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King's Cross Station Redevelopment Programme

Phase II Temporary Service Yard, Option Arrangements

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King's Cross Station Redevelopment Programme

Phase II Temporary Service Yard, Option Arrangements

Concept Report

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1 Introduction

Arup has been commissioned by Network Rail King's Cross Station Redevelopment Programme team to undertake consultancy services for the King's Cross Station Redevelopment.

Part of this commission included the reconfiguring the existing "West Yard" service area that serves both King's Cross Mainline Station and Sub-urban Platforms, to facilitate the first tranche of piling works for the "Network Rail Plant Room".

On 12th April 2006, Arup was instructed to investigate a subsequent service yard arrangement (Phase II) to facilitate the second tranche of piling works.

On 24th April 2006, Arup met with Network Rail and outlined the potential options for the Phase II temporary service yard that had been developed. Subsequently, Arup was further instructed to prepare a functional specification for each option.

On 21st May, Arup's scope was increased to assess the viability of an off-site delivery centre and analyse refuse collection alternatives.

Consequently, this report has been prepared and comprises a brief commentary, analysis, recommendations, functional specification and concept drawing for each of the Phase II temporary service yard options that have been considered. In addition, historical and existing service yard layout drawings have been included for comparison.

2 West Yard Servicing

The King's Cross area is currently undergoing considerable regeneration by various developers and land owners.

Prior to any works commencing, the servicing arrangements for King's Cross Mainline Station and Sub-urban Platforms were directly from Cheney Road (now stopped up) know as the West Yard [refer to *Appendix A1*].

As part of London Underground Limited's (LUL) redevelopment of King's Cross Underground Station, the West Yard was formalised [refer to *Appendix A2*].

During the proposed construction works, associated with redevelopment by Network Rail (King's Cross Station Redevelopment) and Argent (King's Cross Central regeneration), the servicing arrangements will require reconfiguring in several phases to maintain servicing, prior to its ultimate relocation to the Network Rail Plant Room (basement area of the proposed plot A1).

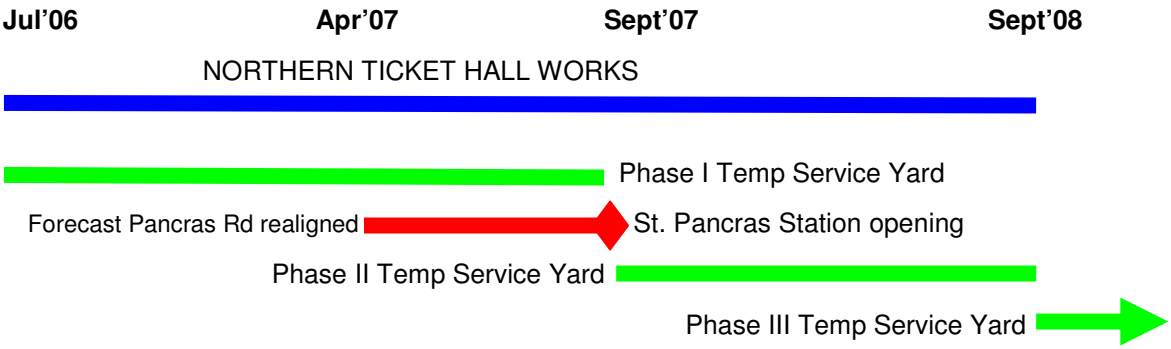
Network Rail's "Functional Specification" and requirements for the West Yard are contained in *Appendix A7*. The schedule describes the current situation, the interim arrangements required during Network Rail's construction phase and the provision in the final scheme (Network Rail Plant Room). This information will be included in the Tripartite Agreement.

The first phase (refer to *Appendix A3*) "Phase I temporary service yard" was implemented in July 2006 and will be required until September 2007 to carry out service diversions and the first tranche of piling the Network Rail Plant Room. The Phase II temporary service yard will be required for approximately one year, from September 2007 when the second tranche of piling will be undertaken.

It should be noted that the service yard will require a further temporary arrangement (Phase III) when it will be necessary to relocate it onto the new roof slab of the Network Rail Plant Room.

LUL's Northern Ticket Hall worksite hoarding forms the southern boundary to the West Yard and is to be maintained until the Northern Ticket Hall worksite is handed over to Network Rail on 1st September 2008.

As part of the King's Cross Central regeneration by Argent, Pancras Road is to be realigned preferably by October 2007 (in whole or part). Therefore, the Phase II temporary service yard options have been prepared in order to accommodate the potential realignment of Pancras Road during this period.



3 Temporary Service Yard Options

3.1 Option A – Realignment prior to CTRL opening

3.1.1 Road Layout Description

Option A [refer to *Appendix A4*] assumes that Pancras Road is realigned by October 2007, thus releasing the land previously occupied by the existing Pancras Road highway.

3.1.2 Functional Specification

- Area = 1150m² (excluding pedestrian routes);
- One 16.5m articulated vehicle loading bay (during the times when articulated delivery vehicles are not present, the assigned bay can be utilised by smaller delivery vehicles under marshalling);
- Four 7.5 tonne vehicle loading bays;
- Three disabled parking bays;
- Four short stay parking bays;
- One informal taxi set-down / pick-up bay;
- Compactor area;
- Bin store
- Delivery Marshall kiosk;
- Street lighting and CCTV coverage.

3.2 Option B –Pancras Road Realignment beyond CTRL Opening

3.2.1 Road Layout Description

Option B [refer to *Appendix A4*] assumes that Pancras Road is on its current alignment and that the realigned Pancras Road and "The Boulevard" are not constructed. Although this is advantageous as it removes the linkage with the realignment of Pancras Road, it does mean that there is insufficient space to accommodate the same number of loading bays as provided in Options A and C.

Section 4 of this report sets out the operational concepts that would be required to maintain servicing within the constraints of Option B.

3.2.2 Functional Specification

- Area = 540m² (including lay-by area on Pancras Rd (excluding pedestrian routes);
- One transit van loading bay;
- One 7.5 tonne vehicle loading bay within service yard and two 7.5 tonne bays in lay-by;
- Three disabled parking bays;
- Informal taxi / car set down / pick up bay;
- Compactor area;
- Bin store
- Delivery Marshall kiosk;
- Street lighting and CCTV coverage.

3.3 Option C – Partial Permanent Realignment with Temporary Link

3.3.1 Road Layout Description

Option C [refer to *Appendix A4*] assumes that part of the realigned Pancras Road and "The Boulevard" are constructed and connects them back into the existing Pancras Road alignment by way of a mini-roundabout. A mini-roundabout is proposed at the junction, as visibility constraints would prevent a typical priority junction.

3.3.2 Functional Specification

- Area = 920m² (excluding pedestrian routes)
- Articulated vehicle deliveries possible night-time only;
- Four 7.5 tonne vehicle loading bays;
- Three disabled parking bays;
- Four short stay parking bays;
- Informal taxi set-down / pick-up bay;
- Compactor area;
- Bin store
- Delivery Marshall kiosk;
- Street lighting and CCTV coverage.

3.4 Common to Options A, B and C

- Parking for British Transport Police (BTP) vehicles is provided at the southern end of Pancras Road, above LUL's Tube Ticket Hall, as part of the temporary BTP compound. Consequently, no further BTP parking is proposed within the temporary service area.
- As cycle facilities are provided alongside the Network Rail car park footpath, no further cycle facilities are proposed within the temporary service area.
- Emergency vehicle access and rendezvous point maintained.
- Existing pedestrian route from the Sub-urban Platforms to Pancras Road maintained.
- It is recommended that the Delivery Marshall is maintained to oversee co-ordinate deliveries, especially during peak periods.
- Existing LUL/MRSSL Northern Ticket Hall (NTH) hoarding line is retained in current location, as shown in *Appendix A4*.

