to storage area on the appropriate level or place of installation as soon as practically possible after delivery.
- Mace logistics manager will co-ordinate all movement of materials from this area.

  NOTE: All materials will be unloaded/ loaded by Sub Contractors own operatives.

9. Interfaces

Public Protection for Vehicle Deliveries to Project

The following measures have been taken to make both pedestrians/Cyclists and vehicles aware of each other around this site entrance.

- No parking or mounting of external boundary kerb for purposes of waiting, goods loading or offloading.
- Signage to warn pedestrians/Cyclists on the public footpath of a vehicle entrance.
- Signage to warn delivery drivers of pedestrians crossing.
- Physical demarcation barriers within the loading bay to protect site personnel from risk of being struck by site vehicles and to stop personnel from wandering into the loading bay.
- Banksman provided by Sub-Contractors to ensure safe exit/ entrance.
- Provision of a separate pedestrian access via security office.
- No pedestrian traffic through the loading bay.
- Security/banksman attendance at gates to control vehicle movements at public interfaces

10. Waste management

Early trades completing the strip out / demolition will be required to remove their own waste using methods that restrict the emissions of dust.

The logistics contractor will provide waste management service for the project once the internal works commence.

- Types of bins to be used (Fit out)

Lidded 240 & 1100 ltr wheelie bins will be used on site for the removal of general site waste. A number of bins will be positioned on the floors for sub-contractors to put their waste in. These bins will then be transferred buy the waste management operatives to the allocated compactor collection point. The logistics subcontractor will empty the bins and remove the waste from site.

- Segregated skips will be provided

Any skips that have waste in need to be covered or sheeted to reduce dust migration.

- Compactors

A compactor will be supplied by the logistics contractor weekly as and when required.

- COSHH waste

Trades are to remove their own COSHH waste. Any waste will need to be kept in a suitable container or cabinet while it awaits removal. No COSHH waste is to be put in the general waste bins or skips.

- Waste areas

There will be no open waste areas on site all waste is to be contained. Bins are to be stored in the delivery areas in a just in time basis ready for the arrival of the compactor

- Waste collection times

To be in site hours. The logistics manager is responsible for booking the waste collections on the Datascope system

- Trade contractors responsibilities

To provide dust free methods of housekeeping (no dry sweeping will be allowed) to enable their operatives to fill the bins provided.

Ensuring and licences or discharge agreements are in place prior to removing waste

Collection of waste data on a monthly basis and completing the Optimise monthly report

- Large waste items

Larger waste items will need to be either removed by the same sized vehicle as it was delivered or broken up on site, the method of which needs to be chosen so not to emit excessive noise or dust. This type of waste will be the responsibility of the cub-contractor to remove.

11. Mobile Craneage

See project lifting plan located on Conject.

12. Site communications

- Type of radio

The use of two-way radios is the preferred option of communication between the logistics team and traffic marshals. All other trade contractors will be responsible for supplying their own radios.

- Training

The use of radios requires training and rehearsal. The voice instructions must be clear and unambiguous. The terminology must be standardised and great care must be exercised to avoid confusion between left and right when the slinger/signaller is facing the mobile cranes. There must be no misunderstandings because of language or dialect – it is essential that there is ready comprehension of spoken instructions.

The radio channel selected should be kept clear of all other communications. All persons involved in the lift should be given a clear and unique call sign.

- Issuing protocol & Inventory

The logistic manager will be responsible for the issuing, charging and maintenance of the radio.

- Emergency procedures

If an emergency occurs on site then the site team are to follow the agreed emergency procedure.

- Emergency services

In the event that emergency services are required, the site emergency co-ordinator or his deputy must contact the emergency services using 999 and give the appropriate information.

13. Temporary services

During the enabling works a validation survey will be undertaken by our M&E trade contractor. All live services will be isolated and removed prior to strip out.

Temporary safety lighting and transformers will be installed to levels 2&3 to allow works to proceed.

All trade-contractor electrical equipment used on site must be clearly marked with up to date PAT test certification. Equipment is to be tested every 3 months.

- Fire system

A wireless alarm system will be used to both the accommodation and the site. Call points will be situated on the fire points. For more information see fire plan on conject.

- Legionella management if applicable i.e. showers

The Mace Legionella Co-ordinator will carry out a risk assessment and stipulate a cleaning regime for the Logistic contractor to follow.

