

euston

euston arch discussion document



The campaign to rebuild the Euston Arch is gathering momentum as remnants of the monument are salvaged from beneath the Prescott Channel where they have been buried for some fifty years, following the demolition of the Arch to make way for a new Euston station in the 1960s. That same station building now requires an overhaul to meet the transport demands of the 21st century and its comprehensive redevelopment may, paradoxically, provide a window of opportunity for the Euston Arch to be reinstated as an iconic 'gateway' to London.

The future of the Arch remains uncertain, however, as there are still several unanswered questions regarding the suitability and scale of such a reconstruction project. Is it appropriate to rebuild an Arch which would be, in essence, a facsimile of the original, composed of old stones and new stones in almost equal proportion due to the poor condition or destruction of many of the original building blocks and foundations of the Arch? Would a modern gateway structure or space be more fitting for a new streamlined station? Is the reinstatement of the Arch a worthwhile investment or might the funds required be better spent elsewhere in the local community?

This document, like the Euston Estate Vision Masterplan which it accompanies, seeks to help resolve these issues by the use of inspirational design visuals, produced by Atkins, to promote debate amongst the key stakeholders. If there has been any consensus to date, it is perhaps that clear guidelines for the future of Euston, and the Euston Arch alike, need to be set down as a matter of urgency to kickstart the development of a modern terminus and public realm fit for the 21st century.



Katharine Collyer
Euston Estate (GP) Limited
May 2009



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Introduction This design report is an addendum to the Euston Estate Vision Masterplan published in May 2008. It is the culmination of a research and design project undertaken by Atkins on behalf of Sydney & London Properties, the project manager to the Euston Estate Partnership, in the context of Network Rail's proposed £1 billion redevelopment and regeneration of Euston Station.

Background to Study The Vision Masterplan set out ideas for a holistic redevelopment of the station and surrounding area that would not only deliver a world-class interchange that was an appropriate gateway to London, but would also create a vibrant mixed use quarter to support and stimulate one of the most deprived areas of London. While the Vision Masterplan sought to promote debate about the future shape and scale of the new Euston, this document focuses on one aspect alone: whether the famous Euston Arch could be integrated into the Vision Masterplan, and indeed if this is the most appropriate response to the creation of a gateway for a 21st Century railway at Euston.

Around the time that this report was being finalised, the Euston Arch Trust was formed in order to promote the case for the reconstruction of the Euston Arch, which had been demolished when the existing station was built in the 1960s. The Trust was keen to ensure that as new masterplans for the site were brought forward, the inclusion of the rebuilt arch was at the forefront of people's minds. In the period since its establishment the Trust has undertaken a vast amount of research and feasibility work of its own, to ensure that the reconstruction of the Arch is possible.

The reinstatement of the Arch was driven by the discovery of a number of the stones from the original Arch at the bottom of the Prescott Channel in the River Lea by Dan Cruickshank in 1994, when filming an episode of the TV series 'One Foot in the Past'. This discovery of around 60% of the original material, and the raising of one stone, led to a new call for the reconstruction. Various other parts of the Arch are still safe – for example the original gates, which are kept at the Railway Museum in York.



Euston Estate Vision Masterplan Document, Atkins 2008

Client Brief The brief for this study was simply to look at the history of the Arch and the campaign to rebuild it, and to identify if and how the Arch could be incorporated into our vision for the redevelopment of the Euston Estate. However, following a workshop of key heritage, design and engineering specialists within Atkins, we decided to expand this brief to consider whether a re-creation of the Arch was the most appropriate response to the site, or whether the new station should have a new gateway, one that reflects the age in which it is built, in the same way that the original Arch did with the original station.

With all of the ideas we generated and explored, there was a 'mix and match' approach, examining the potential for both a historic re-creation and a new interpretation of the Arch. Likewise, we were keen to ensure that not only was the potential reconstruction of the Arch considered, but also how we could tell the History of the Arch through what was delivered.

Ultimately the desire was to produce a document that would stimulate debate and discussion among all interested parties, much in the same way as the original Vision Masterplan has successfully done.

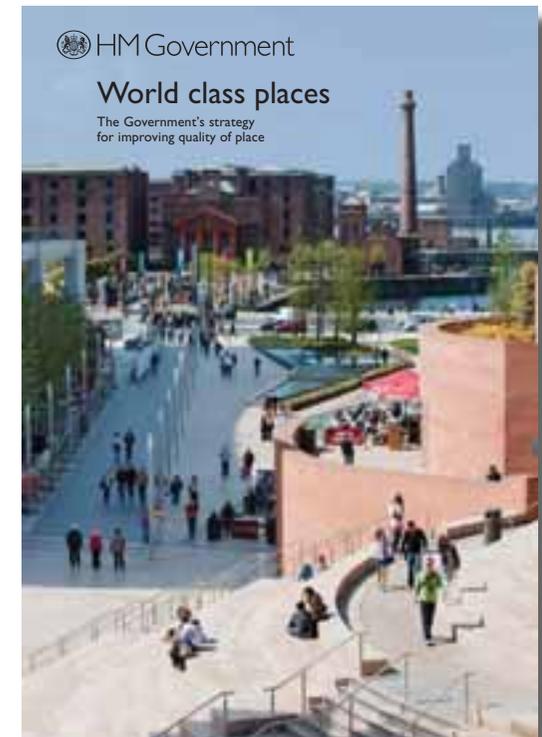
Quality of Place The incorporation of the Arch into the Vision Masterplan raises an interesting question over the importance of not only historic assets within the built environment, but all objects that develop cultural associations, as a focus

for placemaking. This is an issue which was raised in the recent (May 2009) publication 'World Class Places' produced by the Government to address the issue of ensuring that all new projects, such as Euston, have quality of place at the heart of their design.

This is a view we fully endorse, and something that was central to the ideas of the Vision Masterplan – the need to not only produce a scheme that was geographically linked to the surrounding neighbourhoods and communities, but one that reflected their own needs – as identified in the Stakeholder Report.¹ Likewise, this approach has inspired and underpinned the development of the ideas outlined in this design report. We would hope that any scheme that eventually comes forward for the redevelopment of Euston is much more than just a new station, and in fact delivers a new public realm that will also embed quality of place at its heart.

Therefore, in addition to assessing the possibilities for the Euston Arch reinstatement, and exploring alternative ideas for gateway features, this document also expands on the quality of place aspects from the original Vision Masterplan, to ensure it remains as an exemplar for placemaking within existing communities, and reflects the heightened recognition of this from Government.

