

34-36 King Street, Manchester

Construction Traffic Management Plan

TMT Group Ltd

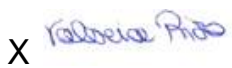
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1.0 Introduction

1.1 Introduction and Background

This Construction Traffic Management Plan (CTMP) has been prepared by Cundall on behalf of TMT Group Ltd to discharge a planning condition in relation to the internal alteration to existing B1 office and A1 retail building and elevation changes at 34 – 36 King Street located in Manchester City Centre, M2 6AZ.

The location of the site is shown in Figure 1.

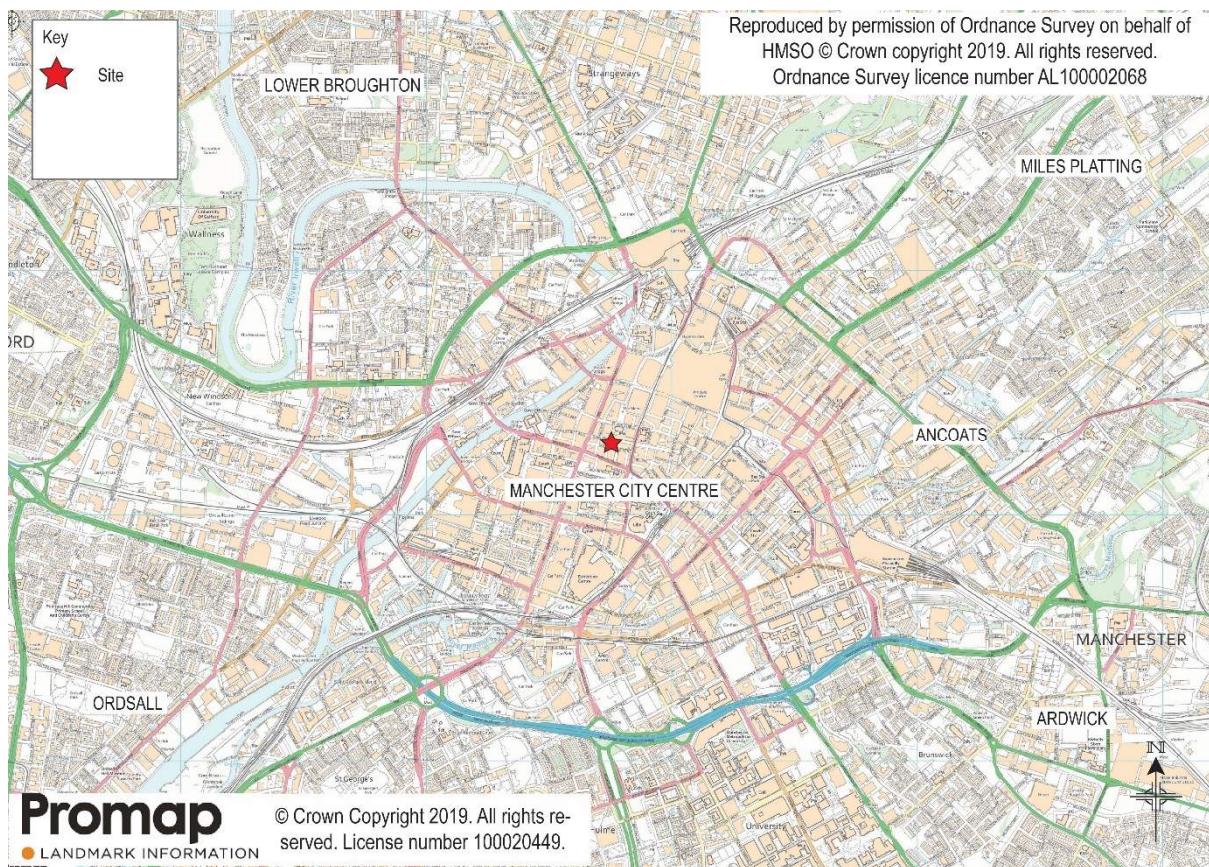


Figure 1.1 Site Context

The existing building on the site includes:

- 295 m² gross internal area of basement and ground floor for retail use; and
- 449 m² gross internal area of first, second and third floor for office use.

The proposal seeks the modification of the internal arrangement of rooms, access and facilities in order to create a more open floor plate to suit potential occupiers. In particular, from a transport point of view, the proposal includes:

- New external door on South King Street providing direct street level access into the basement.
- New separate level access from South King Street provided for the office accommodation.
- Cycle spaces provided within the basement, with stair and lift access to the rear access door at ground floor. The lift will be exclusive to the office occupiers from basement to third floor levels. The retail occupier will only have access to the basement from the new door entrance on South King.

1.2 Purpose of this report

This CTMP has been prepared to support the discharge of planning condition 4 (Application No 22453/JO/2019) which reads as follows:

- *“Before development commences, full details of the proposed construction/fit-out arrangements from a highways perspective shall be submitted to and approved in writing by the City Council as Local Planning Authority. This shall include details on anticipated vehicular movements (type and frequency) and routeing of vehicles (including appropriate swept-path assessment), together with any associated proposals for deliveries, storage and disposal/collection of materials. The development shall be implemented in accordance with the approved details.*

Reason - To ensure an acceptable development during the construction phase, pursuant to policy DM1 of the Core Strategy.”

1.2.1 Scope of CTMP

The overall objectives of this CTMP are to:

- Optimise the efficient delivery and collection of goods and materials to the site.
- Improve adherence to the construction programme by minimising delay created by poor logistics management.
- Lower emissions.
- Enhance safety – Improved vehicle and road user safety.
- Reduce congestion – Reduced trips overall, especially in peak periods.

To support the realisation of this objective, several sub-objectives have been agreed and include:

- Encouraging construction workers to travel to the site by non-car modes.
- Promote smarter operations that reduce the need for construction travel or that reduce or eliminate trips in peak periods.
- Encouraging greater use of sustainable freight modes.
- Encouraging the use of greener vehicles.
- Managing the on-going development and delivery of the CTMP with construction contractors.
- Communication of the site delivery and servicing facilities to workers and suppliers.
- Encouraging the most efficient use of construction freight vehicles.

1.2.2 Report Structure

Following this introduction, the report is set out as follow:

- The site and its accessibility are reviewed in Chapter 2.
- The construction programme is described in Chapter 3.
- The vehicle routing and access arrangements, including swept path, are explained in Chapter 4.
- The anticipated vehicle movements (type and frequency) are included in Chapter 5.
- The strategies to reduce impacts are discussed in Chapter 6.
- The programme for implementing, monitoring and updating the construction activity is outlined in Chapter 7.

2.0 The Site and its Accessibility

2.1 The Site

Figure 2.1 includes a site boundary plan, showing layouts of nearby roads and their parking restrictions.

The site is bound by King Street to the north, neighbouring properties to the west and east, and South King Street to the south.

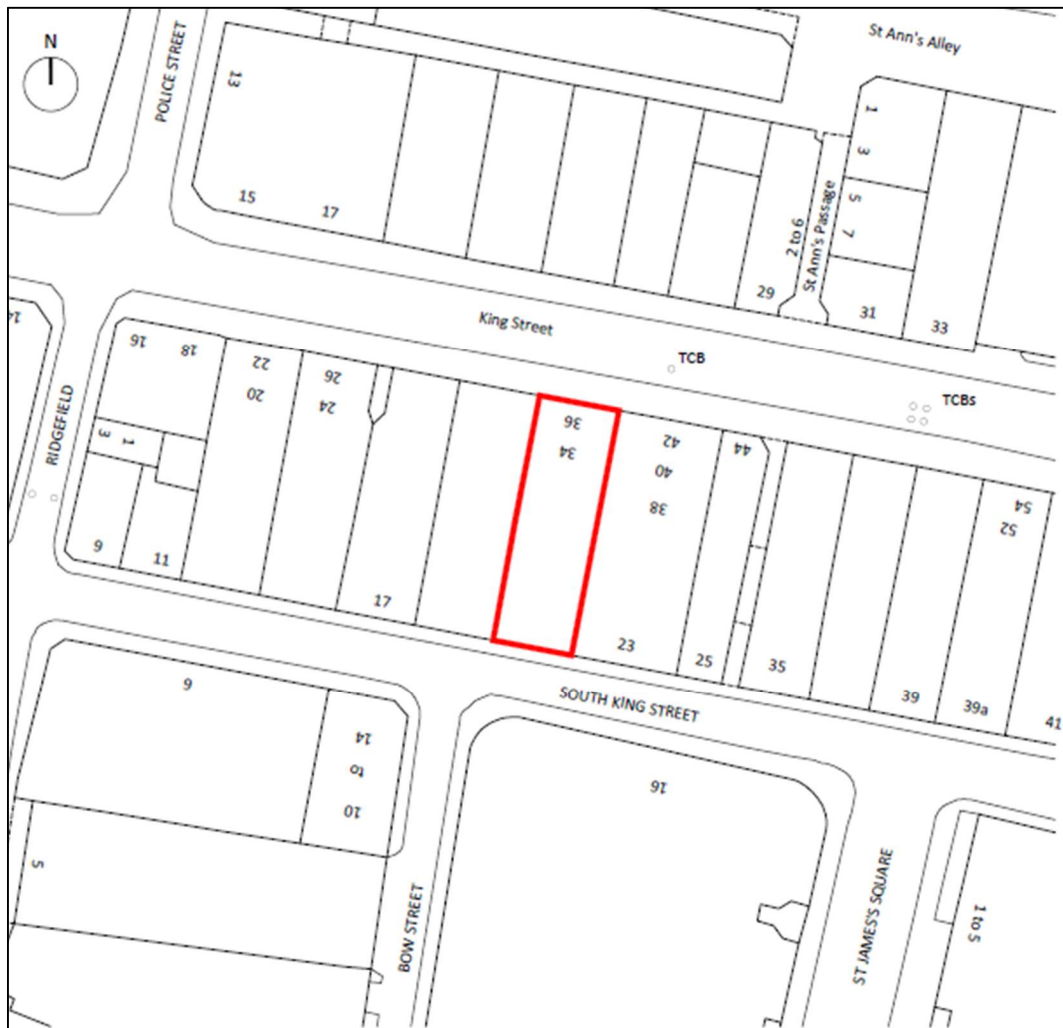


Figure 2.1 Site Boundary Plan

The site does not benefit from vehicular access and has no existing car parking spaces.

2.2 Site Accessibility

2.2.1 Walking

The site is located in an area with good provision of pedestrian facilities with a comprehensive network of footways. Access for pedestrians is achieved from King Street, for the retail aspect of the development, and from South King Street for the offices.

King Street is a pedestrianised area, and pedestrian footways are provided on both sides South King Street with width of approximately 1.3m and 1.6m just outside the site and dropped kerbs provided.

2.2.2 Cyclists

Cycling facilities are provided nearby the site, in the form of cycle lanes and advanced stop line (ASL) at signalised junctions; these are provided along John Dalton Street, Cross Street and Deansgate.

2.2.3 Buses

The area surrounding the site provides multiple bus stops located within reasonable walking distance, on John Dalton Street and Deansgate.

The nearest bus stops to the site are St James Square westbound and eastbound bus stops on John Dalton Street, to the south of the site, marked by a bus flag with timetable and yellow bus cag, while the westbound bus stop is also provided with a shelter, seats and wide footways to allow for waiting areas away from the main flow of pedestrians. These bus stops are served by the following routes: 1 Free Bus, 34, 36, 37, 38, 44, 50, 191, 197, Expresso X39, V1 Vantage, V2 Vantage, V4 Vantage and X8.

2.2.4 Trains

The site is located within the city centre and is within 1km from a number of train stations (9 minutes' walk from Manchester Victoria, 8 minutes' walk from Salford Central, 13 minutes' walk from Manchester Piccadilly, 12 minutes' walk from Deansgate station), with two Metrolink stops within 0.5km of the site.

2.2.5 Local Highway Network

A description of the key highway links near the site is presented in the following paragraphs.

King Street

King Street is an approximately 180m long street marked as a pedestrian zone at any time except for loading between 6am-11am and between 5pm-9pm, with automatic retractable bollards controlling vehicle access.

South King Street

South King Street is an approximately 190m long narrow one-way westbound street which connects Cross Street in the east to Deansgate in the west.

Parking bays are provided to the southern side of the street, with a loading bay provided to its eastern end.

A 'no vehicle except for access' sign is located at its junction with St James's Square.

A56 Deansgate

The A56 Deansgate is an approximately 1.2km long 30mph road connecting the A56 Victoria Bridge Street in the north-east to the A56 Bridgewater Viaduct in the south-west.