14. Protection

We envisage the need to use a mewp or scaffold access to gain high level access to levels 2&3 when working on the balustrades. We are in the process of agreeing a work at height strategy most suited for the type of work required. Protection to the work areas will be of cordec material/ply to protect any finished works from damage.

15. Progressive cleaning

We will be utilising the existing road as the on-site haul road (shown on the logistics plan) which will be kept clean during the construction phase.

We will maintain these management procedures for noise and dust during the main construction phase and enhance it with cutting booths and screen as deemed necessary as the project progresses. We will utilise regular liaison meetings with our neighbours to inform them of upcoming works and review activities. Regular site news letters will be produced to keep the wide community informed of progress and events.

16. Plant

Plant usage in line with our construction phases will differ considerably as the works progress. We need to assess and update the Plan to ensure we have developed the right method of work to insure we minimise potential disruption. To assist with this we have identified the significant plant and deliveries require below.

- **External Facade and roofing;** the plant used will generally be mobile craneage and MEWP's. Deliveries will be bulk deliveries and used/stored on site.
- **Roof Plant;** mobile Craneage and hand tools. Plant will be pre-assembled off site
- **Internal Fit Out;** MEWPs, towers, mixers and hand tools. Again we will look to receive bulk deliveries, just in time where necessary and plan storage areas on site.

17. Security arrangements

- Inductions

All operatives and supervisors will have to sit the site induction prior to starting works. Inductions will be carried out at 9:00am Monday/Wednesday/Friday.

A multiple choice test will follow the induction which all personnel need to pass to be able to continue to work on the project.

Additionally supervisors will have to sit the 'Black Hat Induction' directed at managers and supervisors of all sub-contractors on how Mace expect the project to be managed.

Once completed all site personnel must sit the Module 4 Safety First Second Nature safety training preferably after induction or within the week of starting on site.

- Searching / random spot checks

If random searching is required then it will be in line with the security providers search policy written notice will be given to the operatives in advance.

- Patrols

Generally will be carried out at the start and end of the shift to check the perimeter is secure

- Emergency procedures

Mace Site Emergency Co-ordinator will responsible for managing any emergency on site with the help of fire marshals / first aiders.

Only the Mace Site Emergency Co-ordinator should contact and lease with emergency services.

Emergency procedures will be stipulated in induction and also posted on site notice boards

- Out of hours arrangements

Out of hours number will be posted on signs on the hoarded perimeter for 3rd parties to contact.

There will be an emergency contact hierarchy of Mace manager's numbers to call in the event of call out.

- Passes

Security verification of inducted personnel will be provided by Biometric scanner at the turnstile.

Pass application process

A security form will need to be completed by all inductees prior to siting induction. Full details need to be completed along with a copy of their current CSCS card suitable for the role that they are carrying out.

All information will be logged on the Datascope system and thumb print taken for biometric scanner.

All forms will be stored in line with the provisions of the Data Protection Act.

- Physical site security

Two SIA registered security guards will be on site during site hours and will be responsible for unlocking and locking site, turnstile, biometrics, processing security forms and directing visitors

- Visitors

All visitors will need to sign in at the turnstile and will be given a visitors briefing by security before being directed to the offices in the accommodation block.

No visitor will be allowed to carry out any physical works or walk around site unaccompanied.

- Personnel

All personnel to be fit and healthy to carry out their duties. They must wear full 5 point PPE when on site and no lone working will be allowed.

18. Hoardings/Protection Screens

A new 2.4m ply hoarding will be erected around the site accommodation. Prior to any enabling works commencing a protective Toughcoat screen will be erected to levels 2&3 to fully enclose the work areas. A temporary works design will be carried out and approved prior to the protection screen being erected.

19. Project risk register

The following risk register is populated with example hazards. The register is to be made specific to the project and reviewed on a regular basis or when significant changes to project occur.

Contact your project H & S manager should you require assistance completing this section.

