



**Summary of consultation responses**  
**King's Cross Station Enhancement**

**December 2006**

*CABE*

CABE		
Area	Issue(s) raised	Network Rail Response/Commitment
General	Letter received on 23rd October 2006 - The scale of difficulty is fully acknowledged - London Olympics should not be a significant influence on the project design - Quality of suggested architecture should be protected during planning and construction. Materials and key details should be conditioned.	The design of King's Cross Station has been developed over a number of years in consultation with various groups including Camden, English Heritage, CABE and LUL. It has always been planned that these works would go ahead within the proposed timescales however with the Olympics now going ahead in 2012 it is even more important that these timescales are achieved as King's Cross Station will be a key interchange for many passengers. John McAslan and Partners have produced the design for the new western concourse and they will continue to act as architects for these works going forward.
	- Concerned that the form of the New Western Concourse will not be experienced as a whole because it is masked by the face of the Main Shed, the Hotel and the Sub. Shed.	Due to the limitations of the site within which the existing Station sits, being bounded by York Way, Pancras Road, Euston Road and the canal, the only feasible place for a new concourse is to the west of the main train shed. The concourse has been designed to take into account the restrictions of the main shed, the suburban shed and the Great Northern Hotel which are all listed structures.
Canopy (Southern Entrance)	- The myriad canopies compete with visual clues to the entrance and detract from the strong architectural forms.	There are two main canopies to the south. There is a canopy that covers the main exit from the station. In addition there is an entrance canopy to the south which has since been redesigned and scaled back following comments from CABE and other parties.
Canopy (Southern Exit)	- We have confidence that the details could be resolved elegantly but it is unfortunate though that new structures have to be added after revealing the existing station facade.	Network Rail has looked at this issue in some detail carrying out pedestrian and legion modelling of this particular area in the station. In order for the station to operate successfully in terms of passenger movements it is essential that a continuous canopy is installed across the southern facade. Refer to report 'Assessment of Southern Canopy Options' Arup, December 2006. However, following comments received from CABE and English Heritage this canopy has been re-designed.
Canopy (Taxi)	- Taxi canopies detract from experiencing the semi-circular form of the Western Concourse.	King's Cross Station is a key interchange for passengers in London. Passengers expect to be able to interchange to other modes of transport in comfort which includes having adequate protection during wet weather. Only the area which the taxi canopies will cover is shown in the planning submission but these will be designed to limit any distraction from experiencing the semi-circular form of the Western Concourse.
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge		
Junction between Western Concourse and Western Range	- A rigorous cleaning and maintenance regime will have to be put in place to ensure that it does not become a rubbish / dirt chasm.	Refer to 'King's Cross Station Western Concourse Maintenance Strategy' Network Rail, December 2006.
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		

Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range		
Retail & Mezzanine		
Passenger Movement	<ul style="list-style-type: none"> <li>- Wayfinding and interchange connections will be indirect and dependant on signage</li> <li>- An appropriate entrance sign has not been achieved by the Western Concourse proposal.</li> <li>- A strict management regime will be required to control retail and advertisement creep to prevent spaces being filled, routes narrowed and advertisement hung. All of which lead to visual and spatial confusion.</li> <li>- concerned that complexity of routes could create health &amp; safety hazards</li> </ul>	<p>The station has been designed to provide good connections between all modes of transport. The old Booking Hall which will house the new ticket office and forms the focal point of the new Western Concourse. The Western Concourse has been designed so that it is permeable and from the ground can be accessed at any point along its perimeter. There is no main entrance due to the many ways within which the concourse can be accessed by foot, underground, taxis, buses etc. The concourse has been designed and pedestrian modelling has been carried out which shows that the concourse operates safely and at a good level of service.</p>
Public Transport, Transport Interchange & Cycles		
Platforms		
Access		
Protective Provisions		
Flooding		
Temporary Service Arrangement		
Energy/Noise/Sustainability		
Signage & Lighting	<ul style="list-style-type: none"> <li>- Wayfinding and interchange connections will be indirect and dependant on signage</li> <li>- entrance needs A fresh approach, possibly working with A consortium of architects, artists, lighting consultants and graphic designers</li> <li>- the route from LUL to Concourse has no direct visual connection. Careful attention will be needed in respect of signage to direct passengers.</li> </ul>	<p>The southern entrance canopy has been redesigned taking into account comments from both CABI and English Heritage. It is intended that during the detailed design stage further work will be carried out to enhance the southern entrance visually. There are a number of routes from London Underground to the concourse and these will all be signposted accordingly.</p>
Southern Plaza	<ul style="list-style-type: none"> <li>- Overall clarity to the space needs to be provided also in relation to the myriad canopies in front of the station.</li> </ul>	<p>The southern entrance and exit canopy has been redesigned taking into account comments from both CABI, English Heritage and Camden. In addition Camden is holding a design competition for the Southern Plaza.</p>
King's Cross Central		

*English Heritage*

English Heritage		
Area	Issue(s) raised	Network Rail Response/Commitment
General	Letter received on 29th September 2006, see points right English Heritage has reviewed the emerging designs for the station a number of times over the past five or more years, and has warmly welcomed the overall design of the proposed new Western Concourse	Network Rail will continue to work with English Heritage dealing with any design issues as they arise.
Canopy (Southern Entrance)		
Canopy (Southern Exit)	<ul style="list-style-type: none"> <li>- Design needs further consideration</li> <li>- Must not read as entrance</li> <li>- Integration into Southern Square design elements</li> <li>- Concern of impact on the iconic view remains</li> </ul>	Further work has now been carried out on the design in consultation with both English Heritage, CABE and Camden and Network Rail believes a solution is achieved which both lessens the impact on the iconic view whilst maintaining its functionality. Camden are holding a design competition for the Southern Square and surrounding area and the integration of the canopy will form part of the design remit.
Canopy (Taxi)		
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge	- Need to revisit size, location and design of lifts, seen as damage to special interest of main train shed.	The size, location and design of the lifts has been reviewed and revised, however due to constraints imposed by Railway standards that need to be met and the physical environment within which they sit it has not been possible to make more significant changes.
	- Consider salvage and re-use strategy of old bridge and clock.	The salvage and re-use strategy of the old bridge and clock will be conditioned by London Borough of Camden.
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		

Junction between Western Concourse and Block A1		
Western Concourse Roof	<p>- Amount of glazing should be given further thoughts</p> <p>- Provision for maintenance access and services must be integrated into the design.</p>	<p>Careful consideration has been given to the amount of glazing within the new concourse roof which forms approximately 40% of the total roof structure. The concourse roof has been designed to allow the space to be naturally ventilated whilst at the same time maintaining a comfortable environment for passengers to wait in.</p> <p>For details of maintenance access refer to 'King's Cross Station Western Concourse: Maintenance Strategy' Network Rail, December 2006.</p>
Plant / Ventilation		
York Way / Eastern Range		
Retail & Mezzanine		
Passenger Movement		
Public Transport, Transport Interchange & Cycles		
Platforms		
Access		
Protective Provisions		
Flooding		
Temporary Service Arrangement		
Energy/Noise/Sustainability		
Signage & Lighting		
Southern Plaza	<p>Formal Letter received on 29th September 2006, Ian Ritchie UDB welcomed, create calm but high quality space, not to compete with listed buildings (i.e. GNH and KX Station), integrate station exit and entrance canopy</p>	<p>The station exit and entrance canopy have been redesigned to take into account the comments raised by English Heritage, CABI and Camden.</p>
King's Cross Central		



*Environment Agency (2)*



Environment Agency (2)		
Area	Issue(s) raised	Network Rail Response/Commitment
General		
Canopy (Southern Entrance)		
Canopy (Southern Exit)		
Canopy (Taxi)		
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge		
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		
Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range		
Retail & Mezzanine		
Passenger Movement		
Public Transport, Transport Interchange & Cycles		
Platforms		
Access		
Protective Provisions		

Flooding	Request that a Flood Risk Assessment be carried out.	A flood risk assessment and surface water drainage plan have now been sent through to Environment Agency. The Environment Agency will formally write to Camden.
Temporary Service Arrangement		
Energy/Noise/Sustainability		
Signage & Lighting		
Southern Plaza		
King's Cross Central		

*Environment Agency (1)*

Environment Agency (1)		
Area	Issue(s) raised	Network Rail Response/Commitment
General	Notes received on 28th September 2006 - Objects because of lack of Flood Risk Assessment or surface water drainage plan.	A flood risk assessment and surface water drainage plan have now been sent through to Environment Agency. The Environment Agency will formally write to Camden.
Canopy (Southern Entrance)		
Canopy (Southern Exit)		
Canopy (Taxi)		
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge		
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		
Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range		
Retail & Mezzanine		
Passenger Movement		
Public Transport, Transport Interchange & Cycles		
Platforms		
Access		
Protective Provisions		

<b>Flooding</b>	<ul style="list-style-type: none"> <li>- Objects because of lack of Flood Risk Assessment or surface water drainage plan.</li> <li>- Objection maybe withdrawn if FRA is produced that satisfies the requirements of PPG25 and the EA</li> </ul>	A flood risk assessment and surface water drainage plan have now been sent through to Environment Agency. The Environment Agency will formally write to Camden.
<b>Temporary Service Arrangement</b>		
<b>Energy/Noise/Sustainability</b>		
<b>Signage &amp; Lighting</b>		
<b>Southern Plaza</b>		
<b>King's Cross Central</b>		

*GLA*

GLA		
Area	Issue(s) raised	Network Rail Response/Commitment
General	Letter received on 19th October 2006, see points right	
Canopy (Southern Entrance)	<ul style="list-style-type: none"> <li>- The proposed design response detracts from the newly revealed (and impressive) façade.</li> <li>- The canopy lacks any meaningful architectural relationship with either the new concourse or the southern façade.</li> <li>- The proposed designs do not meet the London Plan: "attractive to look at and, where appropriate, inspire, excite and delight"</li> </ul>	The Southern exit canopy has now been redesigned to take into account TfL and LU's concerns. Weather protection is now provided to the stairs and the top landing waiting area to the lift. Although it is appreciated that any form of canopy does detract from the revealed facade, in order for the station to function and operate safely a canopy is required. Refer to 'Assessment of Southern Canopy Options' Arup December 2006.
	- TfL do not consider that the 5m deep canopy is sufficient to provide weather protection to the stairs and the top landing waiting area to the lift.	With the changes that have been made in consultation with English Heritage and Camden, Network Rail believes that the proposed design does meet the London Plan and is attractive to look at whilst being a functional requirement of the overall station.
Canopy (Southern Exit)		
Canopy (Taxi)		
LUL South East Stair & Lift / North/East Escalator	LU expects NR to upgrade the SE stair structure to meet LU's standards for external station entrance and provide weather protection; this is to be paid for by NR.	Network Rail has revised the southern exit canopy design and this now meets LU's external station entrance requirements. In addition Network Rail can confirm that they will pay for this work.
	Confirmation is sought from NR on the fundamental principle of peak flow direction, so that TfL can accept the single escalator compromise.	In respect of the north east escalator it has been agreed with LU that the escalator will operate in a downward direction in the morning peak and an upward direction in the evening peak.
New Link Bridge		
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		



