



Construction Management Plan
GARDINER & THEOBALD

NEW CITY COURT

Construction Management Plan

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CONTENTS

1. INTRODUCTION..... 3

2. LOGISTICS 6

3. LOCAL ENVIRONMENT 12

3. PRE-COMMENCEMENT WORKS: SURVEYS AND ENABLING WORKS..... 14

4. DEMOLITION 17

6. CONSTRUCTION20

APPENDICES

APPENDIX A SEQUENCE AND LOGISTICS

APPENDIX B SUMMARY PROGRAMME

APPENDIX C VEHICLE ROUTES

1. INTRODUCTION

This Outline Construction Management Plan (CMP) for the demolition and construction has been prepared by Gardiner & Theobald LLP (GTMS) on behalf of GPE St Thomas St Limited in support of the planning application for the New City Court project.

The Outline CMP identifies and summarises the proposed phasing and construction methodology based on the information available, highlighting and addressing any potential issues that will be faced during the demolition and construction phases. As the design develops and contractors are procured this report will be assessed and altered accordingly. The baseline for the analysis is the Local Authority Code of Construction Practice and these have been viewed as the minimum standards to be achieved.

The project is split into 2 key parts.

- Phase 1 - Demolition of the existing building and the enabling works consisting of (a) utility diversions, disconnections and asset agreements; and (b) all on site works; and
- Phase 2 – site establishment and construction of the new building, including all substructures, superstructures, envelope, fit-out and commissioning works.

This assessment has been made using the latest design information provided by the design team and through minimal conversations with TFL, the Client and his team; and is based on typical methods for demolition and construction techniques appropriate to a project of this type and size.

The target date assumed for this CMP is for the commencement of the demolition works in Qtr 1 2022, while the construction works are expected to complete by the Qtr 4 2025, showing an overall development duration of approximately 3 years and 11 months. These dates are to be confirmed and are subject to change.

In due course this CMP will be updated as the contractor is appointed, when they will produce their own specific Construction Management Plan (CMP) to demonstrate how they will comply with the relevant code of practices and the principles submitted within this CMP.

The Appointed Demolition and Main Contractors (ADMC) will develop a site specific Deconstruction and Construction Method Statement (CMS). Further to this they will also look at the environmental mitigation measures during construction highlighted in the ES and planning conditions requirements and add them to the CMP or CMS. Trade contractors will be required to demonstrate how they will meet the targets of the CMS and will also adhere to TfL's 'Construction Logistics, Cyclist Safety, and Work Related Risk' (CLOCS) standards.

The issues that have been considered within this document are as follows:

1.1. Demolition

- Description of Works
- Site access, logistics and indicative phasing of the works are illustrated in Appendix A of this report
- Detailed Indicative Demolition Methodology
- Considerations for noise and vibration, and air quality mitigation
- Considerations for third party licenses and consents
- Public relations and community liaison
- Flood protection
- Ecological protection
- Archaeological resource protection measures

1.2. Construction Works

Construction Methodology is considered outline only, and has been based on the information currently available and our experience on similar projects (and where appropriate, with limited specialist contractor input).

The construction methodology poses no significant risks to the area and works are in a staggered manner working on a bottom up approach which is required to be further developed.

Furthermore, it should also be recognized that the proposals and methodologies outlined in this document will be subject to refinement or amendment at later design stages, resulting from a number of issues. These include:

- Design development, and the introduction or advancement of construction techniques/materials
- Chosen contractor input and programming
- Findings of investigations into adjacent construction and foundations
- Unknown local site conditions

The site is located in the centre of London in close proximity to The Shard. The primary access is along St Thomas Street with a secondary along Collingwood Street.

The existing building is generally 4 and 5 storeys high, with links into the terraced houses. Keats House is to be demolished however the façade is to be removed and stored ready for re-building during the construction phase.

At this stage, GTMS has not entered into direct dialogue with the relevant stakeholders such as the local council, the surrounding retailers and local residents; however we have met with TFL to present our initial thoughts and methods. We envisage this discussion naturally forming part of the next stage to enable these initial plans to be developed further to take on board feedback from all of the above so that an agreed strategy can be established.

2. LOGISTICS

Our logistics solution is outlined below under the following headings:

- Site opening hours
- Security personnel access and egress
- Maintaining a secure site
- Project accommodation and welfare facilities
- Hoarding
- Materials deliveries, distribution and storage
- Waste removal
- Noisy works
- Temporary services
- Fire safety
- Environmental considerations

2.1. Site Opening Hours

The normal site working hours will be between 8am-6pm Monday to Friday. Weekend working will take place if required, on a Saturday between 8am-2pm. The site will only be open on Sundays in exceptional circumstances, with prior arrangement with the Local Authority.

2.2. Security/Personnel Access and Egress

Access to the site will be from the main entrance gate within the hoarding on St Thomas Street to the west side, into site. A security signing in/ out point with turnstiles will be located to the side of the main entrance gate, which will be manned by a full time security guard.

Welfare and offices will be located within the existing buildings to the west of the site.

Throughout the project simple signage will clearly identify the work zones and safe routes, so both site operatives and visitors are aware of no-go areas, safe routes and escape routes.

A secondary means of escape will have to be maintained at all times during the project.

2.3. Maintaining a Secure Site

Maintaining a secure site is important for a number of reasons but most importantly to protect third parties from entering the building and harming themselves or causing damage to the building. The following control measures shall be in place:

- There will only be one means of access into the building. The primary access point shall be through the access gate situated adjacent to the main entrance gate on St Thomas Street

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- Any access for bulk materials will be through the double (sliding/ bi-folding) gate along St Thomas Street, but only under supervision of the main contractor's site team and with prior arrangement. This gate will remain locked at all other times and fully supervised by a traffic marshal/ banksman
 - A digi keypad shall be fitted to the external door at the main entrance to the site
 - Turnstiles with an access control system will be installed adjacent to the site entrance
 - Entrance to the site to be secured with mortice locks at all times outside of working hours
 - Access to the site works areas from all other external doors shall remain locked and secured with emergency break glass bolts
 - Operatives and visitors will have to attend an induction prior to working on site; this will be carried out by the Main Contractor

2.4. Project Accommodation and Welfare Facilities

During both the demolition and the construction phases the site office and welfare will be situated within the existing buildings to the North of the main building. These will be refurbished to provide the required amount of amenities required to meet the current regulations. When the site labour is at its peak, a second area will be created in the basement and again will provide all the statutory requirements needed.

2.5. Hoarding

A 3.0m high plywood hoarding will be erected along site boundary. No discussions concerning the hoardings have taken place to date with the Local Authority or TFL, however this will be required as early as possible during the preconstruction period, to determine what will be permissible. A pit lane will be formed which will allow the delivery vehicles to pull off the road to unload in a safe manner. It will also keep the carriageway open at all times. The hoarding erected off TVCBs and external lighting will be used to illuminate the hoarding around the perimeter. The TVCB's will be bolted together providing a robust structure against accidental impact loadings.

2.6. Materials Deliveries, Distribution and Storage Traffic Management

We have focused our logistics operations to the use of St Thomas Street as the project is enclosed on all other elevations by neighbouring buildings. The main contractor will ensure that all users of St Thomas Street will have safe and clear access at all times.

- To ensure that St Thomas Street is not congested during the works, all deliveries will comply with a booking system coordinated by the main contractor's logistics manager and the project team. This will ensure that materials are pre-booked in a timely manner on a "just in time" basis. An off-site consolidation centre should also be considered as this will assist in ensuring that the scheduled deliveries arrive and depart from site on time.
- All vehicle movements would need to be closely controlled and a detailed traffic management plan would need to be established. This would need to take into account other traffic movements within St Thomas Street.

- Full time banksmen/ traffic marshals would be stationed within the proposed loading bay area within St Thomas Street and would be responsible for managing safe access and egress of all vehicular traffic.
- St Thomas Street being a main thoroughfare into London will have very high usage in the morning and evening and therefore all deliveries will be restricted to be outside these core times.
- No parking on site would be permitted, with exception to the delivery vehicles loading and unloading within the loading bay.
- A holding area will be agreed with the Local Authority to ensure that deliveries to St Thomas Street are coordinated in a controlled manner.

A range of delivery vehicles will be used to transport materials to and from the site. The anticipated vehicle type and use associated with the construction process are set out in table below:

VEHICLE TYPE	TYPICAL SIZE	USE	DISTRIBUTION
Rigid Heavy Goods Vehicle	10m (l) x 2.5m (w) x 3.64m (h)	Demolition Excavation material removal	Strategic road network to motorway
Small Articulated Vehicle	15.4m (l) x 2.5m(w) x 3.7m (h)	Plant, steelwork, bricks, cladding panels, Mechanical and electrical plant, roofing materials	Strategic road network to motorway
Rigid Heavy Goods Vehicle	9.4m (l) x 2.5m (w) x 3.71m (h)	Concrete deliveries	Strategic road network to motorway
Specialised articulated HGV	16.5m (l) x 2.5m (w) x 3.7m (h)	Tower crane erection and dismantle	Strategic road network to motorway
Specialist equipment low loader	16.63m (l) x 2.5m (w) x 3.4m (h)	Occasional delivery of plant	Strategic road network to motorway
Vans	5.7m (l) x 2.4m (w) x 2.7m (h)	Plant service, materials and other suppliers	Distributed to local and strategic road network
Cars	4.94m (l) x 1.9m(w) x 1.85m (h)	Occasional deliveries, couriers etc.	Distributed to local and strategic road network

2.7. Materials Distribution

Materials would be loaded and unloaded utilising a 2No. luffing jib tower crane. The location of this crane would need further consideration to mitigate any potential over sailing issues and also to ensure that it does not impede the progress of the works. Based on the information we have to date, we have proposed that one crane will be situated to the north of the office block and with the second sited on the top of the core. A number of mobile crane lifts would be required throughout the project, which would mean a partial road closure of the St Thomas Street carriageway. Any road closures will need to be agreed with the Local Authority.

2.8. Plant and Equipment

Other types of mechanical plant such as conveyors, hoists, excavators, piling rigs, muck away vehicles, skip lorries, skid steer loaders (Bobcat) etc. will also be utilised and the use of these would be detailed in the traffic management plan/ site logistics strategy.

Due to the space restrictions on site and in particularly directly adjacent to the site, vehicle sizes would have to be restricted. Some of which are shown within the table shown previously.