Parking is restricted to its northern section, with the exception of loading, while some marked parking bays are provided in its southern section.

Bus routes, bus stops and cycle lanes and ASL at signalised junctions are provided along this road.

St James's Square

St James's Square is an approximately 55m long narrow one-way northbound street connecting the A34 John Dalton Street in the south to South King Street in the north.

Parking is provided on both sides of the road, with a loading bay also provided to its southern end.

John Dalton Street

John Dalton Street is an approximately 100m long 20mph road connecting the A56 Deansgate in the north-west with Cross Street in the south-east.

Parking is restricted on the road, with the exception of six marked bays provided to its southern end, and space a bay for loading. Bus routes, bus stops and ASLs at signalised junctions are provided along this road.

Cross Street

John Dalton Street is an approximately 330m long 20mph road connecting running from the A534 John Dalton Street in the south to St Mary's Gate in the north.

Parking is restricted on the road except for loading. Tram lines, cycle lanes and ASLs at signalised junctions are also provided.

Southbound vehicles are only allowed to its junction with King Street, with access to the southern section of the road restricted to trams and cycles only.

3.0 Construction Programme

Table 3.1 indicates the anticipated construction programme, including breakdown of the various construction stages.

Construction stage	Start	End	Duration
Site setup and demolition	Jan 2020	Jan 2020	4 weeks
Basement excavation and piling	Feb 2020	Mar 2020	8 months
Sub-structure	Feb 2020	Apr 2020	12 months
Super-structure	Apr 2020	May 2020	8 weeks
Fit-out, testing and commissioning	mid-Jan 2020	May 2020	18 weeks

Table 3.1: Construction programme

As indicated in Table 3.1, it is anticipated that the construction of the proposal will start in January 2020 and finish in May 2020.

4.0 Vehicle Routing and Access

This section outlines the site access arrangements for construction vehicles (i.e. deliveries, storage and disposal/collection of materials) including heavy goods vehicles (HGVs), light goods vehicles (LGVs), construction workforce and site visitors.

4.1 Site Access

An extract of the Traffic Management Plan is shown in Figure 4.1, including site boundary plan, layouts of nearby roads and parking restrictions, while the full plan is included in Appendix A of this report.

Given that King Street is a pedestrianised zone, access to the site can only occur from South King Street, to the south of the site.

South King Street is a one-way westbound road with a narrow carriageway; it is anticipated that no HGV movements to or from the site should take place between the core morning and afternoon peak operating hours of 07:00 and 10:00 and 15:00 and 18:00.

Construction vehicles will access South King Street through Cross Street and leave the site westbound, towards Deansgate.

Due to the constrained nature of the site there will not be a specified area for storage of plant and materials, and materials will be delivered on a 'just in time' basis.

A delivery area for unloading straight onto the site is proposed on South King Street just opposite the site, nearby where the personnel access/egress point is located.

A 'no vehicle except for access' sign is located on South King Road, from west of its junction with St James's Square (covering the section of the road in front of the site where the delivery area is proposed), and on Bow Street; therefore, given that only a very limited number of vehicles is anticipated to needing access to this road, the presence of any delivery vehicles undertaking loading/unloading operations is not anticipated to have any impacts on the local highway network.

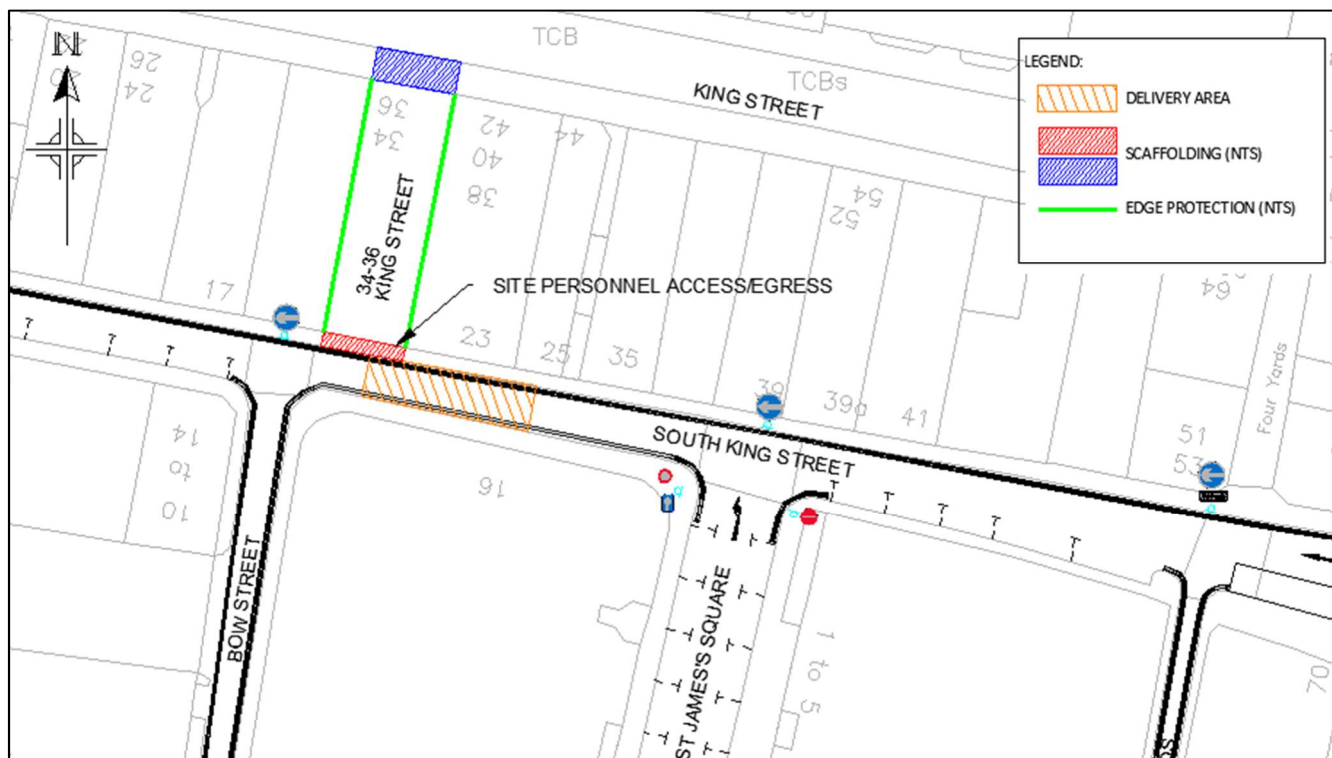


Figure 4.1: Traffic Management Plan

4.2 Vehicle Routing

Construction vehicle routing options were tested in close proximity to the site and the following route is proposed to be used by construction vehicles:

- Construction vehicles will approach the site from Cross Street and travel westbound on South King Street; they will park in the delivery area just outside the site where loading/unloading activities will take place.
- From there, forklifts will transfer the materials to/from the site, with banksmen managing these operations.
- Construction vehicles will then continue westbound on South King Street, towards Deansgate.

Construction Heavy Goods Vehicle Routes have been identified in order to manage the arrival and departure of vehicles from the wider surrounding highway network, minimising the impact to existing road users and upon highway safety and capacity. The routes are presented in Figure 4.2 and 4.3 and have been developed following a review of the surrounding highway network.

Drivers of construction vehicles are expected to approach the site via motorways and principal roads given the loads and size of construction vehicles. However, there are a number of physical restrictions which will limit large goods vehicles from taking the shortest or most obvious routes to site without local knowledge. The following routes have been established in relation to construction vehicles travelling to/from the site (also illustrated in Figures 4.2 and 4.3):

- Construction vehicles that will approach the site from the north and north-west (i.e. A56, A665, A664, A62, A662) will be advised to travel southbound along the A56 Great Ducie Street, turn eastbound on the A56 Chapel Street, continue southbound on the A56 Deansgate and then turn eastbound on the A34 John Dalton Street. From here, vehicles will approach South King Street turning northbound from Cross Street. Drive time between the A6042 Ring Road/A56 Great Ducie Street junction and the site is approximately 9 minutes in normal traffic conditions.
- Construction vehicles that will approach the site from the west (i.e. A6041, A6, A57) will be advised to travel eastbound along the A56 Chapel Street, turn southbound on the A34 Bridge Street and continue eastbound on the A34 John Dalton Street. From here, vehicles will approach South King Street turning northbound from Cross Street. Drive time between the A6042 Trinity Way/A56 Chapel Street junction and the site is approximately 6 minutes in normal traffic conditions.
- Construction vehicles that will approach the site from the south and south-east (i.e. A56, A5067, A34, A46, A635) will be advised to travel northbound along the A56 Chester Road, continue northbound on the A56 Deansgate and turn eastbound on the A34 John Dalton Street. From here, vehicles will approach South King Street turning northbound from Cross Street. Drive time between the Deansgate Interchange junction and the site is approximately 12 minutes in normal traffic conditions.
- Construction vehicles that will approach the site from the south (i.e. A5103) will be advised to travel northbound along the A5103 Medlock Street, continue westbound on Great Bridgewater Street, turn northbound on the A56 Deansgate and turn eastbound on the A34 John Dalton Street. From here, vehicles will approach South King Street turning northbound from Cross Street. Drive time between the Deansgate Interchange junction and the site is approximately 15 minutes in normal traffic conditions.

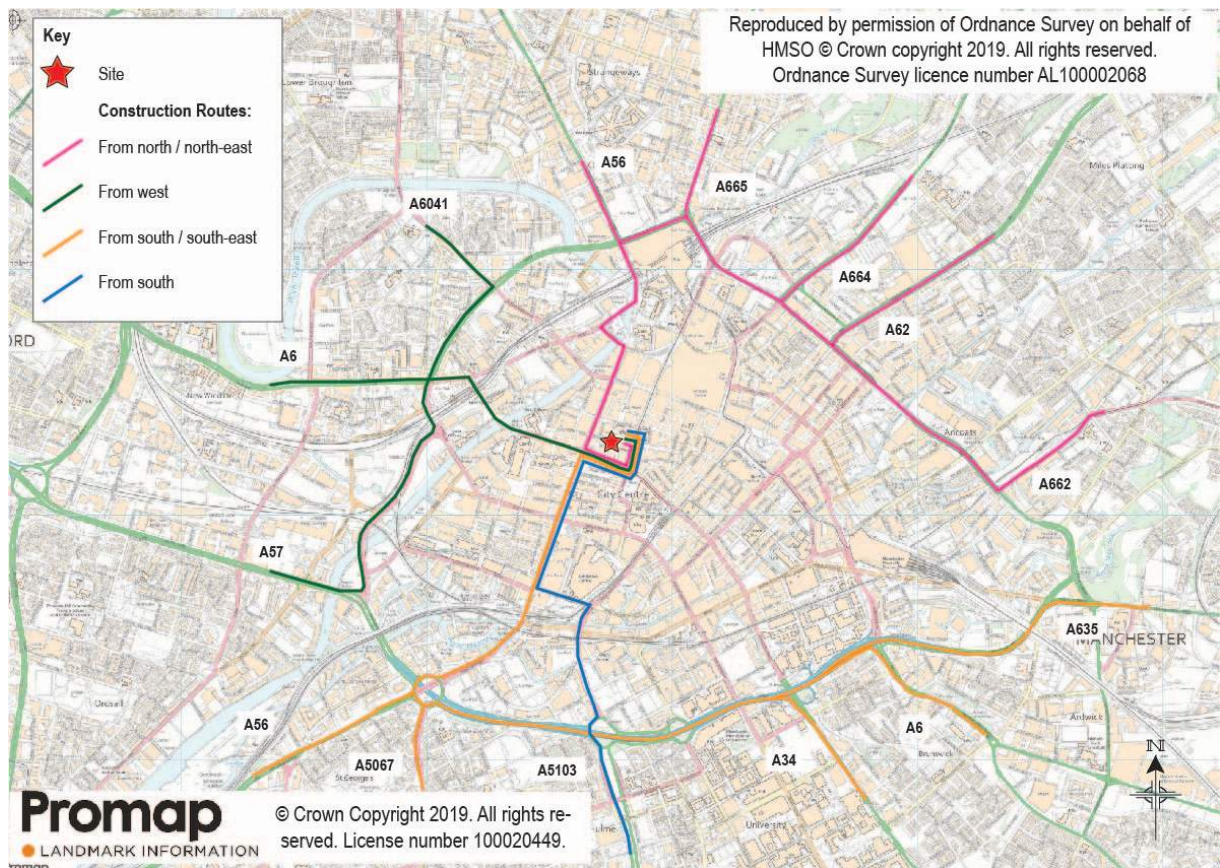


Figure 4.2: Construction traffic routes (access)