¹ Report by The PR Office on STAKEHOLDER ATTITUDES TOWARDS THE REDEVELOPMENT OF EUSTON STATION AND THE EUSTON ESTATE, First Published February 2006 Updated September 2007



World Class Places, May 2009



History

02

The London & Birmingham Railway

The London & Birmingham Railway was formed in 1833 following the amalgamation of rival companies, both of which sought unsuccessfully to obtain backing for such a project – one via Oxford and the other via Coventry. The joint company, the London & Birmingham Railway (L&BR) appointed Robert Stephenson (son of George Stephenson, railway pioneer and inventor of 'the Rocket') as its engineer. Stephenson's route (via Coventry) was endorsed by the government on 6th May 1833 when the Act for Making a Railway from London to Birmingham was passed. The Act approved the start of the railway "on the West side of the High Road leading from London to Hampstead, at or near the first Bridge westward of the Lock on the Regent's Canal at Camden Terrace." A further act, passed on July 3rd 1835, allowed the railway to extend to Euston Grove, on the north side of Drummond Street near Euston Square.

Originally, the L&BR terminus was to be shared with the Great Western Railway which had had difficulty obtaining permissions from the Metropolitan Roads Commission for the railway to cross roads. However, negotiations between the two companies fell through, perhaps due to Brunel's choice of Broad Gauge against Stephenson's Narrow Gauge.

The route was constructed incrementally, with the first trains running from Chalk Farm station at the London end to Boxmoor (Hemel Hempstead). Trains ran the entire line for the first time on 17th September 1838. However, although Stephenson's engineers had successfully tackled difficult terrain across the whole line, the final stretch between the Chalk Farm station and the Euston terminus encountered a steep incline. Until 1844, two stationary condensing engines pulled trains up the incline with rope cables to the Chalk Farm station where the real journey could begin.

In 1846, the L&BR merged with the Grand Junction Railway and the Manchester and Birmingham Railway to form the London & North Western Railway (L&NWR), the largest joint stock company in the world in the late 19th century. Euston's reach extended to the north-west beyond the Midlands.

In 1923, following the amalgamation of railways into four major companies (required by the Railways Act in 1921), the L&NWR joined the London, Midland & Scottish railway (LMS). In 1948, following nationalization, the LMS came under the aegis of the London Midland Region of British Railways.



Train coming into Euston Station, October 1954

Philip Hardwick, Architect

Philip Hardwick, senior, (1792-1870) was the son of Thomas Hardwick, the first winner of the Royal Academy's silver medal for architecture and himself the son of an architect, the Adam brothers' master mason at Syon House. Philip Hardwick trained in the Royal Academy and later in Europe, visiting the classical remains of Greece and Italy, before returning to England to take over his father's practice.

He became architect/surveyor to the hospitals of Bridewell, Bethlehem, and to St. Bartholomew's. He was appointed architect to the St. Katharine's Dock Company in 1825 and the Goldsmiths Company in 1828; there he designed the hall which shows a fine example of classical Italian architecture. He was also architect to the Greenwich Hospital, and above all to the Duke of Wellington; he designed alterations to the Duke's house at Hyde Park Corner.

While he worked for the London and Birmingham Company Philip Hardwick was responsible for Euston's sister station in Birmingham, Curzon Street Station, which featured an Ionic arch. Hardwick's son, Philip junior, also took up the family trade in the later years of his father's career. The Euston Arch was the last design in which Philip Hardwick senior worked without his son.

Philip Hardwick junior was nevertheless a key figure in the development of Euston Station. The Doric Arch has been described by the historian Peter Ackroyd as when London became "the new Rome."

Euston was the first train station in the world to have given a traveller a great sense of entering and then departing. This famous Doric Arch is now long gone and may be regarded as one of London's most tragic losses of nineteenth-century architecture.



Architect Philip Hardwick, Senior

Euston Station

Initially, resistance from landowners prohibited a London terminus at Euston, but by 1835 work was able to begin. The station featured a double roofed train shed, 200ft long with 40ft spans supported on a central line of cast-iron columns, designed by Charles Fox, over its two platforms (arrivals and departures). The roof of this shed was raised by 6 ft in 1872 to allow for expansion and the dispersal of smoke.

In its report of February 1837, the L&BR announced a "grand but simple portico suitable for the Grand Avenue". The station opened in 1837 although the designs of its architect Philip Hardwick were not quite completed until 1838. The Arch separated the station from the approach route. Through the gates, a granite paved roadway ran into the brick walled station yard, running north to south, 500ft by 100 ft which gave access to the two storey stuccoed station offices on the departures side on its east side, which contained booking offices and waiting rooms. Cabs, limited to 45 at a time, could drop off under cover of a canopy.

Shortly after opening, a further office building was built, north of the first, with a Doric colonnade of eight bays.

The Arch and screen's frontage was on Drummond Street, on the opposite side of which was Euston Place. Euston Grove stretched axially north-south between the Arch and Euston Road (formerly the New Road). The scale and austere grandeur of the Doric arch was able to draw attention to the station from the main road and from the open space of Euston Square, despite the fact that it was set to one side of the axial vista along Euston Grove. The total cost of the Euston Grove development was approximately £39,000 with the lion's share of the sum going towards the construction of the Arch.

In 1846, the Great Hall was added, designed by Hardwick, junior, acclaimed for its 'Roman' style. It was part of a 220ft by 168ft block which incorporated the Doric columns of the earlier extension. Although generally positively received, and offering greater comfort to travellers, the Great Hall was aligned asymmetrically to the portico and did not match it in scale or design. It also inhibited any extension of the platforms. However, the lavish decoration and grand staircase to the balustraded gallery provided an atmosphere of opulence (offset by cost-cutting simulations such as Martin's cement to simulate granite on walls). A marble statue of George Stephenson by EH Bailey was installed in 1852. The statue remains at Euston today.

In an effort to upstage the arrival of the Midland Railway at St Pancras, Euston Grove was made into an 80ft approach drive with two lodges constructed to flank the main gate to the station at its Euston Road end, representing a classical riposte to the gothic of the 1860s Midland Railway station. The lodges remain today, faced with Portland stone, with panelling and rusticated quoins. On the quoins, the names of L&NWR destination towns are incised and these were gilded. A bronze statue of Robert Stephenson was erected. The drive enhanced the vista of Hardwick's design, allowing a clearer view from Euston Road.



