OXFORD STATION AREA

DESIGN COMPETITION
1. KEY PRINCIPLES OF THE CONCEPT
2. MATERIALS AND COLOUR PALETTE
3. SKYLINE AND PROTECTED VIEW CONES
4. TRANSPORT
5. CONSTRUCTABILITY

## CONCEPT AREA SCHEDULE

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<td>STATION</td>
<td>2,730m²</td>
<td>2,800m²</td>
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<tr>
<td>STATION OPERATIONS</td>
<td>1,266m²</td>
<td>1,680m²</td>
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<tr>
<td>STATION AND BUS RETAIL</td>
<td>2,195m²</td>
<td>3,130m²</td>
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<tr>
<td>MSCP</td>
<td>480</td>
<td>480</td>
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<tr>
<td>SHORT STAY PARKING/ STAFF PARKING</td>
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<td>BUS AND COACH BAYS</td>
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<tr>
<td>TAXI</td>
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<tr>
<td>CYCLES</td>
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<tr>
<td>COMMERCIAL</td>
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<td>6,500m²</td>
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<tr>
<td>HOTEL/ RETAIL</td>
<td>5,496m²</td>
<td>5,550m²</td>
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<tr>
<td>RESIDENTIAL</td>
<td>1,650m²</td>
<td>5,460m²</td>
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<tr>
<td>STATION RETAIL, COMMERCIAL, HOTEL, RETAIL AND RESIDENTIAL GRAND TOTAL</td>
<td>15,269m²</td>
<td>20,640m²</td>
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1. KEY PRINCIPLES OF THE CONCEPT

**Masterplan Concept**
Our concept develops the original masterplan principles and seeks to create a significant landmark for the city.

The concept respects the scale and street pattern of the neighbouring buildings and preserves the cherished long distance views across the town’s skyline.

It combines the best of international transport architecture with a contemporary vision and an understanding of the historical importance of the setting. The overall site configuration follows the principles of shaping space through the movement of people.

Whether traveling by foot, train, bus, car or cycle, each mode is clearly defined and celebrated by modern and exciting architecture that is integrated into the wider context and characteristics of Oxford.

The concept emphasises key links with the city centre and aligns the new station with Botley Road, providing a memorable approach to the station from Frideswide Square. A new public Plaza creates an appropriate setting for the station building entrance and forms part of a sequence of public spaces linking the new transport hub with the city centre.

The Transport Interchange has been split either side of Botley Road to provide much needed breathing space between transport modes whilst still ensuring a safe pedestrian approach to the station entrance.

**Station Concept**
The station concept will be easy to navigate, dramatic in experience and appropriate to its setting. Its volume and mass is derived from an analysis of the direction of user flows, which serves as a basis for the architectural form.

The building is moulded from a single volume that has been punctuated by large dramatic, arched openings to facilitate the passage and synergy of trains and travellers. Passengers are drawn through the building via a series of large domed spaces.

Inspired by great Oxford architecture such as the interiors of Divinity School, arch of the Bridge of Sighs or the dome of Radcliffe Camera, the station has a contemporary character that is relevant & rooted to its location & place. The building in its slender elegant form is reminiscent of an ancient Oxfordshire landmark – Uffington White Chalk Horse. The gateway into the station takes as much from the historic external facade of Kings Cross as is does from its new interior.

The station building will become a symbolic gateway into Oxford and an important urban link joining the developments on the east and west side of the tracks.

The elevated station concourse provides impressive views over Frideswide Square, into the city centre, underlining the station’s importance as a gateway to the city.
Buildings and Urban Design Concept

The station building is central to the concept, maximising linkages to transport modes and the arrival into the city. This ensures that the various constraints of the Botley Road bridge, height restrictions, curvature of the rail tracks etc are mitigated.

To the south the MSCP building remains in its original position in the masterplan with a widened, improved pedestrian link to the rail station. Parking numbers are retained but could be reduced. The defined separation of bus users, cycle and pedestrian routes, assists all movement along Becket Street. The identity of the bus and coach station has been strengthened, with the removal of all the bays that were located along Becket Street.

A wider glazed concourse provides state of the art services, information and quality waiting facilities for passengers. The public space in front of the bus station has been enhanced by greeneries and addresses the Church of St Thomas the Martyr opposite.