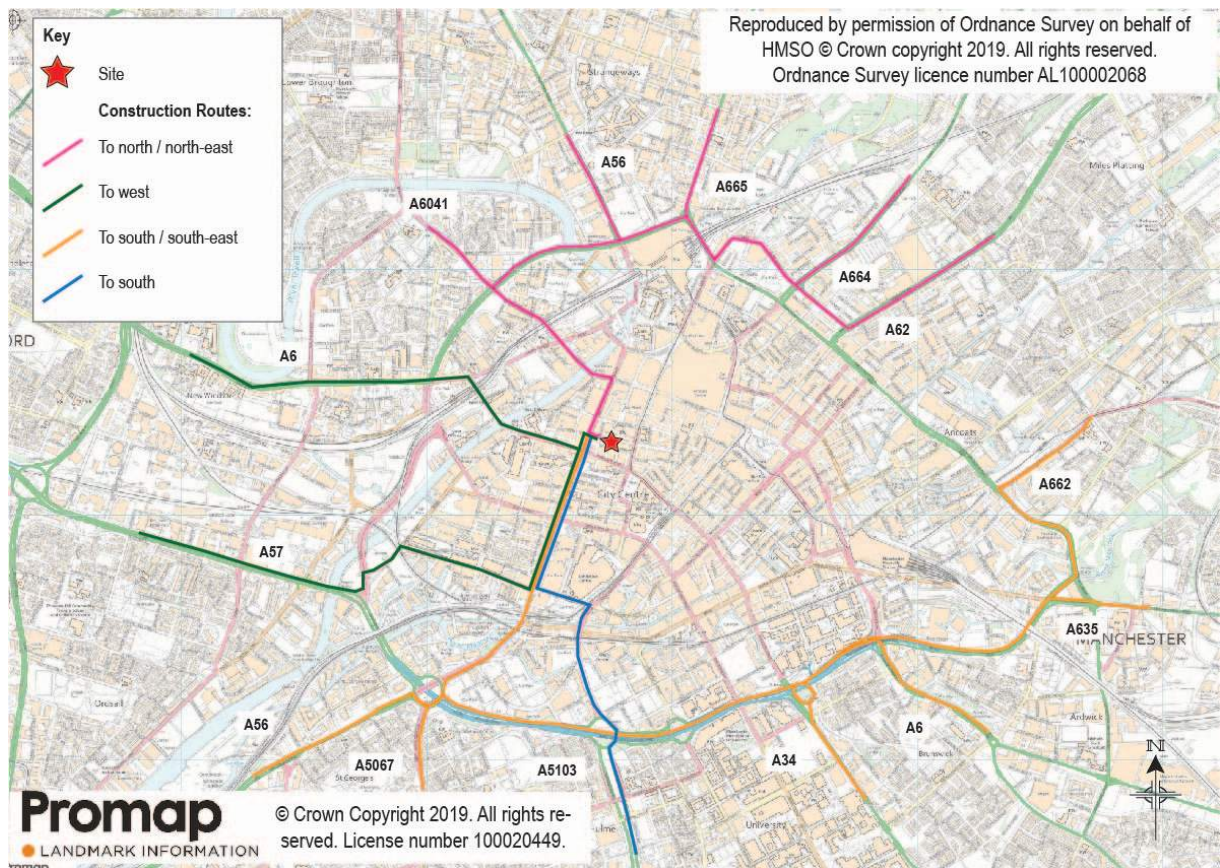


Figure 4.3: Construction traffic routes (egress)

The following construction vehicles are expected to travel to/ from the site:

- 12m rigid truck;
- 7.5m rigid truck; and
- 10m large tipper.

The drawing contained within Appendix B of this report illustrates the swept path analysis using the largest expected vehicle, a 12m rigid truck.

5.0 Estimated Vehicle Movements

The anticipated number, frequency and type of vehicles to be used during construction are included in Table 5.1. These movements are estimated for the length of the construction programme where possible as well as the busiest period of vehicle arrivals and departures within the construction programme.

Construction stage	Duration	Vehicle type	Frequency
Site set up and demolition	4 weeks	12m rigid truck	1 per day
		7.5m rigid truck	1 per day
Basement excavation and piling	8 months	Large tipper	3 per day
Sub-structure	12 months	Large tipper	3 per day
Super-structure	8 weeks	12m rigid truck	2 per week
Fit-out, testing and commissioning	18 weeks	12m rigid truck	1 per week
		Large tipper	2 per day

Table 5.1: Forecast of construction vehicle trip generation.

Table 5.2 includes an estimate of the total number of construction vehicles, monthly and daily.

Construction stage	Period of stage	No. of trips (monthly)	Peak no. of trips (daily)
Site set up and demolition	Q1 2020 – Q1 2020	40	2
Basement excavation and piling	Q1 2020 – Q1 2020	120	3
Sub-structure	Q1 2020 – Q1 2020	180	3
Super-structure	Q1 2020 – Q2 2020	16	0.4
Fit-out, testing and commissioning	Q1 2020 – Q2 2020	198	2.2

Table 5.2: Estimate construction vehicles, monthly and daily

The total number of daily trips indicated in Table 5.2 is not anticipated to impact on the operation of the local highways network.

6.0 Mitigation Measures

6.1 Planned Measures

Various planned measures have been identified and are described in the following sections.

6.1.1 Scaffolding

Appendix C of this report includes the proposed independent access scaffolding to be erected on the site, as produced by the Specialist Scaffolding Contractor; Figure 6.1 includes an extract of this plan.

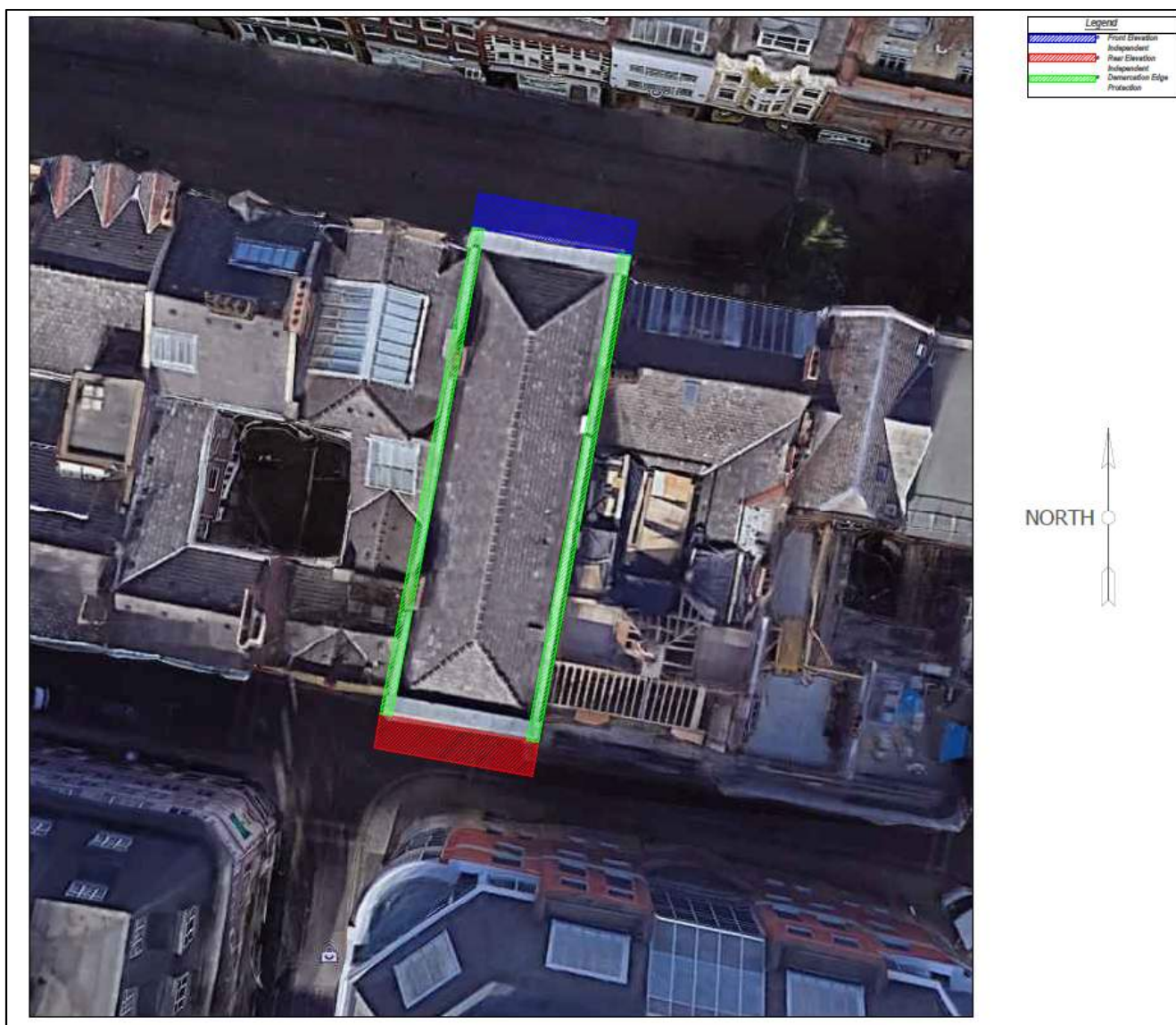


Figure 6.1: Scaffolding location

Figure 6.1 shows independent front and rear scaffolding elevation (indicated in blue and red respectively) and demarcation edge protection (indicated in green) on the eastern and western sides of the site. It is noted that the scaffolding plan is not to scale.

With regard to erecting/dismounting the scaffolding on King Street, given the restrictive loading times of this road (it is a pedestrian zone at any time except for loading between 6am-11am and between 5pm-9pm, with automatic retractable bollards controlling vehicle access), two alternative approaches are anticipated for the access/egress of the necessary vehicles, or a combination of the two:

- Vehicles will access/egress King Street within its restrictive loading line to take the scaffolding material to/from the site;
- Vehicles will park in the proposed delivery area on South King Street and the scaffolding material will be taken to King Street through the site.

The erection/dismantling of scaffolding on South King Street will occur with vehicles parking in the proposed delivery area on South King Street.

Normal working hours will be between 6am and 4pm.

On South King Street, the scaffold will have a clear walkway at ground floor for pedestrian movement and public access to the existing footway all conforming to SG34:17 'Guidance on Protection of the Public' by a Specialist Scaffolding Contractor. It is not anticipated that any diversion of pedestrian traffic onto the other footway would be needed.

On King Street, the bottom of the scaffold will be hoarded to allow the contractor to work on the site front and also provide a secure site entrance.

The scaffold will be monitored daily and written weekly checks performed by the scaffold contractor.

6.1.2 Transport of materials to and from South King Street

Table 6.1 includes a risk assessment provided for the transfer of materials to and from South King Street.

The planned measures included in Table 6.1 have been identified to help the contractor achieve the goals of the CTMP and manage any forthcoming challenges.

No	Activity / Situation	Hazard Description	Risk	Assessment			Control Measures	Residual Risk		
				S 1-5	L 1-5	RR LxS		S 1-5	L 1-5	RR LxS
01	Unloading of delivery vehicle	Working at height	Injury from materials falling from the rear of vehicles	3	3	9	Care to be taken when unloading materials from the back of the vehicle Operatives to be informed of the risk	1	3	3
02	Transfer of deliveries	Materials, tools and equipment falling from height	Injury from materials falling off delivery vehicle	3	3	9	Care to be taken when transferring materials. PPE to be provided	1	3	3
03	Delivery of materials	Using heavy goods vehicles on South King Street	Collisions with cyclists/pedestrians resulting in serious/ fatal injuries	3	4	12	Contractor to ensure Safe System of Works (SSOW) is in place, in the form of banksmen and other measures	2	2	4
04	Access to delivery area on South King Street	South King Street is a narrow road, made it even narrower by the presence of on-street parking	Collision with other users	2	3	6	Use smaller vehicles who can navigate better nearby the site	1	1	1
05	Navigation between the site and the construction delivery area	Loading/Unloading activities undertaken on or nearby footways	Collisions with pedestrians and vehicles	3	4	12	Diversion of pedestrian traffic onto the other footway when required Contractor to ensure SSOW is in place, in the form of banksmen and other measures	1	2	2
06	Transferring material	Using forklift on footways and roads	Forklift toppling over under weight of materials and an uneven surface Collision with other users	4	4	16	Reduce the loads carried by the forklift Diversion of pedestrian traffic onto the other footway when required Contractor to ensure SSOW is in place, in the form of banksmen and other measures	2	2	4
07	Erection and Dismantling of Scaffolding	Materials, tools and equipment falling from height	Injury from materials falling off delivery vehicle	3	3	9	Care to be taken when erecting/dismantling of scaffolding Operatives to be informed of the risk	1	3	3
08	Erection and Dismantling of Scaffolding	Obstruction of pavements	Pedestrian forced onto the road	3	4	12	On South King Street the scaffolding will have a clear walkway at ground floor for pedestrian movement and public access to the existing footway Contractor to ensure SSOW is in place, in the form of banksmen and other measures	1	2	2

Severity (S)	
Fatal or multi-fatal outcome	5
Major Injury outcome (i.e. RIDDOR reportable)	4
3-day injury as determined in RIDDOR	3
Minor injury – first aid only	2
Accident or incident where no injury occurs	1

Likelihood (L)	
Very likely to occur	5
Probable	4
Possible	3
Remote	2
Improbable	1

L=Likelihood Rating S=Severity Rating RR=Risk Rating

Table 6.1: Risk assessment for transfer of materials

6.1.3 Measures influencing construction vehicles and deliveries

Safety and environmental standards and programmes

All contractor and sub-contractor vehicles arriving at the site will comply with sufficient safety measures and requirements relating to Work-Related Road Risk.