4 Satellite Servicing Centre Concepts

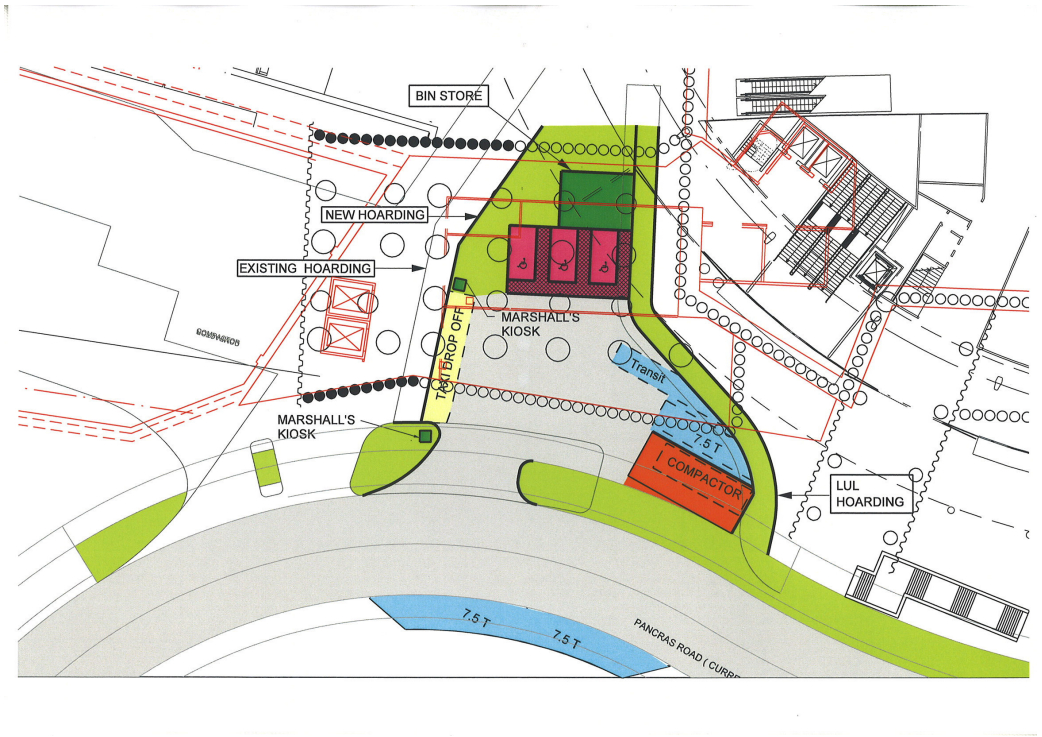
4.1 Objectives

Option B [refer to *Appendix A4*] assumes that the Temporary Service Yard is commissioned before Pancras Road is realigned. Although this is advantageous as it removes the linkage with the construction of Pancras Road, Option B does not possess sufficient space to accommodate the same number of loading bays as the present configuration.

This section sets out the operational concepts that would be required to maintain a servicing operation within the constraints imposed by the reduced number of loading bays in Option B.

This section first reviews the demand for servicing space based on a survey carried out by Network Rail in May 06 and then sets out a number of operation options to control deliveries. This is followed by a set of recommendations and suggested locations for the space required.

Figure 1: Layout of option B



4.2 Demand

A survey of deliveries to King's Cross Station was made in May 2006 (refer to *Appendix A6*). The pattern of deliveries is fairly typical of a mixed retail and office development, in that it shows a full range of delivery types from ad hoc van deliveries of small quantities of parcels to time-critical deliveries of large quantities of perishable goods in articulated lorries.

The pattern of scheduled deliveries is relatively evenly spaced over the week, with a small reduction at weekends. Ad hoc deliveries add variability (Table 1), but only account for a small proportion of the volume delivered.

	Monday	Tuesday	Wednesday	Thursday	Friday	Weekend
Regular deliveries	61	53	58	58	55	44
Regular deliveries as % of weekly total	18%	16%	18%	18%	17%	14%
All deliveries[1]	72	65	65	71	67	46
All Deliveries as % of weekly total	19%	16%	17%	18%	17%	13%

Table 1: Delivery Profile by Day of the Week

The majority of deliveries are made by small and medium vans (Table 2).

	Transit	7.5 tonne	Artic	Variable
Day	53	97	28	81
Night (pre- 7 a.m.)	62	13	43	9
Total	115	110	71	90

Table 2: Delivery Profile by Type of Vehicle and Day or Night Delivery (weekly)

Many articulated lorries deliver overnight or in the early morning to avoid traffic in the area, however a surprisingly large number of artic deliveries (28 no. from Table 2) take place during the day. These daytime artic deliveries are made up of deliveries to two tenants, ISS Facility Services (20) and Whistlestop (8).

Figure 2 shows that the majority of regular deliveries are completed by 9 a.m. The service yard operates at capacity between 6 a.m. and 9 a.m., when up to 15 deliveries are received per hour.

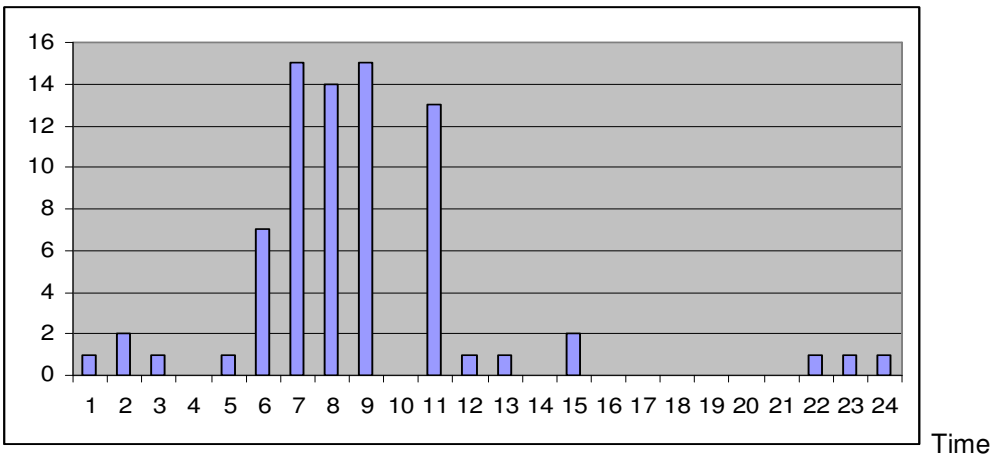


Figure 2: Frequency of Delivery by Time of Day (24hr clock)

[1] Ad hoc deliveries have been added in a random pattern on two days per week.

4.3 Availability of Loading Bays

Option B provides one 7.5 tonne loading bay, one Transit loading bay and a compactor bay. There is insufficient space to provide a separate loading bay large enough to accommodate an articulated lorry.

Swept path analysis (refer to *Appendix A5*) shows that an articulated tractor with a 13.5m trailer can access the temporary service area if it straddles the Transit and 7.5 tonne bays. HGV deliveries are therefore not possible concurrently with deliveries by smaller vehicles.

Furthermore, an articulated vehicle would have to reverse into the temporary servicing area from Pancras Road, which should not be attempted without assistance and is not likely to be practical during busy periods.

4.4 Operational Methodology

There are two options to the successful operation of Option B:

- Cross docking deliveries remotely
- The marshalling of vehicles to prevent congestion and to optimise loading bay utilisation

Both of these assume the separation of HGV deliveries from deliveries by smaller vehicles.

The separation of HGV deliveries can be achieved by restricting the HGV access to the servicing area to night-time only. Since the majority of HGV deliveries already take place before 7 a.m., and those that do not are associated with only two tenants, this is not thought to present a significant obstacle to be overcome.

To ensure that the servicing area is made available for other users, the last HGV should leave the area by 6 a.m. at the latest.

HGV's would be obliged to reverse into the servicing area and would straddle the 7.5 tonne and Transit delivery bays. Vans delivering at night when an HGV was unloading would have to park on the external road and handball their loads into the servicing area.

Night-time deliveries should be controlled by issuing timed delivery slots throughout the night, with an appropriate system of penalties for overstaying and late arrival.

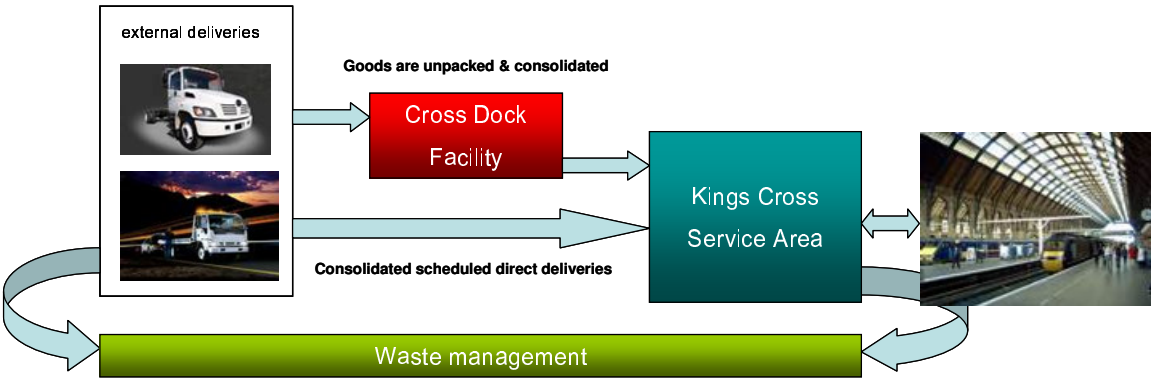
4.5 Cross dock operation

A cross dock operation is used to consolidate a number of small deliveries into a larger bulk delivery. The operation is, at its most simple, to offload from one vehicle, move the goods across the dock to a larger vehicle and deliver in the larger vehicle once it is full. Cross dock facilities do however include other operations such as storage, unpacking, pre-labelling, hanging garments on rails ready to go into shops, dealing with returns, dealing with waste, etc.