<b>Western Concourse Roof</b>	- rainscreen cladding is likely to militate against the integrity of the structure and reduce the sense of arrival.	The solution fully co-ordinates the cladding and structural requirements within an iconic architectural form.
	- the opportunity to harness the sun through photovoltaic panels has also not been grasped. This should be fundamentally re-considered.	Refer to 'Energy Statement' Arup December 2006.
<b>Plant / Ventilation</b>	Details of how LUL vents are to be treated and how access to be provided.	This application does not include any alterations to the LU vents. Access to the vent will not change from the current arrangements that are in place.
<b>York Way / Eastern Range</b>		
<b>Retail &amp; Mezzanine</b>	LDA request further details of how retail units will be accommodated for during the construction phases.	During the construction phase the retail units that are located in the existing Southern concourse will be maintained. Only once the new Western Concourse is functioning will the existing Southern Concourse be demolished.
<b>Passenger Movement</b>	see TfL	
<b>Public Transport, Transport Interchange &amp; Cycles</b>	New station to be oyster card compatible.	Provision will be made to ensure that the new station is Oyster card compatible. Revenue control gates at King's cross Station will be incorporated to facilitate the touching in and out of oyster card ticketing.
<b>Platforms</b>	TfL seeks assurance that the new platforms would be able to take 11 car 23m trains and 12 car 20m trains, as well as confirmation that TOCs or others will not seek to operate longer trains. Action: Bruce Kirkpatrick	Network Rail can confirm that the new platforms will be able to take existing train stock in all the platforms. With the introduction of 12 car trains 7 out of the 9 platforms (platform Y - 8) will be able to take the longer train stock.

<b>Access</b>	<ul style="list-style-type: none"> <li>- provide revised access plan including marked up plans to illustrate level changes, gradients ect.</li> <li>- review accessibility, reduce steps and introduce ramps, review materials, e.g rough chopped irregular granite pavers are trip hazard and should be replaced by flat, smooth paving.</li> <li>- introduce seating with arm and backrests, but not along pedestrian desire lines to avoid obstruction</li> <li>- gullies should be flush and grills small so that walking sticks and wheels cannot get caught.</li> <li>- review location and size of lifts, location of station WC's, colour contrasts, passenger information boards and highway design for taxi drop-off. This must be addressed in the revised access statement before application is referred back to the Mayor for decision.</li> </ul> <p>Show where people move from and to and a further breakdown of volumes of PED-flows.</p> <ul style="list-style-type: none"> <li>- Check whether there is lift access to new cafe/restaurant (pub).</li> </ul>	Refer to the revised 'Access Statement' Network Rail, December 2006 and the report 'Station Design and Passenger Movements' Arup, December 2006.
<b>Protective Provisions</b>	LU require asset protection during construction of the Western Concourse through a PPA. Access for passengers through NR construction site.	Network Rail are amenable to entering into a PPA with LU whilst carrying out works on the Western Concourse. Network Rail have a duty to the public to ensure that passengers are able to access other modes of transport. As part of the detailed design and construction phasing careful consideration will be given to maintaining passenger access through the station and to other transport connections.
	LU requires information as to what steps NR will take to prevent passenger luggage trolleys being brought into the underground.	As part of the detailed design Network Rail will be developing a solution to ensure that luggage trolleys are not brought into the underground and are indeed managed within the station.
<b>Flooding</b>	LU requires a Flood Impact Assessment	A flood risk assessment and surface water drainage plan have now been sent through to Environment Agency. The Agency will
<b>Temporary Service Arrangement</b>	LU seek confirmation that they have access for deliveries in the absence of the SSY, for maintenance of faulty transformers and EDF equipment.	Network Rail is committed to constructing the Shared Service Yard.

<b>Energy/Noise/Sustainability</b>	<ul style="list-style-type: none"> <li>- requirements for energy efficiency and renewable energy measures must be in place. CO2 emissions must be reduced.. Opportunity to harness energy of PVs has not been grasped.</li> <li>- Expect connection to CHP/CCHP distribution networks and there is no consideration of connection to KCC development.</li> <li>- Energy statement need to be revised to be consistent with current London Plan for energy policies</li> <li>- Design proposals for the southern forecourt should incorporate a sound-conscious urban design proposal</li> </ul>	Refer to revised 'Energy Statement' Arup, December 2006 for details on renewable energy and energy efficiency, which is consistent with the current London Plan for energy policies. Camden are holding a competition for the design for the Southern Square.
	- Air Quality chapter to be revised. Kings cross Station is within an Air Quality Management Area. See paras 68 and 69 of GLA letter.	Refer to Chapter 11 of the revised 'Environmental Statement' Environmental Resource Management, December 2006.
<b>Signage &amp; Lighting</b>		
<b>Southern Plaza</b>	<ul style="list-style-type: none"> <li>- The removal of the 'temporary' southern concourse offers the opportunity to transform the space in front of the station into a high quality public space and improve the arrival experience at King's Cross.</li> </ul> <p>Noise Reduction:</p> <ul style="list-style-type: none"> <li>- Design proposals for the southern forecourt should incorporate a sound-conscious urban design proposal</li> <li>- square to be re-designed in line with accessibility requirements, include only gentle slopes and no steps.</li> </ul>	<p>Camden are holding a competition for the design of the Southern Square and the surrounding area.</p> <p>The base plans for the Southern Square have been revised in line with accessibility requirements.</p>
<b>King's Cross Central</b>		

*Islington*

Islington		
Area	Issue(s) raised	Network Rail Response/Commitment
General	Letter received on 19th October 2006. The overall scheme could bring significant benefits to the appearance of the wider King's Cross area, however further alterations and 106 agreements are needed to resolve the issues identified in the points right.	Network Rail will be entering into a Section 106 agreement, the details of which need to be agreed with Camden.
Canopy (Southern Entrance)	- The frontage should not be cluttered with 21st century canopies.  (Elevation: - Concerned that treating one of the five arches undermines the appearance of the listed elevation. This part of the scheme should be revised purely on architectural grounds, so that all six arches appear identical.)	The southern exit canopy at the front of the station is required if the station is to operate as designed and in a safe manner. Refer to 'Assessment of Southern Canopy Options' Arup November 2006. The treatment of the arches has now been revised so that all six arches appear identical.
Canopy (Southern Exit)		
Canopy (Taxi)	- Taxi canopies appear as an afterthought ... and do not relate to the rhythm of the glazing system used to the main concourse extension ... creating a visual 'mish-mash'	The proposed drawings of the taxi canopies have been replaced and a 'Canopy Zone' now identifies the boundaries of possible canopy locations.
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge		
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		
Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range	On Access: - Islington objects to the loss of access into the station from the Eastern corner when some limited access could reasonably be retained. - 2 gate access in south east corner of station should be included.	Network Rail has removed any access into the station from the Eastern corner for safety reasons. Refer to 'Station Design and Passenger Movements' Arup December 2006. Also refer to the revised 'Access Statement' Network Rail, December 2006.



	<ul style="list-style-type: none"> <li>- Eastern flank wall provides an unrelenting dead facade along York Way.</li> <li>- Traffic heading North create a hostile and unattractive public realm.</li> </ul> <p>On Section 106</p> <ul style="list-style-type: none"> <li>- Clearing of Eastern Flank Wall</li> </ul>	<p>Some of the arches along York Way will be glazed helping to improve the visual appearance along the stretch of the Eastern Flank.</p> <p>Any cleaning of the Eastern Flank Wall will be the subject of a Section 106 agreement.</p>
<b>Retail &amp; Mezzanine</b>	<ul style="list-style-type: none"> <li>- Islington Council proposes a condition to be added to any approval - preventing the introduction of additional retail space or other such pavilions or obstructions within the passenger waiting areas and circulation space.</li> <li>- design of open space must avoid a cluttered and confusing proliferation of advertising and ad-hoc directional and retail signage.</li> </ul>	<p>Network Rail has designed the concourse in such a way that a good level of service is maintained throughout and passenger flows are maintained.</p> <p>Signage requirements will be reviewed at detailed design and will be conditioned by Camden.</p>
<b>Passenger Movement</b>		
<b>Public Transport, Transport Interchange &amp; Cycles</b>	<p><b>On section 106 agreement:</b></p> <ul style="list-style-type: none"> <li>- Removal of any unnecessary bus stops / introduce walk through shelters.</li> <li>- Financial contribution to a widened pavement to York Way West side.</li> <li>- Financial contribution to a new pedestrian crossing at junction of York Way and Pentonville Road.</li> <li>- Interchange to be kept clear of unnecessary clutter.</li> <li>- People having to walk around the far side of the station to find the taxi rank seems disappointing. Signage is required.</li> <li>- Management of southern gate line area is crucial.</li> </ul>	<p>Network Rail will be entering into a Section 106 agreement, the details of which need to be agreed with Camden.</p>
<b>Platforms</b>		
<b>Access</b>	<ul style="list-style-type: none"> <li>- design of open space must avoid a cluttered and confusing proliferation of advertising and ad-hoc directional and retail signage.</li> <li>- The renovation of Manchester Piccadilly provided excellent disabled access and direct wide routes through the station.</li> </ul>	<p>Signage requirements will be reviewed at detailed design and will be conditioned by Camden.</p> <p>The newly created concourse will provide excellent disabled access and direct side routes through the station. Refer to 'Access Statement' December 2006.</p>
<b>Protective Provisions</b>		
<b>Flooding</b>		
<b>Temporary Service Arrangement</b>		
<b>Energy/Noise/Sustainability</b>		
<b>Signage &amp; Lighting</b>	<p>On Section 106</p> <ul style="list-style-type: none"> <li>- Creative lighting scheme designed and implemented and maintained to flank wall and shed profile</li> </ul>	<p>The lighting scheme will be developed during detailed design and the lighting of the flank wall be the subject of a Section 106 agreement.</p>

Southern Plaza	<ul style="list-style-type: none"> <li>- The new square must be a coherent public realm wrapping around the station precincts and along York Way</li> <li>- Stepped areas create a trip/crush hazard. Remove from scheme.</li> <li>- The nature and type of the retail units around the vent shaft need to be carefully managed. E.G. a fast food outlet would undermine the attractiveness of the square and the setting and appearance of the listed station and view along Pentonville Road, which is identified as a "national set piece".</li> <li>- The proposed materials (granite, timber, steel) ... are appropriate and will compliment the adjacent Regent Quarter and Victorian Industrial heritage.</li> </ul>	<p>Camden are holding a competition for the design of the new Southern Square. The stepped areas previously shown in the base scheme have now been removed.</p> <p>The nature and type of retail units is to be agreed with Camden.</p>
King's Cross Central		