Aerial view of Euston Station, June 1957

Euston Arch

Hardwick's design was for a classical Greek screen that stretched right across the station's front, the centrepiece of which was an enormous portico, more properly a propylaeum, which was to be flanked by two 'lodges', also Grecian, on each side. The firm of W&L Cubitt were appointed as builders. The Arch itself was Doric and featured four fluted columns, *distyle in antis*, that is between two antae, piers or end walls, with bronze gates [elsewhere cited as iron]. It stood 72ft high, its 44'2" columns topped by an entablature with prominent triglyphs on all four sides, topped with a pediment. The columns when built were higher than any others in London. Their diameter at base was 8'6". The Arch reportedly used 80,000 cubic feet of stone, sandstone quarried at Bramley Falls in Yorkshire and shipped to London by canal. Bramley Falls stone, known as Rough Rock, sits at the top of the Millstone Grit series and was known for its durability.

The Arch was constructed in courses. In the columns, the courses consisted of wedges around a hollow centre. The Arch was the centre of a screen that stretched a total of 300ft, with the station behind set to one side, to the east of the central axis through the arch. Bronze gates also flanked the lodges, separating each from its neighbour. On the eastern side, carriages and heavy goods destined for the trains could pass.

The original construction of Euston Station was met with mixed reviews. Those with negative opinions largely cited cost and size as its principal drawbacks. Pugin commented "this piece of Brobdingnagian absurdity must have cost the company a sum which would build a first rate station, replete with convenience, and which would have been really grand for its simplicity", and criticised the pomp of driving through the arch only to be set down before a sash window in a brick wall to purchase tickets. The guide to the 1851 Great Exhibition described the arch as "gigantic and very absurd".

Others, however, strongly approved. A rapturous review by Ralph Redivus in the *Civil Engineer & Architect's Journal* praised its 'pure' Greek form. The whole "borrowed from the antique" pleased him immensely since nothing interfered with the integrity of this design. Further, Redivus observes,

"Of porticos we have examples enow already; since each additional one does little more than increase the number, without exhibiting any marked peculiarity of design, difference of character, or difference of scale. The more readily therefore do we welcome this Doric propylaeum, which for the scale which the order is executed so greatly exceeds every other specimen of Grecian architecture in this country." [Vol. 1, 1837-8, pp276-277]



Drummond Street looking west, June 1945

Redivus praised the scale and interest of the side elevation, "the series of large heads in the cymatium of the cornice ... and the range of anti-fixae above it", and appreciated the depth of the arch, particularly the contrast of light and shade cast on the four columns. "If we must be imitators, the least we can do is to take care that we do not omit these graces which constitute the finishing touches of architecture".

The 'purity of form' cited by Redivus was a recurrent theme of praise for the Arch, its uninterrupted Grecian form pleased lovers of the classical and neo-classical, at a time of contention between the proponents of the Gothic and Classical styles. Another pleasing feature to critics of the time was the integrity of the screen. The scale of the lodges and gates, and the length of the screen allowed the Arch context of form and scale and prevented it appearing incongruous with its surroundings.

Writing at the time, John Britton, who approved of this "most successful adaptation of the pure Grecian Doric" commented that "all spectators are impressed by magnitude of mass, or by highly enriched detail in public buildings," but that this mass was often in a context of a lesser or different "physiognomy, and to which it is merely an adjunct and an expletive."

The pediment of the Arch contained an office in the roof space, accessed by a spiral staircase – iron, with a rope-banister, and brick faced wall – in one of the abutment walls. The office was used by employees of the railway, and later as a storage space for maps and plans. Photographs from the post-war period show map-cabinets, desks and timber panelled doors in a room lit by fluorescent strip lighting. A girder crosses the roof space and the space also seems to have had roof glazing to provide top lighting.



Euston Arch showing the gilded EUSTON inscribed, 1870

Amendments to the Station Screen

Hardwick himself instituted the first disruption to the screen design in the 1840s when twin hotels were placed before the portico, interrupting the vista of the whole screen, although the Arch itself could still be seen. These were the Victoria, a breakfast-only establishment described as a 'dormitory' and the Euston, for wealthier travellers. These were bridged in 1881 by a new block, lifted on columns above the roadway, which completed the screening of the Arch and screen from Euston Road.

Until 1870, there was no inscription on the Arch, but finally 'Euston' was incised and picked out in gold leaf. Reportedly, some were outraged by this ornamentation.

More extensive disruption to the screen occurred in the 1870s when less flamboyant adjustments to the station reflected a different kind of attitude to station management. The first casualty to Hardwick's design occurred when the outside lodge on the western side of the screen was demolished to make room for further offices. Folklore has it that the lodge (at that time used as office space) was too solid to be pulled down and so was blown up. Further expansion to the west embedded the screen in a busier streetscape. By 1891, Euston had 15 platforms, and had required new entrances and ticket offices to absorb the demand.

A plan was drawn up to construct a more fitting station approach replacing the piecemeal development but financial constraints imposed by the Boer War meant funds were not forthcoming.

By this time, advertising hoardings adorned the screen's lodges and the antae themselves. A tobacco kiosk was attached and newspaper placards fixed. Continual change, adaptation, and piecemeal improvements meant that by the 1930s, plans were again afoot for a complete rebuild. Suggestions to move the Arch to front onto Euston Road were put forward and well received, but the final design appears to have rejected this suggestion. However, war intervened again and the station continued. British Railways instigated a number of changes to the layout of the station including simplifying the line layout on entry to the station, and a refurbishment of the Great Hall to original designs, although requirements for slot-machines and other distractions for passengers also found their way into the hall. By this time, the Arch had been blackened by the engine fumes of years and its setting had been severely altered. It also, like much of London, exhibited shrapnel wounds from wartime bombing though the Great Hall and engine sheds had fared worse.



Euston Arch and adjacent lodge buildings

The Removal of the Arch

The necessity of electrifying the line was the eventual impetus for the long-coming station rebuild. Initially again, plans were made to re-site the arch and the LCC granted planning permission on that basis. In the *Architectural Journal* after demolition had taken place, editor JM Richards commented that resiting the arch on Euston Road (without lodges) “would have improved the setting and underlined the significance of the famous arch”.