For Kings Cross, it is suggested that larger deliveries that already have been consolidated and have been scheduled to arrive outside of busy periods (as suggested above), would not make use of the cross dock operation but would be allowed to deliver directly to Kings Cross. The process flow would therefore be as shown in figure 3 below.

The area required for the cross dock operation has been estimated to be in the region of 200m² on the assumption that this is a very simple operation (This excludes vehicle manoeuvring space). Including an allowance for rent, required staff and vehicle hire the cost of this operation for the year could be in the region of £220,000.

Figure 3: Cross dock operation



Many parcel carriers and freight forwarders use the Cross Dock operation as part of their supply chain.

The benefits of Cross Dock operation are as follows:

- Reduction in vehicle mileage
- Reduction in drivers' hours
- Improved security
- Reduced emissions
- Reduced noise and disturbance
- Improved waste recovery through backhaul operations (dry waste)

The feasibility of a cross dock operation was reviewed as part of the study and there are number of disadvantages:

1. Responsibility for goods in transit (insurance, liability and security)
2. Range of storage requirements (ambient, chilled, frozen)
3. Low utilisation of consolidated trailer (operation is low volume)
4. High cost to Network Rail compared to marshalling solution

4.5.1 Location of the holding area

The driving time between the holding area and the servicing area should be no longer than approximately 15 minutes. Longer transit times would be unreliable in traffic and would potentially create unacceptable delays to the carriers.

Further consideration on the location of the holding area requires discussion of

- The availability of land within 15 minutes driving time
- The costs of securing the use of the land for the duration of Phase II
- Minimisation of disruption to the replenishment process
- Security
- Insurance and Liability

4.5.2 Potential Site

Euston

Following the withdrawal of the Royal Mail from Euston station, the loading facilities used to transfer mail from HGVs to trains have been vacated. British Transport Police are expected to move into some part of the vacant premises, but the future use of the loading bays is unclear.

Euston would offer a number of advantages:

- No external rent for space
- Separation from construction site traffic
- Existing infrastructure (restrooms, catering, telephones, communications, etc)
- Security (CCTV, Police, etc.)
- Simplified Insurance and Liability situation
- Synergy with other deliveries to Network Rail and its tenants at Euston

The principal disadvantage is that the driving time from Euston Station to King's Cross Station can often be greater than 15 minutes, due to congestion on Euston Road. This can certainly occur during AM and PM peak periods.

4.6 Marshalling

4.6.1 Proposed operation

The number of deliveries during the day is much higher than those during the night. For Transit vans, Option B permits a maximum of two concurrent deliveries. Similarly, 7.5 tonne vans can only deliver one at a time.

The variability of traffic flow in London by day is such that a system of timed delivery slots would not be workable during daylight hours. Control can only be applied over short distances when driving times can be reliably estimated between origin and destination.

Although the service area is virtually unused during the afternoon, the morning peak is dominated by time-critical deliveries and deliveries of perishable goods which cannot be delayed until the afternoon. The opportunity to reduce the morning peak is therefore extremely limited.

Vehicles intending to deliver to King's Cross during the day should be required to report to a nearby holding/lay-by area to be booked in, held until a bay is available and dispatched to the servicing area to unload.

This system is conceptually similar to that used to marshal taxis and will require similar management control and communications.

The temporary service area would require two marshals (banksmen) for the night shift (2000hrs – 0600hrs) and two or three during the day. A similar number of personnel would be required at the satellite holding area during the day only (0600hrs - 1600hrs).

The capacity of the holding area should match the current maximum capacity of the servicing yard.

The equivalent of four 7.5 tonne bays, two within the service area and two within the marshalling area is required, plus facilities for marshalling and communication (i.e. two-way radios). A marshall's kiosk would be required to provide shelter and storage of spare two-way radios.

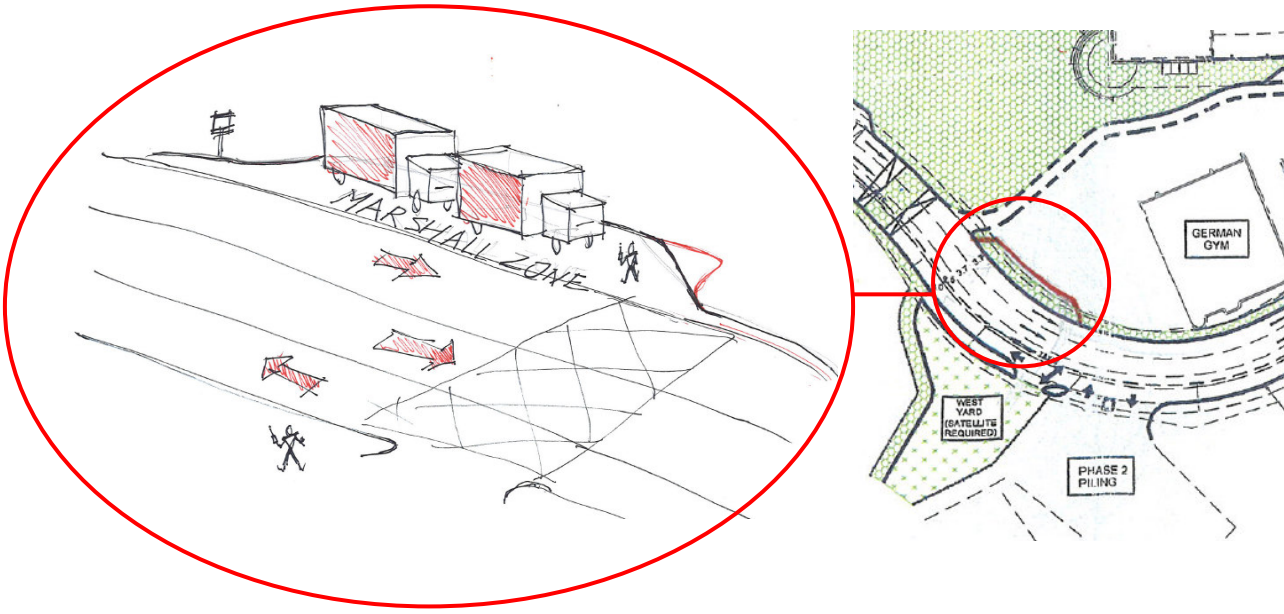
4.6.2 Location of marshalling area

It may be possible to locate a suitable marshalling area on Pancras Road with the agreement of the local highway authority (*see Figure 2*). The controlled lay-by area on the west side of the road would be monitored by two marshals, one on either side of the road to check oncoming traffic movements. The marshalls can be notified at any time when a bay within the service area is available to allow awaiting vehicles to be released from the marshalling zone.

This has been informally discussed with the London Borough of Camden who do not have any initial objections to the proposal.

With regard to approximate budgetary estimates, the road side marshalling could be in the region of £60,000 to implement compared to £220,000 of a cross dock operation. It should be noted that these figures are pro-rata estimates based on previous similar projects.

Figure 2 – Proposed sketch and location of the road side marshalling area [Option B]



4.7 Recommendations

The road side marshalling solution presents a cheaper solution that will be easier to control than the cross dock operation. It also maintains the current servicing strategy relatively unchanged and removes any issues with delayed deliveries and liability.

A preliminary study of the surrounding roads has shown that the area in front of the proposed servicing area of Option B should be available and early discussions with the London Borough of Camden have indicated that there should be no objections to this scheme.

If this solution is acceptable to Network Rail, it is proposed that detailed drawings be prepared with a management strategy, which can then be formally presented to the council. Discussions will also be required with the tenants to review the changes and ensure that large deliveries are made outside of peak hours.

5 Refuse Collection

5.1 Current Operation

If the proposed cross dock operation or marshalling solutions (refer to Section 4) cannot be implemented, then the location of the compactor shown in Option B will have to be changed to provide a further loading bay. If one of the proposed servicing solutions is implemented then it may be possible to operate Option B and keep the compactor in the proposed location, however relocating the compactor would make the servicing solution much more flexible and easier to operate.

A number of alternative operations and locations are explored below.

5.2 Current Operation

The King's Cross Station waste management teams deal with waste generated by retail, office, catering and OBS areas, as well as waste from the trains. Currently, it is believed that there are 3 different internal waste contractors:

- Station/ Train cleaners
- Shop & Ticket office cleaners
- Main office cleaners

The current system of operation uses eurocarts for local storage, which when full are taken to the 30m^3 compactor in the forecourt either by using an electric vehicle (EV) to tow 3 eurocarts or by pushing the eurocarts one at a time. The compactor is collected on a daily basis usually between 8pm and 3am.