A temporary substation is to be sited on the pavement fixed to a gantry, to allow the removal of the existing substation during demolition.

2.9. Site Storage

Dedicated storage zones will be allocated to contractors which are planned to ensure that they do not interfere with the works taking place.

Contractors shall be responsible for the security of their own materials and equipment and shall be encouraged to provide their own lockable tool chests etc. These areas will not encroach onto the safe access routes throughout the building which will be maintained and kept clear at all times.

2.10. Waste Removal

During the strip out, demolition, construction and fit-out works each subcontractor will be responsible for keeping their own work area clean and tidy. The main contractor will provide wheelie bins across the floor plates and take overall responsibility to remove the rubbish from site through the use of a multi service gang (with the exception of the demolition, strip out and builders work as these will be undertaken by the individual contractor).

The waste will be removed from site regularly to minimise fire risks and to maintain a clear site. Waste will be collected and segregated in each area using small wheelie bins, once full the bins will be emptied into a wait and load compactor vehicle. Wait and load skips will also be utilised when necessary.

2.11. Special and Hazardous Waste

Any waste needing to be removed as special/ hazardous waste will be notified to the main contractor who will organise specialist removal contractors to remove it to the appropriate waste and recycling centre.

2.12. Noisy Works and Dust Mitigation

As part of the construction work the Main Contractor will liaise with the Local Authority with regards to a possible Section 61 agreement which will outline noise levels to be adhered to and as a result will dictate the mitigation measures chosen by the Main Contractor.

The noisy works periods will be restricted to 8am - 10am, 12noon - 2pm and 4pm - 6pm Monday to Friday and 8am - 2pm on Saturdays. This will be further discussed with the local residents and businesses.

It is imperative that subcontractors incorporate these restrictions within their works' method statements and programmes and the Main Contractor will manage these restrictions to ensure minimal impact on progress.

To control noise at the source, the Main Contractor will consider the use of temporary acoustic fencing or enclosures in the form of Echo Barriers will be employed to reduce noise transmittal from the site to adjacent buildings. The Main Contractor will employ a number of other noise mitigation applications so that noise will be kept to a minimum; this will be via the use of attenuators / mufflers fitted to plant and equipment. Also the positioning of plant and equipment will be carefully considered to reduce the impact on surrounding buildings. Noise monitoring will be carried out if required following discussions with the Local Authority.

2.13. Dust Mitigation

Dust Mitigation is a key factor as the area is heavily built up with a number of businesses operating in the area so the Main Contractor will insure that:

- All skips and muck away lorries will be dampened down via a water point adjacent to the loading area
- Skips to be securely covered and drop heights to be minimised for redundant materials to reduce dust arising when loading
- All cutting equipment to use water as suppressant or suitable local exhaust ventilation systems where applicable
- When demolition is taking place areas to be dampened down to reduce dust arising
- All vehicles will be washed down before leaving
- All vehicles will switch off engines – no idling vehicles
- Spill kits are available and will be used where required

2.14. Temporary Services

Site services will be installed by a specialist subcontractor. The extent of existing electrical mains and the works associated with installing new incoming electrical services is unclear at present; however this will need careful consideration. This also applies to temporary water and drainage services.

The electrical supply will be down rated to 110V and distributed via transformers in suitable locations around the site. The level of provision will be agreed with subcontractors with regards to the 3-phase supply prior to commencement for example the tower crane, hoists or brock demolition equipment. Background safety lighting and emergency escape routes lighting will be provided, however all task lighting and power leads from transformers is to be provided by the subcontractors.

2.15. Fire Safety

The Main Contractor will produce a Fire Plan which will detail what action is to be taken in the event of a fire on site, and who is responsible for dealing with the actions arising. The Fire plan will also

outline any fire escape routes from adjacent buildings and any potential re-routing / maintaining of escape routes.

As this project would be classified as a major project, a temporary hard wired fire alarm system would be required. The project's work areas will have fire points consisting of CO² and water fire extinguishers positioned in suitable locations and be easily accessible. These positions will be highlighted on the Emergency Escape Plans.

All operatives will be inducted before commencing work on site and during this induction they will be briefed on the project emergency procedure and the location of the muster point.

2.16. Environmental Considerations

The Main Contractor will minimise the environmental impact of the project wherever possible as outlined previously in this document. The key points to focus on are:

- Noise pollution and monitoring
- Air pollution
- Minimising waste and recycling
- Aesthetic impact of the works

The following will be implemented to help reduce the impact:

- Work methods and tools selection will be important to minimise the noise and vibration transferred through the building. Any potential impact on the party walls or neighbouring buildings shall be a primary consideration when works method statements, sequencing and plant/ equipment selection are being determined.
- The noisy working restrictions as mentioned earlier will be implemented.
- Where possible we will minimise activities that have an impact on the neighbours, particularly the local residents and businesses.
- Good practices will be observed at all times particularly during activities such as the external cladding/envelope works, external paving/landscaping roofing.
- A strict regime of cleaning the pavement and public highways.
- We will present a clean and presentable image to both the public and any visitors whilst ensuring that the hoardings and scaffold sheeting are of the highest standard and are inspected and maintained regularly.
- It is the Main Contractor's intention to leave carriageway clear and unobstructed, and all deliveries will be banked to ensure no obstructions occur.

3. LOCAL ENVIRONMENT

3.1. Protecting the Local Environment

3.1.1. Communications With Our Neighbours and Local Residents

The Main Contractor will have a site based project team who will manage every aspect of the construction process. Their Senior Construction Manager's responsibilities include ensuring that the site team are doing everything practically possible to minimise disruption to the neighbours and other local residents. He/She is in control of the site, their team and all of the subcontractors and their deliveries so he/she is in a position to influence what happens and when. He/she is closely supported by other members of staff on the ground including construction managers and a logistics manager.

The Main Contractor's approach is to encourage collaborative discussion with the neighbours and local residents so all are listening to their concerns and addressing them. Regular and accurate communication is a very important element of his role and this is implemented via the following plan:

- The project manager, senior construction manager and site team's contact details are readily available including out of hours contact details.
- Regular liaison meetings to discuss the progress of the project and what may be changing in the coming days and weeks, to avoid surprises. Before the project commences they would organise open forums to introduce our team and explain our plans.
- Their delivery team is site based and is very easily contactable by phone or face to face on site throughout the day.

3.1.2. Managing and Minimising Noise, Vibration, Dirt and Dust

The objective of our site team will be to keep the site and the surrounding area spotlessly clean at all times. This will include all hoardings, the footpaths and the adjacent properties. The Main Contractor will employ resources to focus on this activity alone, in addition to the subcontractors undertaking the main works. Regular patrols will be undertaken to ensure that this happens and our construction manager will be responsible for this activity. Part of our cleanliness approach is to ensure that food is not left on site in the eating or any other area, which reduces the risk of rodents on site. Rodent control is another process that is managed by our site team via a specialist contractor so that traps are set and poison laid on a regular basis to reduce the risks of rodents on site.

Dusty operations will be managed to reduce the amount of dust emitted in the first instance and to contain the dust within the confines of the site. For example, cutting of materials such as timber and plasterboard will not be permitted outside of the site area. All such operations will be confined to the site and suitable screening erected wherever possible. Spray water will be used whenever dusty works are being undertaken, to assist in damping down the dust and preventing it from becoming airborne, including for basic operations such as sweeping up and filling rubbish bins. Dust extraction plant will be utilised when appropriate to capture dust before it becomes airborne.

With regards noise, each operation will be assessed for noise and vibration Impact and the best methods and tools will be selected to keep noise and vibration to a minimum. For example, this will

include bursting, cutting or diamond drilling out existing concrete which must be removed instead of using breaker machines. The site will not make any noise outside of the standard working hours and there will be a strict zero tolerance ruling in this respect. Our site team will also appreciate that there may be special times of the day or specific events when neighbours may require a completely noise free environment and we would discuss and agree these instances when they arise.

Site noise which can also be avoided is the unnecessary and unacceptable shouting made by operatives on site and use of radios. All of this behaviour will be ruled out and the Main Contractor Managers will police this on site. If possible and appropriate, temporary screens will be erected above the, to an appropriate height, which will contribute towards containing noise and dust, in addition to simply screening off the visual impact of the external works from neighbours.

The Main Contractor's team will aim to present a clean and professional project, minimising noise, vibration, dust and other disruption to our neighbours.

3.1.3. Respecting Our Neighbours and the Environment We Are Working In

The Main Contractors culture will be founded on the principle of respecting all of the stakeholders in the project, from the Client and through to the neighbours and the operatives on site. We always aim to create an environment of cooperation and respect and this means going about our work as professionally and as diligently as possible, whilst taking care of all of those people we may be having an impact on. There are so many ways that we can make a difference in this respect and you can be assured that we will aim to take every practical action possible to achieve this aim. It is very typical for our site team to build a good relationship with neighbours and local residents.

An essential aspect is to ensure that the selected subcontractor firms with the same ethos of respect as will be employed on site. All of the site team together will work as a team to minimise noise and dust, prevent operatives from loitering or smoking outside of the site, avoid unnecessary noise being emitted such as shouting and site radios.

The Main Contractor will register to the Considerate Constructors Scheme.

The Main expectations for those associated with the scheme are as follows:

- Care about Appearance
- Respect the Community
- Protect the Environment
- Secure everyone's Safety
- Value their Workforce

4. PRE-COMMENCEMENT WORKS: SURVEYS AND ENABLING WORKS

4.1. Pre Commencement and Enabling Works

The following pre-commencement and enabling works activities will be carried out prior to the commencement of asbestos removal and demolition works:

- Statutory notifications and consents, e.g. HSE asbestos notices, hoarding and scaffold licences, road closures, Section 80 Demolition notice.
- Identify methods and procedures to comply with Section 61 of the Control of Pollution Act; 1974 agreements and consents. Once agreed, to establish Noise Action and Vibration Action levels to determine best practicable measures to reduce/mitigate impacts.
- Approval of method statements and risk assessments, scaffolding and temporary works design.
- Working under a voluntary S.60 2 hours on 2 hours off regime with the actual planned activities and timing of certain works to be pre-agreed with the Local Authority Environmental Team.
- Dust monitoring to be carried out within the site hoarding and also the public areas around the site on a regular basis, including baseline monitoring prior to the commencement of the works. Consultation to establish action levels for dust/air quality and frequency of monitoring during the works to be agreed with Local Authority, Third Party Approvals.
- Install, maintain and continuous monitoring of Vibration and Noise equipment, located within adjacent buildings around the site to comply with Party Wall/Neighboring agreements.
- Prepare a written plan for carrying out the demolition in accordance with Regulation 29 of the CDM regulations to identify how danger and risk from these activities will be prevented.
- Install perimeter hoarding, external loading bay and gates to suit demolition removal works.
- Installation of Protection Gentries/Loading Decks above areas adjoining public pavements and highways.
- Survey of all existing services and service terminations/ disconnections at the site boundary.
- Trial pits and cores to the existing retaining wall to confirm construction.
- Structural investigation via best practise silent methods of the existing structure and load testing to confirm safe allowable capacity of the floor plates.
- Supply and install site accommodation & welfare facilities.
- Install temporary power, lighting and water services.
- Establish fire escape routes / systems & emergency plans.