A collision reporting system will be used to ensure all collisions and accidents involving the projects' vehicles and drivers are reported to the project manager and any relevant parties.

It is proposed that vehicles will park in the proposed delivery area on South King Street, opposite of the site access point. In the event of HGV's reversing, a banksman will be in attendance at all times. As set out within the Health and Safety Executive (HSE) guidance, the banksman directing vehicle movements will be trained and authorised to do so.

HSE guidance will be adhered to in order to ensure the safe separation of pedestrians and construction vehicles on-site. If construction vehicles park on the pavement, pedestrian diversion routes will be identified, including pedestrians using the northern footway on South King Street.

Adherence to designated routes

Details of routes to be used for journeys to and from the site for road operations are provided in Chapter 4.0. These access routes have been reviewed with respect to potential impacts, conflicts and hazards.

A copy of the route plan will be given to all suppliers when orders are placed to ensure drivers are fully briefed on the required route to take. The suppliers will be made aware that these routes are required to be followed at all times unless agreed or alternate diversions are in place.

Delivery scheduling

Deliveries are to be coordinated and all deliveries to site will be arranged to ensure minimal disruption to the public and local traffic movements.

A web-based delivery management system will be used to control the volume of deliveries to the site. This system will work by defining the number of 'resources' the site has and thus can service in 30 minutes intervals. It then limits the number of delivery bookings per half-hour to this defined capacity.

HGV arrivals will be actively managed so that the arrival profile is spread out as far as possible throughout each day. This will be undertaken by assigning drivers specific time slots for arrival to the site and will be managed by communication between the site manager and the source company.

Sub-contractors and hauliers must be booked in a minimum of 48-hours in advance in order to allow the request to be reviewed and subsequently approved/ declined. The system can be accessed by completing a new user application form and submitting it, countersigned by the SRM package manager to the delivery manager.

Due to the nature of the works it is not anticipated any debris being deposited onto the public highway from delivery vehicles, however this will be monitored daily by the site manager and if required will be cleaned up immediately or if needed a road sweeper can be called upon at short notice to carry out a road sweep / wash.

Re-timing for out of peak deliveries

Re-timing out of peak time will aid the operational efficiency of the construction site and also the neighbouring area. The developer commits to attempting to re-time as many deliveries as possible out of the morning and afternoon peak periods (07:00-10:00 and 15:00-18:00).

Waste removal

Construction Site waste will be stored internally within the site but removed on a daily basis to prevent any build-up of materials on site.

All contractors will use banks men for managing their deliveries as required with the relevant areas segregated off with pedestrian barriers and appropriate directional signs.

Compound Area

No compound area is provided for the works due to the local authority traffic restrictions and highway limitation; the storage of materials will be limited and called off as required and any materials for the build will be stored internally.

6.1.4 Material procurement measures

Smart procurement

Suppliers that use different modes of transport will be explored in the procurement stage, as well as sourcing local suppliers to contribute to the local economy. Also, opportunities to source materials from the same supplier(s) from sites in close proximity to the site will be explored.

6.1.5 Other measures

Staff Travel Plan

It is important that staff use sustainable modes of transport such as public transport to commute to/ from the site, as no parking will be provided. Measures to support sustainable travel for staff and encourage modal shift away from car-based travel will be highlighted to all staff. If driving cannot be avoided, all vehicles must be parked off the adopted highway throughout the construction process.

7.0 Implementing, Monitoring and Updating

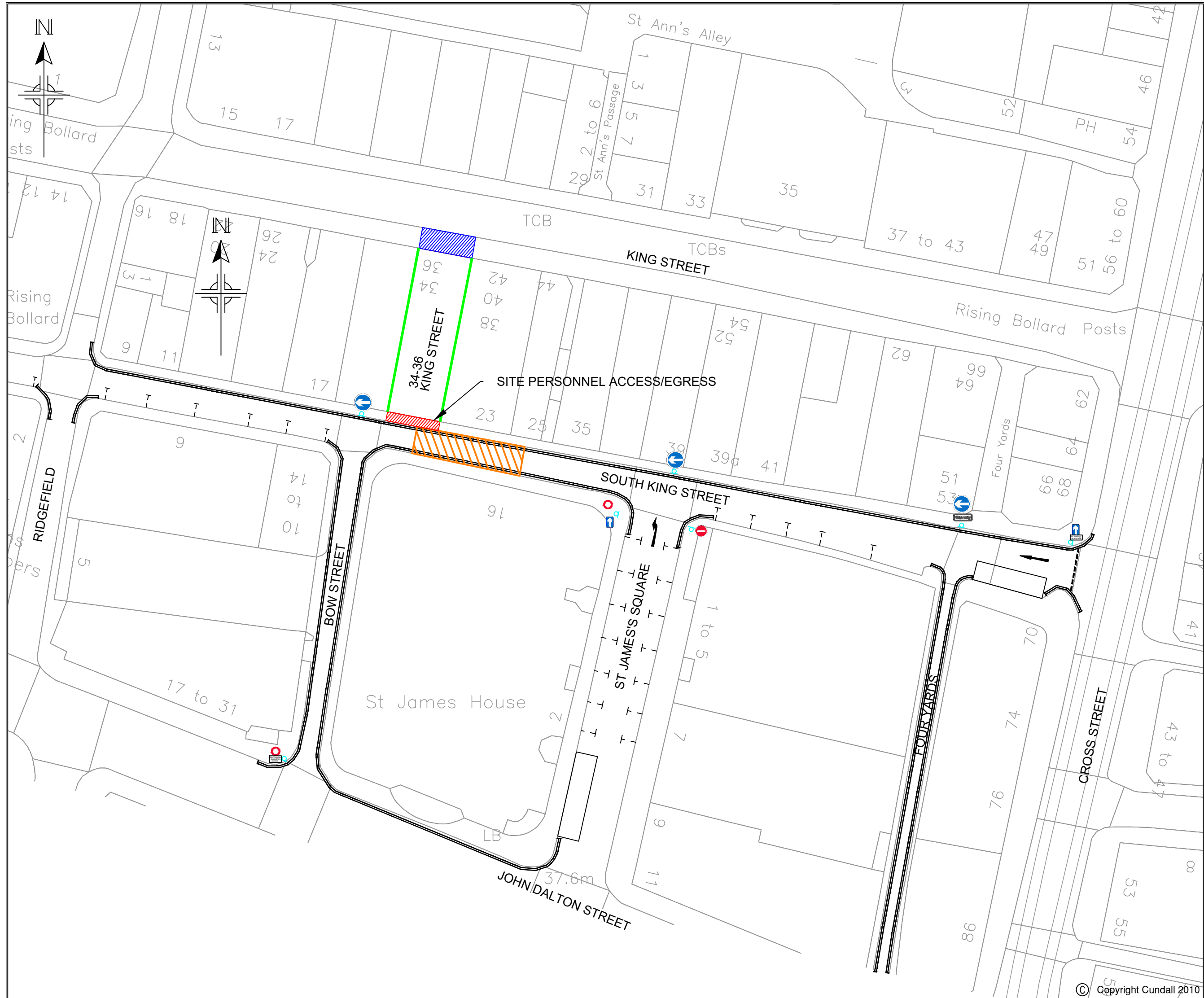
An appointed Site Manager will be in charge of implementing the CTMP.

To ensure that all contractors are aware of the tight restraints of the site, the Site Manager will note the traffic management plan and details at the pre-start meeting with each contractor again, at the induction of the Contractors to site and will be monitored daily. The Traffic Management Plan will be displayed on the H&S notice board in the site office. It will take into account the high likelihood of public and contractors' vehicles interaction and include safeguarded pedestrian routes.

The Site Manager will also be collecting the following data:

- Number of vehicle movements to the site; collected through a delivery booking-in system.
 - Total;
 - By vehicle type/ size/ age;
 - Time spent on site;
 - Consolidation centre utilization; and
 - Delivery/ collection accuracy compared to schedule.
- Breaches and complaints.
 - Vehicle routing;
 - Unacceptable queueing;
 - Unacceptable parking.
- Safety.
 - Logistics-related accidents;
 - Record of associated fatalities and serious injuries; and
 - Vehicles and operations not meeting safety requirements.
- Description of the contractor's handbook.
- Description of the driver's handbook.

Appendix A



DO NOT SCALE FROM THIS DRAWING

Notes

1.
- DRAWING BASED ON OS MAPPING AND SATELLITE IMAGING
2.
- FOR DETAILS OF THE SCAFFOLDING PROPOSAL REFER TO DRAWING NO. BDS-5554-01 REV B PRODUCED BY BDS SCAFFOLD DESIGN SPECIALISTS

LEGEND:

- DELIVERY AREA
- SCAFFOLDING (NTS)
- EDGE PROTECTION (NTS)

A	22.11.2019	MINOR CHANGES	JV	VR	VR
-	12.11.2019	FIRST ISSUE	JV	VR	VR
Issue	Date	Description	By	Chkd	Verfd