*King's Cross CAAC*

King's Cross CAAC		
Area	Issue(s) raised	Network Rail Response/Commitment
General	Letter received on 19th October 2006	
Canopy (Southern Entrance)	<ul style="list-style-type: none"> <li>- It needs total re-design.</li> <li>- The "false eyelash" canopy over entrance is aggressively hostile to historic architecture. It severely interferes with view to end of Western Range.</li> <li>- Conflicts with canopy along southern façade.</li> <li>- Drawing people into the entrance would be better done with some suitable signage, free standing feature and route ways marked on the pavement, the recess that already exists in the building line should be exploited to draw people in, rather than obscured by this over large canopy.</li> <li>- Main doorway seems mean and constricted both in height and width.</li> </ul>	<p>The Southern Canopy has been redesigned and pulled back so that it does not interfere with views to end of Western Range and does not conflict with the canopy along southern façade. Suitable signage will be used to draw people into the entrance.</p> <p>The door is considered to be of sufficient height and width. The station has been designed to provide good connections between all modes of transport. The old Booking Hall which will house the new ticket office and forms the focal point of the new Western Concourse. The Western Concourse has been designed so that it is permeable and from the ground can be accessed at any point along its perimeter. There is no main entrance due to the many ways within which the concourse can be accessed by foot, underground, taxis, buses etc. The concourse has been designed and pedestrian modelling has been carried out which shows that the concourse operates safely and at a good level of service.</p>
Canopy (Southern Exit)	<ul style="list-style-type: none"> <li>- A much more restrained and functional structure is to be preferred in this setting.</li> <li>- The planning whereby passengers are to emerge from the station across the whole width of the Southern Front to reach the LUL entrance or the even further taxi ranking is a messy compromise (see point under passenger movement)</li> </ul>	<p>The Southern exit canopy has been redesigned.</p> <p>With the siting of the concourse to the west of the main train shed it is important that people are drawn out of the station through the front façade. There will however be some movement through the south east gateline through to the Western escalators which lead down to the Northern Ticket Hall and also for those passengers who proceed to the taxi rank.</p>
Canopy (Taxi)	<ul style="list-style-type: none"> <li>- Link between main entrance and taxi canopy to the West seems unhappy, in terms both of aesthetic consideration and pedestrian movement.</li> <li>- question benefit of rain protection of such a high canopy which fails to extend over the taxi rank carriageways.</li> </ul>	<p>The proposed drawings of the taxi canopies have been replaced and a 'Canopy Zone' now identifies the boundaries of possible canopy locations. The final design of the taxi canopies will be worked up in conjunction with Camden and TfL and will provide rain protection.</p>
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge	<ul style="list-style-type: none"> <li>- Concerned about the prominence of the lift towers, which introduce a needless vertical emphasis conflicting with the rhythm of the arcades and other structures.</li> <li>- To reduce prominence of towers, frames might be set back behind enclosing glass ... and painting them a dark colour.</li> </ul>	<p>The size, location and design of the lifts has been reviewed and revised, however due to constraints imposed by Railway standards that need to be met and the physical environment within which they sit it has not been possible to make more significant changes.</p>

	<ul style="list-style-type: none"> <li>- The elevational and soffit treatment of the new bridge should refer to that of the original 19th century bridge. It is hoped that elements of the bridge could be re-used.</li> </ul>	The option of re-using the original bridge will form part of the salvage strategy.
<b>Junction between Western Concourse and Western Range</b>	<ul style="list-style-type: none"> <li>- Concerned about the relation ship of the roof to the Western façade of the Western Range. It hides the façade from the outside.</li> <li>- Surely, there is a more sensitive solution...the historic building might just as well not be there.</li> <li>- Funnel-shaped structure that is to support roof is to displace the important historical feature of the Port Cochere. It should be reinstated.</li> </ul>	<p>The Western Concourse has been designed to embrace the Western Range, Suburban train shed and the Great Northern Hotel. There will be a glass wall between the western Concourse and the façade of the Western Range so that it is visible to the public from within the Concourse.</p> <p>The central funnel structure not only provides vertical support to the semi-circular skylight, it adds stiffness to the shell structure and also creates a central focal point in front of the re-instated booking hall.</p>
<b>Junction between Western Concourse and GNH</b>	<ul style="list-style-type: none"> <li>- The proposed roof will obscure some remarkable feats of planning by L.Cubitt.</li> </ul>	Refer to justification for roof and funnel structure. (McAsian)
<b>Junction between Western Concourse and Block A1</b>		
<b>Western Concourse Roof</b>	<ul style="list-style-type: none"> <li>- The funnel will interfere with the facades architecture, creating an unfortunate duality within the symmetrical composition.</li> <li>- Structural arguments about foundations are not reason enough for this visual crime.</li> </ul>	Refer to justification for roof and funnel structure. (McAsian)
<b>Plant / Ventilation</b>		
<b>York Way / Eastern Range</b>		
<b>Retail &amp; Mezzanine</b>	<ul style="list-style-type: none"> <li>- There is a lot going on in the concourse.</li> <li>- ...with extensive retail provision ... It will simplify architectural issues as well as support the local community if this is kept to the minimum.</li> </ul>	The level of retail provision is small when compared to other stations such as Paddington which have a similar through put of passengers. In addition along with the primary requirement to provide tickets and information passengers also require retail provision.
<b>Passenger Movement</b>	<ul style="list-style-type: none"> <li>- The planning whereby passengers are to emerge from the station across the whole width of the Southern Front to reach the LUL entrance or the even further taxi ranking is a messy compromise (see point under exit canopy)</li> </ul>	See response under exit canopy.
<b>Public Transport, Transport Interchange &amp; Cycles</b>		

<b>Platforms</b>	<p><b>On shortening platforms:</b></p> <ul style="list-style-type: none"> <li>- we regret shortening of platforms, which will create an unfortunate contrast to the surviving platforms.</li> <li>- Movement of passengers might be further investigated</li> <li>- It would be regrettable if this was eventually to be used simply to introduce additional commercial space.</li> </ul> <p><b>On platform Y:</b></p> <ul style="list-style-type: none"> <li>- we question whether options have been sufficiently explored considering the architectural importance of this Grade I listed building</li> </ul>	<p>With the siting of the new concourse to the west of the platforms it is essential that passengers have enough room to walk through the western gateline and to their platform. Without the shortening of platforms 5- 8 it would not be possible for people to move safely and freely to their train. This area will purely be used for circulation space.</p> <p>King's Cross Station is sited in a very restricted site with York Way to the east, Pancras Road to the west, Euston Road to the south and Goods Way/ the canal to the north. As a result of these restrictions the only available area for an additional platform is under the Grade I listed building which will incorporate this area into the operation of the station and will have minimal impact on the listed building above it.</p>
<b>Access</b>		
<b>Protective Provisions</b>		
<b>Flooding</b>		
<b>Temporary Service Arrangement</b>		
<b>Energy/Noise/Sustainability</b>		
<b>Signage &amp; Lighting</b>		
<b>Southern Plaza</b>	<ul style="list-style-type: none"> <li>- The group of shops with canopies around the southern vent... block out large parts of the views to the station from Euston Road.</li> <li>- The objective ... has been to clear this space and open up views of the station... Yet obstructions have been creeping back...and now this!</li> <li>- Proposed shops must be reduced in size and arranged in an architecturally disciplined manner. These services could be better served by local shops.</li> </ul>	<p>The shops around the southern vent have now been reduced in size. The provision of shops in this area acts as a natural policing in the Southern Plaza and is supported by British Transport Police.</p>
<b>King's Cross Central</b>		

*London Borough of Camden*



## London Borough of Camden

Area	Issue(s) raised	Network Rail Response/Commitment
General	Letter received on 13th October 2006	
Canopy (Southern Entrance)	Size, form and design details to be reviewed. Refine relationship between hotel and existing station building. Should be more lightweight in appearance and set back approx 5m. The front door 'role' would be met because a clearly modern design would stand out.	The canopy that sits between the existing station and the hotel has now been redesigned and is now set back and is more lightweight in appearance.
Canopy (Southern Exit)	Revise height and bulk of structure. Must not read as entrance. Revise material in context to original station building. Revise material in context to original station building. Consider more traditional material Revise alignment and plan form of canopy in relation to profile of existing station elevation.	The southern exit canopy has now been redesigned with the height and bulk of the structure being reduced so that it does not read as an entrance. The choice of materials has also been revised.
	Revise relationship to LUL exit and consider treating stair as free standing object using modern materials.	The relationship with the LU stair/lift has also been reviewed resulting in a covered walkway. Refer to 'Assessment of Southern Canopy Options' Arup, December 2006.
Canopy (Taxi)	Revise submitted drawings as follows: -Delete proposed drawings of canopies and replace by showing a 'Canopy Zone' identifying the boundaries of possible canopy locations. Drawings may show illustrative canopy design for consultation purposes and detailed design can be appropriately addressed at a later stage as a planning condition. Request for a canopy island may need to be considered.	A canopy zone is now shown on the drawings for the taxi pick-up and drop-off area. The request for a canopy island will be considered at detailed design.
LUL South East Stair & Lift / North/East Escalator	Lift highly visible from Southern Square. Relocating lift to the north of stair would lessen visual impact. Clarification on lift position required from LUL.	Refer to 'South east stair - justification for location of lift'. In addition to the constraints noted due to a level difference between the Northern Ticket Hall and the Tube Ticket Hall there is a ramp between the two areas which has necessitated the stairs to be located in this position.

## London Borough of Camden

Area	Issue(s) raised	Network Rail Response/Commitment
New Link Bridge	<p>Revise form of footbridge and its relationship to the existing train shed.</p> <p>Revise lift overrun height.</p> <p>Should be more lightweight and elegant in appearance and incorporate curved structural members to reflect existing station structure.</p> <p>Revise material and quantity of glass.</p> <p>Justify width of link bridge.</p>	<p>The design of the footbridge has been reviewed and changes made by revising the type of material used resulting in a lighter weight and more elegant structure. In addition the lift overrun height has been reduced although to comply with Railway Standards it has been necessary to allow for some overrun.</p>
Junction between Western Concourse and Western Range	<p>Show details for provision of glass cleaning. Unclean glass with dirt would have a detrimental effect.</p> <p>Access for maintenance and services needs to be integrated into the design at this stage.</p>	<p>For details of maintenance access refer to 'King's Cross Station Western Concourse: Maintenance Strategy' Network Rail, December 2006.</p>
Junction between Western Concourse and GNH	<p>Show details for provision of glass cleaning. Unclean glass with dirt would have a detrimental effect.</p> <p>Access for maintenance and services needs to be integrated into the design at this stage.</p>	<p>For details of maintenance access refer to 'King's Cross Station Western Concourse: Maintenance Strategy' Network Rail, December 2006.</p>
Junction between Western Concourse and Block A1	<p>Show details for provision of glass cleaning. Unclean glass with dirt would have a detrimental effect.</p> <p>Access for maintenance and services needs to be integrated into the design at this stage.</p>	<p>For details of maintenance access refer to 'King's Cross Station Western Concourse: Maintenance Strategy' Network Rail, December 2006.</p>
Western Concourse Roof	<p>Show details for provision of glass cleaning. Unclean glass with dirt would have a detrimental effect.</p> <p>Access for maintenance and services needs to be integrated into the design at this stage.</p>	<p>For details of maintenance access refer to 'King's Cross Station Western Concourse: Maintenance Strategy' Network Rail, December 2006.</p>
Plant / Ventilation	<ul style="list-style-type: none"> <li>- review location of low level ventilation plant on concourse roof.</li> <li>- Discussions with Environmental Health officer necessary to re-work mezzanine ventilation plant.</li> <li>- provide clarification and information of the location and design of all other elements of plant and mechanical extract vents within development.</li> <li>- all plant elements need to be fully integrated as part of the design.</li> </ul>	<p>The location of the low level ventilation plant has been reviewed. Refer to letter from Arup dated 24 November 2006 titled 'Meeting with Camden 22 November, Extract Ventilation. In addition refer to the specification provided by a manufacturer.</p>