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- Early environmental clean of the building, sharps needle weep, hazardous material identification and pest control within the site boundary.

4.2. Asbestos Removal and Soft Strip Works

Prior to commencing demolition works a demolition and refurbishment survey will be carried out to establish the location and quantity of asbestos containing material within the buildings and associated structures to be demolished. The survey will be undertaken strictly in accordance with the Control of Asbestos Regulations 2012 and the appropriate HSE guidance (HSG 248 & 264). The surveying organisation and individual surveyors will be accredited to an appropriate body as competent to perform such work in compliance with ISO 17020 and ISO 17025.

The above survey, method statements and the draft site environment management plan (DSEMP) will be issued to appointed Demolition Contractor and form part of the pre-construction Health & Safety Plans prepared by the CDM Coordinator. Any constraints associated with the result of these documents will be factored into the demolition detailed methodology.

The appointed Demolition Contractor will record, control, remove and dispose of all asbestos containing materials in accordance with current legislation and best practice and this will include the following:

- Preparation and approval of specific detailed asbestos removal method statements.
- Notification of asbestos removal to the Health and Safety Executive (HSE).
- No works can commence without the relevant HSE (ASB5) notice being approved by the HSE.
- Areas not accessible during the refurbishment and demolition survey will be inspected and surveyed prior to works commencing.
- Additional asbestos finds will result in re-notification of ASB5 approval to the HSE.
- Asbestos removal will be carried out under licence by approved Contractors, who are a member of the Asbestos Removal Contractors Association (ARCA).

The following sequence is an outline methodology of general asbestos removal once the ASB5 notice has been approved by the HSE – if found. The actual method statement will be far more detailed and specific to the type of asbestos and its location:

- Advanced investigation works will have located the position of the asbestos based materials (refurbishment and demolition survey).
- A pre-asbestos soft strip will take place to expose areas of asbestos to be removed & take out all furniture.
- A decontamination unit will be positioned within the building and a controlled safe transit route to the workface signposted.
- The work area will have a protective enclosure erected to encapsulate it.

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- A 3 stage airlock will then be installed into the encapsulated area.
 - Negative pressure units will be installed into the enclosure.
 - Prior to any removal works progressive smoke test will be carried out to ensure that the area is sealed.
 - The asbestos based material will be removed / taken down and then double bagged for removal to the secure asbestos skip.
 - With the asbestos based products removed the area will have a pre clean and a disturbed air test carried out.
 - Once the area is cleaned and signed off the enclosure will then be dismantled & the area will be handed over for follow on works.

All material contaminated or asbestos based products will have full documentation from the licensed tip where they have been disposed so as to provide a full audit trail. The asbestos will be stored in a secure area within the building; the asbestos will then be removed by a licensed carrier.

The sequencing for both the asbestos removal and soft strip will be carried out working in two concurrent areas:

- Area 1: Working top down from roof level down through the existing floor plates.
- Area 2: working in Keats House top down from roof through the existing floor plates.

5. DEMOLITION

Structural demolitions will commence on the two areas concurrently:

- The main building will be demolished starting roof and working down to the ground floor slab. The works will be subject to the detailed method statement from the demolition contractor. The lift will be removed early in the programme and the shaft will be used to drop debris to ground floor. All debris will then be removed using plant to an awaiting wagon or skip and removed from site. No crushing will be allowed on site due to noise and the proximity of the residents.
- The Keats House facade, being a historical building, is to be removed carefully, fully recorded to allow re-erection in the final scheme. This will be undertaken by a fully qualified contractor and again will be subject to a fully detailed method statement.

Temporary works will be installed to back prop the existing ground floor back to basement level, to ensure the existing slab has safe capacity to support the demolition plant and construction vehicles.

In addition, and to assist the programme of works, it is anticipated that the footpath adjacent to the site will be closed from pedestrians, and a new crossing may be sited at either end of the site to allow safe access to the opposite side.

All construction traffic entering and leaving the loading bays will be closely managed by the project Traffic Management Team/Traffic Marshalls.

Detailed below is a typical sequence of operations for floor by floor mini machine demolition method, which will need to be developed specifically during the mobilisation period.

- During the on-site establishment and soft strip phase, trial holes will be broken out in the roof and upper floor slabs of the building, to investigate/confirm floor spans and construction. The existing drawings and any existing trial hole information will be used in conjunction with these findings.
- Install, and maintain Vibration and Noise monitoring equipment, located within adjacent buildings around the site.
- Continuous noise and vibration monitoring equipment is to be located at the site boundary for the duration of the works by the contractor.
- Load testing will be carried out and the permissible floor loadings ascertained. Machine sizes and any necessary back propping requirements will then be determined.
- In addition, the condition of the structure and construction techniques will be investigated to provide as much information prior to deconstruction commencing.
- Only one machine is to be used in any one bay at any given time (a bay being a floor area usually between four existing columns).

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- The floors are to be examined for any inconsistencies before use (openings through the floors, changes in construction, existing cracks/damage or signs of previous repairs). Any such items are to be reported to the Temporary Works Engineer prior to using the machines on these floors.
 - The soffits are to be inspected regularly and frequently (at least twice daily) and any signs of distress / sagging / cracking are to be reported to the Temporary Works Engineer (and any machine use immediately suspended).
 - The immediate area around the deconstruction area will be barriered off and warning signs erected. The controlled drop zone within the deconstruction area will be established and further demarcation established. The staircases directly below the working level will be closed off and lower levels will be temporarily decked out with timber. Access to the upper levels for operatives and tools etc. will be via a designated stair case away from the controlled drop zone.
 - The demolition tower cranes will be used to lift the required demolition plant onto the roof level. The cranes will also be used to lift any heavy rooftop plant down to the external loading bay, for removal from site and installed during the Stage 01 works.
 - Ensuring that only one 360° excavator is in any one bay at any one time the roof structures will be demolished using a combination of 360° excavator fitted with hydraulic breaker attachment and hand held pneumatic tools. The debris will be broken down onto the floor slab below processed and separated to increase the efficiency of debris removal.
 - Marks will be painted on the floor slab to indicate to each machine operator the permitted track locations. Each operator will be inducted specifically to his tasks and instructed to remove the keys when leaving the machine to prevent unauthorized use of machine.
 - Resultant demolition debris will be cleared using skid steer Bobcat or similar and deposited via the purpose build scaffold chutes (controlled drop zone) before being processed off site.
 - Steelwork will be progressively exposed and severed using oxygen / propane burning equipment. This operation will be executed in a controlled manner, ensuring the column being pulled over is not excessive in size and weight.
 - Once the internal columns and walls have been demolished the working level slab will be broken out using 360° excavators, fitted with hydraulic breaker attachments, in a bay by bay sequence working towards controlled drop zone.
 - The debris will be broken down onto the floor slab below, either onto layers of "core matt boards", air bags and insulation material to reduce noise/vibration levels
 - Work areas adjacent to adjoining Party Wall properties will be lined with acoustic quilts and a 10 metre area will be barriered off with a warning sign - "permit to work zone – noise controlled.
 - Immediately upon reaching the new level, the demolition arisings will be loaded away via the well hole to reduce the imposed loading on the slab at the earliest opportunity. The arisings will then be cleared from all other floor areas using skid steer loader.

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- The scaffold to the external elevations will be struck as the works proceed, with the scaffold always being one lift above demolition level at all times. Scaffold to retained facades will remain in place.
 - Careful consideration will be given to the stability of the building at all times. Any load bearing walls will be identified prior to deconstruction commencing to ensure that they are maintained until structurally redundant.
 - Dust emissions will be controlled at the working face and loading away area by a fine water spray. The quantity of water emitted by the sprays will be regulated and controlled to prevent any flooding at ground floor level.

Once the building deconstruction has reached the 2nd floor level large 30 tonne machines fitted with muncher attachments will take over and complete the works down to the existing ground bearing slab. All demolition works will be dust suppressed with water sprays to ensure that dust nuisance is not caused to any neighbouring property.

Temporary works propping will be required to be installed to retain the existing basement walls before or in conjunction with the basements structural demolition.

To enable piling works to the perimeter, the existing basement slab will be marked out and the perimeter cut using diamond drilling plant. The concrete will then be broken out using methods that provide the highest level of noise mitigation.

Once a sufficient area of the basement slab has been released by the demolition works the existing ground bearing slab will be broken out, this will be followed by pile probing to a depth of 3m at the perimeter for the new perimeter retaining wall structure.

6. CONSTRUCTION

6.1. Basement Formation Strategy

To avoid using an extensive propping system to support the roads and services in the pavements, and also to overcome the possible impact on foundations to adjacent buildings. It is expected to utilise embedded retaining walls along the boundary of the site, by using secant pile walls within the existing wall line. Piling will start from approximately just above the existing basement level, off an engineered piling mat for the low level capping beams and off the ground floor slabs for the high level capping beam. The ground floor slab will be fully propped to withstand the loads.

Several temporary works strategies have been explored with the structural engineers in preparing this report, with regards to the temporary works associated with the construction of the substructure basement levels and it is envisaged that a “blue sky” strategy could be adopted using, temporary props against the new secant piled wall. This method allows the mitigation of any utilities movements around the building.

The piling line will be set such that adequate clearance to the adjacent structures is maintained from the centre line of the pile to the adjacent high level obstruction (as required by the contractor). The vibration induced by piling and the movements arising from piling and excavation will be assessed against agreed specified limits.

