3 Further Description of the Enabling Works

3.1 As shown on the drawings within section 2, the Shared Service Yard would be a basement service area, predominantly for servicing vehicular deliveries. The floor of the Shared Service Yard would be some 9 metres below ground level at the southern tip of Development Zone A.

3.2 The Access Road would be a covered structure providing access from ground level.

3.3 The Shared Service Yard and Access Ramp would be shared by the users and operators of both King's Cross Central and King's Cross Station. They have been designed to meet the spatial, functional and environmental requirements of:

i) Vehicular deliveries and collection , recycling storage, servicing and disabled parking for a future building within Development Zone A, Plot 1 ("A1"); and

ii) Heavy goods vehicles movements undertaking deliveries and collections to/from King's Cross Station retail units, maintenance, train servicing and refuse collection operations.

Shared Service Yard

3.4 The Shared Service Yard would include:

For King's Cross Station

i) 2 articulated vehicle bays

ii) 2 rigid vehicle bays

iii) 1 refuse compactor bay

iv) 1 maintenance vehicle bay

For a Future Building A1

v) 2 disabled parking bays

vi) 2 (further) rigid vehicle bays

vii) Storage area for recycling/waste

viii) 1 passenger lift room

ix) 1 goods lift room.

Power and Plant

x) Electrical substation

xi) Plant rooms at the sub-basement and mezzanine levels

3.5 The Shared Service Yard would be a piled wall basement, built with 'top down' construction using plunge columns. Contiguous piles would form the retaining walls to the north, east and west. There are two drainage options currently under consideration: the base option is a directly applied in situ reinforced concrete wall with tanking inbetween the piles and the reinforced concrete wall. The walls and columns and roof slab have been designed to accept the structural loads of the future superstructure of the one or more buildings above in Development Zone A1.

3.6 The floor of the Shared Service Yard would be an insitu-cast slab, laid to falls for drainage to a cast drainage channel running in an east-west direction. A movement joint would separate the Shared Service Yard ground floor slab and the Network Rail plant room.

3.7 The Shared Service Yard would directly adjoin, and interface with, Network Rail's two-storey basement plant room (part of the King's Cross Station Enhancement Scheme, Camden ref. 2006/3387/P). Indeed, Network Rail's plant room would link through to the Shared Service Yard. It is anticipated, therefore, that these two projects would be procured as one package or, at the very least, as two closely phased and fully co-ordinated contracts.

3.8 More generally, the programme and method of construction for the Shared Service Yard and Access Ramp have been designed to integrate with, and facilitate, Network Rail's plans for the Station Enhancement Scheme and other projects to upgrade the transport interchange. The delivery of the Shared Service Yard and Access Ramp is a key early step within a complex, carefully co-ordinated and choreographed programme and sequence of work, sponsored by the Department for Transport and shared by many other stakeholders. The programme requires the Shared Service Yard and Access Ramp to be fully functional in time to service King's Cross Station on (or before) the completion of the Enhancement project. The sequence reflects the need to engineer and make available the physical space necessary to carry out safely the proposed construction works.

3.9 The March 2006 Officer's Report on the outline planning application reported correctly that the provision of servicing facilities beneath Development Zone A are seen by the Department for Transport as "critical to their own programming for the integrated interchange" (para 5.8.11).

Access Ramp

3.10 As shown on the drawings at section 2, the Access Ramp would be a covered structure, providing access to the Shared Service Yard from ground level.

3.11 The Access Ramp would be constructed at the same time as the Shared Service Yard. Contiguous piles would form the retaining walls to the west and east. The Ramp has been designed to take the structural loads of the future superstructure of buildings within Development Zone A. Ventilation slots would be formed (cast insitu) at regular intervals.

3.12 Upon the completion of these Enabling Works, the Access Ramp will finish at a point between Battlebridge Road and Goods Way, where it becomes at grade with the surrounding ground. Vehicles will then access the Shared Service Road via Battlebridge Road.

3.13 Later on, the Access Road will be accessed via a temporary route from the new "Boulevard", which will connect Pancras Road to Goods Way. Delivery of the Boulevard will provide construction access to build this temporary route and sever the initial access to/from Battlebridge Road. The design of the temporary route will be brought forward later, alongside details of the new Boulevard.

3.14 In due course, the intention is to extend the Access Ramp up to Goods Way, to achieve the permanent servicing solution indicated on Parameter Plan KXC016 and described in the Revised Development Specification (see section 1 above). This 'Stage 2 Ramp' is not part of this submission and it will be brought forward later, probably after the completion of the Network Rail Western Concourse in 2012.