## London Borough of Camden

Area	Issue(s) raised	Network Rail Response/Commitment
York Way / Eastern Range	Treatments for the remainder of the York Way frontage and the return along Goods Way would be welcomed.	Network Rail will work with Camden to look at possible treatments along the York Way frontage.
Retail & Mezzanine	- provide annotated detailed elevations of retail pods from within the concourse at 1:50 scale	Revised detailed elevations of retail pods are now provided within the application drawings.
	- Justify width of mezzanine link	The width of the mezzanine link has been sized and checked using pedestrian and legion modelling.
	- provide floor plans of all uses within the existing station for comparison against proposal	Updated floor plans provided.
	- Confirm that no A5 uses are proposed in the mezzanine	Network Rail can confirm that no A5 uses are proposed in the mezzanine.
	- treatment of shop fronts in retail areas should follow common approach, so that coherence of concourse design is not compromised	Refer to planning drawings for treatment of shop fronts and fascia of mezzanine.
Passenger Movement	Enhance information in Access appraisal: Illustrations and clarifications are requested as outlined in the letter dated 13th October.	The Access appraisal has now been updated and resubmitted.
Public Transport, Transport Interchange & Cycles		
Platforms		
Access	Requested a revised Access Statement to include: Illustrated explanation of movement patterns. Strategies of inclusive access. Justification of choice of materials and levels. Statement that inclusive design has been considered. Clarification of ingress ticket barrier in SE corner. Clarification of disabled access to PH. Indication of emergency access routes. Clarification of strategy for pedestrian use of western perimeter route. Annotated illustration of accumulation space. Details of provision of infrastructure.	Revised access statement now submitted. Points not covered by the revised access statement are discussed below.

## London Borough of Camden

Area	Issue(s) raised	Network Rail Response/Commitment
	Future proofing of accumulation space.	The concourse has been sized to allow for maximum demand under a 7/12 timetable. Annex J of the Environmental Statement shows that the concourse operates at level of service B.
	Provision of ticketing.	In respect of size of ticketing GNER issued a report titled 'Reasonable Requirements at Kings Cross Station' January 2002. The size of the ticketing facilities has been based on the details in this document. Due to continuing changes in ticketing requirements Network Rail will be working with the Train Operating Companies to ensure that the right balance of ticket windows versus ticket machines is achieved.
	Justification of retail barrows.	Retail barrows provide essential income which will be used to offset additional maintenance costs as a result of building a much larger and new concourse. Arup have confirmed that the location of the barrows will not interfere with passenger flows.
	Clarification of trolley park.	The strategy for trolleys within the station will be developed with the Train Operating Companies during detailed design.
<b>Protective Provisions</b>		
<b>Flooding</b>		
<b>Temporary Service Arrangement</b>		
<b>Energy/Noise/Sustainability</b>		
<b>Signage &amp; Lighting</b>	<ul style="list-style-type: none"> <li>- Use common language on signage. This approach should be integrated as part of a signage strategy.</li> <li>- a lighting strategy needs to be in place</li> <li>- use opportunity for imaginative lighting scheme, e.g uplighters to structural columns of western concourse and wash light effects on historic elements</li> </ul>	The signage strategy will meet current Network Rail standards and DDA requirements. The lighting strategy and detailed scheme will be developed in detailed design and also as part of the competition that Camden are holding for the Southern Plaza. It has been agreed that the lighting design will be conditioned by Camden.

*TJL*

<b>TfL</b>		
<b>Area</b>	<b>Issue(s) raised</b>	<b>Network Rail Response/Commitment</b>
<b>General</b>	Letter received on 19th October 2006 - TfL requires the ticketing system of the new station to be Oyster card compatible.	Network Rail confirms that the ticketing system of the new station will be Oyster card compatible.
	- Active management for taxi passengers should be included in the section 106 agreement.	Network Rail will be actively managing the taxi rank as they already do at Paddington.
<b>Canopy (Southern Entrance)</b>	- "Canopies should be re-designed to a standard befitting of this gateway location between two Grade 1 listed stations and incorporating LU's requirements for stairwell cover"	The Southern entrance canopy has been redesigned. See revised drawings.
<b>Canopy (Southern Exit)</b>	- 5m canopy is not sufficient against the protection of wet weather conditions to LUL stair and lift. Wind blowing in from the south needs to be considered.	The design of the southern exit canopy has been redesigned taking into account the views of LU and TfL.
<b>Canopy (Taxi)</b>	- Shelter for taxi passengers should be provided on the island pick up areas, as well as the Concourse side of the pick-up areas.	The need for taxi shelters on the island will be reviewed with the rest of the taxi shelter requirements.
<b>LUL South East Stair &amp; Lift / North/East Escalator</b>	North/East Escalator:  - NR to confirm principle peak flow direction, so TfL can accept the single escalator compromise.	Network Rail has agreed with LU that the north east escalator will operate in a downward direction in the morning peak, and an upward direction in the evening peak.
<b>New Link Bridge</b>		
<b>Junction between Western Concourse and Western Range</b>		
<b>Junction between Western Concourse and GNH</b>		
<b>Junction between Western Concourse and Block A1</b>		
<b>Western Concourse Roof</b>		
<b>Plant / Ventilation</b>		

<b>York Way / Eastern Range</b>		
<b>Retail &amp; Mezzanine</b>	<ul style="list-style-type: none"> <li>- TfL question whether design allows for sufficient passenger accumulation space (as oppose to retail space) .</li> <li>NR to justify station capacity and Service Factor Levels in locations that are expected to become overcrowded.</li> </ul>	The concourse has been designed to allow for sufficient passenger accumulation space. The concourse has been sized to allow for maximum demand under a 7/12 timetable. Annex J of the Environmental Statement shows that the concourse operates at level of service B.
<b>Passenger Movement</b>	<ul style="list-style-type: none"> <li>- TfL support GNH colonnade. A planning condition should be imposed on the GNH colonnade as without this space severe congestion will occur on Pancras Road.</li> <li>- TfL request proof of people movement from and to the station and breakdown of volumes to identify whether All pedestrians have been adequately catered for.</li> <li>- TfL question whether design allows for sufficient passenger accumulation space (as oppose to retail space) and whether Southern gateline is adequately long to provide A high quality station environment. NR to justify station capacity and Service Factor Levels in locations that are expected to become overcrowded</li> <li>- TfL require proof that station will be fit for purpose.</li> </ul>	Refer to Annex J of the Environmental Statement and the report 'Station Design and Passenger Movements' Arup, December 2006.
<b>Public Transport, Transport Interchange &amp; Cycles</b>	<ul style="list-style-type: none"> <li>- <b>Cycles:</b></li> <li>- NR's provision for 142 cycle parking spaces is unlikely to cater for future needs. In the absence of sufficient high quality secure cycle parking TfL seeks a contribution of £175,000 towards cost of providing facility on Pancras Road.</li> <li>- TfL wishes to see more cycle parking to be provided outside the station.</li> </ul>	It has been agreed with Camden and TfL on 5 October 2006 that the cycle parking provision is acceptable. Laurie Baker re-confirmed this at meeting on 23rd November at Camden Offices. The position of cycle parking in Southern Square has been amended.



	<p><b>Buses:</b></p> <ul style="list-style-type: none"> <li>- Temporary service yard options A&amp; C are preferred. Impact on bus operations must be agreed with TfL.</li> </ul> <p><b>Pancras Road:</b></p> <ul style="list-style-type: none"> <li>- Final alignment of Pancras Road has not yet been agreed, but all key stakeholders have been working together to progress a design that is fit for purpose and balances the need for all road</li> </ul>	The temporary service yard option selected will depend on the road alignment for Pancras Road, but Network Rail will ensure that TfL are consulted.
<b>Platforms</b>	<ul style="list-style-type: none"> <li>- TfL does not object to shortening of platforms.</li> <li>- NR to assure that new platforms will take 11 car 23m trains and 12 car 20 m trains.</li> <li>- NR to confirm that TOC's will not seek to operate longer trains</li> </ul>	<p>Network Rail can confirm that the new platforms will be able to take existing train stock in all the platforms. With the possible introduction of 12 car trains, 7 out of the 9 platforms (platform Y - 8) will be able to take the longer train stock.</p> <p>Network Rail are not in a position to confirm that the TOCs will not seek to operate longer trains.</p>
<b>Access</b>		
<b>Protective Provisions</b>		
<b>Flooding</b>		
<b>Temporary Service Arrangement</b>		
<b>Energy/Noise/Sustainability</b>		
<b>Signage &amp; Lighting</b>		
<b>Southern Plaza</b>		
<b>King's Cross Central</b>		

*Victorian Society*



## Victorian Society

Area	Issue(s) raised	Network Rail Response/Commitment
General		
Canopy (Southern Entrance)	The entrance canopy has an overbearing presence and should be scaled back.	The Southern Canopy has been redesigned and pulled back.
Canopy (Southern Exit)	They do not want the arches to be cluttered.	The Southern exit canopy has been redesigned.
Canopy (Taxi)	They do not want the arches to be cluttered.	The outline within which the taxi canopies will come forward is shown on the plan. The design of the taxi canopies will however be conditioned and worked up in detailed design.
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge	The Victorian Society commends the re-use of the original bridge structure.	The original bridge structure will not be re-used but Network Rail will be looking at alternate sites to locate the bridge as part of the salvage strategy.
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		
Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range		
Retail & Mezzanine		
Passenger Movement		
Public Transport, Transport Interchange & Cycles		

Platforms		
Access		
Protective Provisions		
Flooding		
Temporary Service Arrangement		
Energy/Noise/Sustainability		
Signage & Lighting		
Southern Plaza	Subject to LBC Competition	
King's Cross Central		