The final construction sequence adopted must ensure that both in the short term (before the permanent construction is complete) and in the long term, ground movements are controlled to acceptable limits.

With the buildings demolished down to existing basement level and raking props installed where necessary to the perimeter walls, the guide walls, with secant piled walls and capping beam works to perimeter can now progress.

Due to the restrictive site constraints, piling rig and associated plant access will be via St Thomas Street and piling will commence at basement level from the South West corner working south to north.

Once the entire ground floor slab is removed, a logistic slab is constructed (due to limited areas for storage and laid down area) adjacent to St Thomas Street. This will be supported on plunge columns and designed by a qualified temporary works engineer.

Once all the piling has been completed (both load bearing and secant) the crane base is installed. This will remain in place until the completion of the works, with a second crane introduced later in the programme. Concurrently the capping beam will be installed allowing the excavation to progress.

Excavation of the new base 2 level will be undertaken and props installed as according to the temporary works engineer instructions. Excavation rates will be around 3 wagons per hour based on an 8 hours shift. Loading will be undertaken from the ground floor slab which has been constructed on plunge columns.

A mole hole is to be used to the south of the site for ancillary access to the basement, access for plant etc.

Set out below is the proposed sequence and is highlight in appendix B, showing the sequence and logistics.

- Piling from B1 or ground
- Install capping beam and form logistics ground floor slab
- Excavate down to new B2 level and cast B2 slab
- Install concrete core via jump form
- Cast structure to B1 slab and install B1 slab
- Cast B1 structure up to and including new ground floor slab

6.1.1. Mechanical, Electrical and Plumbing Services Installation

Initial thoughts on the construction methodology for the basement areas which contain the majority of the primary plant and equipment are as follows:

- Construct plant bases to an agreed sequence
- Deliver packaged plant and equipment and protect immediately
- Install all high level horizontal services first
- Build Blockwork walls
- Connect up equipment and complete room fit-out works
- Fit permanent doors and decorate

The Basement plant delivery will be sequenced in line with the programme requirements, and will be distributed by crane via the existing mole hole onto cantilevered loading platforms in the basement.

6.2. Superstructure

The current design shows the building will be constructed around a concrete stability core, with a steelwork frame and in situ concrete slabs sat on structural metal decking. The core will house the lifts stairs and primary landlord service risers. Traditional reinforced concrete slabs will be utilized at Ground Floor level and below, the priority will be to release the main core as quickly as possible and considering the building height and potential weather impacts, a jump form/ self-climbing formwork system for the cores has been adopted

The steelwork works is due to commence once the core is sufficient installed to allow full access to install the embedment plates.

Superstructure floor slabs are generally reinforced concrete flat plates, sat on a proprietary metal decking which is secured to the steelwork frame. The frame will span from the external elevation to

the core. Cast in plates will be provided within the core structure and welded plates will be installed prior to the steelwork commencing. A temporary propping system may be required to the underside of the metal decking however this will be minimal.

6.3. Envelope

Installation of the new glazing panels will be carried out from each slab level, with the use of floor mounted manipulator cranes with fixed traverse arms / sucker frames and tower crane for the top most panels.

Material (panel) distribution to all levels will be by means of a large mammoth hoist site to the North West corner to the building. Brackets will be installed early in the programme once the full floor plate is free from any temporary propping deemed required.

The cladding panels will be commenced once the structure is complete to level 6. This should ensure the cladding never clashes with the progress of the structure frame erection.

The method of installation of the panels requires more detailed assessment when more information is available and a specialist contractor is appointed. This will ensure the floors are made watertight to allow commencement of the CAT A installations.

Flat roofing works to roof and terrace levels will commence once the structure concrete slab is complete and has had sufficient curing period.

6.4. Fit-Out to CAT A

It is envisaged that all elements of the building will be fitted out completely with the office areas up to CAT A level of completion. The cores and landlord areas will be fitted out fully including all services which will be commissioned.

Work to the risers start on completion of the frame to level four. Access to the Upper floors will then be released in line with the frame cycle. The main mechanical and electrical carcasses to the floors are installed followed by progressive fit-out of the offices, cores and lobbies.

To this end, the installation of a good temporary waterproofing strategy is essential to allow early services installation and first stage fit-out works to commence, in addition to maintaining programme momentum. This is to consist of two levels of protection (such as bundling) at levels 5, 15 and 25 to prevent water ingress to risers from floor plates.

In the cores, further investigations are required to determine if prefabrication/pre-assembly of MEP risers is of any benefit.


Lift Installation to the cores will commence once the frame structure is complete. The lifts will be installed as early in the programme as possible to allow for early beneficial use to facilitate logistics, during the final stages of construction.

CAT A fit-out to the office areas will commence once the cladding at level 5 is complete, and be sequenced on a floor-by-floor basis, with a duration of 21 weeks per floor with a 2 week lag between floors.

6.5. Commissioning

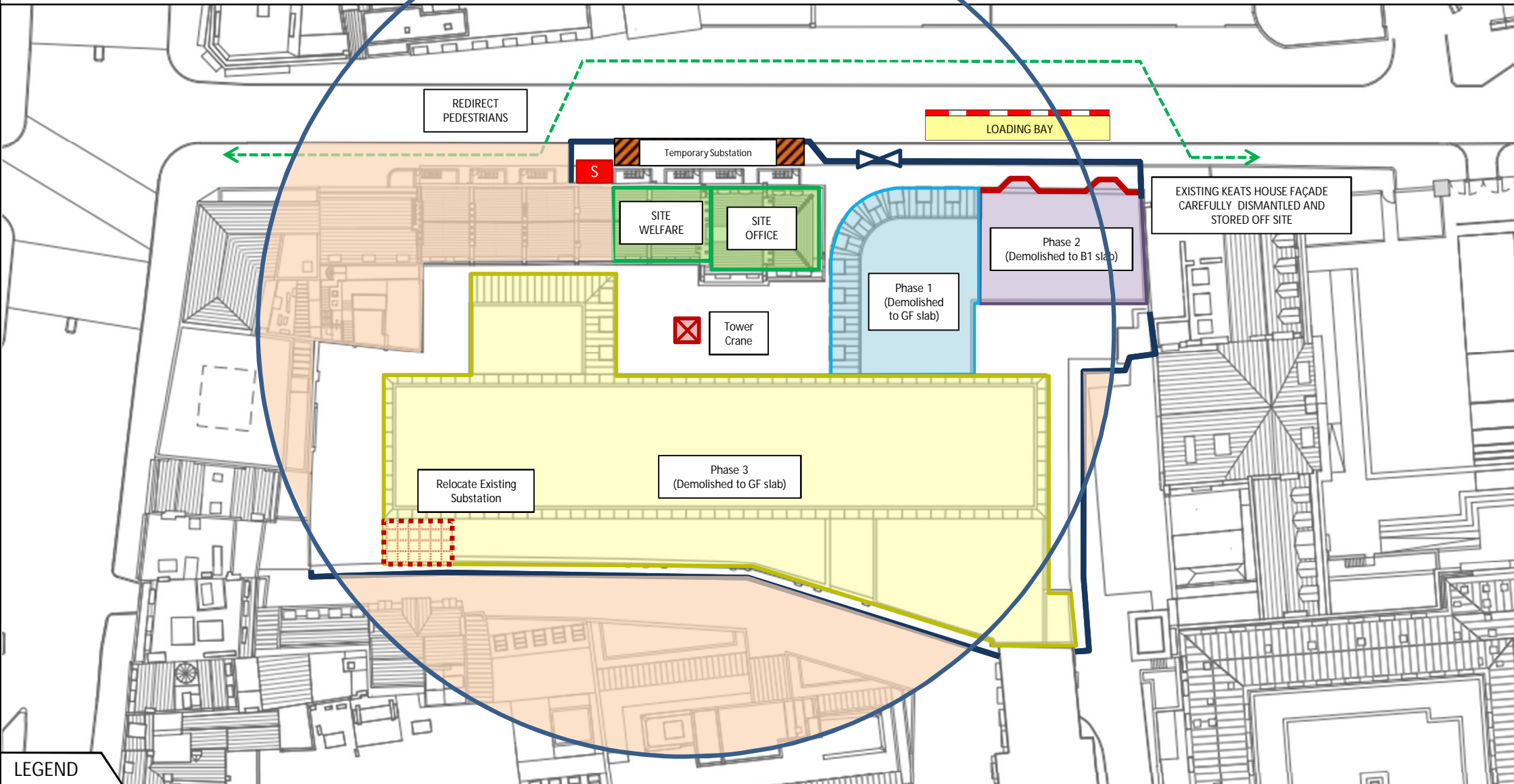
As each system is completed throughout the building, they will be tested in accordance with the mandatory specifications and codes. No enclosed spaces will be closed such as ceiling areas and service shafts until such tests are completed, snagged and signed off. Fire sprinkler systems will be tested and inspected as required under national regulations.

On completion of all works, the building systems shall be subject to statutory inspections and testing, and witnessed before finally being handed over to the building owners/Client.

The background of the page is a solid teal color. Overlaid on this are several large, overlapping, curved shapes in various shades of teal and light blue. These shapes create a layered, geometric effect, with some areas appearing darker due to the overlap of more shapes. The overall aesthetic is modern and minimalist.