Project
34-36 KING STREET - MANCHESTER

Client
TMT GROUP LTD

Architect
-

Title
CONSTRUCTION TRAFFIC
MANAGEMENT PLAN

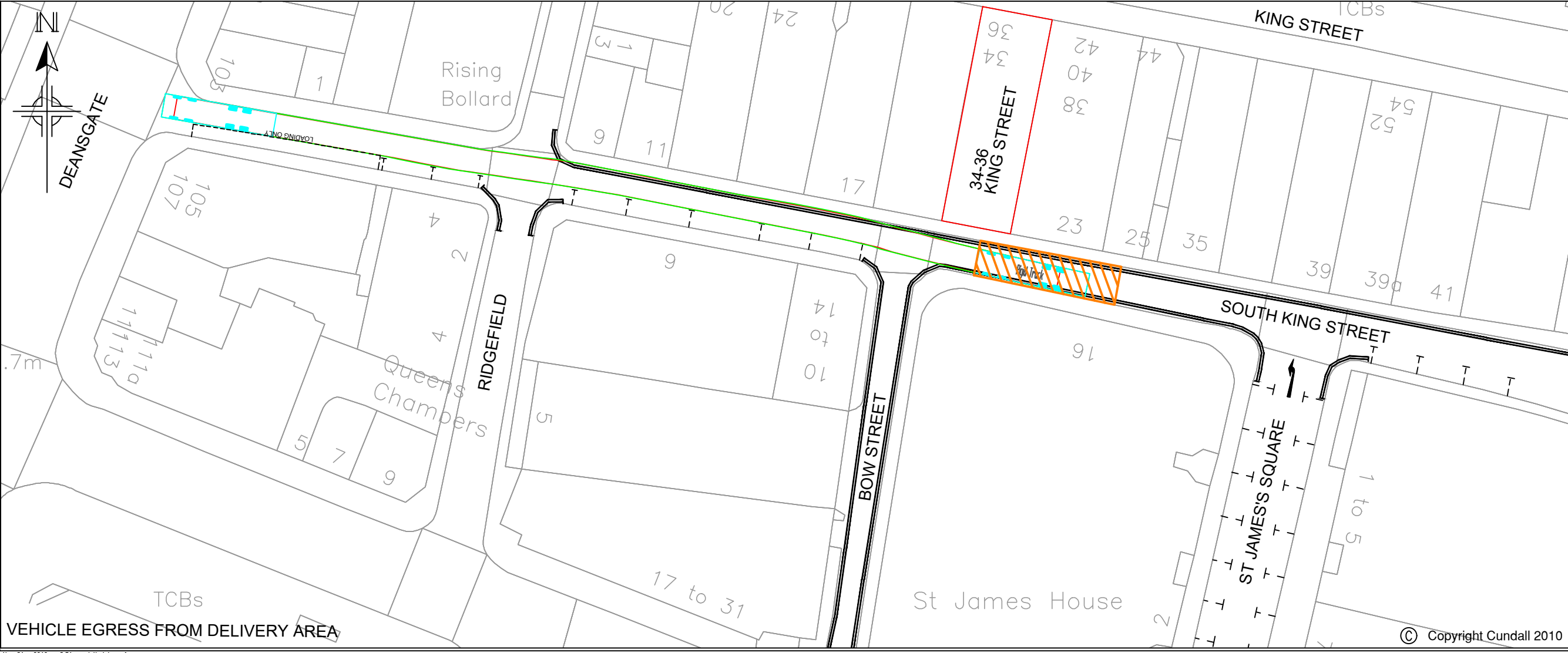
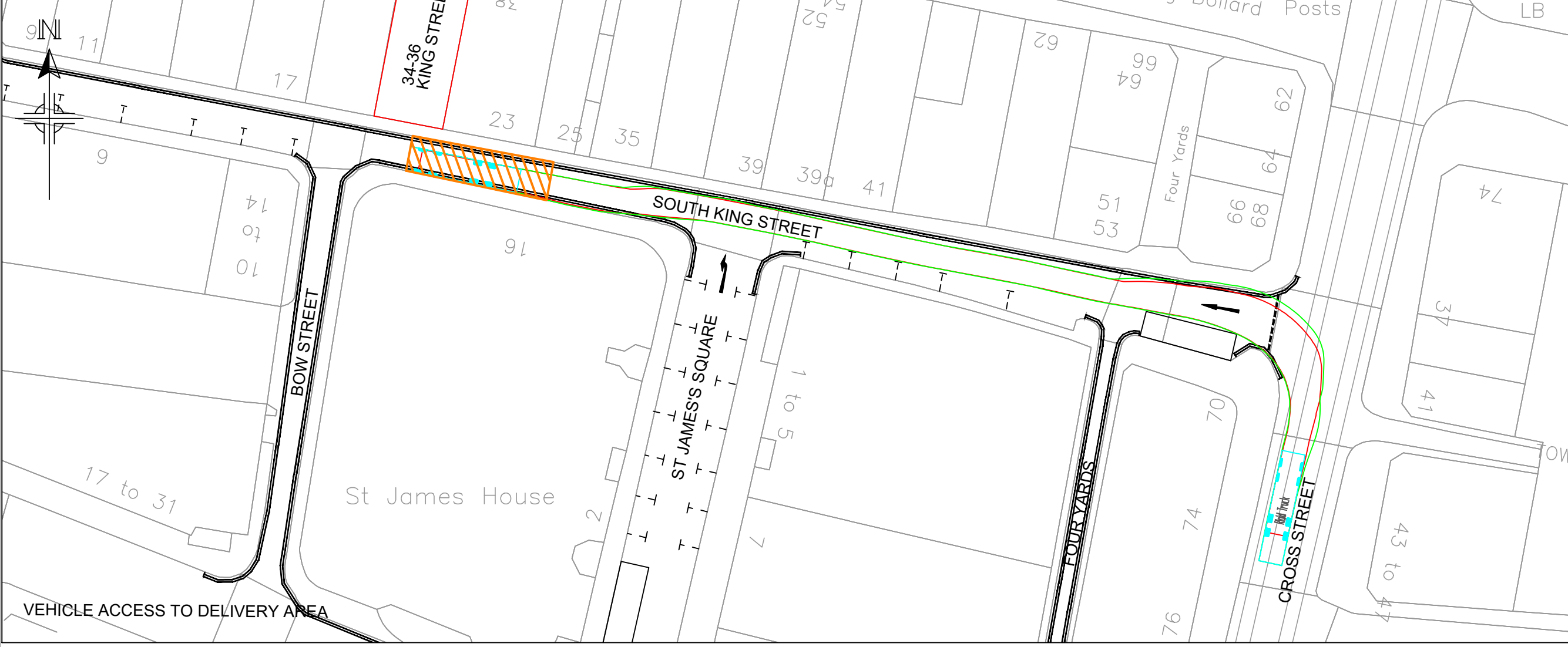
Drawing No. KS-CDL-T-DR-60-0001-0	Drawing Status INFORMATION
Job No. 1025193	Scale 1:500

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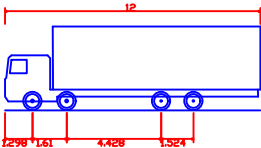
Appendix B



DO NOT SCALE FROM THIS DRAWING

Notes

1. DRAWING BASED ON OS MAPPING AND SATELLITE IMAGING



Rigid Truck
Overall Length 12.000m
Overall Width 2.500m
Overall Body Height 3.328m
Min Body Ground Clearance 0.412m
Track Width 2.471m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 11.900m

A	22.11.2019	MINOR CHANGES	JV	VR	VR
-	12.11.2019	FIRST ISSUE	JV	VR	VR
Issue	Date	Description	By	Chkd	Verfd

Project
34-36 KING STREET - MANCHESTER

Client
TMT GROUP LTD
Architect
-

Title
VEHICLE TRACKING -
12m RIGID TRUCK

Drawing No. KS-CDL-T-DR-60-0002-0	Drawing Status INFORMATION
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Job No. 1025193	Scale 1:500
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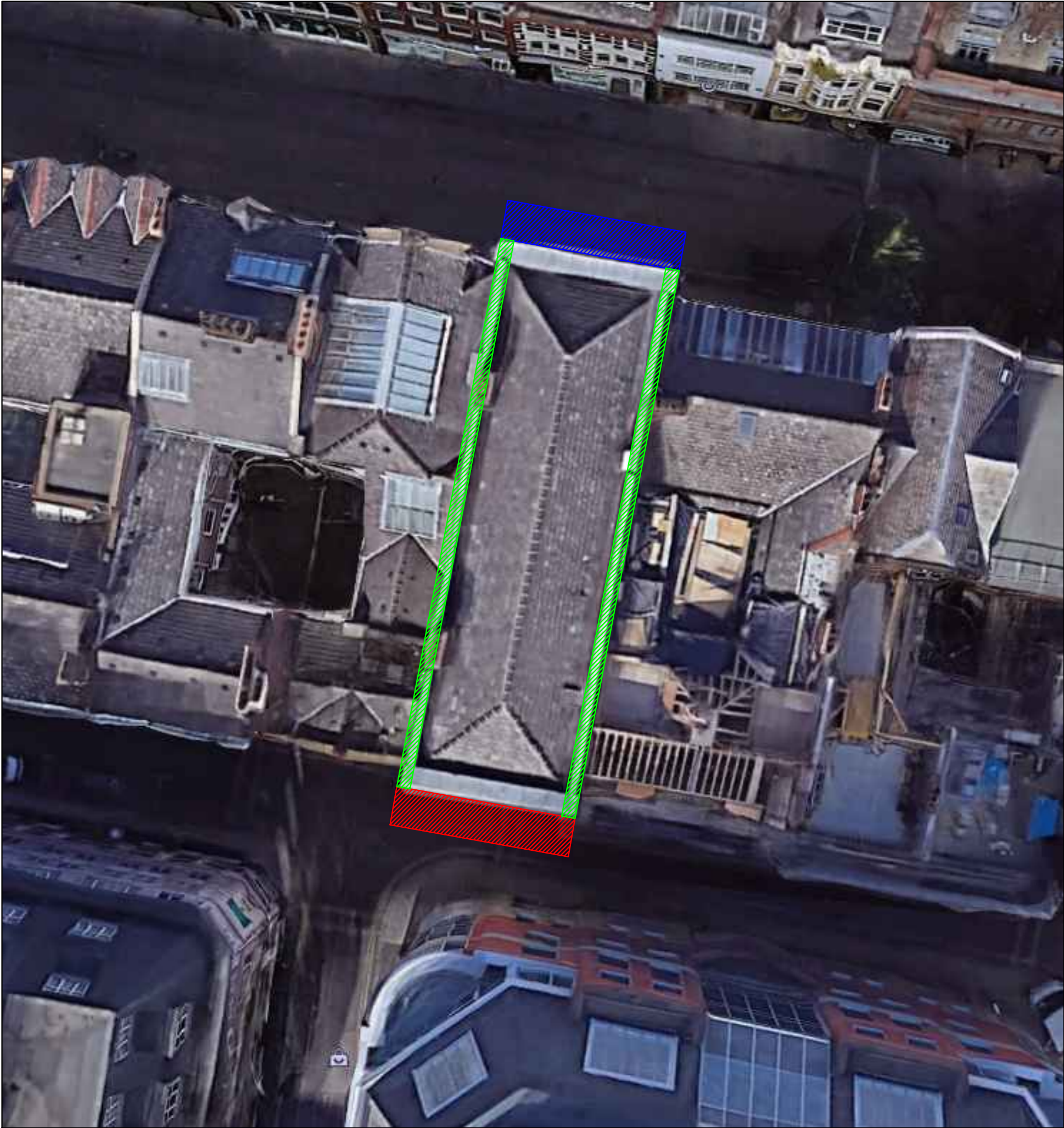
CUNDALL

4th Floor, Partnership House
Regent Farm Road,
Gosforth,
Newcastle NE3 3AF
Telephone: +44 (0)191 213 1515

Website: www.cundall.com

Appendix C

General Arrangement



Legend	
	Front Elevation
	Independent
	Rear Elevation
	Independent
	Demarcation Edge Protection



Notes:

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- BS2482 Specification for Timber Boards
- BS EN 12811-1 Codes of Practice for Access and Working Scaffolds and Special Scaffold Structures in Steel
- BS EN 12812-1:2008 Falsework: Performance requirements & general design
- TG20:13 Guide to Good Practice for Scaffolding with Tube and Fittings
- BS EN 1991-1-1:2002 Eurocode: Actions on Structures - Densities, Self-weight and Imposed Loads
- BS EN 1991-1-4:2005 Eurocode: Actions on Structures - Wind
- BS EN 13374:2013 Temporary edge protection systems - Product specification, test methods.

MAXIMUM LOADINGS

Independent - 1no. Lift - **2kN/m² (200kg/m²)**
All inside boards at - **0.75kN/m² (75kg/m²)**
Edge Protection - **0.3kN (Horizontally)**
- **1.25kN (Vertically)**

THESE LOADING MUST NOT BE EXCEEDED
All Loadings Unfactored
No alterations which may effect the scaffolds structural stability to be made without prior written notice from BDS Ltd

 Please print all drawings in colour A3 min

Drawing not to scale
dimensions as per drawing



Client:



**BDS**

SCAFFOLD
DESIGN
SPECIALISTS

T: 0800 270 7998 E: info@buckleydesigns.co.uk

Project: 34 - 36 King Street, Manchester

Drawing Title: Independent Access Scaffold

Drawn by: Rob Forster Draft: N/A

Signed:  Approval: 14/11/2019
Construction: TBC

Checked by: Lee Buckley Date: 14/11/2019

Signed: 

Drawing No.	Revision
BDS-5554-01	B

Drawing Scale: N/A

Revisions:		
A	General Arrangement Page Added	15/11/2019
B	Roof Edge Protection Introduced	19/11/2019
C	N/A	N/A
D	N/A	N/A
E	N/A	N/A

 **DIMENSIONS** 
NO SURVEY DRAWINGS SUPPLIED THEREFORE ALL BUILDING
DIMENSIONS ARE APPROXIMATE

Plan A-A (Front)

Boarding and intermediate transoms omitted for clarity

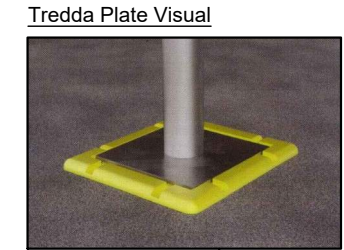
Elevation B-B (Front)