Currently, segregation is limited to only paper from the offices and is dealt with separately by an external contractor. All other waste is placed in the compactor.

5.3 Proposed alternatives

5.3.1 Remote compactor

The fact that many of the eurocarts are already moved using an electric vehicle means it would be relatively easy to use a road licensed EV to move the eurocarts to a remote compactor.

A road licensed tug usually requires the addition of lights, indicators and mirrors, and it is believed that one of the current waste contractors (Initial) currently has a suitable vehicle at Kings Cross. Reflectors will also be required on the eurocarts. If a suitable EV is not available then there are a number of options (these are budget figures provided as a guide only):

- Buy a new road worth EV £5,500 + VAT
- Lease an EV £450/month + VAT
- Adapt one of the existing EV £500 + VAT

For the location of the compactor, it is proposed that, despite being roadworthy, the eurocarts should not be towed along Euston Road and the compactor should be located within ½ mile. This would therefore suggest a location further north along Pancras Road, possibly on or near the Argent site.

5.3.2 Additional collections

In order to provide additional space, a smaller compactor container could be used. Consequently, additional collections would be necessary.

As noted above, the 30m³ compactor container is already being collected every day, the use of a smaller compactor container (say 10m³) would require additional daily collections without really releasing a significant amount of space. Assuming the same compactor unit is used, the container will reduce by approximately 2.5m in length.

This would require possibly three daily collections and could triple collections costs. It would also increase the level of management required for waste disposal at King's Cross Station to ensure compactors containers are full at the right time for collection.

The collection vehicle will however be much smaller and more manoeuvrable, which will allow the compactor to be located in a tighter space.

5.3.3 Remove the compactor

This option is based on having a dustcart collection for eurocarts rather than a collection for the compactor. The advantages are that the eurocarts can be located in an enclosure located within 10m of where the dustcart stops to load (council requirement), which is more flexible than accommodating a 30m³ compactor and associated manoeuvring space.

The disadvantages are that to duplicate a 30m³ compactor, approximately 120 eurocarts will have to be emptied everyday, which will require a room a minimum of 150m² (based on 3 collections of 40), and collection costs will increase (estimated £110 for compactor per day and £900 for eurocarts per day + VAT).

5.3.4 Make use of other facilities

With St Pancras just next door, there may be a possibility of temporarily making use of the waste storage facilities being provided at St Pancras. Eurocarts could then be moved across as described in section 5.3.1.

5.4 Recommendations

If the proposed cross dock operation or marshalling solutions (refer to Section 4) cannot be implemented, then the location of the compactor shown in Option B will have to be moved to a new location to provide a further loading bay. A new location for the compactor would need to be investigated, should cross dock and marshalling be disregarded.

From the four alternatives, Arup recommend that either the compactor be moved to another location further north (an area has yet to be determined) or, if a suitable area cannot be identified, the compactor be replaced by eurocarts.

If either the cross dock operation or the marshalling solution be implemented, then relocating the compactor would make the servicing solution much more flexible and easier to operate.

6 Design Development

6.1 London Borough of Camden

A meeting with the London Borough of Camden (LBC) was held on 20th April 2006 to present outline sketches of the options being considered with a view to obtaining early feedback from the Highway Authority.

LBC's initial comments were that earlier Options B, C1 and C2 (now superseded) were feasible with no strong concerns. Option A was not sketched or discussed at this meeting.

Although not sketched, the area currently occupied by the St. Pancras Station temporary taxi facilities was discussed as a suitable location. Should the proposals to utilise this area involve trolleys being manually pushed across Pancras Road (whilst live), then LBC identified that they would have safety concerns.

Arup arranged a further meeting with LBC to ascertain if this location was at all possible. LBC's view was that they would not rule out the option, but would reserve their view until receiving additional information.

As this particular location and its operation is dependant up the alignment of Pancras Road, it is proposed that this location be investigated, if applicable, in conjunction with the separate "Pancras Road Options" study. Discussions with LBC could reopen once a concept layout(s) has been developed.

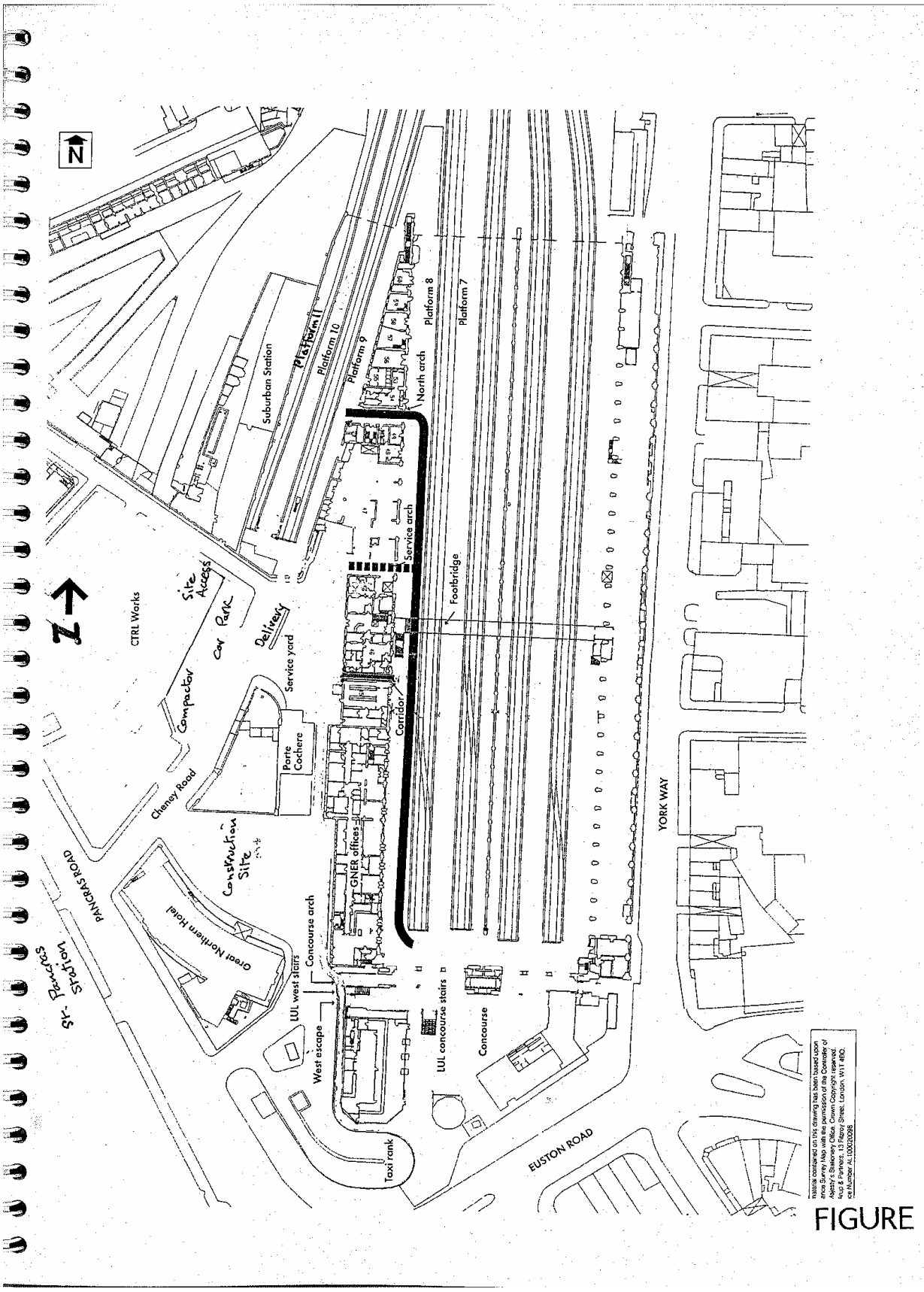
6.2 Next Steps

- As the Phase II temporary service yard options are dependant upon the alignment of Pancras Road, further options may be required to be developed;
- Present King's Cross Station Redevelopment Programme Team's preferred option(s) to Network Rail (Station Management and TOC's) and LBC;
- Develop concept layout of preferred option(s) into Scheme Design (incorporating improvements to concept layout where feasible). It should be noted that confirmation of the Network Rail Plant Room roof slab construction joints will be required to develop Scheme Design;
- Develop Scheme Design into Detailed Design.