However, the British Transport Commission (under General Sir Brian Robertson, succeeded in 1961 by Dr Richard Beeching) had been given a mandate to cut costs and refused to countenance the projected figure of £180,000 for the rebuilding of the arch. The LCC and BTC seem not to have achieved consensus. Appeals were made to government but none of the ministries concerned, Transport, Work, or Housing (under whose aegis Listed Buildings came, the arch being a Grade II Listed Building), would take ownership of the problem. Finally, Transport Minister, Ernest Marples, declared that the resiting of the arch was not justified on the grounds of cost.

The impending fate of the arch mobilised amenity groups and individuals and became a public cause celebre. The Georgian Group and the Fine Art Commission (the

latter was supposed to advise government on historic buildings) were both refused access to the final plans of the station redesign. A demonstration of 75 architects and students was held in the Great Hall. Along with the Victorian Society, the Society for the Protection of Ancient Buildings, the London Society and the Ancient Monuments Society all lobbied government, eventually winning an audience with Prime Minister, Harold Macmillan. Macmillan did not intervene, and although last minute cases were made by the Victorian Society who had found a Canadian construction company who offered to move the arch elsewhere for half the price quoted by BTC, and even the disquiet of the demolition company, who offered to number each block and store it for resurrection elsewhere at another time, the Arch was demolished before any other work began at the station.

The *Architectural Journal* published an article in April 1962 entitled ‘The Euston Murder’, by editor JM Richards which detailed the Arch’s demise from the perspective of those that had tried to save it. The episode mobilised amenity and lobby groups for architecture and heritage, and influenced many, including government voices to lobby for changes in procedure over heritage protection. The treatment of 19th century buildings was heavily underlined by the affair and a more appreciative attitude emerged.

The emotional language and style of Richards’ article has set the tone for subsequent discussion about the Arch. Description of the BTC attitude, and even that of Macmillan as ‘wanton philistinism’ in Richards’ article was mild in comparison to Alison and Peter Smithson’s book on the Arch which read the destruction of the Arch as “an act of revenge by the south against the north”, with reference to the potential personal predilections and educational backgrounds of those involved in its removal, and more recently Gavin Stamp’s inflammatory reading of Macmillan’s war record, casting him as “Stalin’s lackey.”

The pieces of the Arch itself were reused. 4000 tonnes (60% of the stones) were used in filling a problem rift in the River Lea at the Prescott Channel. This location was tracked by architectural historian Dan Cruickshank and in 1994 this episode in the Arch’s afterlife was broadcast in a BBC television programme, ‘One Foot in the Past.’ Other parts of the Arch were built into the home of the engineer who oversaw its demolition (for £12,000), Frank Valori.

The New Station

In 1962, Taylor Woodrow began the first stage of Euston Station's reconstruction. A temporary building was erected so that the station could remain in use while demolition and rebuilding proceeded. By 1966, fifteen new passenger platforms were operational; all serviced a fully electric fleet. The plans for the new station had been submitted for planning permission just days after a new White Paper was published that restricted office building in Central London. This meant that what eventually resulted was a low building in the 'international modern' style, which took much of its form from research into passenger movement and transport needs.

The new station was designed by RL Moorcroft, the London Midland Region architect and included a paved piazza in front of the station, which sat over an underground taxicab rank. The main passenger hall was 150ft deep with a 36ft high roof, and was built on new principles that reflected passenger volumes and use, and attempted to create a concourse that would allow for future station growth. Access to the Underground, both the new Victoria line and the existing Northern line, was built under the passenger concourse, with access directly from it.

To the front of the station, a large surface bus station provided an integrated road and rail transport solution. It had been argued throughout the design process that because of a need to extend platforms, and a complicated layout of tracks and tunnels north of Euston which restricted growth northwards, the only way to achieve this was to take over the area to the south of the station, which at the time included the Great Hall and Arch.

Critics of the new station complained that it was not a suitable 'gateway' to London, and was not a design befitting a station that was London's first mainline terminus. Arch enthusiasts pointed out that the Arch could have found space fronting Euston Road and that line lengths were not brought forward during the rebuilding anyway – the original argument in determining the fate of the Arch.



Building Euston Station, 1960



Building Euston Station, 1960

Memory of the Arch

While the Arch may have been demolished in 1960, the memory of the Euston Arch lives on, and it can be found not only in the memories of those who have links to the area, but in the fabric of Euston itself, both in names and images that can be found all around the Euston Estate.

Inside the station an image of the Arch can still be found on the Victoria line platform at Euston Underground Station. The platforms along the Victoria Line were originally tiled in a non-descript cool blue/grey colour and London Transport appointed designers to create tiled motifs on seating recesses to distinguish them from each other. In Euston Station the image in the tiles depicts the Doric Arch, and was designed by Tom Eckersley in 1969.

Outside the station, examples include the public house that sits within the podium building, adjacent the bus station, which is now named 'The Doric Arch', and includes several photos of the structure on the walls in the bar. Another example can be found just to the east of the station, on the opposite side of Eversholt Street - Doric Way.

This short road was originally the end of Drummond Street, which ran all the way from Hampstead Road. However, when the new station was constructed on an alignment further south than the original station, both the Arch and Drummond Street were obstacles to the development, therefore Drummond Street was closed at the junction with Cardington Street / Melton Street. This left a short length of some 120m that was now separated from the remainder of the street, by the station building. This stretch was subsequently renamed Doric Way. The crescent that sits at the eastern end of Doric Way is still called Drummond Crescent, even though it is no longer attached to Drummond Street.

Some parts of the original arch are retained alongside other elements of the original station. In particular the gates that sat within the Arch can be found at the National Railway Museum in York, and the National Tramway Museum.



Arch Motif on Victoria Line Station Platform



02

Doric Arch Pub, Euston Station



Doric Way



Doric Arch Pub, Euston Station

Campaign to Rebuild

As mentioned previously, the initial desire to rebuild the Arch came out of a 1994 episode of the documentary series 'One Foot in the Past', presented by the historian Dan Cruickshank. Dan Cruickshank had discovered an estimated 60% of the 4,000 plus tonnes of the arch buried in the bed of the Prescott Channel at its junction with the Channelsea River, part of a network of waterways that run into the River Lea in the East End of London. A section of one of the columns was recovered from the river. The location of the rubble, for which he had been searching for 15 years, had been revealed by Bob Cotton, a British Waterways engineer, who stated that the rubble had been purchased in 1962 to fill a chasm in the bed of the Prescott Channel.

The campaign has been reinvigorated lately due to an intriguing coincidence of circumstances. The initial movement was spurred on by the decision by Network Rail to rebuild the station in partnership with a development partner, who would have 'air rights' over the station concourse in return for reconstructing the station itself. Those that had been both involved and inspired by the story of the Arch saw this is a prime opportunity to raise the case for the reconstruction of the Arch as an integral part of any redevelopment of the station.