APPENDIX A

Sequence and Logistics



LEGEND

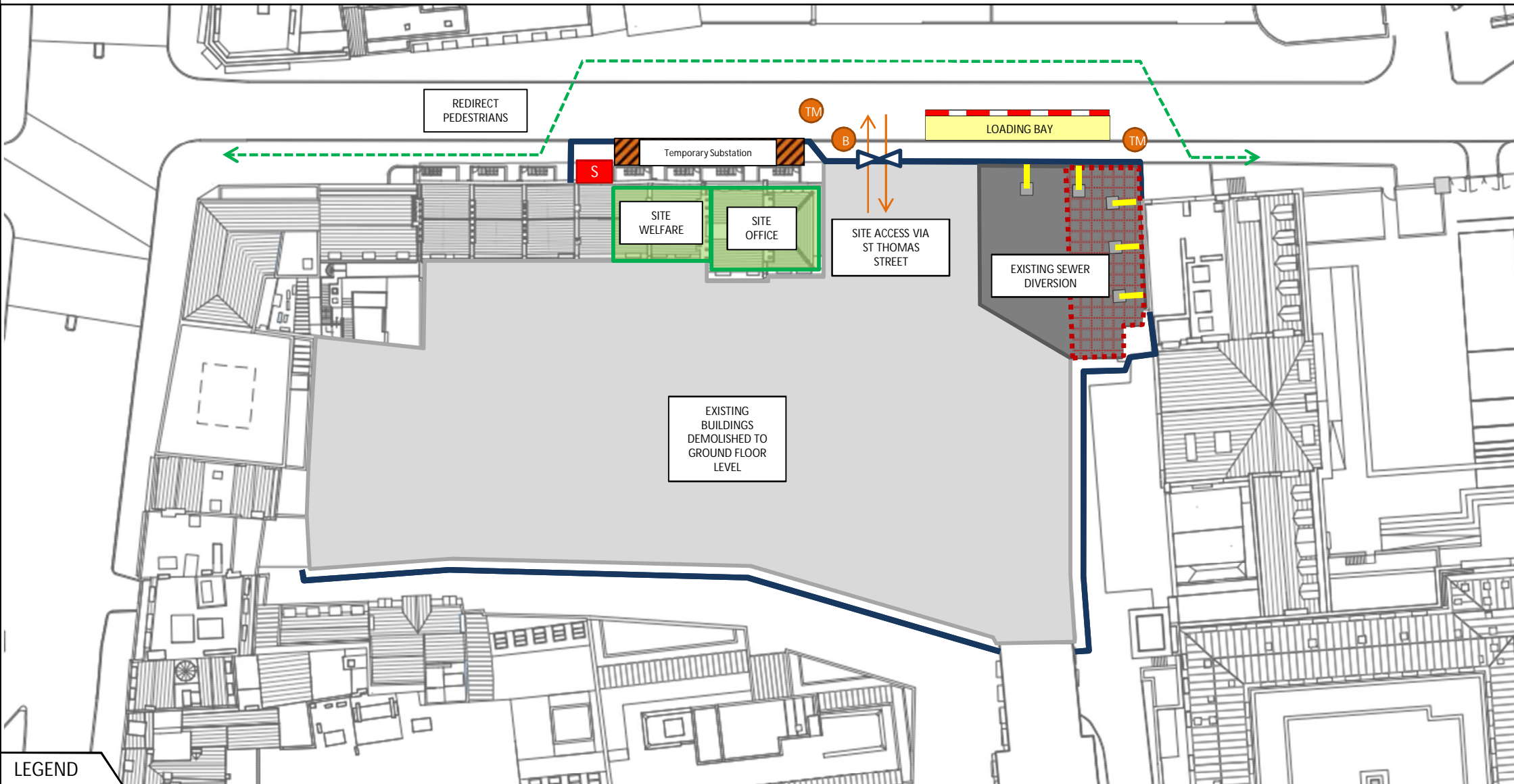
- TM Traffic Marshall
- B Banksman
- S Security
- No over-sailing

NOTE:

This sequence is based on the design information released on 24/07/18 by AHMM: "180724MACETN02Information_101638"

Assumptions:

- Existing buildings demolished to existing GF level.
- Existing substation relocated (location TBC)
- Existing GF slab can be back propped to support vehicle movement
- TFL approval of proposed pedestrian route
- Lane closure / parking bay suspension approved for loading bay(s)
- Site is accessible via ramp
- Plunge columns and proposed GF slab can be designed to support vehicle movements
- Core can be jumped from GF level on plunge columns