Appendix A

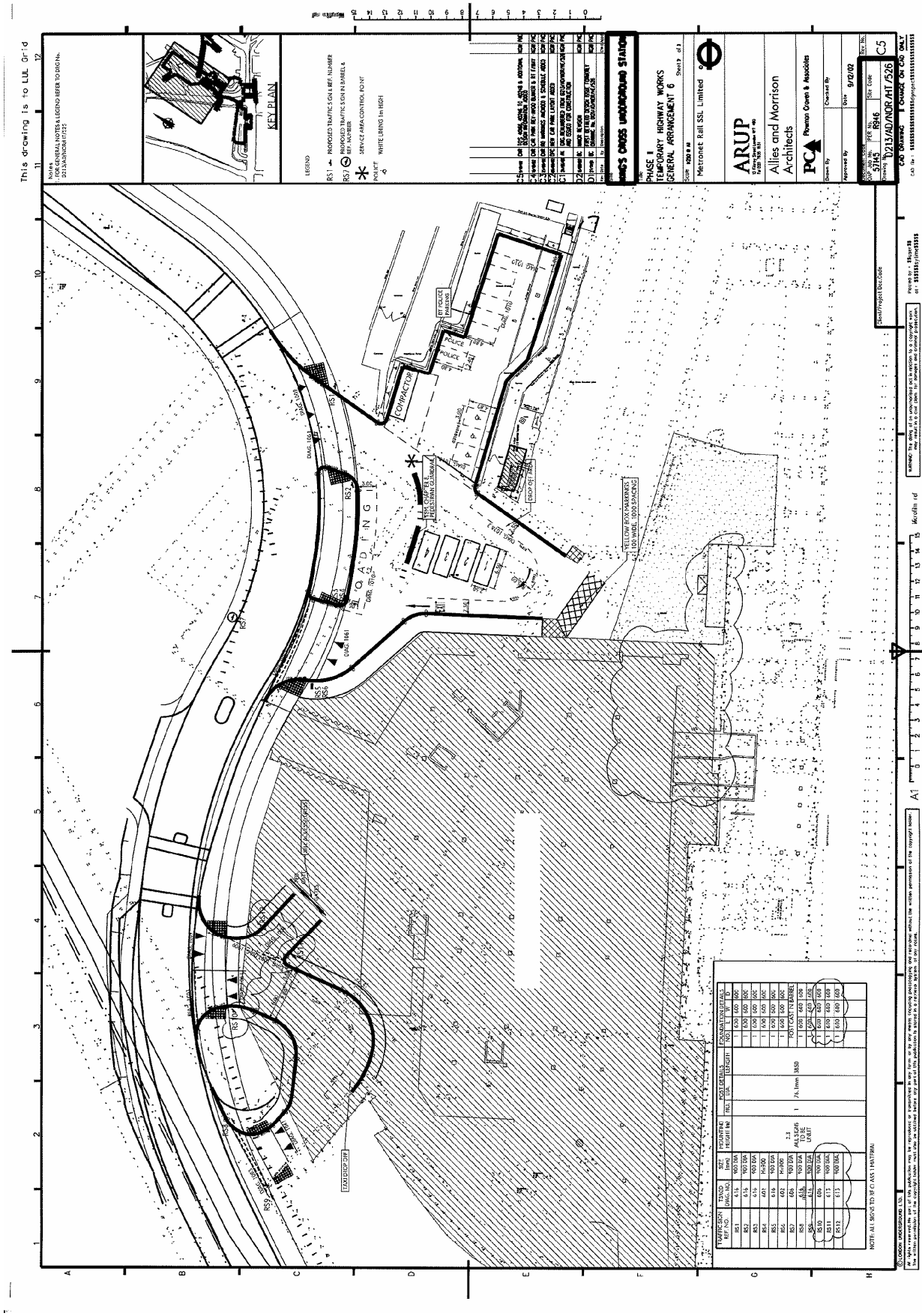
Figures

A1 Original Service Area – Cheney Road

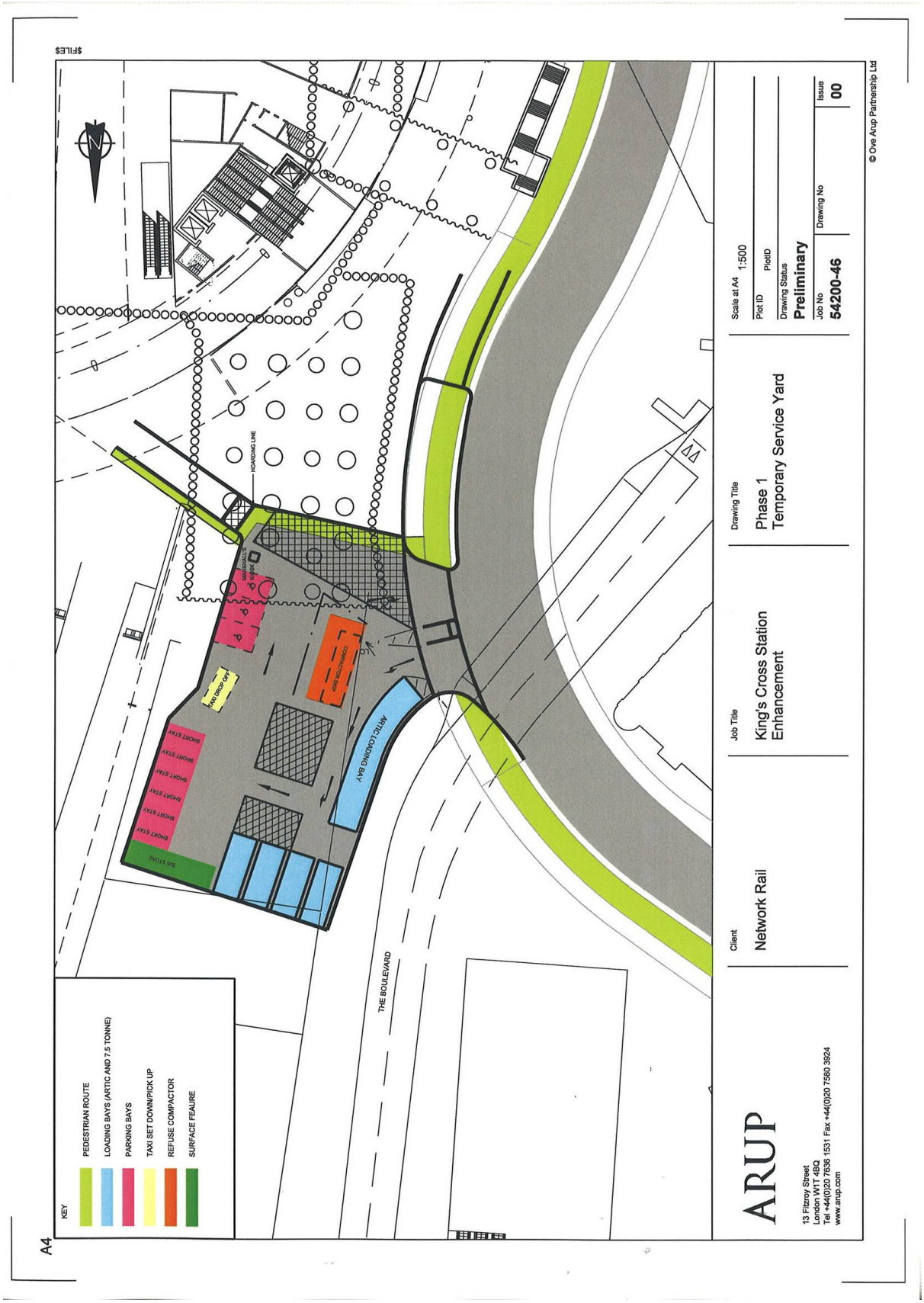


FIGURE