*GNER*

GNER		
Area	Issue(s) raised	Network Rail Response/Commitment
General	<p>Notes received on 26th September 2006. NR to provide accommodation facilities for the ICEC franchisee in the Western Range.</p> <p>2) GNER want assurances that the removal of the central western staircase will not commence until departments have moved to alternative temporary locations.</p> <p>3) Concerns re no detailed plan to mitigate the impact on the OBS.</p>	<p>1) The final location of accommodation facilities for the ICEC franchisee has not yet been determined but will be considered along with all of the other accommodation requirements at the Station within the confines of the existing lease arrangements.</p> <p>2) Network Rail can confirm that the central western staircase will not be removed until all departments have been moved to alternative locations.</p> <p>3) Network Rail can confirm that OBS will remain operational throughout the works.</p>
Canopy (Southern Entrance)		
Canopy (Southern Exit)	Support the need for the canopy.	The design of the canopy has now been revised.
Canopy (Taxi)		
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge		
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		
Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range		
Concourse, Retail & Mezzanine	<p>- The current layout prioritises retail and cafe's over passenger considerations and station facilities.</p> <p>- Queries whether all aspects of impact on station access have been considered during construction phase.</p>	<p>The former booking hall will become the new ticket hall which is the focal point of the new concourse. Retail and cafe provisions have been set back from the other station facilities.</p> <p>Network Rail will be working with all parties affected by the construction phase to ensure that any disruption is kept to a minimum.</p>

	<ul style="list-style-type: none"> <li>- GNER has not been involved in discussions of size of ticketing facilities.</li> </ul>	In respect of size of ticketing GNER issued a report titled 'Reasonable Requirements at Kings Cross Station' January 2002. The size of the ticketing facilities has been based on the details in this document. Network Rail appreciate that passenger ticketing requirements are changing and will therefore be discussing this issue in more detail with the Train Operating Companies as part of detailed design.
	<ul style="list-style-type: none"> <li>- Toilets are situated in furthest possible location away from concourse and with less in number.</li> </ul>	The number of toilets being provided in the new station has increased - refer to 'Access Statement'. The toilets are located at ground floor level close to the left luggage facility and platforms 9 - 11.
	<ul style="list-style-type: none"> <li>- Concern over lack of heating/cooling in Western Concourse</li> </ul>	The concourse has been designed so that it is naturally ventilated and does not require heating and cooling.
<b>Passenger Movement</b>		
<b>Public Transport, Transport Interchange &amp; Cycles</b>	<ul style="list-style-type: none"> <li>- Large scale bicycle parking should not be situated to the south of station.</li> </ul>	The location of bicycle parking has been reviewed and revised. However the number of bicycle parking spaces remains the same and has been agreed with Camden and TfL. Refer to revised planning submission drawings.
<b>Platforms</b>	<ul style="list-style-type: none"> <li>- Major concerns over shortening of platforms 5 - 8. DfT have long term plans to increase capacity of UK rail network to include longer trains.</li> </ul>	Network Rail can confirm that the new platforms will be able to take existing train stock in all the platforms. With the possible introduction of 12 car trains, 7 out of the 9 platforms (platform Y - 8) will be able to take the longer train stock.
<b>Access</b>	Concerns re road access onto Pancras Road and the servicing of the DBS in the basement of the Western Range during the construction phase.	Network Rail is currently looking at various temporary servicing options which will enable deliveries to be made to the basement of the Western Range. Refer to Phase II Temporary Service Yard, Option Arrangements Issue 4' Arup.
<b>Protective Provisions</b>		
<b>Flooding</b>		
<b>Temporary Service Arrangement</b>		
<b>Energy/Noise/Sustainability</b>		
<b>Signage &amp; Lighting</b>		
<b>Southern Plaza</b>		
<b>King's Cross Central</b>		

*BTP*



**BTP**

Area	Issue(s) raised	Network Rail Response/Commitment
General	Notes received on 26th September 2006 - Support proposal but have police and security issues as yet unresolved and to be discussed as part of the detailed design process.	Network Rail will continue to consult with BTP on the detailed design.
Canopy (Southern Entrance)		
Canopy (Southern Exit)		
Canopy (Taxi)		
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge		
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		
Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range		
Retail & Mezzanine		
Passenger Movement		
Public Transport, Transport Interchange & Cycles		
Platforms		

Access		
Protective Provisions		
Flooding		
Temporary Service Arrangement		
Energy/Noise/Sustainability		
Signage & Lighting		
Southern Plaza		
King's Cross Central		

*Other*

**Other (Guardian Newspapers Ltd., Local residents, Parabola Land Ltd, London Sinfonietta and Orchestra, London Canal Museum)**

Area	Issue(s) raised	Network Rail Response/Commitment
General	Notes received on 26th September 2006 - Lack of pedestrian access from York Way.	The option of providing access from York Way has been looked at as a possible option earlier on in the design process, however for safety reasons this option has not been taken forward.
Canopy (Southern Entrance)	Canopy is a detail of concern and is aggressive. The entrance gates should be wider and taller.	The Southern Canopy has been redesigned and pulled back. The entrance gates are considered to be sufficiently wide and tall. The station has been designed to provide good connections between all modes of transport. The old Booking Hall which will house the new ticket office and forms the focal point of the new Western Concourse. The Western Concourse has been designed so that it is permeable and from the ground can be accessed at any point along its perimeter. There is no main entrance due to the many ways within which the concourse can be accessed by foot, underground, taxis, buses etc. The concourse has been designed and pedestrian modelling has been carried out which shows that the concourse operates safely and at a good level of service.
Canopy (Southern Exit)	Need better treatment to southern canopy and should be made more discreet.	The Southern exit canopy has been redesigned.
Canopy (Taxi)	Taxi pick up and set down points need better treatment.	The outline only of the canopy for the taxi pick up and set down is shown on the revised drawings. The design of the taxi canopies will be conditioned by Camden.
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge		
Junction between Western Concourse and Western Range	- There is nothing in the bulbous roof that relates to nearby buildings. The funnel that displaces the Port Cochere obscures the same western façade	Refer to 'Justification for height and bulk of main concourse building'
Junction between Western Concourse and GNH		

Junction between Western Concourse and Block A1		
Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range	- Lack of pedestrian access from York Way.	Network Rail has removed any access into the station from the Eastern corner for purely safety reasons. Refer to the revised 'Access Statement' Network Rail, December 2006. With the concourse now positioned to the west of the main train shed it has not been possible to provide pedestrian access from York Way. Refer to 'Station Design and Passenger Movements' for an explanation of how the Western Concourse operates in terms of pedestrian flows.
Retail & Mezzanine	Comment that the Eastern Elevation on York Way should be opened up for retail.	It is not possible to open up this elevation with the proposed implementation of Platform Y.
Passenger Movement		
Public Transport, Transport Interchange & Cycles		
Platforms		
Access		
Protective Provisions		
Flooding		
Temporary Service Arrangement		
Energy/Noise/Sustainability		
Signage & Lighting		
Southern Plaza		
King's Cross Central		

*GL Archeology Advisory*



GL Archeology Advisory		
Area	Issue(s) raised	Network Rail Response/Commitment
General	Letter dated 28th September 2006. Recommend planning condition be attached to any approval requiring a programme of archaeological work in accordance with a written scheme for investigation to be submitted to LBC	Network Rail accept that the condition would be applicable. Contract Requirements Environment include this type of requirement for any contractor undertaking works in or near a listed structure or site of historic importance - Archaeological watching brief.
Canopy (Southern Entrance)		
Canopy (Southern Exit)		
Canopy (Taxi)		
LUL South East Stair & Lift / North/East Escalator		
New Link Bridge		
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		
Western Concourse Roof		
Plant / Ventilation		
York Way / Eastern Range		
Retail & Mezzanine		
Passenger Movement		
Public Transport, Transport Interchange & Cycles		
Platforms		

Access		
Protective Provisions		
Flooding		
Temporary Service Arrangement		
Energy/Noise/Sustainability		
Signage & Lighting		
Southern Plaza		
King's Cross Central		

*LUL*

LUL		
Area		Network Rail Response/Commitment
General	Letter received on 19th October 2006	
Canopy (Southern Entrance)		
Canopy (Southern Exit)		
Canopy (Taxi)		
LUL South East Stair & Lift / North/East Escalator	South /East Stair & Lift - NR to upgrade structure/canopy to meet LUL's standards for external station entrance. - LU consider weather protection to staircase fundamental	The Southern exit canopy has been redesigned so that LU staircase is weather protected.
	North/East Escalator - NR to confirm principle peak flow direction, so TfL can accept the single escalator compromise.	Network Rail has agreed with LU that the north east escalator will operate in a downward direction in the morning peak, and an upward direction in the evening peak.
New Link Bridge		
Junction between Western Concourse and Western Range		
Junction between Western Concourse and GNH		
Junction between Western Concourse and Block A1		
Western Concourse Roof		

Plant / Ventilation	<p><b>Bomb Gap Vents</b></p> <ul style="list-style-type: none"> <li>- NR to confirm access for maintenance to vents shafts and associated equipment.</li> </ul> <p><b>South/East Vent</b></p> <ul style="list-style-type: none"> <li>- NR to confirm access for maintenance to South/East vent</li> </ul>	Network Rail will provide access to all vent shafts located in the Bomb Gap and the Southern Square to allow future maintenance.
York Way / Eastern Range		
Retail & Mezzanine		
Passenger Movement		
Public Transport, Transport Interchange & Cycles		
Platforms		
Access		
Protective Provisions	<ul style="list-style-type: none"> <li>- LU requires asset protection during construction of Western Concourse through PPA (Protective Provision Arrangement)</li> <li>- NR to provide method statement of works and confirmation that access for passengers during construction is guaranteed for by 2009.</li> </ul>	<p>Network Rail will enter into a Protective Provision Arrangement with LU.</p> <p>As part of any works we will ensure that passengers can access all other modes of transport.</p>
	<ul style="list-style-type: none"> <li>- NR to confirm strategy for the prevention of passenger trolleys being taken into the Underground environment.</li> </ul>	A strategy for the management of trolleys will be developed during detailed design and agreed with LU.
Flooding	<ul style="list-style-type: none"> <li>- LU requires that A flood impact assessment is carried out to demonstrate that there is no risk of flooding to the Underground from the proposed Western concourse.</li> </ul>	A flood risk assessment and surface water drainage plan have now been sent through to Environment Agency. The Environment Agency will formally write to Camden.
Temporary Service Arrangement	<ul style="list-style-type: none"> <li>- LU requires clarification on access strategy for deliveries in the absence of a shared service yard.</li> <li>LU, NR and EDF equipment will require servicing and/or replacement any time from late 2007 onwards.</li> </ul>	Network Rail will be constructing the shared service yard. During construction temporary servicing arrangements will be put in place.
Energy/Noise/Sustainability		
Signage & Lighting		

Southern Plaza		
King's Cross Central		



***Justification for Height and Bulk of Main Concourse Building***

Architecture  
Urban Design  
Landscape

John McAslan  
Adam Pether  
Mark Smith  
Andrew Tye  
Roger Ellis  
Tom Lee  
Natalia Smith  
Tim Rogers  
Michael Lander  
Matthew Bell  
Chris SA  
Sally Soper  
Therese Brown  
Mark Gough  
Simon Jones  
Pete Moberg  
Kathleen Moberg

## MEMO

FILE REF: KM/1163/1.1  
TO: Steve Taylor NR  
FROM: John McAslan + Partners  
DATE: 20-11-06  
NUMBER OF PAGES: 2  
CC: Lisa O'Toole NR

### KING'S CROSS STATION – PLANNING APPLICATION CLARIFICATION JUSTIFICATION FOR HEIGHT AND BULK OF MAIN CONCOURSE BUILDING

The challenge at King's Cross Station is to form a world-class transportation hub with St Pancras Station and to provide connections between the national and European rail networks and London's local transport systems. The response is to create a dramatic and welcoming new station building, which makes King's Cross Station a place where travel is a pleasant, exciting, safe and above all memorable passenger experience of the future.