LEGEND

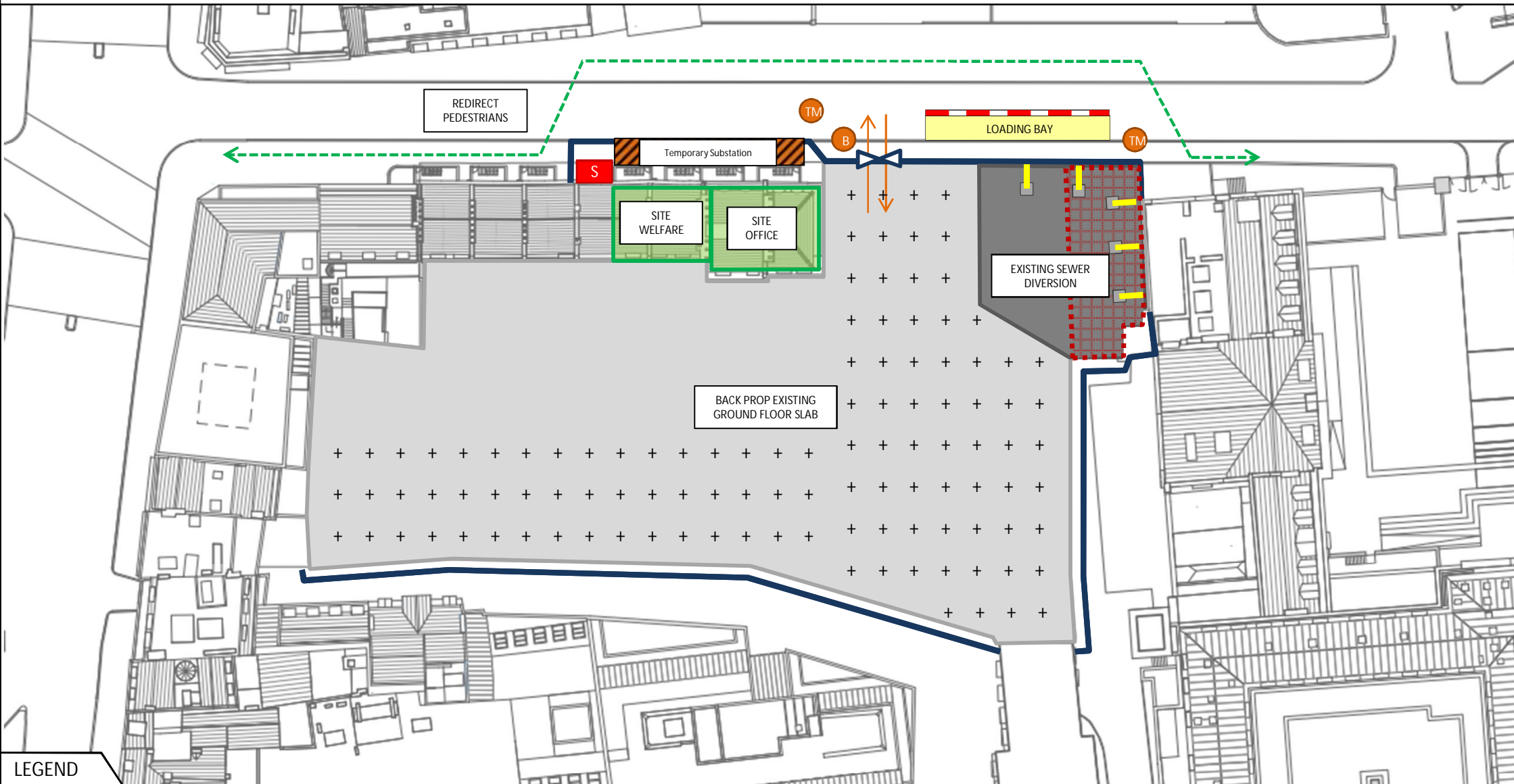
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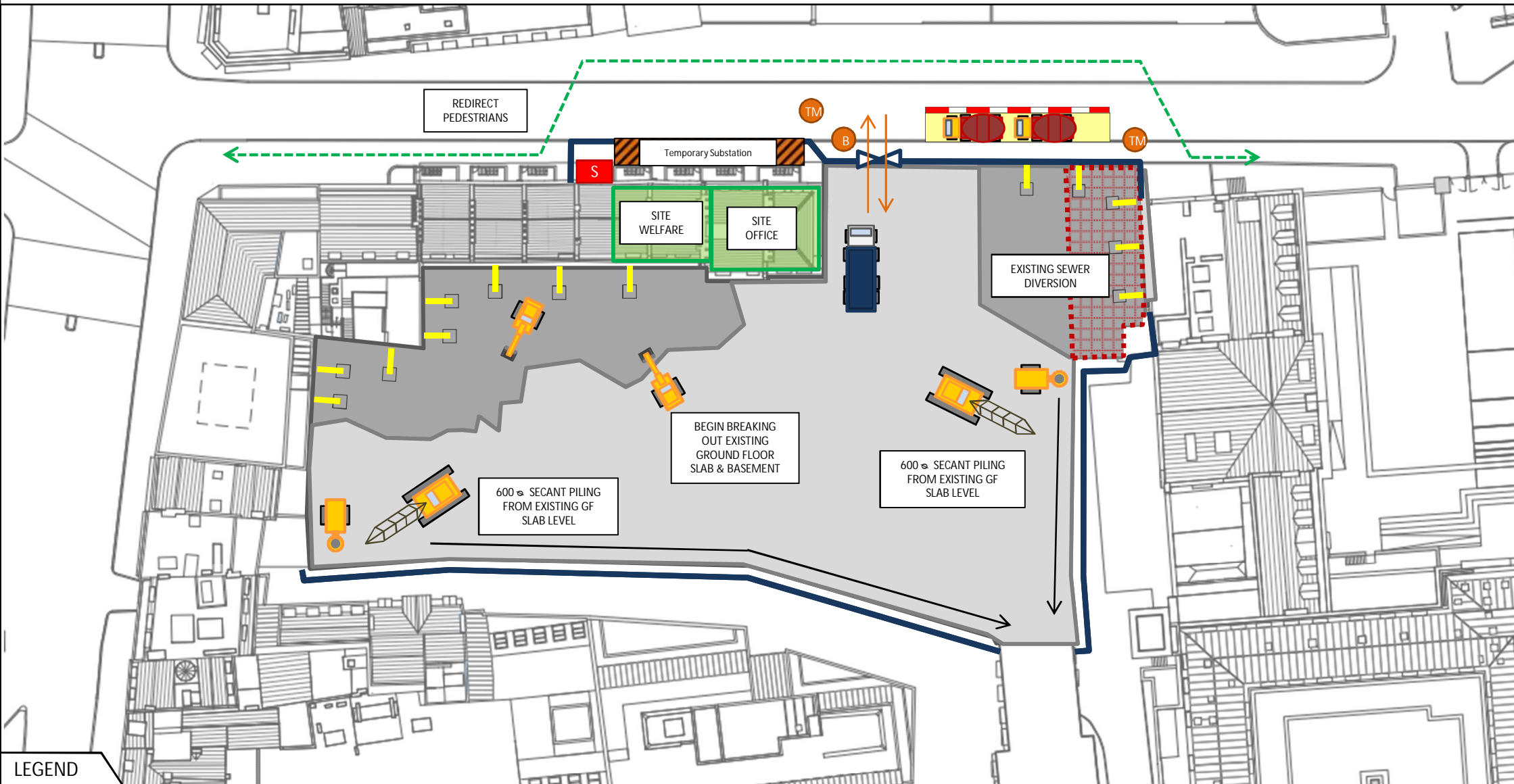
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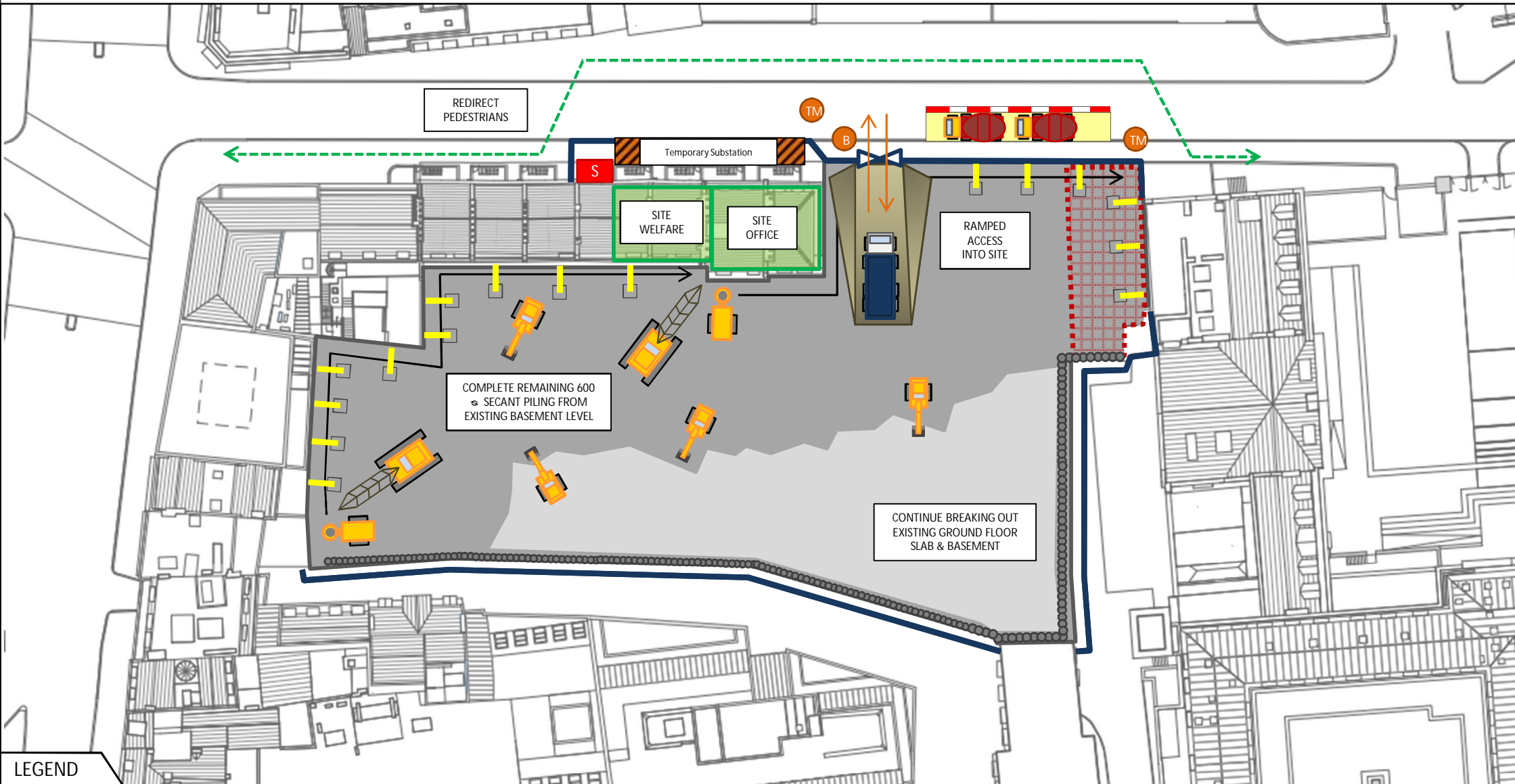
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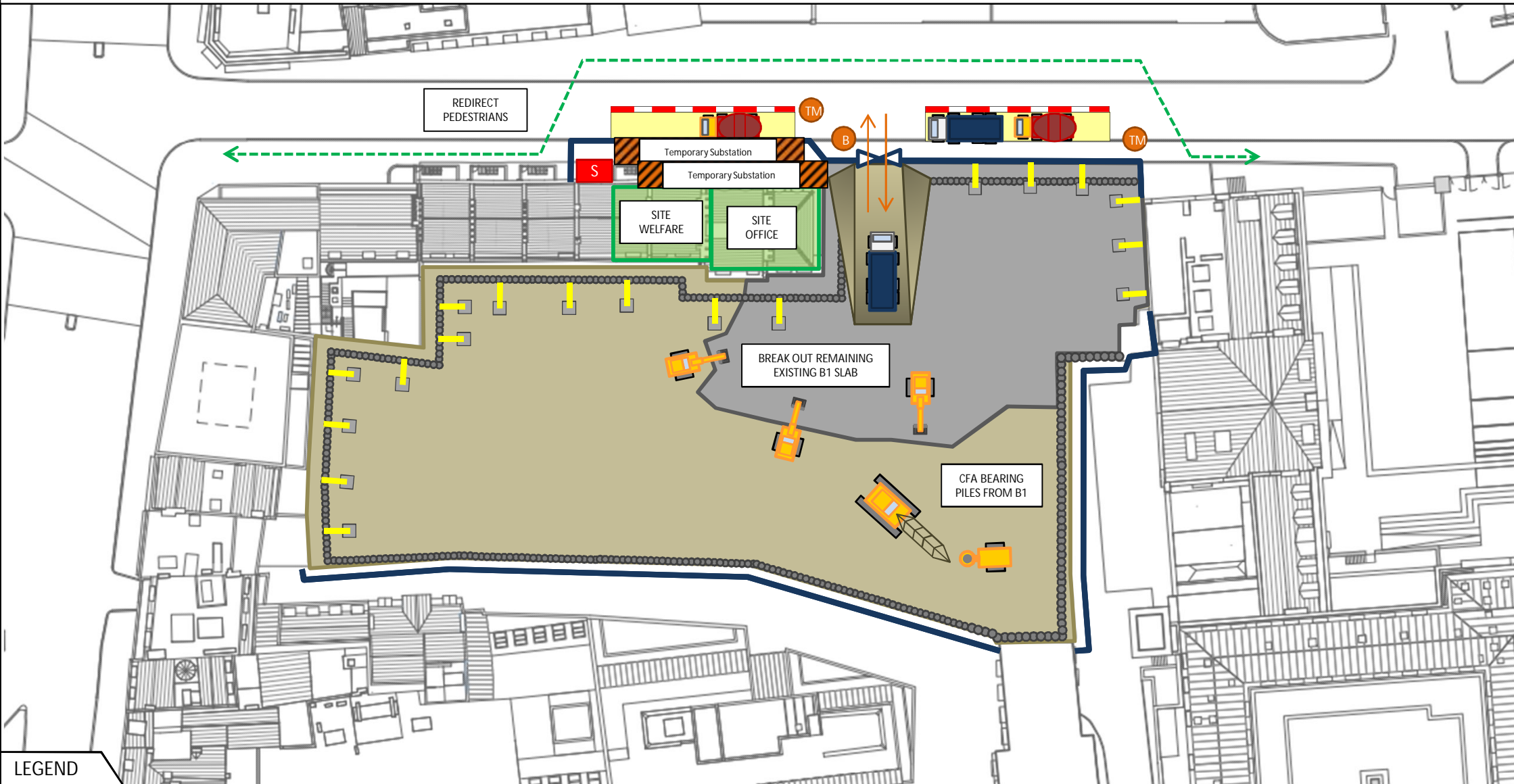
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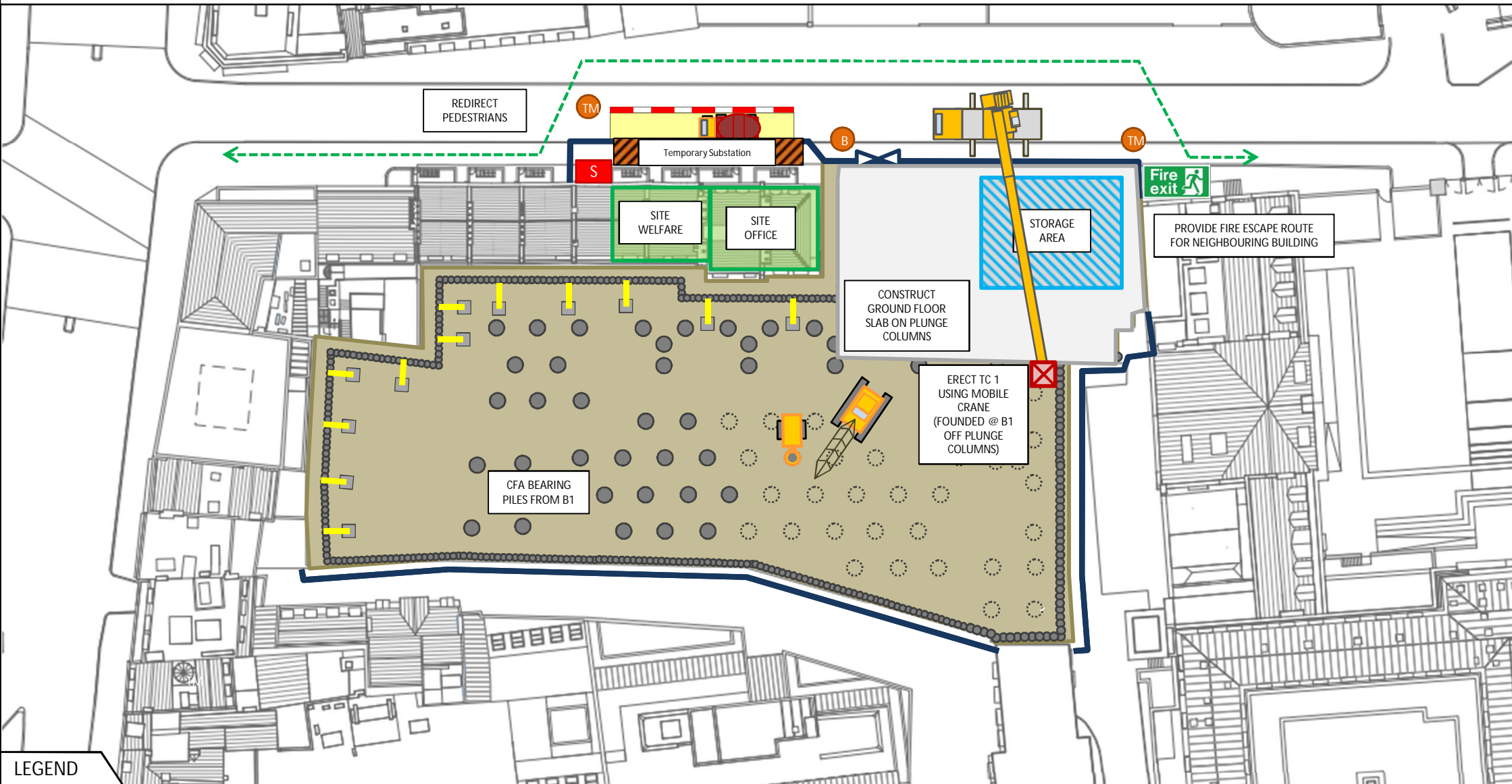