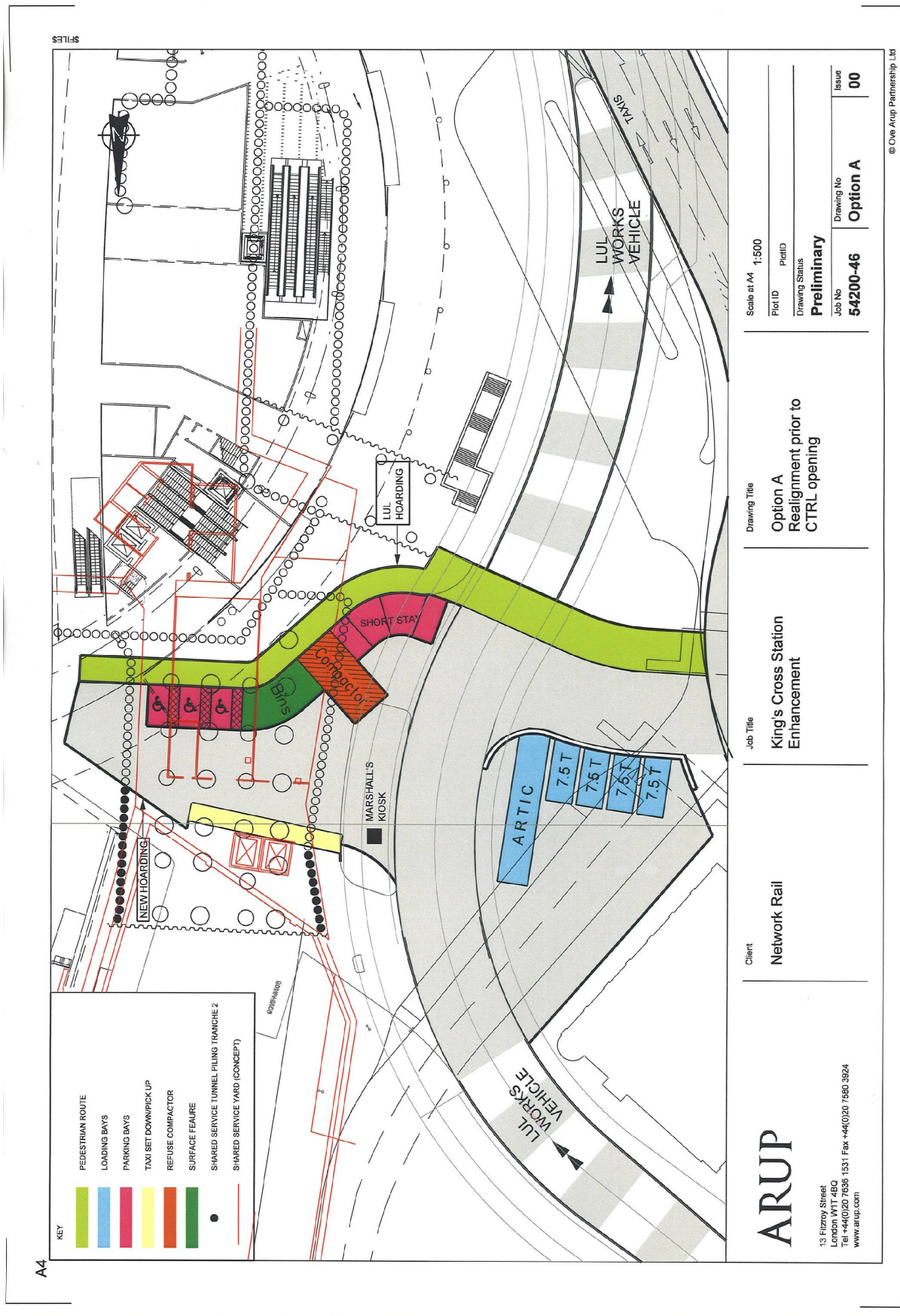
A2 Existing Service Yard (1310m²)

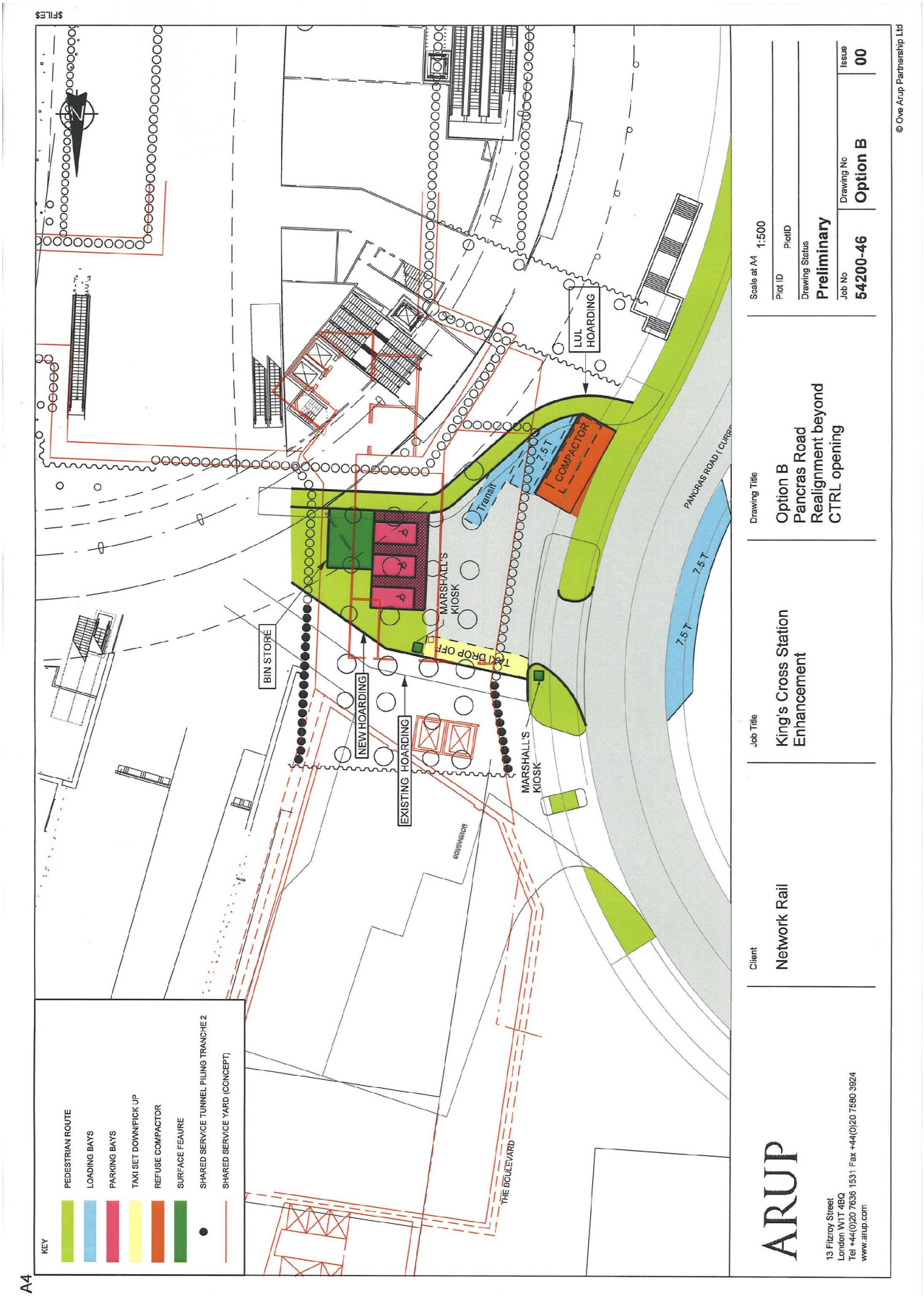


A3 Phase I Temporary Service Yard (1160m²) [CURRENT LAYOUT]