At around the same time as the campaign was beginning to gather momentum, it received a boost from the re-opening of St. Pancras station as the London terminus for the Eurostar service. The incredible restoration of the old station had shown how old and new could be successfully combined with striking and breathtaking results. St. Pancras Station itself was at one time under the threat of demolition and reconstruction, and was in the end saved by a campaign led by Sir John Betjemen. Many say that it was the failure to save Euston that spurred on those who fought even harder to ensure St. Pancras was not lost.

The third coincidence was the 2012 Olympic Games being awarded to London. As part of the commitment to creating the 'greenest ever Olympics' a major decision was made to maximise the use of the canals and waterways that run through the Olympic Park site in the Lea Valley for movement of materials. A key element to enabling this was to be the construction of enhanced locks in the Prescott Channel, at the very spot where the old stones from the Arch had been dumped. This meant that a large number would need to be removed to allow for the opening up of the waterways for new barge traffic.

In combination, these events have all given a new momentum to the calls for rebuilding the Arch, and have led to the campaign we have today which is being driven by the Euston Arch Trust and its members. The Trust was founded in the early 1990s by a group of historians, architects and journalists headed by Professor Dan Cruickshank following his BBC series in which he tracked down the remains of the Arch. The Trust would like to see the Arch rebuilt, using as much reclaimed original material as possible, on the Euston Road between the two lodge buildings that are still in place – one of the few elements of the original station area still in their original location.

ARCHITECTURE

Steam ahead





The Euston Arch, a grand classical building that once stood as the gateway to London's first railway terminus, is set to be reborn. The arch, designed by Philip Hardwick in 1837, was destroyed in 1961. Its reconstruction is a major project for the Olympic Games, which will be held in London in 2012. The arch will be built on the site of the original terminus, which was destroyed to make way for the modern Euston station. The new arch will be a faithful reproduction of the original, built from Portland stone. It will be a landmark building, a symbol of London's rich architectural heritage. The project is a testament to the city's commitment to preserving its history while embracing the future.

BBC NEWS

'Euston Arch' stones to be saved



...of the arch, which was destroyed in 1961. The arch was a landmark building, a symbol of London's rich architectural heritage. The project is a testament to the city's commitment to preserving its history while embracing the future.

BBC News Article, 18 May 2009

Telegraph.co.uk

Euston: time to rebuild this colossus

Martin Gayford
Last Updated: 10:28AM BST 15 Aug 2008

Why is a treasure of the steam age languishing in a canal? Martin Gayford reports



"Railway termini and hotels are to the 19th century what monasteries and cathedrals were to the 13th century. They are the only real representative buildings we possess." So wrote Building News in 1875. Many, looking at the refurbished St Pancras, would agree: that is universally agreed to be among the architectural masterpieces of Victorian Britain. It is less well known that an equally imposing monument of the railway age now lies - or most of it does - at the bottom of a canal in east London.

A gateway to the past: the arch in 1961

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The Euston Arch used to stand a few hundred yards to the west of St Pancras: huge, austere, magnificent. It was 70 feet high by 44 feet deep. "Between the fluted columns, each eight and a diameter, which formed the main carriage entrance," wrote John Betjeman, "might be glimpsed of Hampstead beyond." For over a century this was the first sight of London for travellers from the When it was new, crowds flocked by omnibus to see this wonder of the age.

Its destruction in 1961 was one of the first and sharpest battles in the late-20th-century conservation fact, the outcry that it provoked was an important factor in preventing the destruction - now inconceivable at St Pancras and King's Cross. But now there is a chance that the great arch may rise again. This is an opportunity, as Tim Knox, director of Sir John Soane's Museum, says, "to right one of the great wrong architectural vandalisms to London in the Sixties".

The Euston Arch was constructed in 1837 by the architect Philip Hardwick as the grand entrance to the railway terminus ever built in a capital city. The world's first trunk line, as Betjeman put it, was from London

Daily Telegraph Article, 15 August 2008

History

The Euston Arch emerges from the depths





Work on improving East London shows in time for the 2012 Olympic Games has led to the recovery of some of the remains of the Euston Arch, observes TIM OLIVER

PRICE

- £3.5
- £5
- £10

"I can never understand why people should seek Egypt in search of the Sphinx and the Pyramids, when they can visit Euston station and survey the wonders of a stone arch."
- Henry Dearden - (Sunday and a price 1825)

Background

Thinking there are arches

Planning of the Euston Arch

Further Article

Rail Magazine, Issue 610, Jan/Feb 2009



Workshop



Workshop

The first step in exploring how the Arch could be incorporated within the Vision Masterplan was the staging of a workshop, and as an interdisciplinary design team, it was important to draw on all expertise to explore the notion of the Euston Arch and what it could be. An internal workshop took place with planners, architects and structural engineers to discuss thoughts and ideas and to establish options for the Euston Arch. As highlighted in Section 1 the brief was to explore what the Arch was and what it could be and identify if and how this could be incorporated into our vision for the redevelopment of the Euston Estate.

The Atkins design approach is always based upon a thorough understanding of the history of any site, therefore the first point of discussion in the workshop was to discuss 'What was the Euston Arch and what did it signify?' As described in Section 2, the Euston Arch was an expression of engineering achievement, a statement of what could be achieved in that period of the 1830s.

With this in mind, we decided to focus on two areas. Firstly, how could the old Arch be rebuilt, and secondly, what might the 'Arch of today' look like? What would be a fitting monument to engineering and design skill at the start of the 21st century?

Our initial options were to explore the revival of the old Euston Arch. Options were discussed such as making an exact replica of the Arch, re-creating the Arch using remnants found in the river and a modern twist to the old Euston Arch incorporating a viewing platform. Having explored the options of what the Euston Arch once was, we then discussed and considered ideas of what the Arch 'could be' to modern day society. The production of any proposal for redevelopment will be affected by many constraints, as expressed in the Vision Masterplan document. One such constraint will be the preservation of viewing corridors that cross the site. The key sight line to St Paul's Cathedral must be considered and preserved when discussing options for the Euston Arch.

An exploratory study of what the Arch could be led us to look at precedents of iconic arches. These included classical structures, such as the Arc de Triomphe; natural arches, such as woven plants; modern arched buildings, such as La Defense; and modern structural arches such as Wembley Arch. Many other ideas were also discussed, including landscape and public realm options in the forecourt of the station, arch structures that were extensions to the station, and the opportunity for arches that were located to the north of the station and could act as the gateway to those that arrive in Euston by train.