Project traffic management and logistics risk register

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
1.0	**Key considerations**				**Project specific**	
1.1	**Incident management**	Unplanned event occurring without Mace knowledge	H	Develop project emergency procedures /plans to include: • Fire • Security -Unauthorised entry • RTA's-spillages • Inclement weather • Accident and Incidents • Bomb threats • Theft		Relevent / specific project plans i.e CPP, Fire Plan etc.
1.2	**Existing locations**	Existing locations impacting on project delivery	H	• Liaison with local authority • Monitor external traffic movements • Review signage strategy and effectiveness of signage • Access – egress routes controlled at all times –public interface		
1.3	**Training / Competence**	Use of non-competent logistics / traffic management personnel	H	• All traffic marshals to be competent • Traffic marshals to be briefed on task specific RAMS, CLOCS requirements • Emergency procedures- trained in spill kit procedures		Recognised Competency Plant and Vehicle Marshaller Category A73 CPCS

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
2.0	**Vehicle Management (Internal)**				**Project specific**	
2.1	**Vehicle segregation**	Moving vehicles mixing with site operatives	H	• Adequate signage-giving clear information to all contractors • vehicle drivers information to include vehicle and pedestrian routes via DMS • Access and Egress controlled at all times-public interface • Monitor traffic movements and effectiveness of signage		
2.2	**One way systems**	Mis-use ,bad management of traffic routes	H	• Clearly defined and signed routes, pre-planned routes to stop reversing • Use traffic light systems • Speed limits • Vehicles escorted at all times by contractor traffic marshal		
2.3	**Unloading areas**	Falling materials, vehicles striking contractors, speeding vehicles, weather conditions	H	• Drivers to adhere to speed limits • Exclusion zones clearly defined • Use of MHE • SSOW developed-lifting plans		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
3.0	**Vulnerable road user management (External)**				**Project specific**	
3.1	**Pedestrian segregation**	Pedestrians mixing with moving vehicles	H	• Warning signage, for pedestrians and delivery vehicles • Exclusion zones-Marshalled • All access/egress areas Marshalled at all times- adequate lighting in all areas		CLOCS requirements
3.2	**Vulnerable road users**	Vulnerable road users sustaining injury	H	• Emergency information available for all site staff-local hospital, ambulance , police numbers • Regular checks of policies /procedures		
3.3	**Non-use of designated vehicle routes**	RTA's, Traffic Jams,	H	• All deliveries to use DMS • Subcontractors to confirm routes to all delivery drivers including overseas drivers		
3.4	**WRRR compliance**	Vehicles being non-compliant with WRRR standard	H	• Information/requirements ref WRRR/CLOCS included in contracts, start-up meetings • Contractors to submit evidence that they are compliant		WRRR Standard