RISK

Principal contractor to confirm ground is capable of supporting imposed loads

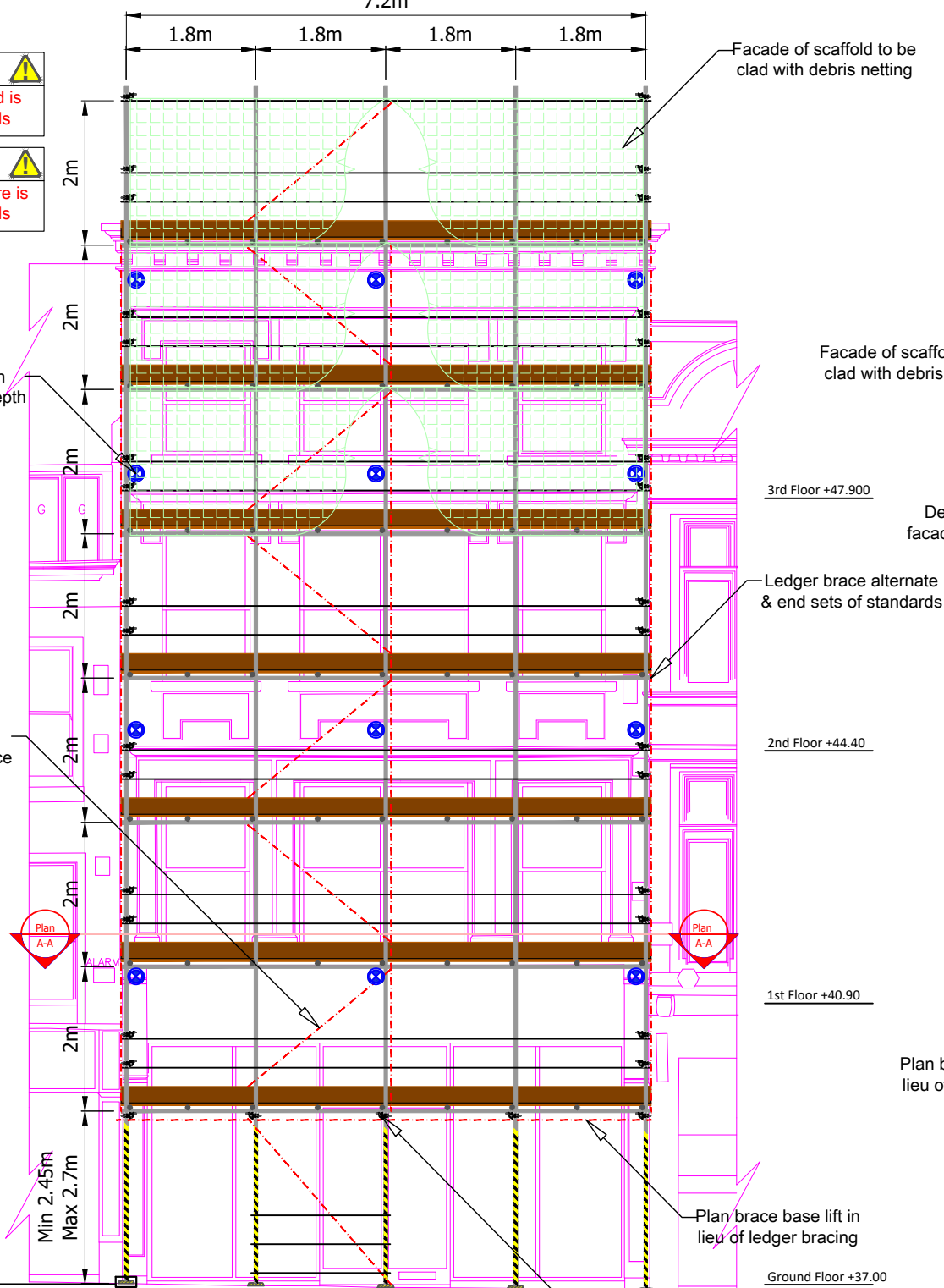
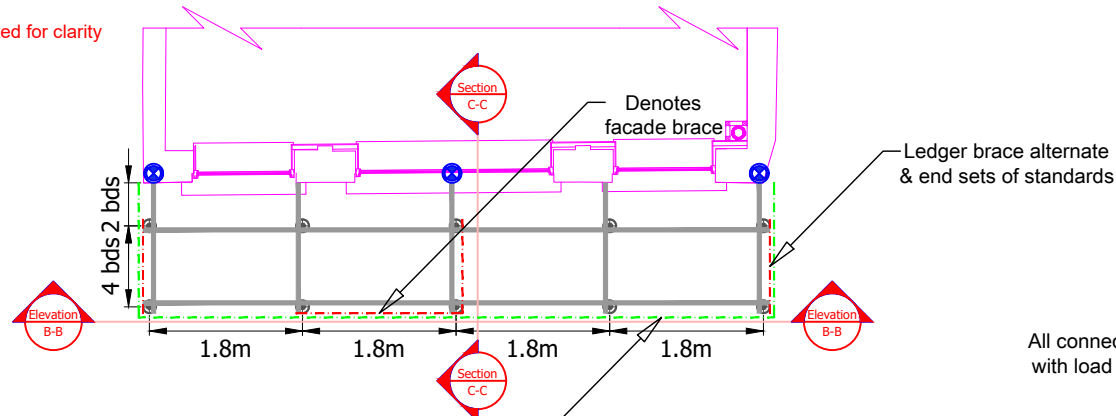
RISK

Principal contractor to confirm structure is capable of supporting imposed loads

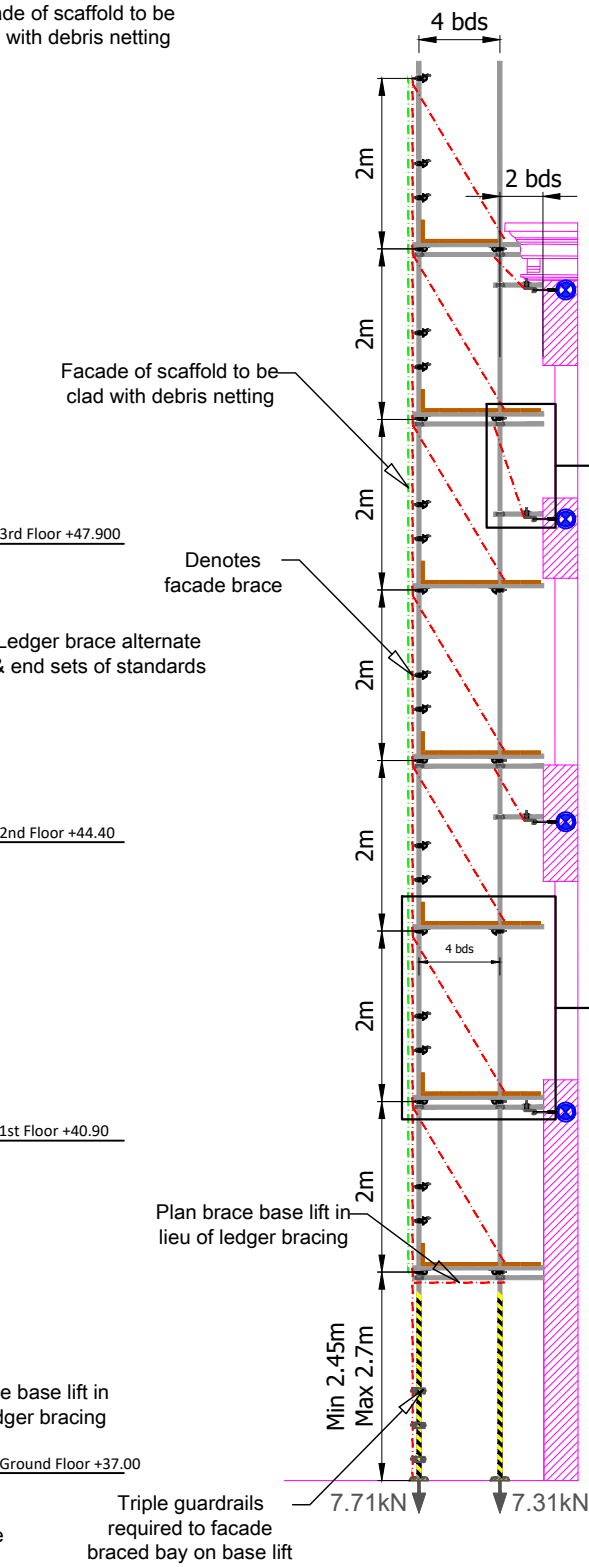


Fundamental Notes

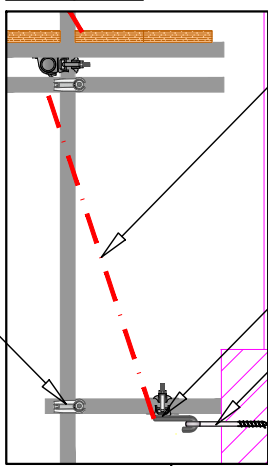
1. Max bay length 1.8m (independent) - 3m (edge protection)
2. Max bay width 4 boards (front elevation) - 3 boards (rear elevation)
3. Max transom spacing 1.2m
4. Max lift height 2m - 2.7m (Base Lift)
5. All connections except board bearers to be made using load bearing fittings
6. Exact standard locations may vary on site, however max bay lengths/widths etc must not be exceeded
7. Max tie grid - As Shown



Section C-C (Front)



Blow Up Detail



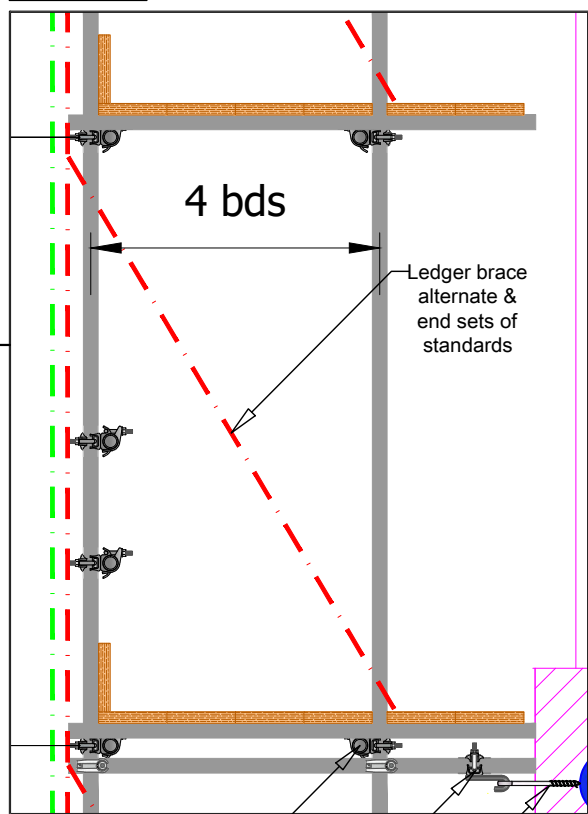
Brace required to all tie tube that exceed 300mm from node point

Hook coupler

12mm ADI Restraint Eye with minimum 75mm embedment depth

All connections to be made with load bearing couplers

Blow Up Detail



All connections to be made with load bearing couplers

12mm ADI Restraint Eye with minimum 75mm embedment depth

CDM REGULATIONS 2015

The Construction (design & management) Regulations 2015, Require that we make customers aware of their duties imposed by the regulations. Guidance on your duties are published by the HSE in the form of an approved code of practice.