Arc de Triomphe, Paris



Jakarta Hotel design proposal

Alternative Proposals

Some options considered in the workshop explored what the new gateway could be if it were not an arch. One option was that perhaps Euston Station should aspire to have a clock tower, for example, instead of an arch. This would reflect both the historic precedents of significant time-pieces at stations and a rhythm of clock towers on Euston Road.

Another alternative considered the opportunities that could be achieved by installing Public Art in the frontage to the station. The Vision Masterplan for Euston Station aims to regenerate the area and encourage people to visit the station, not only to enter or leave London, but to see it as a destination in its own right. Therefore one suggestion was to commission a well known modern artist to create an iconic structure entitled 'arch'. This may be abstract, but should be of landmark status, and would sit within Euston Square Gardens at the front of the station.

Perhaps no significant new building would be required to achieve the notion of 'arch'. Instead this could be achieved through modification of the design of the existing scheme, for example by stronger articulation to the roofline of the building, so that when viewed from a distance (in particular from Primrose Hill) it would emphasise the inverted curve of the roof.



Public Art Installation

Workshop outcomes

Following the workshop session, the original computer generated images of the proposed vision scheme for Euston were modified, in order to illustrate each of the ideas discussed. While these options are shown here in isolation of one another, they do not need to be considered as either/or scenarios. There may be a desire to 'mix & match' ideas, and some of these options could even be delivered alongside the restoration of the original arch, as promoted by the Euston Arch Trust.

In producing these options we have also sought to consider how income-generating features could be included, such as rooms to hire, cafés etc. All options would also include lighting elements. This would vary from straightforward architectural lighting to innovative and more artistic installations. We could also involve lighting designers in developing night-time concepts, to explore how the station character alters through the day, and reflect how busy Euston is, from early in the morning to very late at night.

All options could include a 'memory arch' built into paving on top of the roof garden in the exact location of the original arch. This would allow people to understand something of the history of the site, and how the station building and layout has evolved over time. More information on this concept is provided in Section 4.



Original Arch with Viewing Platform



Arch Options



Option 1: Arch Re-creation (freestanding)

Description Option 1 is the re-creation of the original Arch and locating it on Euston Road between the two existing 1870s lodges. This proposal involves the reconstruction of the Arch using a number of repaired old stones salvaged from beneath the Prescott Channel and using new stones where necessary.

If the old stones recovered are unusable this option could also be achieved by creating an exact new replica of the Arch using old plans that detail all aspects of the Arch and its structure. These are held by the National Archive at Kew.

Discussion Historic re-creation of the Arch is an option that is supported by the Euston Arch Trust, who campaign to 'Rebuild a Lost London Masterpiece.' They state "The Euston Arch was a powerful symbol of the optimistic spirit of the Victorian railway. Its demolition in the 1960s confirmed that blandness and lack of imagination had replaced the heroic vision of the past. Since then, the enormous popularity of the restored St. Pancras, soon to be followed by a restored King's Cross, has shown that celebration of the past and potential for the future are not mutually exclusive. The restoration of Euston Arch would restore to London's oldest mainline terminus some of the character and dignity of its great neighbours."

<http://www.eustonarch.org/campaign.html>

While discussing the notion of rebuilding the Arch it was thought that the number of recovered pieces from the river may be limited and the ability to use these for structural purposes may not be viable.

While a replica may satisfy vocal movement groups such as the Euston Arch Trust, its economical and visual success as part of the new Euston Station is questionable. The size, style and scale of the original arch was in keeping with the Euston Station that opened in 1837. However with the proposed Vision Masterplan and new Euston Station this may not be the case.

'The Euston Arch was a powerful symbol of the optimistic spirit of the Victorian railway.'

Michael Palin, Patron of the Euston Arch Trust



Option 2: Arch Re-creation (courtyard)

Description Option 2 is a variation of the first option using the re-creation of the original Arch, locating it on Euston Road between the two existing 1870s lodges and incorporating it with an enclosed forecourt. This proposal also involves the reconstruction of the Arch using a number of repaired old stones salvaged from beneath the Prescott Channel.

The enclosed forecourt would result from a simple addition of columns and railings in keeping with the style of the Arch and lodges that would enclose Euston Square and the War Memorial at the front of the station.

Discussion As expressed by the Euston Arch Trust, “The rebuilt arch should fulfil its original function as a gateway to the station, and original stones, many of which still exist under the waters of an east London river, should be incorporated into the structure.”

The enclosure of the forecourt would allow the Arch to serve its original function as a gateway to the station. The original Euston Arch was at the entrance to the old station that was demolished in the 1960s. The station at that time had its entrance on Drummond Street which is now where the ticket hall is located. Therefore, through its relocation between the lodges and the enclosure forecourt the Arch would be revived and would have a purpose.

The Euston Estate Vision Masterplan aimed to improve the pedestrian movement in and out of the station. With this option there could be concerns that such pedestrian movement could not be realised. The wish to have a new open space in front of the station was in order to allow a visual presence of the station to be seen from Euston Road. The presence of the Arch and enclosed forecourt may disrupt the encouraged and newly established pedestrian movement. It may also obscure and obstruct the new modern station behind.

This option, as shown in the visual, also expresses the apparent incompatibility of the two styles. If the Arch was brought back it would be a modern replica of the old arch and would not be authentic. This would inevitably look out of place between the two original lodges. Even with the enclosed forecourt which may help incorporate it with the new station, whether it would have the same strength and conviction that can be seen at the new St Pancras and Kings Cross developments is questionable.



Option 3: Arch Re-creation (façade)

Description Option 3 is a third variation of Option 1, this time using a re-creation of the original Arch but constructing it as part of the new frontage of Euston Station, to replace the yellow arch structure (itself designed as a functional 'memory' of the original arch) that is shown in the Vision Masterplan scheme.

This proposal could involve the reconstruction of the Arch using a number of repaired old stones, subject to their structural integrity. Alternatively new stone could be used, and if possible this could be sourced from the same quarry as the original material.

Discussion As highlighted previously there is concern that a replica arch with its form and style may not work as an entrance to a world class station of the 21st century. However it can also be argued that at St. Pancras we have a great example of how historic architecture and structures can work as exemplar 21st century design, and can function as a breathtaking gateway to London.