Residential use is proposed above the bus and coach station providing important natural surveillance, additional commercial revenue and a strengthened street presence. The residential building is scaled to be sensitive to the existing character of Becket Street. The varied roof-scape, with duplex apartments and green terraces provide interest.

The corner of Botley Road and Becket Street is celebrated with a striking feature commercial building that provides a strong geometrical form that complements but doesn’t compete with the train station. It provides active frontages with shops and cafés at ground floor level.

The Plaza in front of the train station prioritises pedestrians. The proposals are integrated with Frideswide Square and ensure a high quality experience when entering or leaving the station.

The taxi rank and short stay car park have been relocated to follow the more intuitive route for cars to park on the north side of Botley Road. This concept is also more convenient for commuters entering or leaving the station by taxi.

Cycle parking is mainly positioned underneath the taxi rank. The new location aligns with existing cycle routes and strengthens the character of the north side of the new station as a clearly defined commuter zone. The entrance stairs/ ramps appear through a large water feature and the voids bring light into the subterranean space incorporating a cycle workshop and retail.

The vehicular access into the Said Business School is preserved and integrated into the access and parking strategy. The proposed commercial buildings respond with elegance and utilise classical references to the Oxford vernacular as well as to the new character of Frideswide Square. The potential for leisure, retail,
office and hotel use is maximized around the Plaza.

The character of the west side of the station changes with the Botley Road underpass to respond to the suburban zone fronting Roger Dudman Way. The proposed residential block and the station operational building are considerably lower and smaller in scale. Nonetheless the architectural quality is preserved and the language and use of materials is consistent with the development elsewhere.

Small scale retail uses are located under the Botley Road Bridge.

Materials & Colour Palette
The proposed façade treatment is a carefully considered and well mannered approach that is contemporary and distinctive; that fits well within its context and has a civic presence. We have taken care to maintain a sense of human scale and variety to the elevations. Elevation treatments have a rich expression of sensitive details at a range of scales, from large glazed elements and modulated roofs to, deep reveals, projecting bays & sensitively detailed junctions.

The station building exterior incorporates dramatic large glazed arch openings that enhance permeability and celebrates the point of arrival and departure.

The main volume of the station is monolithic and is clad in local limestone connecting the building with the Oxford vernacular.

Materials have been chosen to reduce not only the carbon emissions embodied within the building but also the other environmental impacts of construction materials. The façade materials include local stone, curtain wall, zinc panels and stone landscaping.

Finally, the internal and external materials will be chosen to be robust and to withstand the effect of heavy pedestrian use.

View Cones
The concept has been developed with the use of a 3D digital model that extends into its urban surrounding and this has been used to test and refine the key views towards and out of the site area. We also tested the impact that the building will have on the Oxford View Cones making sure that the historic vistas are preserved and unobstructed.

The siting of the station should not be contentious as in all aspects we feel that damage to the View Cones is minimal or indeed non-existent.

The Station is either outside the key view corridor or significantly below the skyline and important features.

The concept proposes the majority of the buildings at or below 18.2m in height. The station Roof Restaurant and adjacent commercial building is at a height of 20m but set back from the perimeter and does not affect the View Cones.
4. TRANSPORT

Background
The concept is for a modern, multi-modal, transport interchange that improves the urban environment, better serves the community and enhances the local economy.

It combines a bus and rail station with interfaces to private car, taxi, bus and cycle modes. It will provide a catalyst for the regeneration of a revitalised station quarter, considerably enhancing the area for everyone, and will create a fantastic first impression of Oxford as a confident and outward looking international city.

Rail
The station anticipates the requirement for an increase in the number of platforms, allowing more trains to run on the network every hour. It also provides enhanced concourse passenger facilities which will allow passengers to wait for trains in more comfort with more space and more facilities such as shops, cafés and ticket offices and information. Easy access will be provided to and from the platforms via an enhanced overbridge with escalators, stairs and lifts connecting directly to every platform.

Bus and Coach
The concept incorporates all 18 bays within a new safe and pleasant bus and coach station. The removal of bus bays from Becket Street allows the street to be more pedestrian and cycle friendly. The station will accommodate local and longer distance services and is serviced by adjacent retail and offices.

Space has been provided for the peak number of passengers and takes into account that many passengers will travel in groups or have luggage.

Cycles
Cycling is a very popular mode of travel in Oxford and accordingly the new station and Plaza will integrate an enhanced cycle provision as part of the scheme, both in terms of numbers of spaces and quality/security of provision.