TG4:19

Scaffold tie arrangements must be erected in accordance with the guidance notes set out in TG4:19 (Anchorage Systems for Scaffolding)

TG4:19 (TIE TESTING REQUIREMENTS)

- Preliminary Load Test - This anchor to 2 x 5.03kN = 10.06kN if the preliminary load test is successful, then apply the proof test load to the supporting anchors. 1.25 x 5.03kN = 6.29kN 'pull out'.
- Should the test load fall below the above figures, then the tying configuration to be re-evaluated. (Low Level Ties)

SG4:15

The scaffolders MUST erect the scaffolding in accordance with the guidance notes set out in SG4:15

LADDER ACCESS

LADDER ACCESS TO BE INSTALLED IN ACCORDANCE WITH SG25:14 (omitted for clarity)

RISK

NO BANNERS, SHEETING OR NETTING TO BE FIXED TO THE SCAFFOLD

PEDESTRIAN PROTECTION

PROTECTION TO THE PUBLIC MUST BE MAINTAINED IN ACCORDANCE WITH SG34:17 & TG20:13

RISK

ALL BOARDS TO BE ADEQUATELY SECURED IN THE EVENT OF HIGH WINDS

CLASS B COUPLERS

ALL CONNECTIONS TO BE MADE WITH CLASS B COUPLERS
CLASS B COUPLER: SWL = 9.1kN

Legend

- Tube
- Debris Netting
- Bracing
- Foam Protection
- Standard
- Puncheon
- Lip Tie Tube
- 12mm ADI Restraint Eye (or similar)

Notes:

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MAXIMUM LOADINGS
Independent - 1no. Lift - 2kN/m² (200kg/m²)
All inside boards at - 0.75kN/m² (75kg/m²)
Edge Protection - 0.3kN (Horizontally)
- 1.25kN (Vertically)

THESE LOADING MUST NOT BE EXCEEDED
All Loadings Unfactored
No alterations which may effect the scaffolds structural stability to be made without prior written notice from BDS Ltd

Please print all drawings in colour A3 min
Drawing not to scale
dimensions as per drawing



Client:



BDS SCAFFOLD DESIGN SPECIALISTS
T: 0800 270 7998 E: info@buckleydesigns.co.uk

Project: 34 - 36 King Street, Manchester
Drawing Title: Independent Access Scaffold

Drawn by: Rob Forster Draft: N/A
Signed: [Signature] Approval: 14/11/2019
Construction: TBC
Checked by: Lee Buckley Date: 14/11/2019
Signed: [Signature]

Drawing No. **BDS-5554-02** Revision **B**

Drawing Scale: N/A

Revisions:	
A	General Arrangement Page Added 15/11/2019
B	Roof Edge Protection Introduced 19/11/2019
C	N/A N/A
D	N/A N/A
E	N/A N/A

DIMENSIONS
NO SURVEY DRAWINGS SUPPLIED THEREFORE ALL BUILDING DIMENSIONS ARE APPROXIMATE

Plan A-A (Rear)

Boarding and intermediate transoms omitted for clarity

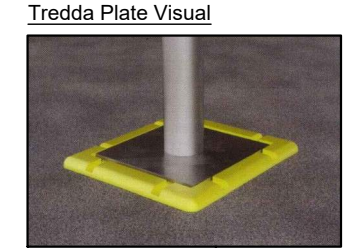
Elevation B-B (Rear)

RISK

Principal contractor to confirm ground is capable of supporting imposed loads

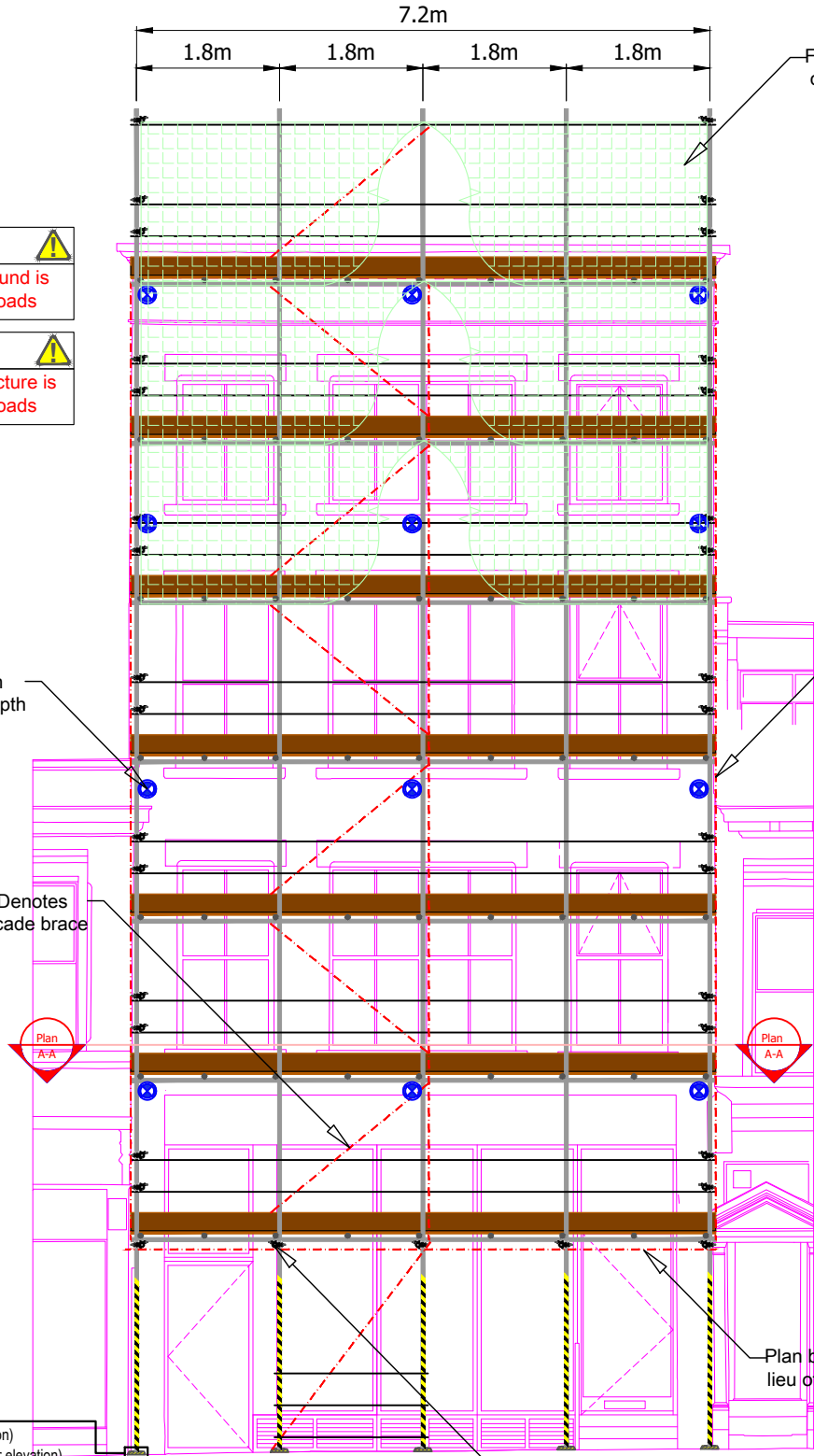
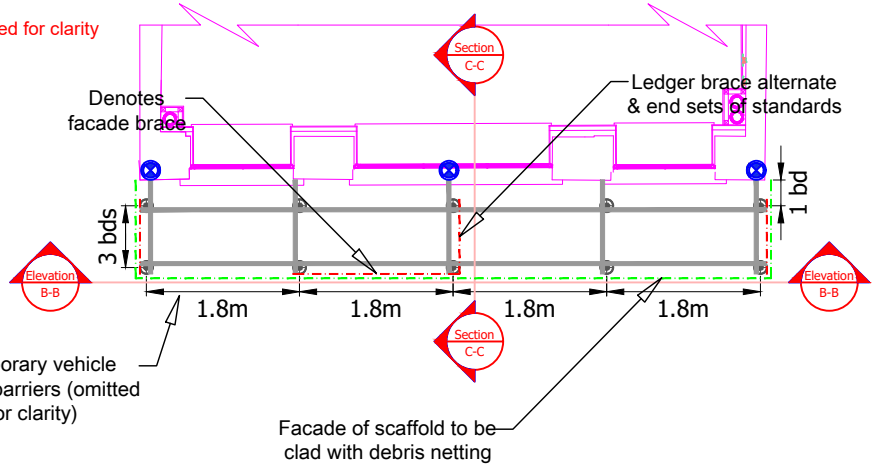
RISK

Principal contractor to confirm structure is capable of supporting imposed loads

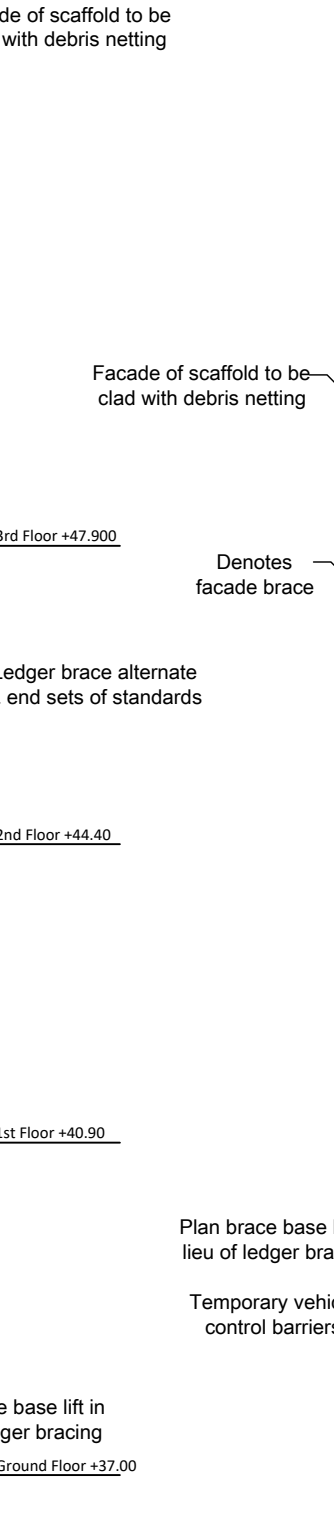


Fundamental Notes

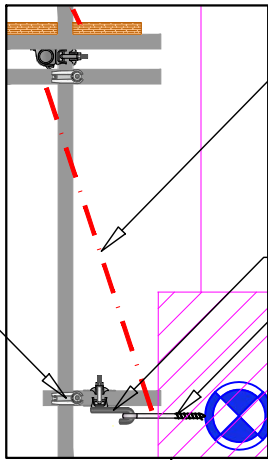
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- 3. Max transom spacing 1.2m
- 4. Max lift height 2m - 2.7m (Base Lift)
- 5. All connections except board bearers to be made using load bearing fittings
- 6. Exact standard locations may vary on site, however max bay lengths/widths etc must not be exceeded
- 7. Max tie grid - As Shown



Section C-C (Rear)



Blow Up Detail



Brace required to all tie tube that exceed 300mm from node point

Hook coupler

12mm ADI Restraint Eye with minimum 75mm embedment depth

All connections to be made with load bearing couplers

Facade of scaffold to be clad with debris netting

Denotes facade brace

Ledger brace alternate & end sets of standards

Plan brace base lift in lieu of ledger bracing

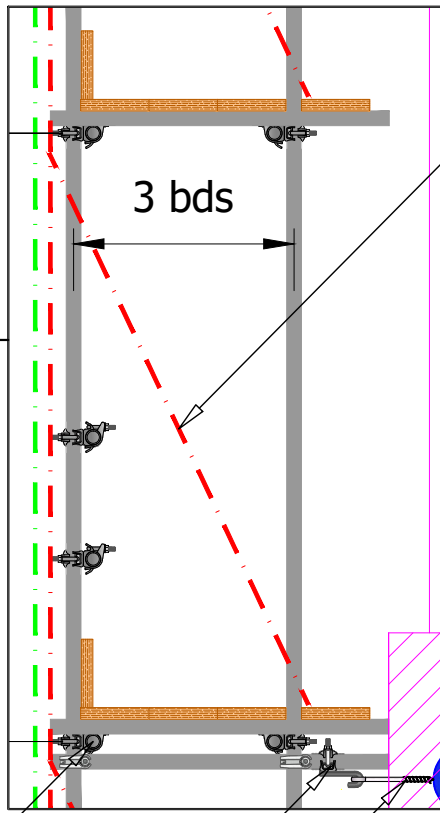
Temporary vehicle control barriers

Triple guardrails required to facade braced bay on base lift

All connections to be made with load bearing couplers

12mm ADI Restraint Eye with minimum 75mm embedment depth

Blow Up Detail



3 bds

Ledger brace alternate & end sets of standards

Hook coupler

5.03kN

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SG4:15

The scaffolders MUST erect the scaffolding in accordance with the guidance notes set out in SG4:15

LADDER ACCESS

LADDER ACCESS TO BE INSTALLED IN ACCORDANCE WITH SG25:14 (omitted for clarity)

RISK

NO BANNERS, SHEETING OR NETTING TO BE FIXED TO THE SCAFFOLD

PEDESTRIAN PROTECTION

PROTECTION TO THE PUBLIC MUST BE MAINTAINED IN ACCORDANCE WITH SG34:17 & TG20:13

RISK

ALL BOARDS TO BE ADEQUATELY SECURED IN THE EVENT OF HIGH WINDS

CLASS B COUPLERS

ALL CONNECTIONS TO BE MADE WITH CLASS B COUPLERS
CLASS B COUPLER: SWL = 9.1kN

Legend

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- Standard
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dimensions as per drawing



Client:



BDS

SCAFFOLD DESIGN SPECIALISTS

T: 0800 270 7998 E: info@buckleydesigns.co.uk

Project: 34 - 36 King Street, Manchester
Drawing Title: Independent Access Scaffold

Drawn by: Rob Forster Draft: N/A
Signed: Approval: 14/11/2019
Construction: TBC

Checked by: Lee Buckley Date: 14/11/2019
Signed:

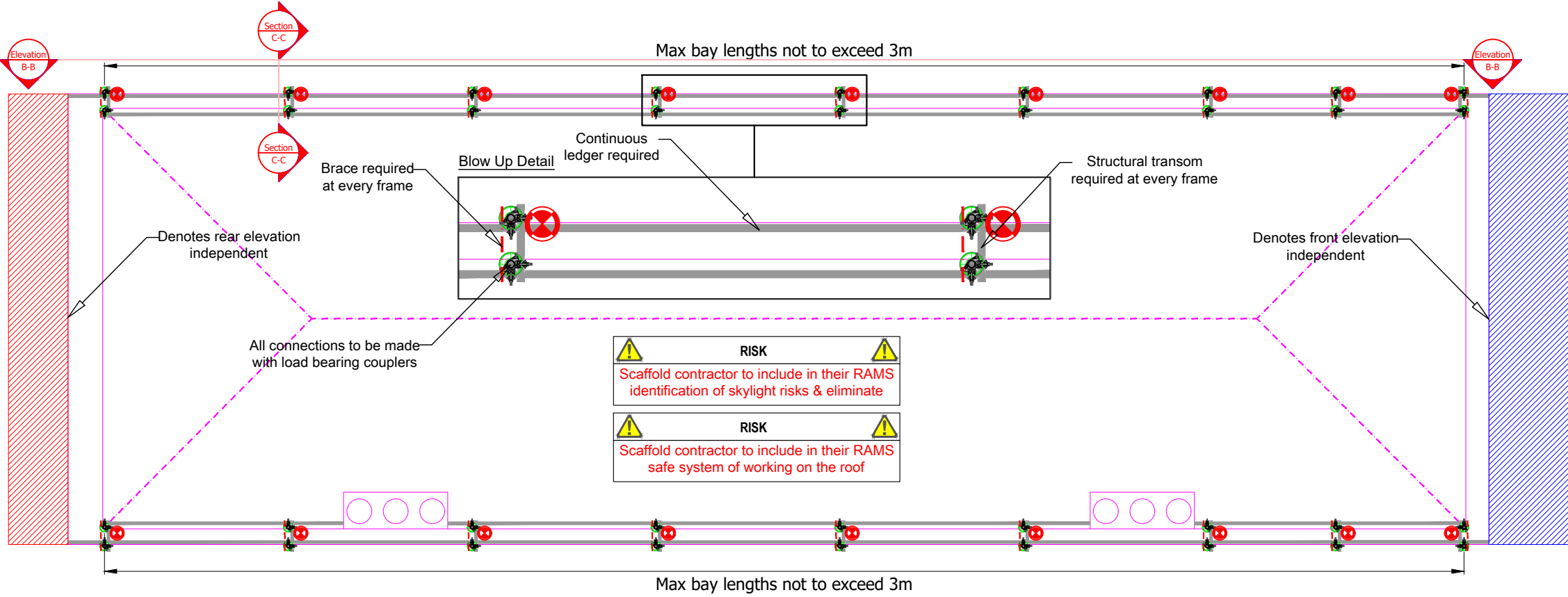
Drawing No. BDS-5554-03 Revision B

Drawing Scale: N/A

Revisions:	
A	General Arrangement Page Added 15/11/2019
B	Roof Edge Protection Introduced 19/11/2019
C	N/A N/A
D	N/A N/A
E	N/A N/A

DIMENSIONS
NO SURVEY DRAWINGS SUPPLIED THEREFORE ALL BUILDING DIMENSIONS ARE APPROXIMATE

Plan A-A
(Edge Protection)



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LADDER ACCESS TO BE INSTALLED IN ACCORDANCE WITH SG25:14 (omitted for clarity)

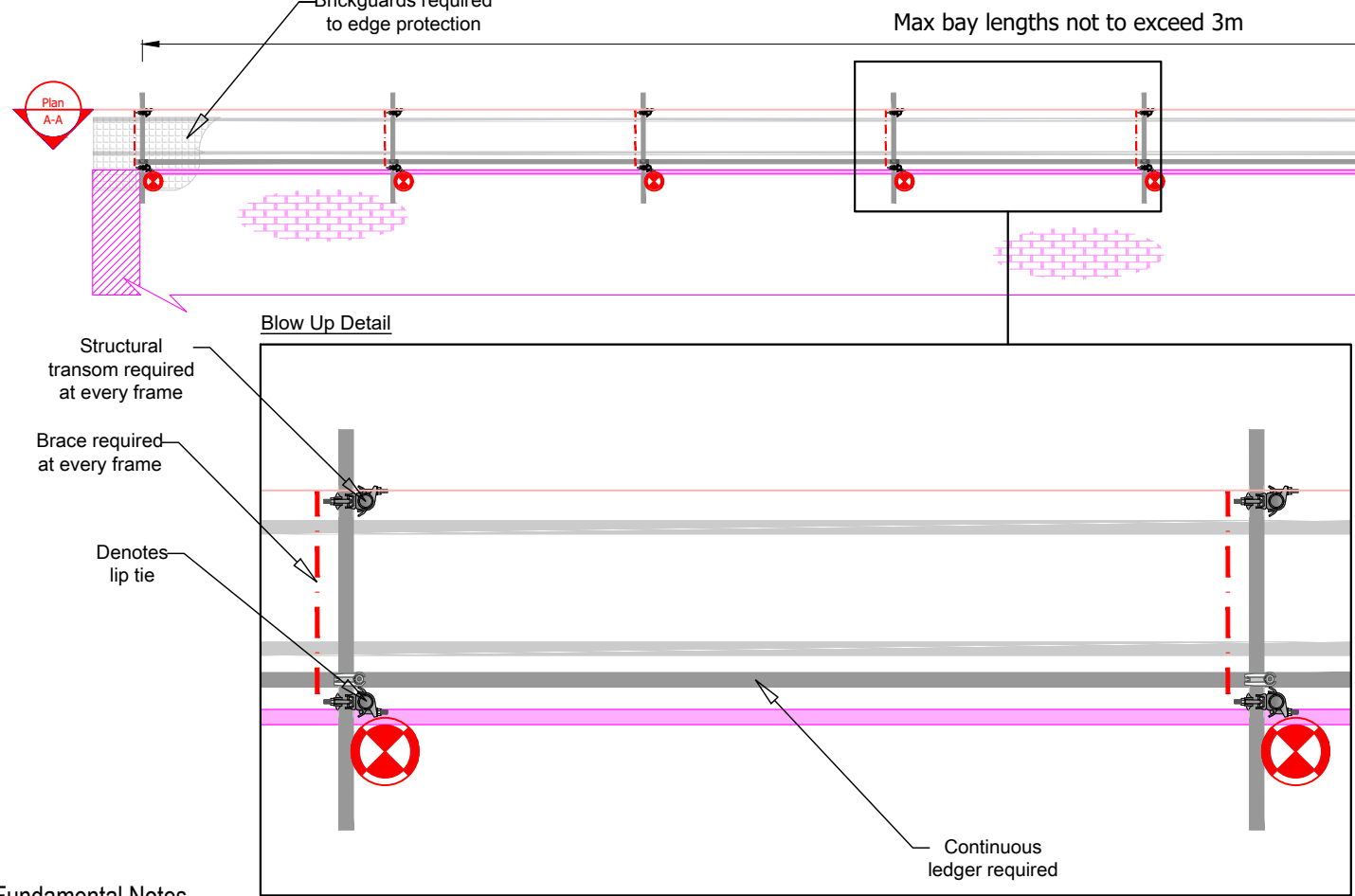
RISK
NO BANNERS, SHEETING OR NETTING TO BE FIXED TO THE SCAFFOLD

PEDESTRIAN PROTECTION
PROTECTION TO THE PUBLIC MUST BE MAINTAINED IN ACCORDANCE WITH SG34:17 & TG20:13

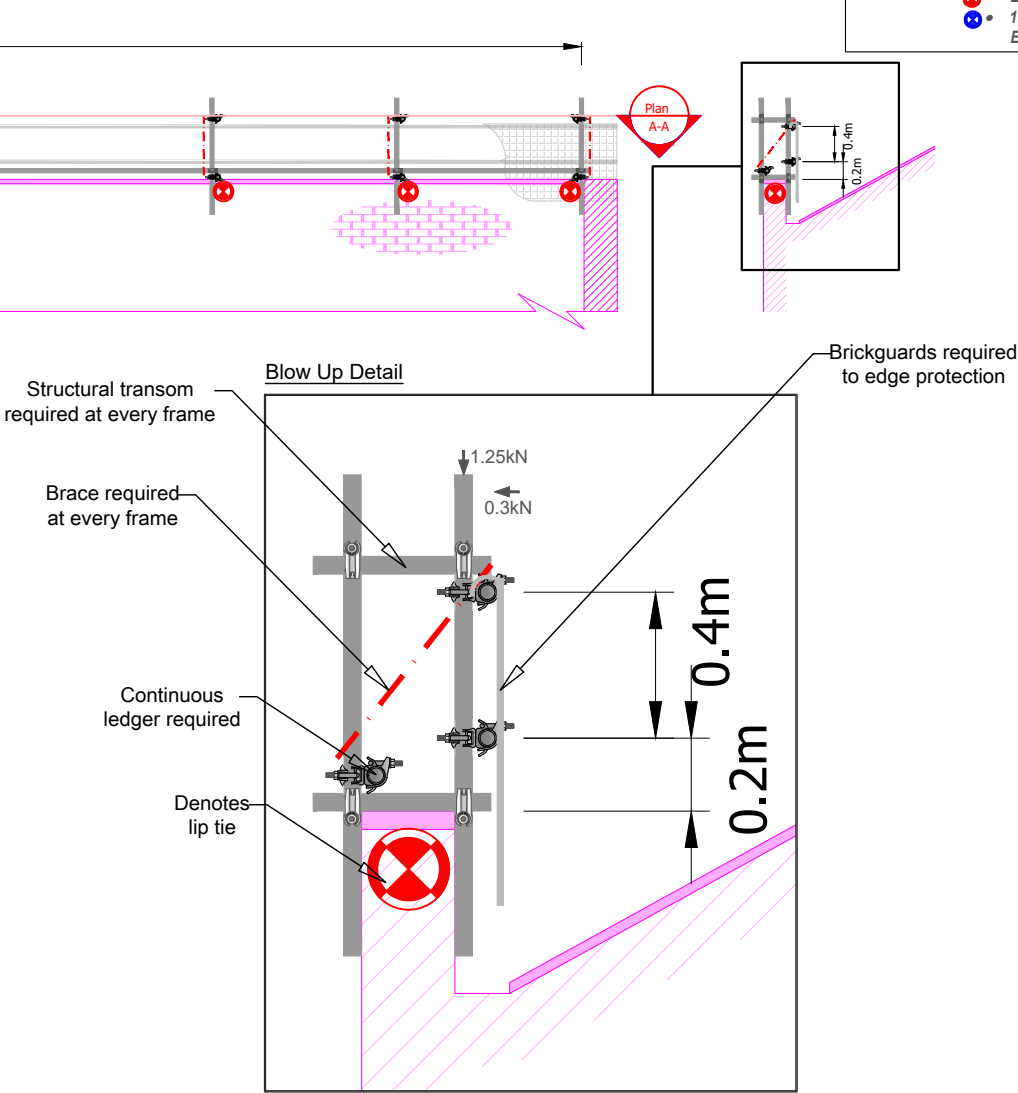
RISK
ALL BOARDS TO BE ADEQUATELY SECURED IN THE EVENT OF HIGH WINDS

CLASS B COUPLERS
ALL CONNECTIONS TO BE MADE WITH CLASS B COUPLERS
CLASS B COUPLER: SWL = 9.1kN

Elevation B-B
(Edge Protection)



Section C-C
(Edge Protection)



- Fundamental Notes**
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Please print all drawings in colour A3 min
Drawing not to scale
dimensions as per drawing



Project: 34 - 36 King Street, Manchester
Drawing Title: Independent Access Scaffold

Drawn by: Rob Forster
Signed: [Signature]
Checked by: Lee Buckley
Signed: [Signature]

Draft: N/A
Approval: 14/11/2019
Construction: TBC
Date: 14/11/2019

Drawing No.		Revision
BDS-5554-04		B
Drawing Scale: N/A		
Revisions:		
A	General Arrangement Page Added	15/11/2019
B	Roof Edge Protection Introduced	19/11/2019
C	N/A	N/A
D	N/A	N/A
E	N/A	N/A

DIMENSIONS
NO SURVEY DRAWINGS SUPPLIED THEREFORE ALL BUILDING DIMENSIONS ARE APPROXIMATE

Cundall Johnston & Partners LLP

One Carter Lane London EC4V 5ER
United Kingdom Tel: +44 (0)20 7438 1600

Asia Australia Europe MENA UK and Ireland
www.cundall.com