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
4.0	**Delivery management**				**Project specific**	
4.1	**Unplanned deliveries**	Unscheduled deliveries preventing compliance with delivery schedule	H	• Logistics team to inform Construction team who will make final decision		Delivery management system (DMS)
4.2	**Overseas vehicles**	Non-compliance with WRRR standards	H	• Site rules ref WRRR to be instigated by project team to be included in contracts		
4.3	**Delivery restrictions**	Deliveries cannot be undertaken Mixing deliveries with vulnerable road users	H	• Delivery timings to complied with • Good communications with all stake holders ensuring correct information on DMS ref size of vehicle, correct equipment to unload etc. • Good management of access/egress minimal disruption for all 3rd parties		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
5.0	**Material distribution / Storage**				**Project specific**	
5.1	**Material Storage**	Material stored with the potential to cause harm		• Designated lay down areas for all subcontractors, • Clearly defined with signage and barriers • Minimise build-up of excess materials by good planning		Project lifting strategy
5.2	**Vehicle movements**	Vehicles unable to unload		• Practical Planning using DMS • Equipment availability- for vertical and horizontal unloading		
5.3	**Unloading**	Unloading activity causing harm / damage		• Use of correct MHE for all unloading • Information for all deliveries on lifting plans • Exclusion zones/warning Signage		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
6.0	**Interfaces**				**Project specific**	
6.1	**3rd parties**	3rd party activities impacted by logistics activities	H	• Revise traffic management plan as job progresses • Review signage at regular intervals –for effectiveness • Review vehicle and pedestrian routes as job progresses • Liaise with local authority and all stakeholders ref site wide developments • Regular checks of Cycle safety routes		
6.2	**Neighbours**	Project neighbours contacting enforcing authority	H	• Review current complaints procedure • Regular meetings with local tenants association reviewing changes to access roads, parking facilities etc. • Comply with local authority noise, dust and nuisance requirements		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
7.0	**Waste management**				**Project specific**	
7.1	**Waste movement**	Accumulation of waste on project	H	• Regular disposal of waste-skip, compactors • Bins , Skips for provided for general waste • Bins located at prioritised areas-safe access and egress • Housekeeping completed after every task • Segregation of waste materials		
7.2	**Hazardous waste**	Hazardous waste causing harm	H	• Hazardous waste bins/containers provide and disposed of in line with site procedures • COSHH assessments developed		
7.3	**Manual handling**	Incorrect manual handling causing damage / injury	H	• Bins not to be overloaded-materials protruding • All waste containers to be inspected for damage at regular intervals • Access and Egress routes clear-		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
8.0	**Craneage / Hoist's**				**Project specific**	
8.1	**Lifting operations**	Unplanned lifting activities resulting in damage / harm	H	• All lifting operations to be planned- SSOW/ Lifting plans • All operatives involved in lifting operations -competent		Strategic lift plan
8.2	**Weather**	Inclement weather impacting lifting activities	H	• Regular weather checks for local areas • Flexibility in lifting programme /delivery schedule		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
9.0	**Site communications**				**Project specific**	
9.1	**Emergency procedures**	Lack of understanding of emergency procedures	H	• All operatives to carry out site induction training- refresher training • Emergency Information displayed on site notice boards –reviewed and updated regularly • Emergency procedures to be reviewed at regular intervals and communicated to all operatives		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
10.0	**Temporary services**				**Project specific**	
10.1	**Emergency lighting**	Insufficient emergency lighting	H	• Risk based assessment required for all escape routes		
10.2	**Lighting levels**	Insufficient lighting resulting in harm	H	• Lighting levels to be checked at regular intervals / time of year		
10.3	**Fire alarm maintenance**	Unplanned activation of fire alarm	H	• Weekly/daily inspections of fire points Records kept • Servicing and maintenance agreement required in accordance with equipment instructions		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
11.0	**Protection**				**Project specific**	
11.1	**Weather**	Damage to project	H	• Materials stored and secured safely • Winterisation process developed • Hoarding weekly checks completed		
11.2	**General damage**	Damage to finished / installed items	H	• Agreed protection methods in place • Process in place for hand overs of equipment and work areas • Permit to work in controlled areas		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
12.0	**Progressive cleaning**				**Project specific**	
12.1	**Cleaning activity**	Slips, trips & falls	H	• Warning signage prominently displayed where cleaning is taking place • All spillages cleaned up immediately • Access and Egress –designated walkways free from obstructions		
12.2	**Existing locations**	Accumulation of waste	H	• Strict waste disposal procedures in place • Segregation policy • Regular housekeeping carried out by all contractors		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
13.0	**Plant operation**				**Project specific**	
13.1	**Lifting equipment**	Failure of lifting equipment Unauthorised operation of lifting equipment	H	• SWL to be confirmed before lifting takes place • Only certificated/ competent persons to be used all lifting operations • Thorough examination and Inspection certificates available		
13.2	**Lifting accessories**	Failure of lifting accessories	H	• Associated lifting equipment's inspected as required by LOLER and makers instructions • Thorough examination and Inspection certificates available • Crane Check list completed before any lift takes place • Test lifts carried out • Only certificated/ competent persons to be used all lifting operations		
13.3	**Contractor coordination**	Conflicting lifting activities	H	• Daily co-ordination meeting to confirm lifting schedules • Planning in line with construction programme • Lifting plans to be approved		

Nr	Activity	Key Project-Specific Hazards	Risk rating	Key Project Specific Control Measures	Residual Risk	Additional comments / information
14.0	**Security arrangements**				**Project specific**	
14.1	**Trespassers**	Death / serious injury to trespasser	H	• 24 /7 security presence- trained in site specific emergency procedures • Warning signage prominently displayed • Security assessment reviewed as job progresses • External hoarding/barriers/gates and lighting inspection at regular intervals		
14.2	**Visitors**	Unauthorised visitors on site	H	• 24 /7 security presence - trained in site specific emergency procedures • Security assessment reviewed as job progresses • Warning signage prominently displayed • External hoarding/barriers/gates and lighting inspection at regular interval		
14.3	**Out of hours**	Unauthorised access to project	H	• 24 /7 security presence - trained in site specific emergency procedures • Warning signage prominently displayed • Security assessment reviewed as job progresses • External hoarding/barriers/gates and lighting inspection at regular intervals		