A4 Phase II Temporary Service Yard Options

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PARKING BAYS
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SURFACE FEAURE
SHARED SERVICE TUNNEL PILING TRANCHE 2
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BIN STORE
NEW HOARDING
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MARSHALL'S KIOSK
THE BOULEVARD
ARUP
13 Fitzroy Street
London W1T 4BQ
Tel +44(0)20 7636 1531 Fax +44(0)20 7580 3924
www.arup.com
Client
Network Rail
Job Title
King's Cross Station
Enhancement
Drawing Title
Option B
Pancras Road
Realignment beyond
CTRL opening
Scale at A4 1:500
Plot ID PlotID
Drawing Status
Preliminary
Job No
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Drawing No
Option B
Issue
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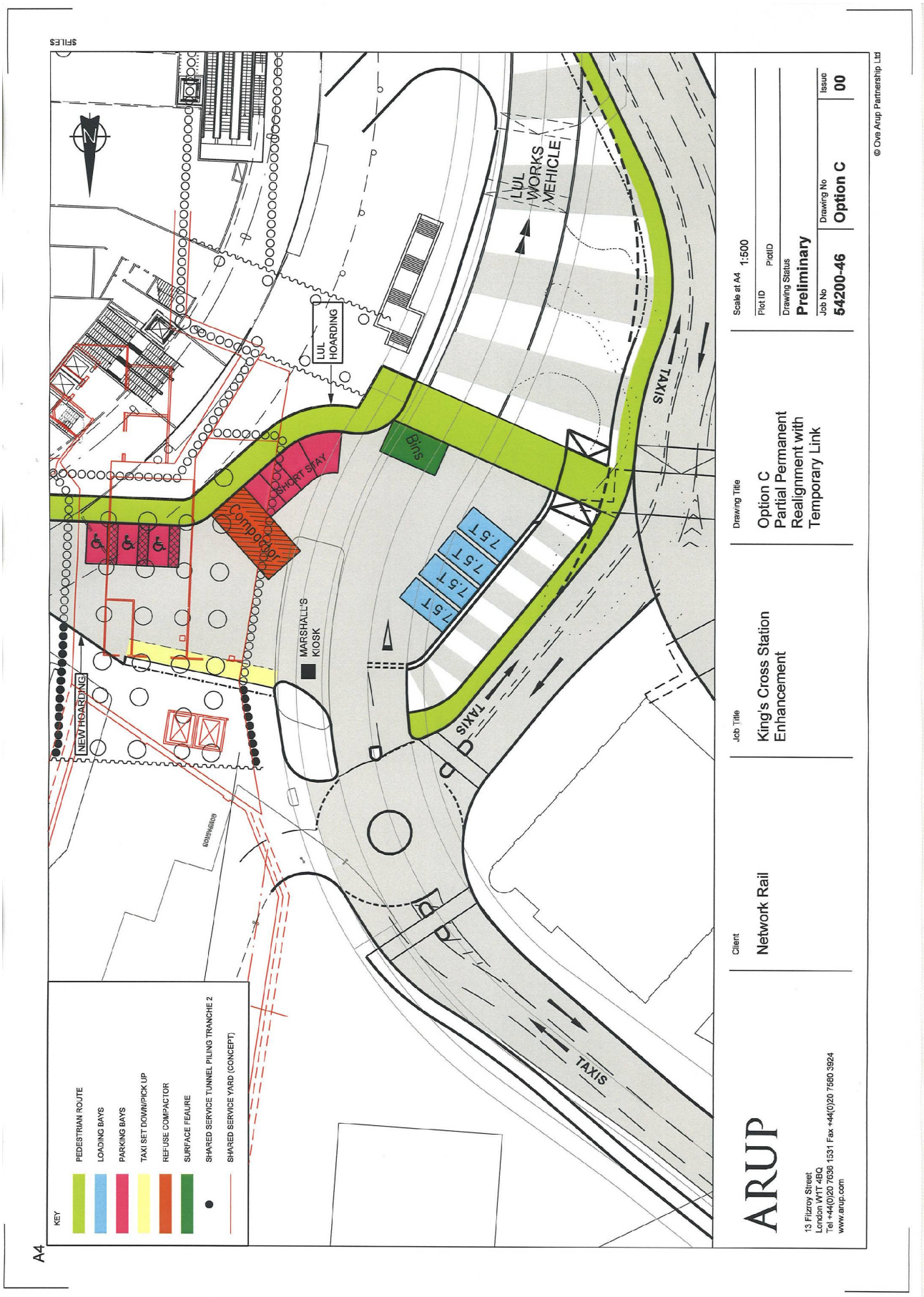
A4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PEDESTRIAN ROUTE
LOADING BAYS
PARKING BAYS
TAXI SET DOWN/PICK UP
REFUSE COMPACTOR
SURFACE FEAURE
SHARED SERVICE TUNNEL PILING TRANCHE 2
SHARED SERVICE YARD (CONCEPT)
A4
ARUP
13 Fitzroy Street
London W1T 4BQ
Tel +44(0)20 7636 1531 Fax +44(0)20 7580 3924
www.arup.com
Client
Network Rail
Job Title
King's Cross Station Enhancement
Drawing Title
Option C
Partial Permanent Realignment with Temporary Link
Scale at A4 1:500
Plot ID PlotID
Drawing Status
Preliminary
Job No
54200-46
Drawing No
Option C
Issue
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A5 Option B – Articulated Vehicle Manoeuvre

A6 West Yard Delivery Schedule (May 2006)

Name of receiving company	Name of delivery company	Day(s) of delivery	Time(s) of delivery	Size of delivery	Size of vehicle	Time to deliver
AMT Coffee	Andronica	Tuesday/Friday	08.30 - 13.30	2/3 Pallets	7.5 tonne	30 - 45 mins.
Boots	Boots DC	Sunday - Friday	00.00 - 04.00	15 Boxes	Transit	20 mins.
Bureau de Change	Securitas	Wednesday	09.00 - 12.00	1 Box	Transit	10 mins.
Burger King	Gray's (collect waste oil) Various Couriers	Twice per week Monday - Friday	06.00 - 07.00 Ad hoc	Varies Varies	Varies Varies	Varies Varies
Duke of York	Fullers TradeTeam Bibendum Coors	Tuesday Thursday Ad hoc	06.00 - 08.00 10.00 - 14.00 Ad hoc	20 Pallets 1 Pallet Varies	7.5 tonne 7.5 tonne Varies	2 hrs. 45 mins. Varies
FCC	DHL Corporate Express Etrinsic Greenhams	Sunday - Saturday Monday - Friday Monday - Friday Monday - Friday	08.00 - 18.00 08.00 - 18.00 08.00 - 18.00 08.00 - 18.00	1 - 120 Boxes 1 - 120 Boxes 1 - 120 Boxes 1 - 120 Boxes	Transit - 7.5 tonne Transit - 7.5 tonne Transit - 7.5 tonne Transit - 7.5 tonne	Up to 2 hrs. Up to 2 hrs. Up to 2 hrs. Up to 2 hrs.
GNER (Travel Centre)	Securicor DHL Hercules	Monday - Saturday Sunday - Saturday Sunday - Saturday	Ad hoc Ad hoc Ad hoc	Varies Varies Varies	Varies Varies Varies	Varies Varies Varies
GNER	M&S/Exel Eden Catering AK Supply Docqwise Guilbert/Niceday Benrose Booth Initial Washroom Services Jespers Kraft Foods King Express Multitechnic National Rail Supplies Pitney Bowes	Monday - Friday Monday - Friday Ad hoc Ad hoc Ad hoc Ad hoc Ad hoc Ad hoc Ad hoc Ad hoc Ad hoc Ad hoc Ad hoc	10.30 - 12.00 10.30 - 12.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00 09.00 - 17.00	2 - 3 Trays 2 - 3 Trays Varies Varies Varies Varies Varies Varies Varies Varies Varies Varies Varies	Varies Varies Varies Varies Varies Varies Varies Varies Varies Varies Varies Varies Varies	15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins. 15 - 30 mins.
Initial Transport Services	Initial Washroom Services Bunzil	Thursday Once a month	05.00 05.30 - 06.00	Sanitary Bin Swap 4 Pallets	7.5 tonne Artic.	30 mins. 20 mins.
ISS Facility Services	Bunzil Pakex Dudley Stationary TNT Live Wire	Monday - Friday Monday - Friday Monday - Friday Monday - Friday	07.00 - 17.00 07.00 - 17.00 07.00 - 17.00 07.00 - 17.00	1 Box - 3/4 Pallets 1 Box - 3/4 Pallets 1 Box - 3/4 Pallets 1 Box - 3/4 Pallets	Transit - Artic. Transit - Artic. Transit - Artic. Transit - Artic.	Varies Varies Varies Varies
Ixxys Bagels	Bagel Factory	Sunday - Saturday	22.00 - 01.00	10 - 15 Boxes	Transit	15 mins.
Journeys Friend	London Crofters WH Smith News Retail Brake Bros. Journeys Friend H/O Post Office Collection Fish	Monday - Friday Monday - Sunday Monday - Sunday As and when Monday - Thursday Friday Ad hoc	06.00 - 07.00 05.30 05.30 10.00 - 16.00 07.00 09.00 - 16.00 10.00 - 16.00	1 Box 2 - 4 Bundles 1 - 2 Bundles 10 Boxes 4 Cages 2 Bags 1 - 2 Boxes	Transit Transit Transit Transit/7.5 tonne 7.5 tonne Transit/7.5 tonne Transit	5 mins. 5 mins. 5 mins. 5 mins. 30 mins. 5 mins. 5 mins.
lastminute.com	Courier	Monday - Friday Once per week	09.00 - 17.00	2 - 3 Boxes	Transit	10 mins.
LUL	Prestige Securitas Eden CDL	Last Thurs of month Sunday - Saturday Fortnightly Wednesday	08.30 - 15.30 10.00 Off Peak Off Peak	20 Boxes 5 - 20 Boxes 30 - 40 Bottles 10 - 40 Boxes	7.5 tonne 7.5 tonne Artic 7.5 tonne	30 mins. 30 - 60 mins. 60 mins. 30 mins.
Marks & Spencer	GIST (M&S)	Sunday - Saturday Sunday - Saturday	01.30 05.00	22 Pallets 24 Pallets	7.5 tonne 7.5 tonne	1 hr. 1 hr.