The above objectives have led to the creation of a volumetric building form for the new station concourse, which is radial in plan and centred on the old booking hall. In particular it responds to the concave geometry of the Great Northern Hotel. At its high point the new enclosure meets the central booking hall of the Western Range just below cornice level. The structural response to the limitations imposed by the LUL Northern Ticket Hall below is the clear spanning semi-circular diagrid roof structure above. The roof creates a welcoming and voluminous columnless space for unobtrusive passenger movement, circulation and accumulation.

The central funnel structure not only provides a vertical support to the semi-circular skylight, it adds stiffness to the shell structure and also creates a central focal point in front of the re-instated booking hall. The glazed central roof light resolves a simple interface with the complex geometry of the Western Range, which reinstates a centralised booking hall in its historic location.

The vertical facades in front of the western Range will be of self cleaning non-reflective glass so to allow for views into and out of the new concourse areas and thus creating a direct relationship between the new and the old building structures.

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The form of the roof is a radical evolution of the railway structure of the nineteenth century – light and ethereal in comparison with the massive timber, iron and glass roofs of the 1850s sheds. The form of the roof expresses dynamism of travel, while its structural efficiency provides a great public space unencumbered by columns.



The new form of the concourse roof sweeps down to embrace the station forecourt, thus providing a soft link between the new King's Cross and St Pancras Station buildings.



In townscape terms, the radial form of the Concourse reinforces generous and seamless pedestrian movement from the new southern square to King's Cross Central to the north and creates a memorable world class urban gateway for the 21<sup>st</sup> century.



## MEMO

FILE REF KM/1163/1.1  
TO Lisa O'Toole NR  
FROM John McAslan + Partners  
DATE 13-12-06  
NUMBER OF PAGES 1  
cc Steve Taylor NR

### KING'S CROSS STATION – PLANNING APPLICATION CLARIFICATION JUSTIFICATION FOR ROOF AND FUNNEL STRUCTURE

The form of the roof is a radical evolution of the railway structure of the nineteenth century - light and ethereal in comparison with the massive timber, iron and glass roofs of the 1850s sheds. The form of the roof expresses dynamism of travel, while its structural efficiency provides a great public space unencumbered by columns.

- The roof is articulated away from the listed facade.
- The roof structure is a layered composition.
- It has a similar relationship to the heritage buildings and the historic vaults.
- It frames the elevation with minimal visual interruption.
- Any interruption is only functional in the great engineering tradition, it is the lightest resolution of a giant span structure and the contrast of volume and materiality of the shell with the solidity of the heritage facade is clear, articulated and delightful.
- There is no confusion between new and old and it is clearly defined and traditionally legible.
- Site elements do sit in front of the listed facade but it is conceived as a lightweight filigree construction in the great tradition of Victorian ornamental structures. These sculptural parts in front of the old booking hall only serve to signify the importance of this element as an origin for the geometrical centre of the new vault.



***South East Stair – Justification for Location of Lift***





*Kings Cross Station Western concourse: Maintenance  
Strategy*

## **Kings Cross Station Western Concourse: Maintenance Strategy**

Network Rail's Design is currently at RIBA Stage D. Detailed design is expected to commence in Spring 2007 and this stage will further develop design of maintenance systems in accordance with any planning conditions.

Network Rail is acutely aware of the need to ensure that future maintenance and renewal is a key driver in design. Network Rail is in a unique position to understand the importance of maintenance access arrangements bearing in mind the limited opportunities available to maintain the operational railway.

The new western concourse is a landmark building and we will ensure that maintenance systems and processes do not compromise the integrity of the architectural design. Furthermore, maintenance must be safe, effective, and affordable.

Maintenance of specific areas of the western concourse will be addressed as follows:

### **Gutter between Western Concourse and Western Range**

Cleaning the gutter is straightforward. Access is via the first floor windows of the western range. The gutter is 600mm wide and has walk on grills which provide a safe maintenance walkway. The walk on 'grills' can be lifted in order to clean the gutter.

### **Concourse Roof**

Perimeter level access, along the gutter line of the roof, can be gained from the first floor windows of the western range, towards its northern and southern ends where the roof is essentially flat between the western range gutter and the main roof area. "Mansafe" fixings along the gutter line will provide safe and secure access around the entire roof perimeter and as the roof is essentially flat in this area, this should be the primary point of day-to-day inspections.

High level access to the uppermost section of the roof, including the glazed roof lantern and the upper sections of the metal panel roofing system, is provided from the roof of the old booking hall in the centre of the western range. Maintenance operatives can step over the existing brick roof parapet onto the central glazed section of the new roof. A mansafe fall arrest system will be incorporated around the perimeter of the glazed central section of the roof and on the internal face of the existing roof parapet wall. The roof pitch to the central section of the roof is very shallow - less than 20 degrees to the mid-point of the roof, so access by foot with appropriate fall arrest harnesses will provide suitable access for regular inspection and maintenance. Mansafe fixings will be designed to be unobtrusive.

### **Glazed Wall between Western Concourse and Western Range**

The internal face can be accessed using aerial work platforms such as "Cherry Pickers".

Externally, lower levels can be cleaned by standing on the gutter grills. Upper levels can be cleaned using water fed poles operated from the gutter grills or possibly from the concourse roof. A "Mansafe" system may be installed on the roof at the top of the glazed wall subject to the chosen methodology.

Furthermore we are also considering the possibility of using telescopic ladders subject to safety and aesthetic considerations.

*Meeting with Camden 22<sup>nd</sup> Nov, Extract Ventilation*

Our ref: 54200-60/JM

Date: 24 November 2006

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Network Rail  
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London  
WC1X 8BP

# ARUP

Dear Lisa

**King's Cross Station Enhancements  
Meeting with Camden 22nd Nov, Extract Ventilation**

We attended a meeting on 22<sup>nd</sup> November with Peter Carey, Environmental Health Officer at Camden. We discussed the issues raised by Camden in their letter of 13<sup>th</sup> October concerning extract ventilation in the concourse roof (see attached).

We discussed Camden's concerns over the 4 extract louvres shown on the roof plans, and their suggestions of ducting the extracts to high level. We pointed out that their suggestions of tall flues to the roof level of the Great Northern Hotel or lengths of extract ductwork following the curve of the roof would not be acceptable architecturally. In addition, long lengths of duct for kitchen extract would accumulate fat and pose a fire hazard.

We explained that we want to maintain the appearance of the roof as currently shown on the plans, and in order to satisfy the planners we would not be extracting odours at the two extracts closest to the Great Northern Hotel. The extracts would also have deodorising filters - our *Retail Engineering Services Strategy* report (54200/159/1, Nov 2003) states: "it is recommended that major catering tenants are required to fit UV or deodorising washer type filters to the kitchen exhausts". We tabled sketches (attached) showing an option for achieving this by making the southern vents into "dummy" vents, and extracting only to the two Northern vents. This proposal would impose restrictions on the type of catering provided in the units at the southern end of the mezzanine.