There is a general consensus that if the Arch is to be rebuilt, then between the lodge buildings on Euston Road is the most suitable place, allowing it to be companion to contemporary structures from the original station.



Doric Arch Capital

'The Arch could be the focal point of a newly developed and world class station.'

The Euston Arch Trust



Description The Euston Estate Vision Masterplan promotes walking as a primary means of movement for all those in and around the Euston area. The Masterplan included a new combined foot/cycle bridge, placed at the rear of the station to further enhance connectivity between the communities separated by the railway.

This option explores the potential of supporting this footbridge structure with an arch.

Discussion Euston Station lets as many people enter through the rear of the station as it does through the front. This arch would be a gateway to all those that come into London by train.

One particular constraint for this arch is the key sight line to St Paul's Cathedral. This must be maintained and not obstructed. The arch that is designed to support the footbridge must not obstruct this viewing corridor.

Options for a cycle bridge arch that would clear the viewing corridor by arching over it were considered but were significantly larger than structurally possible, particularly with its close proximity to the railway lines. A proposal was established for the arch to be of a suitable height that would not obscure the view of St Paul's and would take full account of the constraints imposed by the Primrose Hill view.

The arch would be visible upon entering the station by train, for pedestrians that use the footbridge and also from the public space at roof level. This arch would serve the function of supporting the footbridge as well as being a gateway to the station for all those that enter by train.

This particular option, if delivered in addition to the reconstruction of the old arch, could provide a striking balance between the old and the new, as well as delivering a wide range of both heritage and regeneration benefits.

Option 4: Cycle Bridge



Bridge Arch



Option 5: Water Arch

Description Option 5 is a landmark water feature that would re-create an arch using jets of water. These could either be fired from the ground to create a large arch or possibly from the side of the building, to create an arc of water. The design would be integrated into the landscape of the station forecourt to prevent people getting wet.

Discussion Many options were discussed in the workshop to consider what the new masterpiece gateway to the new Euston Station should be. The option of a landmark water feature of the scale and size shown in the visual is hoped to reflect this. It would not only act as a gateway to the station, but would also aim to be a unique attraction in the station forecourt. It is hoped it would encourage visitors and tourists to the station and shopping area in line with the Vision Masterplan proposals.

The water arch could exist as an individual steady state laminar stream that is apparently motionless, and with no splash or sound, and could potentially rise 30-35 ft.

This feature could incorporate light and music, and could change according to the time of day or year. It would have the flexibility to be turned off and on as appropriate. It could be similar to the fountains of Bellagio that attract and delight all passers by and would entertain those strolling and entering the station. The water arch would help make Euston Station a unique destination and would reflect the modern station behind.



Motionless water stream



Description The Euston Estate Vision Masterplan included a proposal for Euston Square that is located in front of the station. The proposal was to create a square that is a new multi-purpose paved space that keeps the main pedestrian routes (from the corners of the square to the entrance of the station) free of obstacles and to have small activity spaces.

Discussion This proposal would still maintain the Heritage features that exist in this space such as the railings, lodge buildings and War memorial and mature trees, but would also allow for new features.

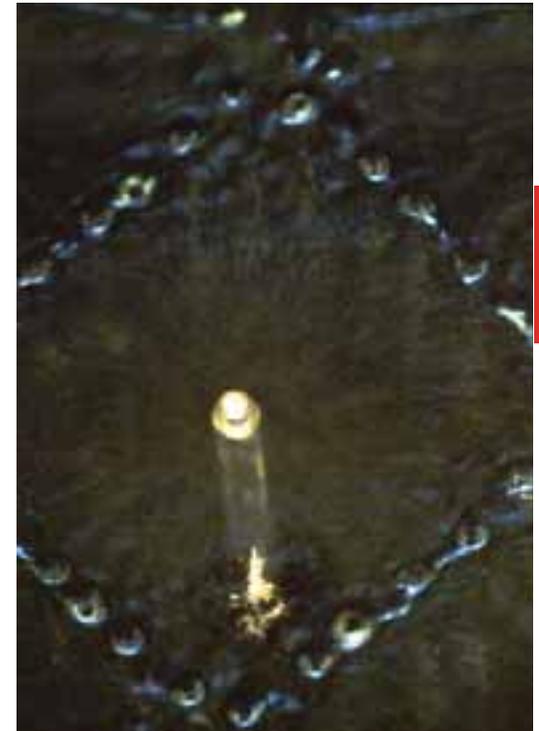
One such feature previously explored was to include a number of fountains in the scheme. These would add visual interest in the space but could be turned off if the space was required for a big event. This could also generate a night-time feature, with an appropriate lighting scheme.

The fountains could become part of a landscape feature that corresponds to the platforms in the station behind. These fountains could be programmed to relate directly to the trains entering and leaving the station.



Gas Company Tower, California, WET

Option 6: Water Feature



Gas Company Tower, California, WET



EUSTON STATION

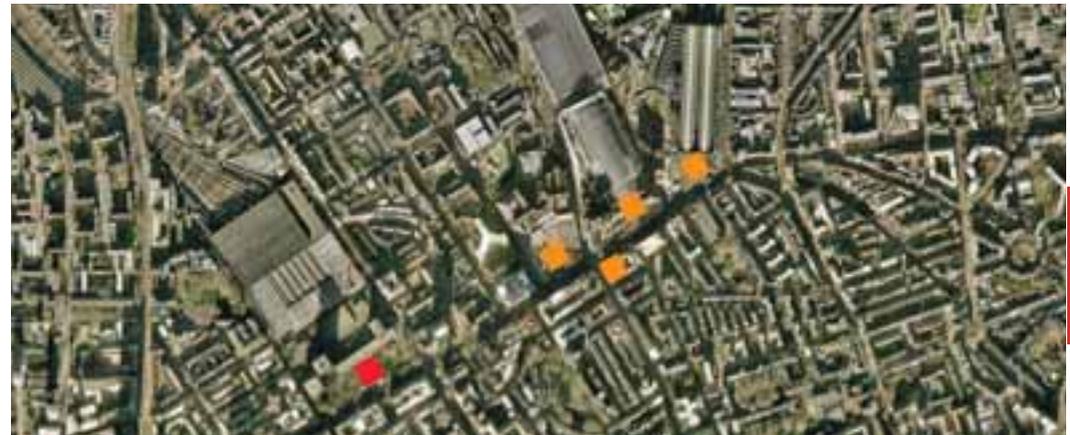
Option 7: Clock Tower

Description The most significant buildings along Euston Road are actually given landmark status by clock towers. This is also historically a key feature of railway stations, and used to be where people would go to get the 'real' time (regulated time is a result of the railways).