Network Rail	Grosvenor	Sunday - Saturday	21.00 - 00.00	1 Large Bin	20+ tonne	20 mins.
	Echo	Ad hoc	07.00 - 17.00	1 Box - 1 Pallet	Transit	1 hr.
	Securitas	Sunday - Saturday	06.00 - 08.00	1 Cage	7.5 tonne	1 hr.
	Guilbert/Niceday	Ad hoc	Ad hoc	5 - 12 Boxes	Transit	30 mins.
	PowWow	Ad hoc	Ad hoc	10 Plastic Bottles	7.5 tonne	30 - 60 mins.
	PowWow	Ad hoc	Ad hoc	Varies	7.5 tonne	10 mins.
	Office Depot	Ad hoc	Ad hoc	Varies	Transit	10 mins.
Rail Gourmet	Tom Granby	Sunday - Friday	23.00 - 04.00	1 - 6 Pallets	Artic	2 hrs.
	Sandwich Factory	Sunday - Saturday	06.00 - 09.00	1 - 2 Pallets	7.5 tonne	45 mins.
	Coca Cola	Monday/Thursday	08.00 - 15.00	1 - 2 Pallets	7.5 tonne	30 mins.
	Bunzl	Wednesday	08.00 - 15.00	1 - 2 Pallets	7.5 tonne	30 mins.
	Fresh Direct	Sunday - Friday	04.00 - 10.00	2 Pallets	7.5 tonne	45 mins.
	H & B	Once per week	06.00 - 10.00	10 Boxes	Transit	15 mins.
	King UK	Once per month	06.00 - 15.00	3 Pallets	7.5 tonne	1 hr.
	Dudson	Once per 3 months	06.00 - 15.00	1 Pallet	7.5 tonne	30 mins.
	M&J Sea Food	Twice per week	08.00 - 16.00	1 - 12 Boxes	Transit	30 mins.
	Russell Hume	Mon/Wed/Friday	07.00 - 10.00	1 - 2 Pallets	7.5 tonne	30 mins.
	P&H Snack	Wenesday/Thursday	08.00 - 16.00	1 - 12 Boxes	Transit	30 mins.
	Styropack	Thursday	08.00 - 16.00	100 Boxes	7.5 tonne	45 mins.
	Bookers	Monday - Friday	08.00 - 15.00	1 Pallet	Transit	30 mins.
	Angel Crousant	Monday - Friday	01.00 - 04.00	1 - 10 Boxes	Transit	25 mins.
	MH Foods	Thursday/Friday	08.00 - 16.00	1 - 8 Boxes	Transit	30 mins.
	3663 Food	Ad hoc	Ad hoc	Varies	Varies	Varies
	Service	Ad hoc	Ad hoc	Varies	Varies	Varies
	Harp Products	Ad hoc	Ad hoc	Varies	Varies	Varies
	Furms Tech.	Ad hoc	Ad hoc	Varies	Varies	Varies
	Hilden	Ad hoc	Ad hoc	Varies	Varies	Varies
	Lockhart Suppliers	Ad hoc	Ad hoc	Varies	Varies	Varies
	Lambert & Blaber	Ad hoc	Ad hoc	Varies	Varies	Varies
	Shefield Metals	Ad hoc	Ad hoc	Varies	Varies	Varies
	WK Thomas					
Scribbler	Courier	Monday - Friday 3 - 4 per week	09.00 - 18.00	5 - 6 Boxes	Transit/7.5 tonne	15 mins.
SSP	3663 CD	Monday - Saturday	06.00 -	4 - 5 Pallets	Artic	30 - 45 mins.
	3663 BK	Monday - Saturday	07.00/10.00	4 - 5 Pallets	Artic	30 - 45 mins.
	Coca Cola	Monday/Thursday	06.00 -	4 - 5 Pallets	7.5 tonne	30 mins.
	King UK	Wednesday/Friday	07.00/10.00	4 - 5 Pallets	7.5 tonne	30 mins.
	Delice de France	Monday - Saturday	07.00/10.00	1 - 2 Pallets	7.5 tonne	20 - 30 mins.
	The Cheese Cellar	Monday - Friday	06.00 -	4 Boxes	Transit	10 mins.
	Co. Fab	Monday - Saturday	07.00/10.00	15 - 20 Boxes	Transit	10 mins.
	Foods	Monday - Friday	10.00 - 11.00	10 Boxes	Transit	10 mins.
	Kentas	Once per week	07.00 - 10.00	2 Boxes	Transit	5 mins.
	Da Vinci	Once per week	10.00 - 11.00	4 Boxes	Transit	5 - 10 mins.
Swatch	DHL	Tuesday	08.00 - 12.00	1 - 2 Boxes	Transit	15 mins.
Upper Crust	Daily Bake	Sunday - Saturday	06.00 - 06.30	4 Boxes	Transit	20 - 30 mins.
West Cornwall	West Cornwall	Sunday - Friday	12.00 - 16.00	2 Pallets	7.5 tonne	45 - 60 mins.
Whistlestop	P & H	Monday/Thursday	07.00 - 09.00	6 Pallets	Artic	30 mins.
	Madina	Mon/Wed/Friday	06.00 - 07.00	5 Boxes	Artic	15 mins.
	Simple-Simon	Monday - Saturday	07.00 - 10.00	25 Boxes	7.5 tonne	30 mins.
	Food PT	Sunday - Saturday	07.00 - 09.00	10 Boxes	Varies	15 mins.
	Bibandum	Monday/Thursday	11.00 - 16.00	1 Pallet	Artic	30 mins.
	Wavely	Monday/Wednesday	07.00 - 10.00	2 Pallets	Artic	30 mins.
	Cranbrock	Tuesday	10.00 - 14.00	35 Boxes	Varies	20 mins.
	Nila Way	Sunday	08.00 - 10.00	2 Pallets	Artic	30 mins.
	Daily Baker	Sunday - Saturday	06.00	2 Boxes	Varies	15 mins.
W.H. Smith	WHS News	Sunday - Saturday	05.30	2 Cages	Transit	30 mins.
	Hornsey	Ad hoc	Ad hoc	Varies	7.5 tonne	30 mins.
	WHS Holford	Monday - Saturday	02.00 -	4 Cages	Transit	1 hr.
	(Wincanton)	Sunday - Saturday	04.00/12.00	1 Cage	Transit	30 mins.
	WHS News	Mon/Wed/Friday	06.00	18 Boxes	Transit	10 mins.
	Slough	Monday - Saturday	07.30	2 Cages	7.5 tonne	10 mins.
	WHS News Retail	Monday - Friday	05.30	Varies	Transit	10 mins.
	Services	Monday - Friday	10.00 - 11.00	Varies	Transit	10 mins.
	Redbridge		09.00 - 15.00			
	Palmer & Harvey					
	ES					
	Securicor					

A7 Functional Specification

The West Yard service area at King's Cross Station is located on a area of land of 1310 m^2. A similar area of land is required during the interim arrangements to ensure that the functions contained within the space can be operated. Alternatively, functions can be located elsewhere if suitable working provisions can be made and agreed by Network Rail. The layout of the service area is determined by vehicle swept path analysis. Safe and dedicated walking routes for passengers must be identified and maintained at all times.

The following functions must be provided for:-

	Current Situation	**Interim Arrangements**	**Final Provision**
1	One compactor and compound (4.5m x 10m) with circulation space for the delivery vehicle to manoeuvre and replace the compactor bin.	One compactor and compound (4.5m x 10m) with circulation space for the delivery vehicle to manoeuvre and replace the compactor bin.	This facility will be located in the Shared Service Yard once the station works are completed. Functional Specification has been written for this space.
2	One bin store (10.8m x 3.0m).	One bin store (10.8m x 3.0m).	This facility will be located in the Shared Service Yard once the station works are completed. Functional Specification has been written for this space.
3	One 16.5m articulated delivery vehicle loading bay (40 tonnes when fully ladened).	One 16.5m articulated delivery vehicle loading bay (40 tonnes when fully ladened).	This facility will be located in the Shared Service Yard once the station works are completed where two 16.5m (40 tonne) articulated delivery vehicle loading bays will be provided.
4	Four 7.5 tonne delivery vehicle unloading bays.	Four 7.5 tonne delivery vehicle unloading bays.	This facility will be located in the Shared Service Yard once the station works are completed where two 7.5 tonne delivery vehicle loading bays will be provided.
5	Six short term public parking/drop off Bays.	Six short term public parking/drop off Bays.	Ten short term public parking/drop off Bays will be located next to the new Western Concourse once the station works are completed, three of which will be for disabled users.
6	Three disabled parking bays.	Three disabled parking bays.	These will be located next to the new Western Concourse once the station works are completed as described in item 5 above.
7	One informal taxi set down/pick up bay.	One informal taxi set down/pick up bay.	A new taxi drop off area will be constructed next to the new Western Concourse once the station works are completed.
8	No provision of British Transport Police (BTP) parking bays.	As part of the design of the new temporary BTP facility at the front of the station, three dedicated police parking bays have been provided.	There is no provision under new station plans for BTP vehicle parking bays.
9	Delivery Marshall Kiosk.	Delivery Marshall Kiosk.	This facility will be located in the Shared Service Yard once the new station works are completed.
10	Street lighting, CCTV coverage and PAVA.	Street lighting, CCTV coverage and PAVA.	Lighting, CCTV coverage and PAVA.
11	Access and rendezvous point for emergency vehicles.	Access and rendezvous point for emergency vehicles.	This will be located at the south end of Pancras Road to the Southern Public Realm area.