Yours sincerely

Jim McCarthy  
Associate

HORIZONTAL DUCTWORK  
TO TAKE EXHAUST AWAY  
FROM SURROUNDING  
BUILDINGS

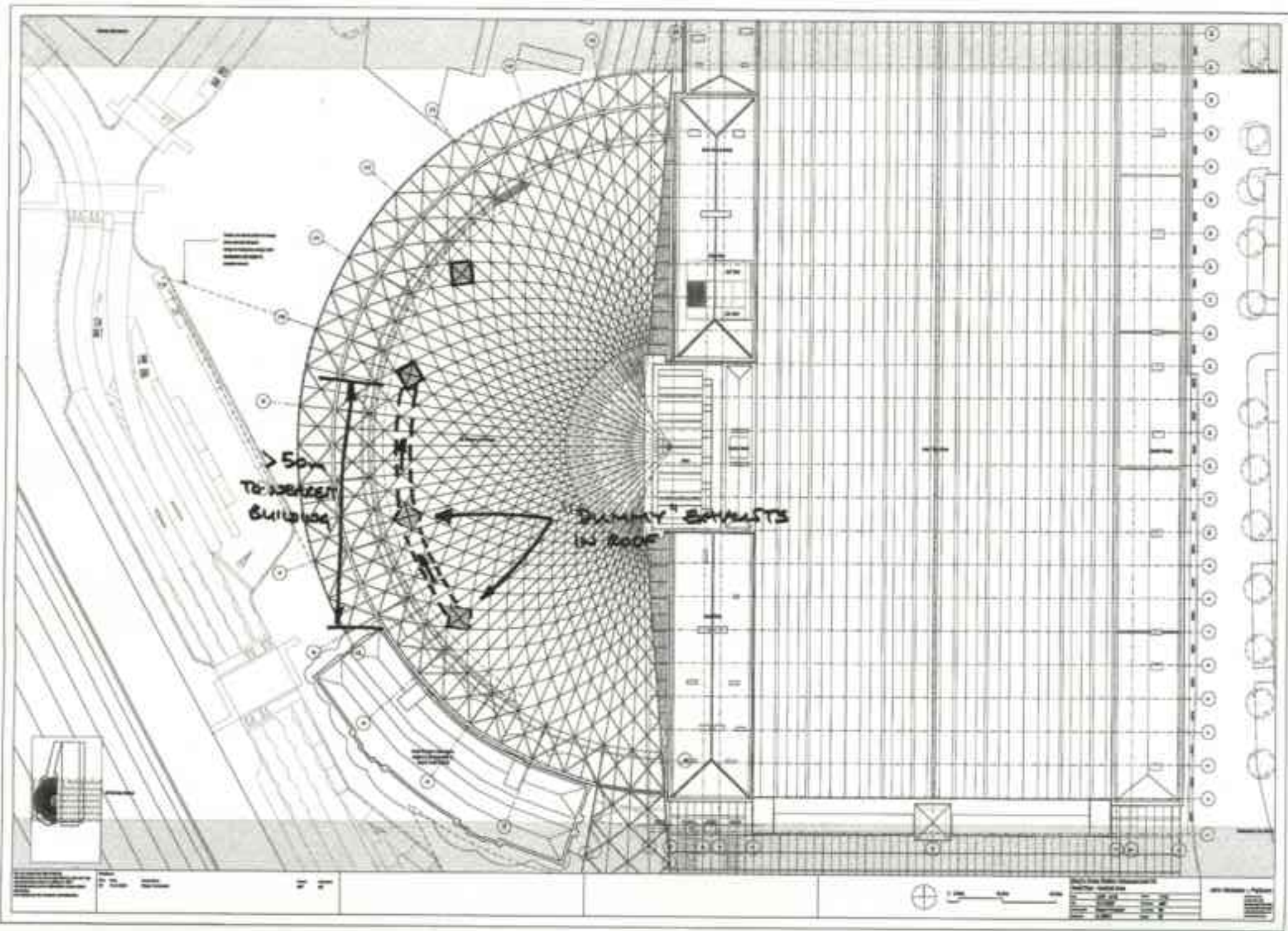
NOTE: EXTRACTS SHOULD NOT  
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NOTE: ROOF SURFACE TO  
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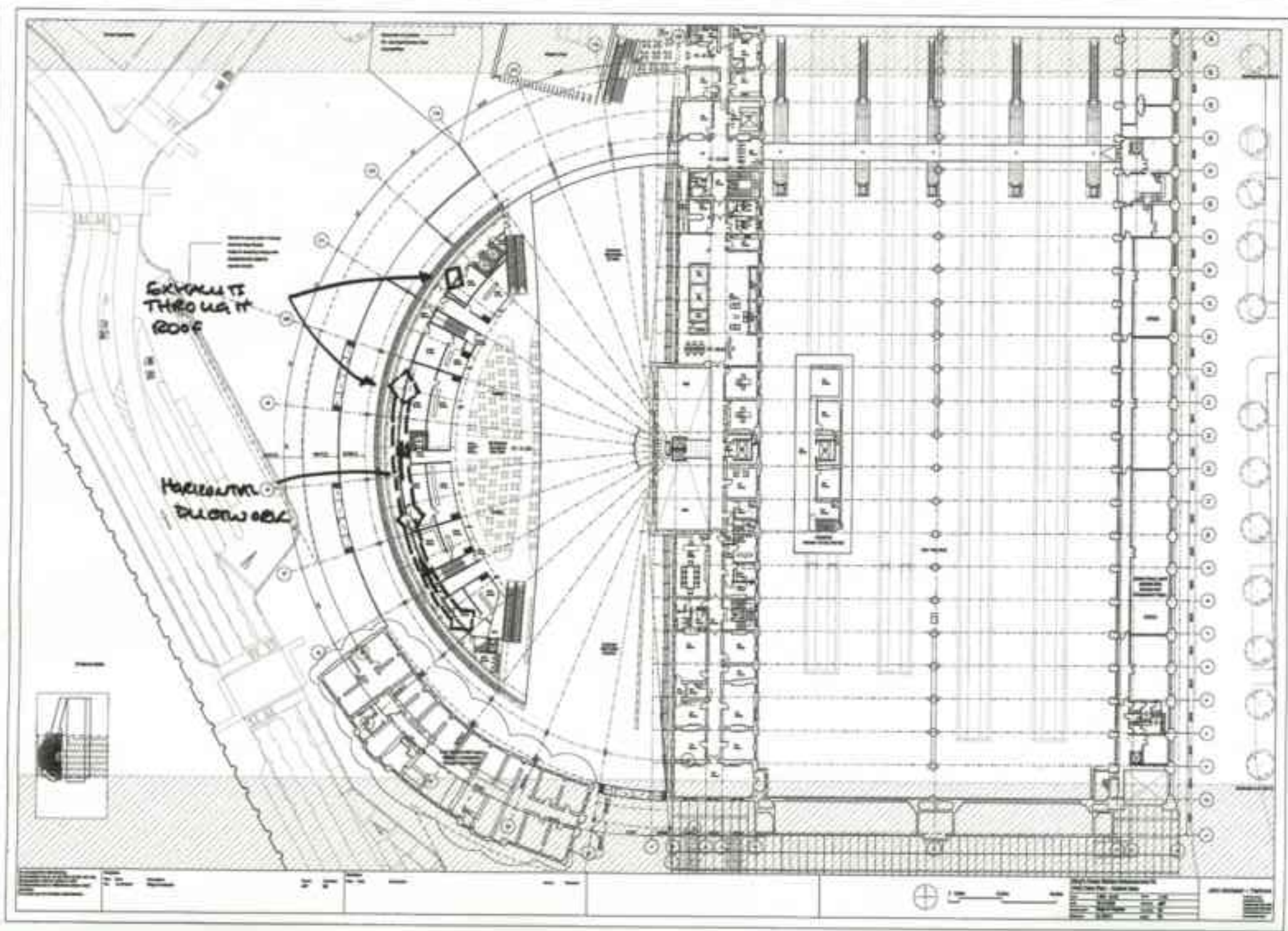
Non - KITCHEN CATERING  
- AVOID EXTRACTING FROM  
COOKING (FAT) INTO  
HORIZONTAL DUCTWORK

RETAIL WORK ON THIS  
SIDE TO HAVE KITCHENS









On 22<sup>nd</sup> November Arup and Network Rail met with Peter Carey of LB Camden environmental Health to discuss the following concern raised to the planning application. The work we did for the meeting was specifically in response to the planners concerns about the ventilation from the retail units. In particular the low-level extracts close to the Great Northern Hotel

### Ventilation and plant

The low level ventilation identified on the concourse roof is not acceptable because of likely odour nuisance in the vicinity, particularly adjacent to the upper floors of the Great Northern Hotel. It is Council policy that a high level extract duct should be provided above the roofline of the subject building and where possible, to adjacent buildings. A re-worked design for the ventilation will be required as part of the current assessment.

Further discussion with our Environmental Health officers is necessary and we are happy to arrange this. One possible option may include the incorporation of suitably designed and visually negligible internal or external narrow vent pipes rising from the current location to discharge adjacent to the apex of the concourse. These would read as "ribs" that might logically be read as structural elements on such a form.

To complete assessment, we also require clarification of the location and design of all other elements of plant and mechanical extract vents within the development. It is important that these elements are fully integrated as part of the design.

The council appeared to want flues extending up to GNH roof line, and was suggesting runs of ductwork along the concourse roof. The architect does not want this as it spoils the appearance of the building. The current architectural layouts and models show a smooth roof surface, with extract vents flush with the roof. At the meeting, Camden's Environmental Health Officer accepted that flues above the roof, especially if they are to extend to the roof level of the GNH, would not be architecturally acceptable. He also accepted that the long ductwork runs suggested in the second paragraph above would collect fat and be a fire hazard, and in any case, they detract from the architecture.

Arup tabled a marked-up ventilation schematic (attached) showing the 2 vents closest to the GNH being dummy vents, and horizontal ductwork connecting the southern retail units to the 2 remaining roof vents. This option was acceptable to the EHO as an alternative to the long ducts and flues above the roof line.

However, this imposes severe restrictions on the retail strategy for the station. The drawing shows that only the northern units can have cooking, and the others must have non-cooking extracts. There may be other options to allow for cooking in the other units that could be explored, and we would not recommend that NR restrict themselves at this stage.

We have not specified what filters are to be used for the retail areas as this is part of the tenant fit-out. The "Retail Engineering Services Strategy", 7.4.3 states "It is recommended that the major catering tenants are required to fit UV or deodourising washer type filters to the kitchen exhausts".

Drawings are attached pertaining to de-odourising air extracted from catering facilities. These drawings are typical and the equipment shown therein is not sized to suit the Western concourse facilities. However, they do reflect the type of equipment needed for a medium sized 'burger bar'.

These drawings come courtesy of Purified Air Ltd, who are a market leader in the supply, installation and maintenance of such equipment. Note that they do not show the ductwork, noise attenuation equipment or extract fans that the installation would require. The M&E contractor would show this additional equipment. Therefore, the space requirement will be considerably larger than that shown in these drawings.



In order to properly de-odourise the air, one must first remove all larger particulate. The drawings show a double pass Electro-Static Precipitator (ESP). This reduces particulate size to below a micron. De-odourising equipment can then be installed in series with the ESP. This can take one (or more) of three forms a) ultra violet (UVC), b) carbon filter (MMF) and c) vapour injection (ON). These abbreviations are used in the attached files. The drawings included are picked randomly to give a 'flavour' of the type of installation that might be required.

Some styles of cooking, such as Indian or Chinese, require a more vigorous de-odourising system. For such, two or more de-odourising techniques may be included. Note that it is only once the size and type (cooking style) of each catering facility is known that the type of de-odourising and particulate removal equipment can be confirmed.

#### Drawing References

2 x ESP - Electro-static precipitators

2xESP + UVC + 4xMMF - Electro-static precipitators and ultra violet treatment and carbon fibres

2xESP + 2xMMF + on100 - Electro-static precipitators and carbon fibres and vapour injection

All dimensions in millimeters  
Do Not Scale

# Purified Air Ltd

Title:

2x(ESP 3000E)

Weight:

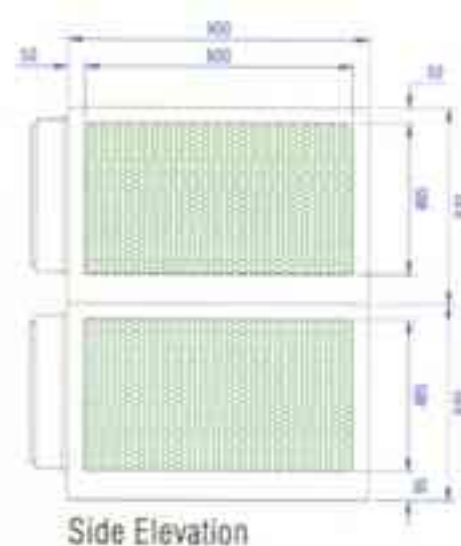
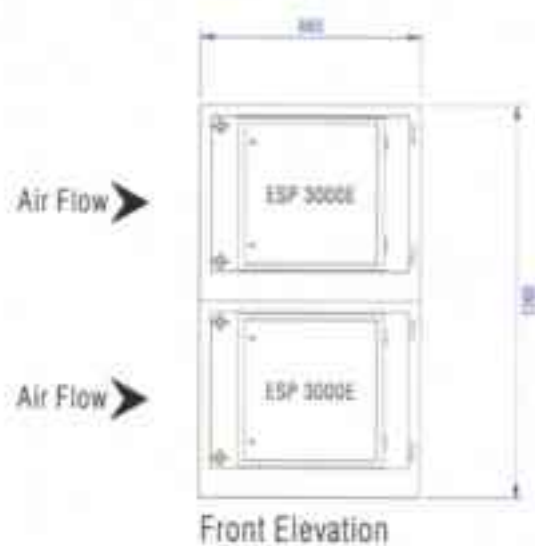
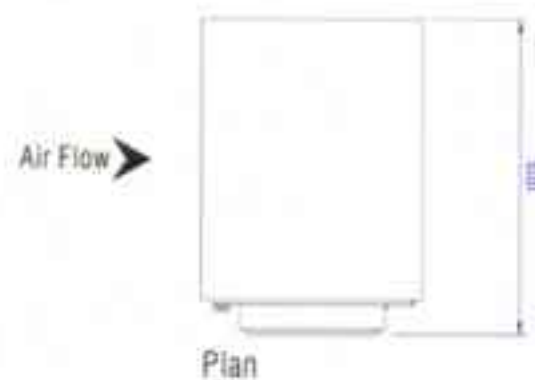
200kg

Power Supply:

220/240v-50Hz-1 Phase

Maximum air flow through system:

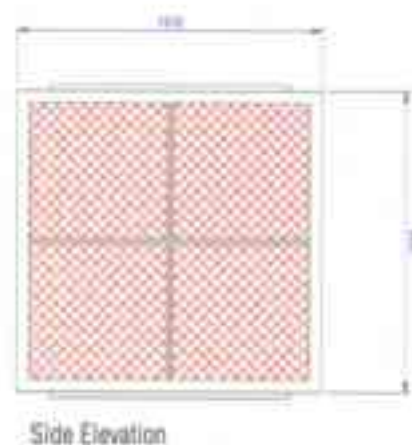
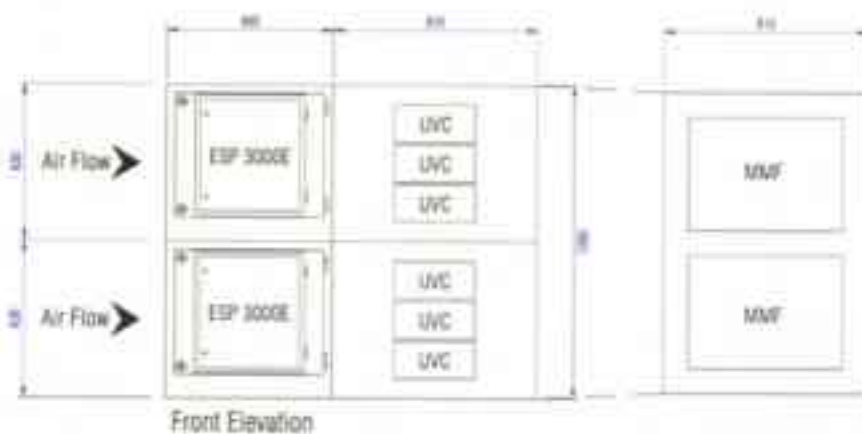
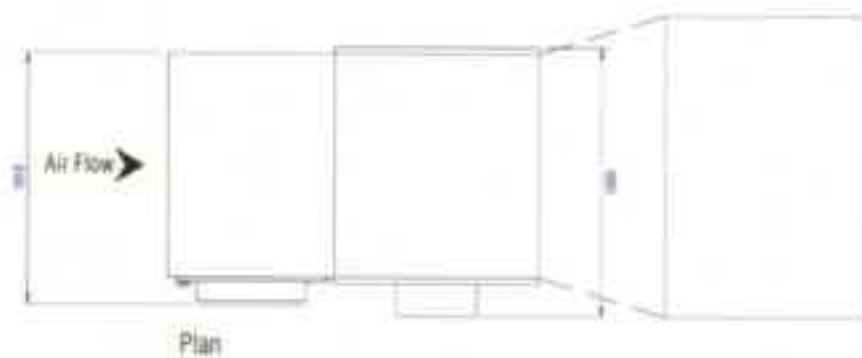
2.8m<sup>3</sup>/s



Note

The system can be reconfigured if air flow direction is different to that shown.

All dimensions in millimeters  
Do Not Scale



## Purified Air Ltd

File: (2 x ESP 3000E) +  
(2 x UVC 3000 Module) +  
(4 x MMFilters)

Weight: 550kg + 16kg/Rack	Power Supply: 220/240v-50Hz-1 Phase
Maximum air flow through system: 2.8m <sup>3</sup> /s	

**Note**  
The system can be reconfigured if air flow direction is different to that shown.  
Transition and ducting sections in between units shown for indication purposes only.  
All transition pieces and ducts to be designed, supplied and installed by others.

All dimensions in millimeters  
(Do Not Scale)

# Purified Air Ltd

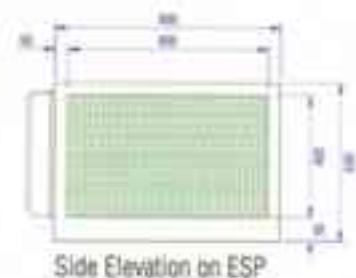
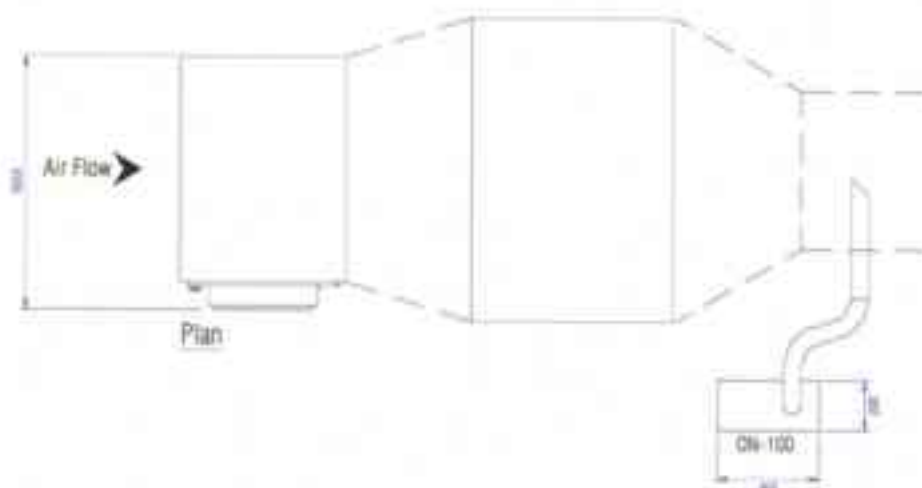
Size

(1 x ESP 3000E) +  
(2 x MMFilters) + (ON 100)

Weight  
150kg

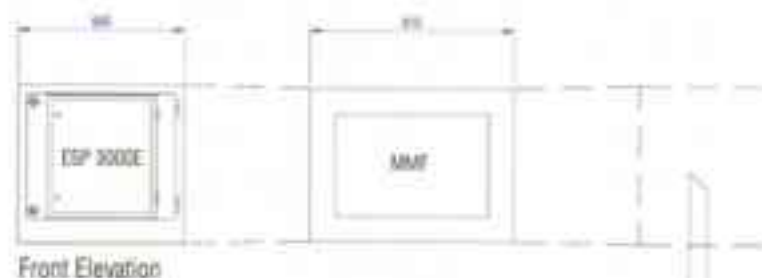
Power Supply  
220/240v-50Hz-1 Phase

Maximum air flow through system  
1.4m<sup>3</sup>/s

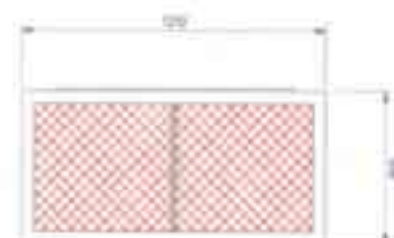


Side Elevation on ESP

Air Flow →



Front Elevation



Side Elevation on MMF

Note  
The system can be reconfigured if air flow direction is different to that shown.  
Transition and ducting sections in between units shown for illustrative purposes only.  
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CONCOURSE

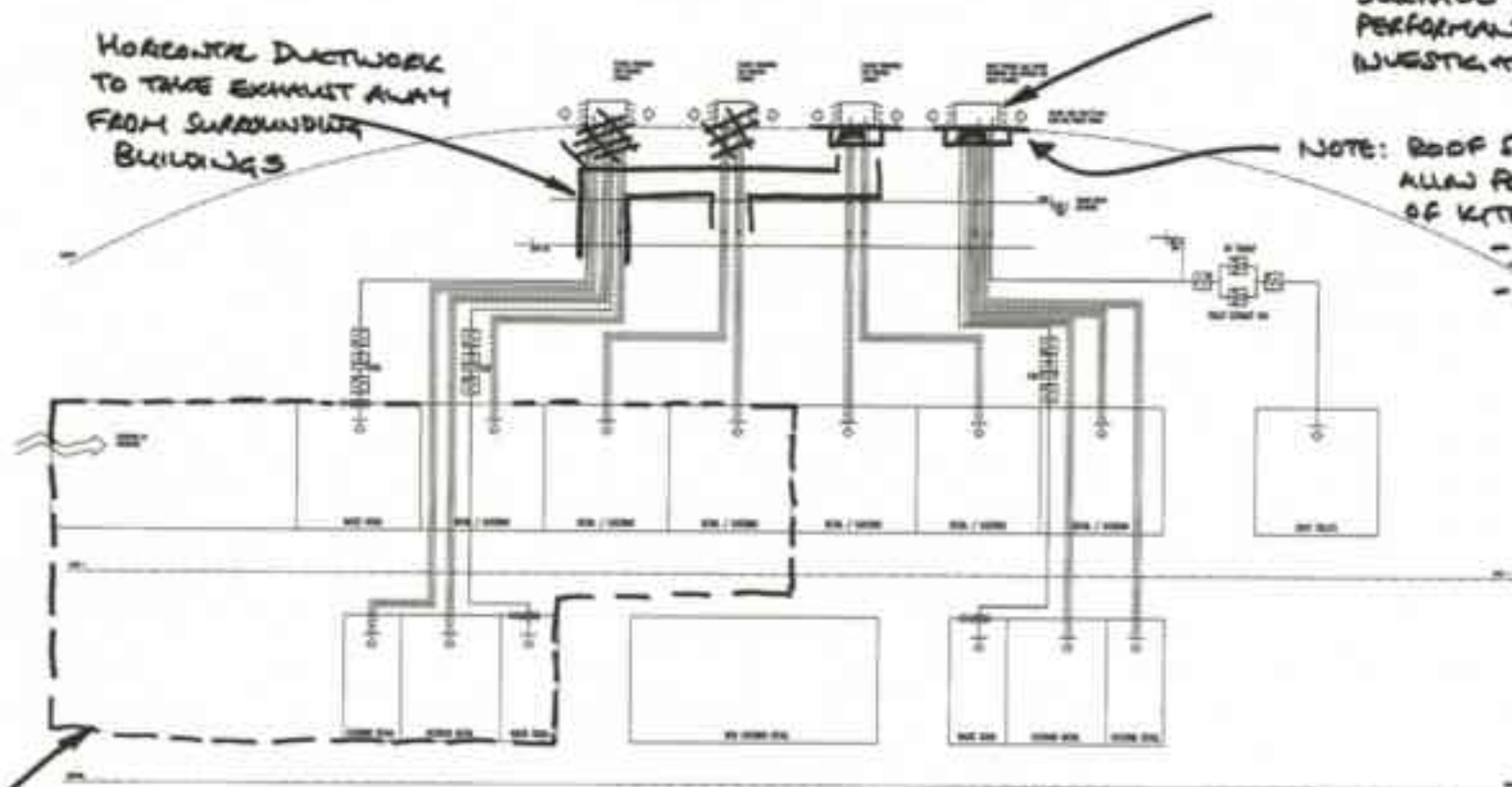
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HORIZONTAL DUCTWORK  
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Non- KITCHEN CATERING  
- AVOID EXTRACTING FROM  
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HORIZONTAL DUCTWORK

RETAIL UNIT ON THIS  
SIDE TO HAVE KITCHENS



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ARUP

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