Option 7 is for a new clock tower at Euston that could be freestanding in Euston Square Gardens or could be integrated into the building.

Discussion Euston Station is located on Euston Road along which there are numerous stations and iconic buildings. All of these have a clock tower. Such buildings include Kings Cross Station and The British Library. Euston Station does not currently have a clock tower, therefore perhaps instead of having an arch it should have a clock tower to mark its presence on Euston Road.

A clock tower would not only mark Euston Station on Euston Road like other iconic buildings, but it also would be a key and relevant feature of the station itself.



Aerial of Euston Road indicating the location of the existing clock towers and possible Euston Station clock tower.



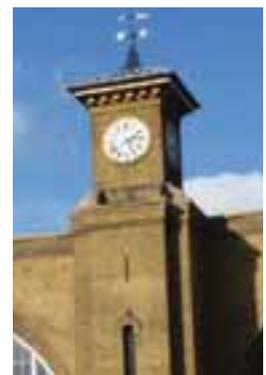
The British Library



New St Pancras Church



St Pancras Station



King Cross Station



Option 8: Roof Feature

Description Option 8 is a 'memory arch' built into paving on top of the roof garden in the exact location of the original arch.

Discussion As previously indicated, if the Arch were to be rebuilt exactly as it was in 1837 and in the same location, it would in fact be where the ticket hall is now and is proposed to be in the Vision Masterplan. It can therefore not be exactly reproduced as it was. What could however be developed is a paving feature on the roof garden, a 'slice through' of the original Arch. This would not only commemorate the Arch but would allow pedestrians and visitors to appreciate the scale, size and location of the Arch. This could also be repeated on the ticket hall floor .

A similar idea has been designed at St Paul's cathedral where the outline and plan has been used for a landscape feature showing the original location of the building.

This option is believed to respect and reflect what the Arch was, without creating a replica of the former arch using modern materials.

This option would be able to use some of the pieces of arch recovered from beneath the Prescott Channel in a meaningful way.



St Paul's Cathedral paving feature



Raised paving at St Paul's Cathedral showing original plan



Option 9: Museum

Description Option 9 is similar to option 8 as it would involve recovering as much of the original arch as possible from the Prescott Channel and placing it in the Gardens. This may be in the form of a semi-built structure, or as a series of pieces. There could be associated interpretation information, and maybe even a small 'museum' kiosk structure.

Discussion This option would allow the old arch to be appreciated and commemorated without trying to re-create it using modern materials.

It would also attract tourists and visitors to the station not only to appreciate the new station but also what it used to be.



Recovering parts of Euston Arch from the Prescott Channel



Euston Arch Trust

As part of the ongoing debate about the Arch it is important to ensure that all those parties with an interest are talking, and that all ideas are explored and considered. As the first step in doing this, we were very keen to engage with the Euston Arch Trust to find out more about what they wanted to achieve, and tell them about the work that we have undertaken.

A positive meeting was held on 9th April 2009 with Dan Cruickshank of the Euston Arch Trust and Peter Heath, Paul Reynolds, Jon Barker and Ken Sabel of Atkins, representing Design, Planning and Heritage aspects. At that meeting a number of aspects were covered, including the condition and quantity of original arch available, the likely costs of reconstruction, and how the Arch could work within the Euston Estate Vision Masterplan.

It was agreed that it was worth exploring two areas in more detail - How the Arch could be used to generate income, and how interpretation materials could be included to 'tell the story' of the Arch. It was pointed out during the meeting that the original arch had a large area at the top that was used for storage, and was accessed from spiral staircases in the 'legs' that were in turn accessed from the lodge buildings either side.

The proposed location for the re-created arch, between the two lodges on Euston Road, would make this more difficult to replicate (both of the remaining lodges are themselves listed buildings), however, it was likely a suitable solution could be developed. If access could be resolved, then it was felt this top space could either be a good location for a café/bar or perhaps for a museum telling the story of the Arch, and of Euston as a whole.

Discussion also took place as to whether it would be more appropriate to use as much original material in the rebuilt arch as possible, or if it would be better to have an entirely new replica arch, with the reclaimed stone used in some other way, perhaps as part of the public realm or landscape, or as part of an 'open air museum'. In the end it was agreed that this decision would depend, in part, on how much original stone could be located and salvaged.

All of these topics will be discussed further as the debate continues, and can be considered in more detail once a way forward for the design of the interchange has been agreed.



Next Steps



Next Steps

As with the original Euston Estate Vision Masterplan, we hope that this document will provoke debate among all stakeholders and interested parties.

There is a clear and strong argument for reinstating the Arch, a truly iconic structure, as a make-piece for the destruction of the original monument. However, there is an equally strong argument that a more modern design of gateway should be adopted and also that the money required to rebuild the Arch, while small in comparison to the overall costs of redevelopment, could be better spent elsewhere.

This document is designed to address all of these issues and challenge assumptions while also giving new ideas as to what could be achieved. As a masterplan evolves for the station itself, the need to develop a design solution that meets the aspirations of all parties will become ever more important. In the meantime, we are keen to continue the debate and consult with all parties as to how the Arch, or an alternative, can best be delivered within the auspices of a redevelopment of the station and the enhancement of the surrounding neighbourhoods. How can the needs of all those that live and work in Euston or travel through it, best be addressed and catered for?

Some small steps have already been taken, as witnessed by the ongoing consultation led by Camden Council to

set down planning guidelines for the Euston area. It is clear that local and government stakeholders alike recognise the importance of the development of this site, not only in terms of transport optimisation but equally for its potential to transform this area of London with a sustainable development – creating local jobs, housing, an improved public realm, green open spaces, and making Euston Station a destination in its own right.

However, the sheer scale of this development and number of stakeholders involved should not be allowed to make the scheme unworkable. It is hoped that the results of the ongoing consultation will assist Network Rail and its development partner British Land to agree a clear direction for the future redevelopment of Euston, so that key stakeholders can work together effectively to bring about the development which is so urgently required.

During the coming weeks and months we look forward to additional consultation and further engagement with all parties that have been involved to date, but we also seek to welcome new voices and hear from those who have been inspired by the story of the Arch and its future. We invite all readers of this document to make comments on the ideas proposed and look forward to the conversation continuing.