3.15 This phased approach to the delivery of the Access Ramp reflects a number of factors, not least the presence of LUL (Northern Ticket Hall) and Network Rail (King's Cross Station Enhancement) work sites within Development Zone A. Such work sites will, for the initial phases of King's Cross Central, be in short supply. Delivery of the Shared Service Yard and Access Ramp, as proposed, will help alleviate this pressure by:

i) Facilitating the transfer of existing Network Rail surface servicing functions into the new, below-ground Shared Service Yard, thereby freeing up space at ground level; and

ii) providing a load-bearing working platform i.e. the lid of the Shared Service Yard and Access Ramp, which can then be utilised (if appropriate) for construction access/work sites/materials storage etc, for projects in King's Cross.

3.16 These factors mean that the ground floor slab of the Shared Service Yard and the lid of the Access Ramp would require protection from wear and tear and accordingly they have been designed to take temporary guard rails, lighting, bollards etc.

3.17 From the north end of the Access Ramp, a Track Access Point would be provided for Network Rail. Access would be via motorised top-hung galvanised steel gates. The ramp from the Access Road to the Network Rail permanent way would be insitu concrete with a heavy duty chequer plate transitional zone foot bridging over Network Rail's existing cables.

Lift Cores

3.18 The proposed works include the construction of two lift cores to enable basement servicing for (a) future building(s) within Development Zone A1. The proposed cores have been designed to accommodate:

i) A goods lift, serving the ground floor retail unit and travelling between ground and basement levels only; and

ii) A passenger lift to provide assisted passage to the basement, e.g. for delivery functions.

Materials

3.19 The majority of the works described in this submission would lie below ground level, as shown in the plans at section 2. Those elements above ground would, in due course, be subsumed within the structural and cladding envelope of buildings within Development Zone A.

3.20 The external finishes for the Enabling Works would be almost exclusively temporary, therefore, and concerned with waterproofing and wearing surfaces for the interim period. Walls and structure would be fair-faced concrete. Security panels, infilling openings in the east wall of the Access Ramp alongside the railway, would be of galvanised steel formed from rectangular grid mesh in Rectangular Hollow Section frames. Top surfaces would be concrete over-slab above a waterproof membrane. Fencing would be installed along the eastern boundary (see 'Maintenance Strip' below) and this would need to be adequate to prevent access onto the railway line and/or electrified equipment.

3.21 A 300mm cladding zone has been allowed for future cladding, along the eastern boundary. The intention is that this zone continues upwards to form an integral part of the façade of future buildings within Development Zone A. It is anticipated that, in this future state, cladding to the ramp structure will need to incorporate a number of metal louvers or similar features to allow for ventilation to the ramp.

3.22 Other external features, for example the ventilation shaft enclosure shown on the drawings and described below, would be sited wholly within the envelope of Development Zone A and, in due course, would no longer be visible. Nonetheless, care will be taken to ensure a good quality of surface finish.

Vent Shaft Enclosure

3.23 The vent shaft enclosure would project above the Shared Service Yard 'roof deck.' The shaft would be a permanent structure, formed with reinforced concrete walls and roof. The (galvanised steel) louvered panel in its east face however would be temporary. When the building(s) within Development Zone A1 is/are completed, the shaft would be over-clad externally and fitted with permanent louvers in keeping with the design, style and finishes of those buildings. Details of the permanent louvers will therefore be brought forward later, as part of any submission relating to the building(s) above.

Temporary Enclosures

3.24 The works would also include 3 temporary enclosures that would project above the Shared Service Yard/Access Ramp 'roof deck':

i) Stair 3, final exit – escape stair from Shared Service Yard; exit through east wall to the maintenance strip (see below);

ii) Stair 4, final exit – escape stair from Shared Service Yard; exit through west wall to the Boulevard; and

iii) Stair 5, final exit – escape stair from the Access Ramp, exit through ramp west wall

3.25 Stairs 3 and 4 would be formed with reinforced concrete walls and roof. It is anticipated that these stairs would be demolished or otherwise reconstructed later, to fit (or interface with) the detailed architectural requirements of the building(s) within Development Zone A1.

3.26 Stair 5 would be an external open stair, with a low enclosing concrete wall at ground level. It is designed to be built in phases. In the Enabling Works condition, the stair would allow escape to the existing ground level, east of the existing Culross buildings. It would later be extended to meet the Boulevard.

3.27 Even though these enclosures would be temporary, they are likely to be exposed to heavy-duty building construction traffic (see paras 3.13 and 3.14 above) and, as such, require a robust measure of protection. That is why they are to be constructed in concrete.

Maintenance Strip

3.28 The design provides for a maintenance access strip along the eastern perimeter of Development Zone A. It is intended to serve as a shared maintenance zone for Network Rail and King's Cross Central along the southern end. It would also be an integral part of the escape route for the occupants of the Network Rail plant room and the Shared Service Yard. The southern part of the strip would be 3 metres wide and as such would facilitate the use of Mobile Elevated Working Platforms. The northern end of the maintenance strip would be 2 metres wide and would allow maintenance to the eastern façades of Development Zone A buildings. The maintenance strip would be separated from the Network Rail permanent way by a fence.

External Lighting

3.29 External lighting would be required for escape areas of the maintenance strip and all escape stairs and passageways.