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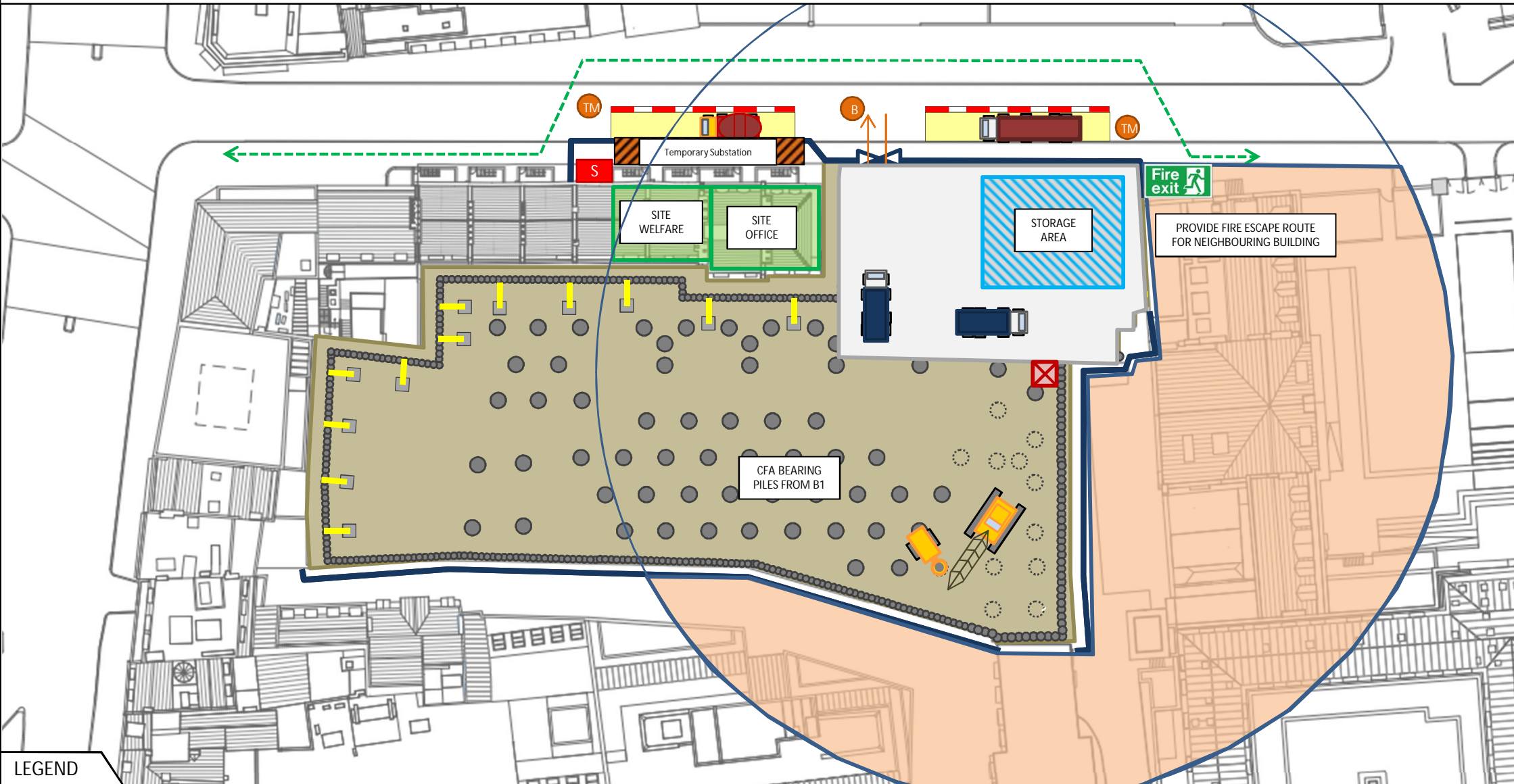
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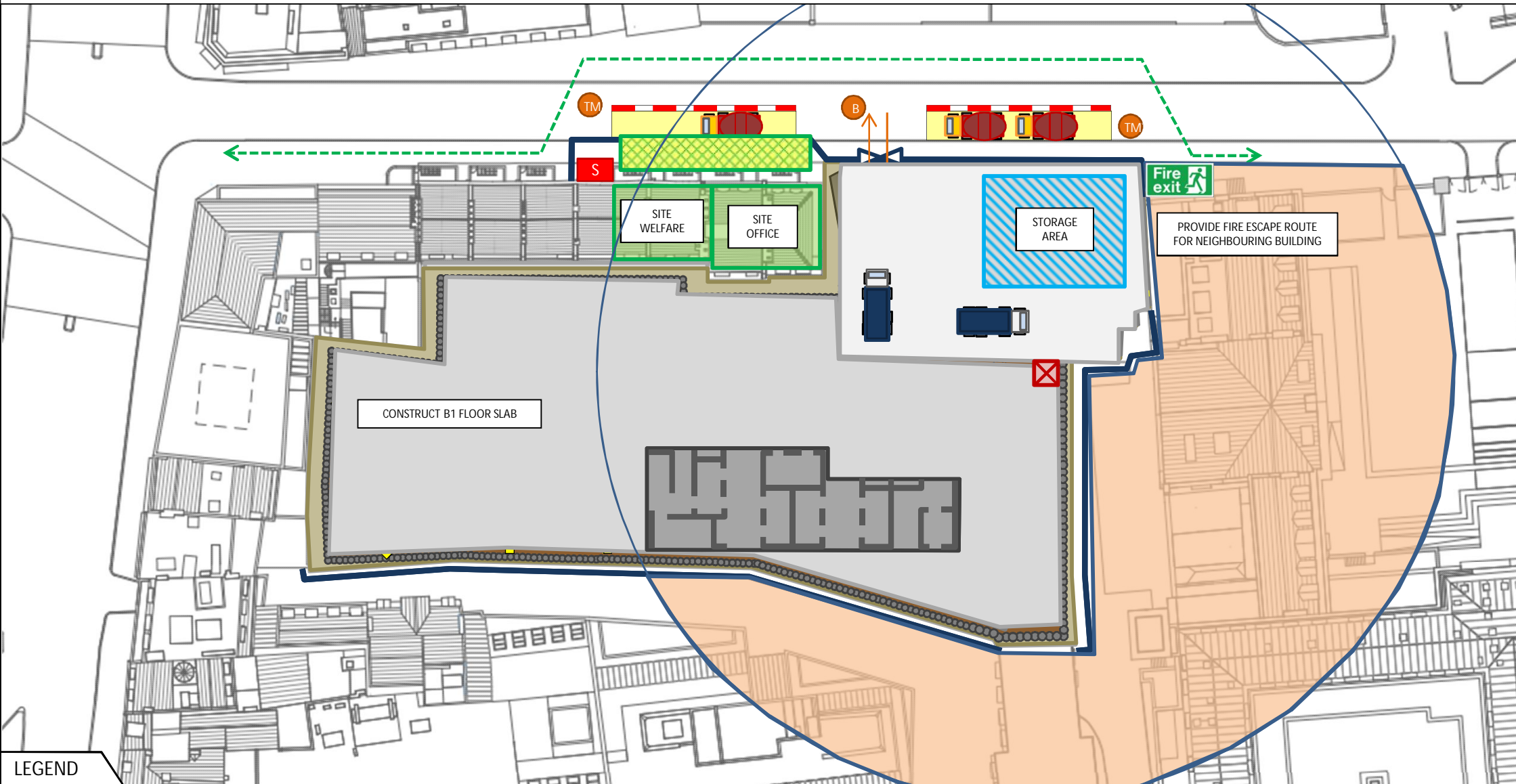
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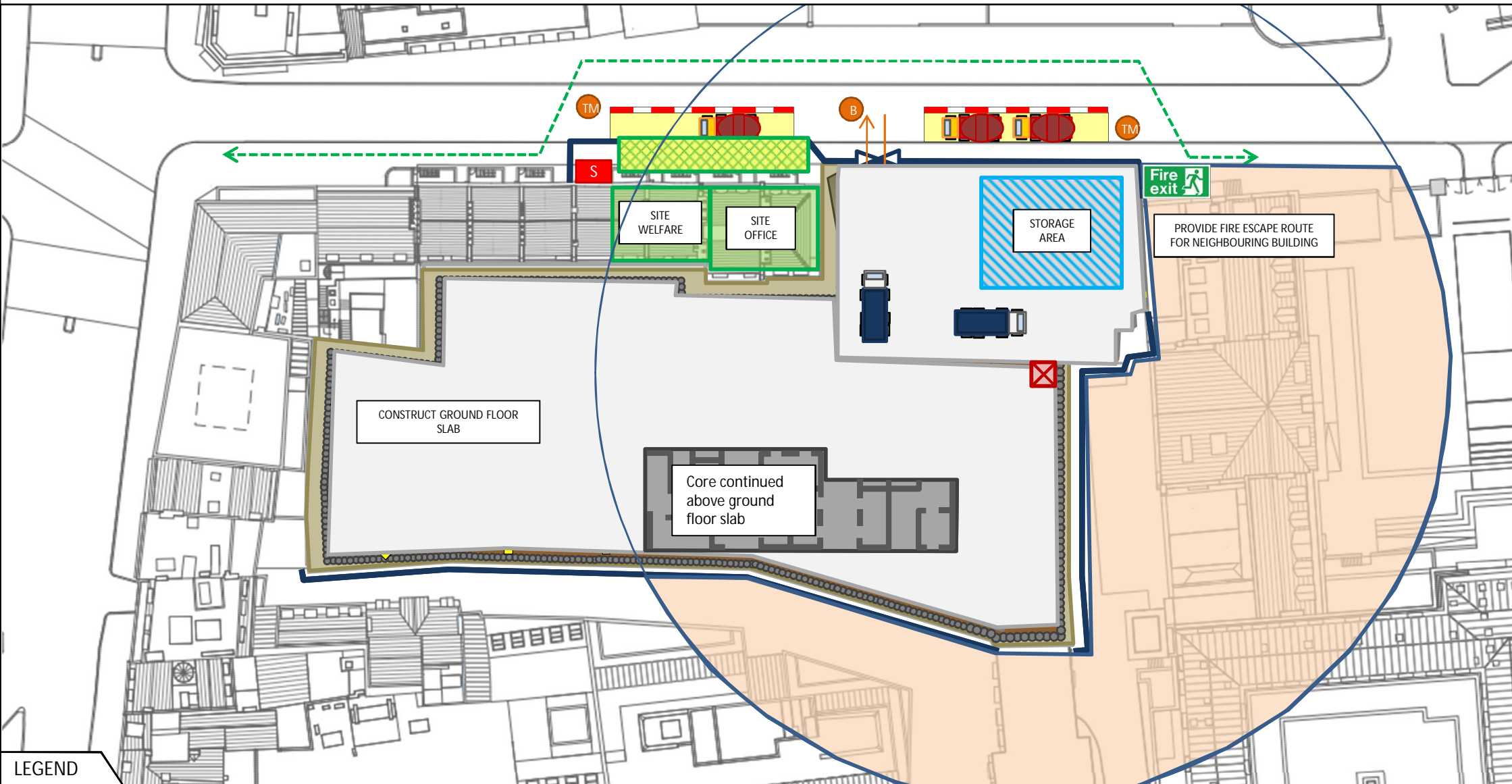
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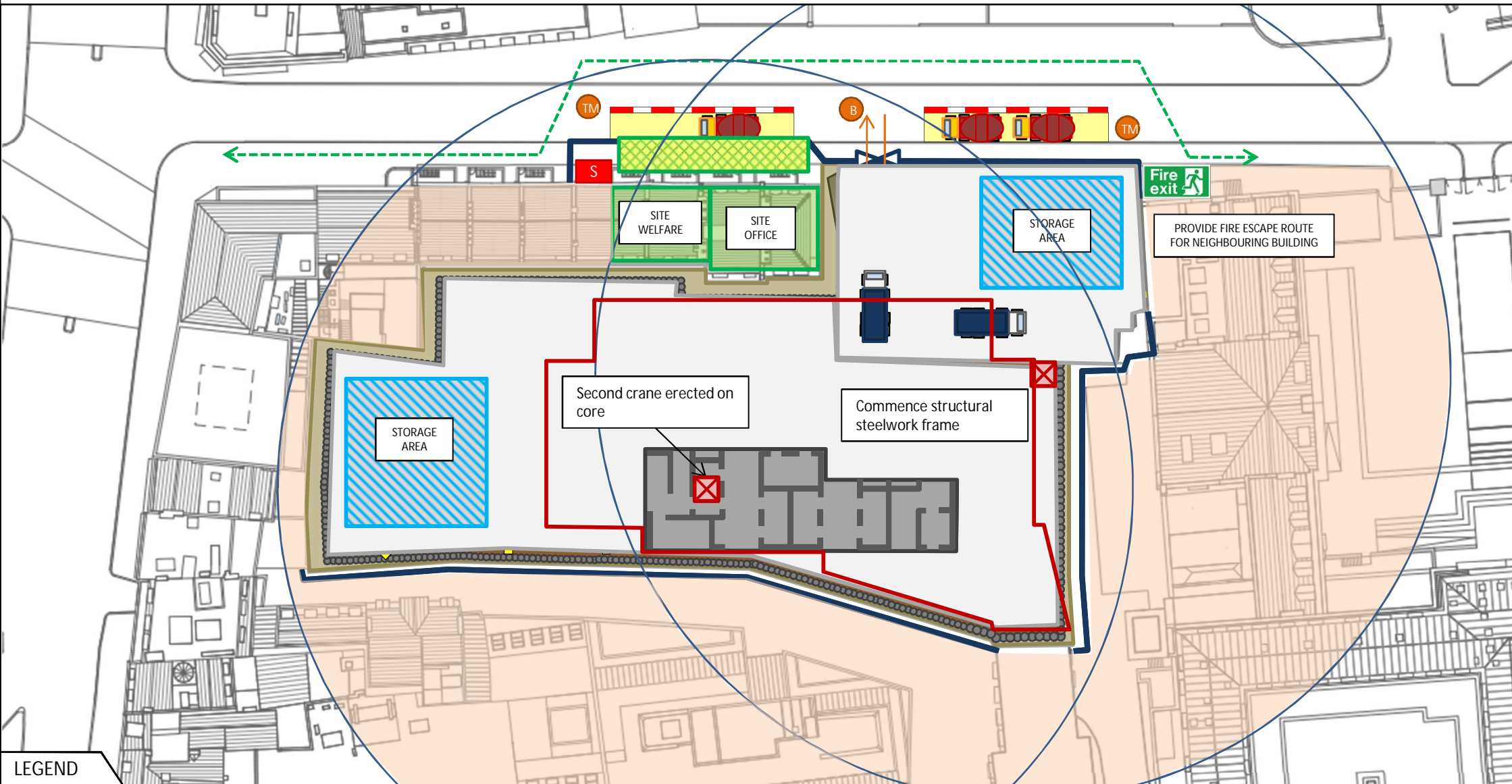
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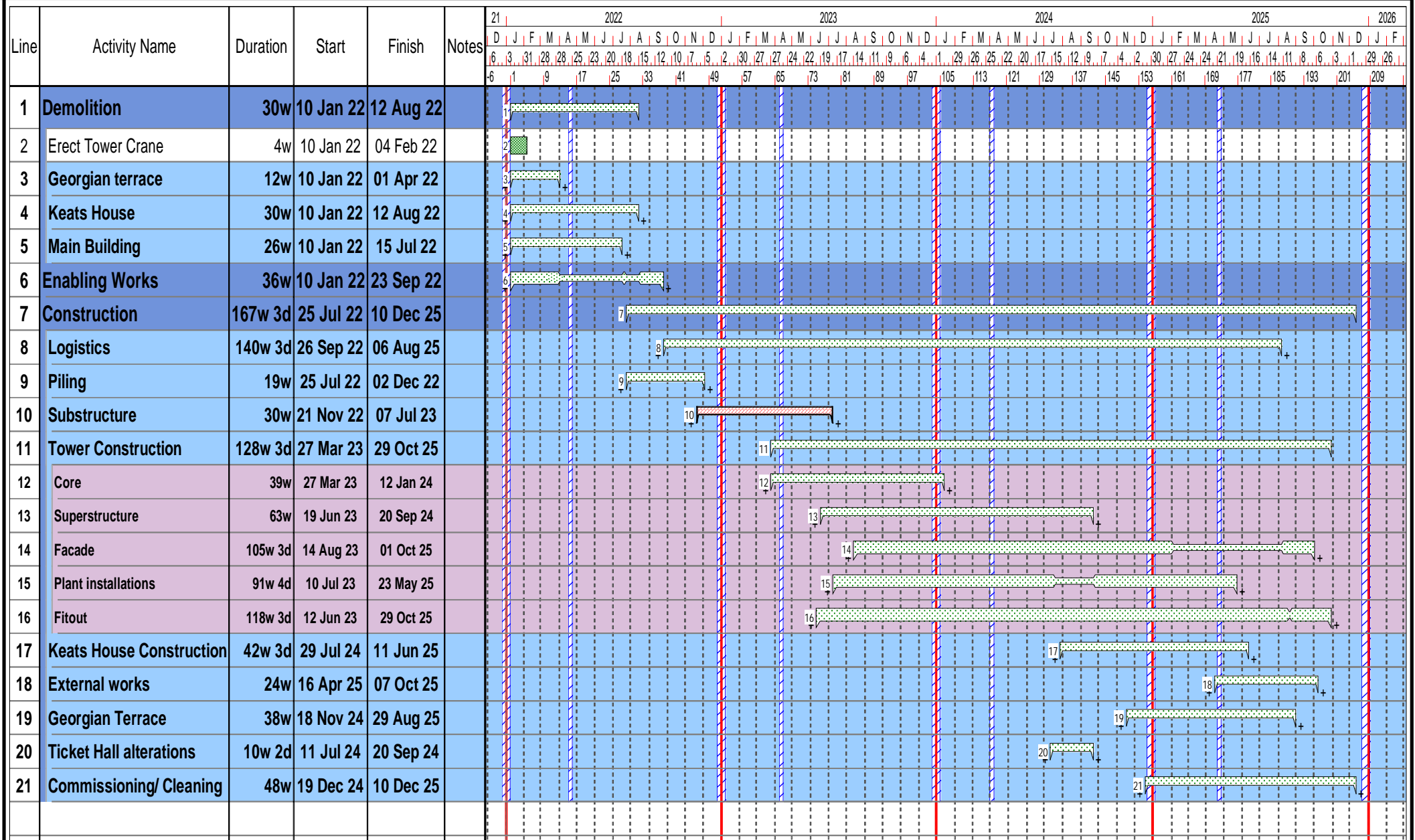
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APPENDIX B

Summary Programme

New City Court
Construction Programme (Blue Sky) - Summary Programme



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APPENDIX C

Traffic Routes



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10 South Crescent, London, WC1E 7BD

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