Cycle parking for 1,200 cycles is located in a new subterranean facility with natural daylighting.

This is enhanced with a cycle repair workshop and retail. The space is accessed via a ramp and a dramatic staircase accessed through an external water feature.

Private Car and Taxi
The new station interchange will provide dedicated parking, pick-up and set-down points for private cars, allowing passengers a structured, accessible and well-defined provision.

Taxis are well catered for via a new rank and drop off to ensure a good supply of taxis at peak times located adjacent to the door of the station.

Long term parking is via a MSCP which is accessed directly from Becket Street and will allow easy transfer by foot directly to the station.

Pedestrians
The majority of passengers arriving at the station continue on foot toward the city centre or the residential areas to the west.

The concept provides intuitive way-finding via strong linkages and clear dramatic architecture.

Routes are easily navigable and well connected. The proposal allows for wider pedestrian walkways between the MSCP, bus, coach and railway stations.

It also provides for a safe and direct at-grade crossing across Botley Road.

The bridge over Botley Road is simplified to allow access along additional active frontages to maximise commercial opportunities and to encourage the use of the public realm.

Access into the station is gained from both the east and the west.

Staff access and parking is via Roger Dudman Way. The operational building enables direct access into the station.
5. CONSTRUCTABILITY

Construction Concept
The concept allows for the station to remain fully operational throughout its re-building, with existing rail services unaffected except during possessions.

Construction either side of the existing tracks at ground level can generally be carried out without affecting the operation of the railway and with all lines remaining open. Careful thought has been given for the phasing and sequencing of the work and is set out briefly below.

Station
The architectural form naturally leads to the use of arches for the primary structure. These arches spring from thrust blocks on the platforms and span both over the tracks and along the length of the platforms, creating large circulation spaces at platform and concourse level uninterrupted by structure. A two way spanning grillage of trusses, the depth of which will vary to follow the vaulted profile of the ceilings, will span two ways between the arches to form the floor and roof structure. A concrete floor slab at concourse and roof level will be supported on the top chord of these trusses.

The structural solution has been developed taking into account the constraints associated with building over a live railway line in a city centre location. The foundations will comprise of raking piles to carry the thrust loads from the base of the arches. We anticipate that some possessions may be required for these works. The trusses and arches will be fabricated from steel, a material ideally suited to this application due to it’s high strength to weight ratio, but also as it lends itself to off-site modular construction.

The arches will arrive on site in three or four sections and will be bolted together on the ground before being lifted into position. For the arches over and adjacent to the live railway, this could be completed in the course of a relatively short series of track possessions. Once they are in place, the concourse level floor trusses in the longitudinal direction would be lifted into place. Each truss would arrive as one component pre-welded. Following on, the individual components of the infill trusses in the transverse direction will be lifted into place to complete the two way spanning grillage.

The majority of the structure can be erected during overnight or short weekend track possessions. Once the first floor slab is in place it can form a crash deck for any work taking above, using the permanent works as a crash deck for the work above.

Botley Road Bridge Alterations
Two new tracks are to be introduced at the station which will necessitate the building of two new bridges parallel to the existing bridge over Botley Road. The existing bridge will need to be replaced to allow for a longer span to accommodate an increased width for carriageway and walkway/ cycle path underneath. The existing road level will also be reduced to give suitable headroom for double decker bus access.

New piled foundations for the new station link structure will need to be located to avoid the pumping station.

Method set out below:
To preserve the existing southernmost abutment, a new bridge support will be formed that will in effect segregate the walkway/cycle lane from the carriageway.

Continuous bored piles to form the new bridge support/ abutment - possession required for the new central bridge

Part-demolition of the existing northern bridge abutment and archway and install bridge deck Possession required for new central bridge.

Cut and cover operation to install pre-cast culverts to form new walkway.

Demolish remainder of existing northern bridge abutment and archway, lower the level of existing northern carriageway, then open this carriageway to traffic.

Close southern carriageway and build up levels for new pavement.

The two outermost bridges could be constructed as the above sequence prior to any work commencing on the central bridge. These lines could then be opened to provide limited capacity and continuous rail use whilst the central bridge work is carried out.
Primary Arches
Fabricated steel box sections, erected first

Longitudinal Trusses
Steel truss supported on the arches. Each truss arrives on site as one element and can be rapidly lifted into place.

Transverse Trusses
Individual elements fit between longitudinal trusses to complete two way grillage.