



London Borough of Waltham Forest

Olympic Gateway Initiative



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OLYMPIC GATEWAY INITIATIVE

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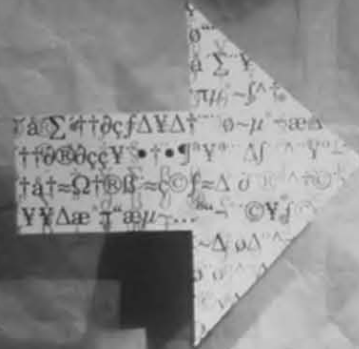
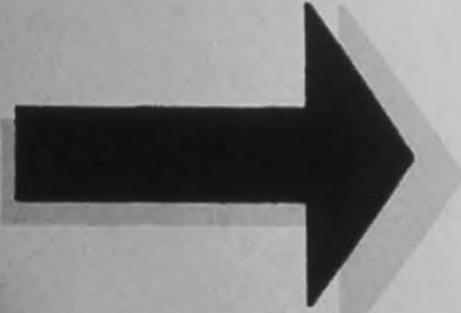
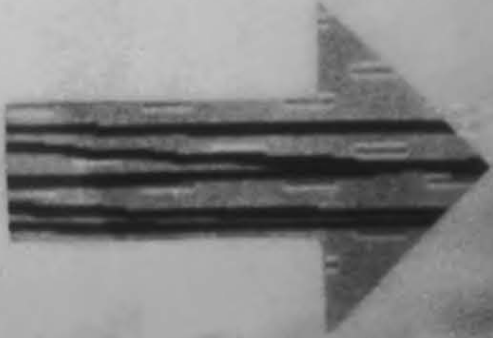
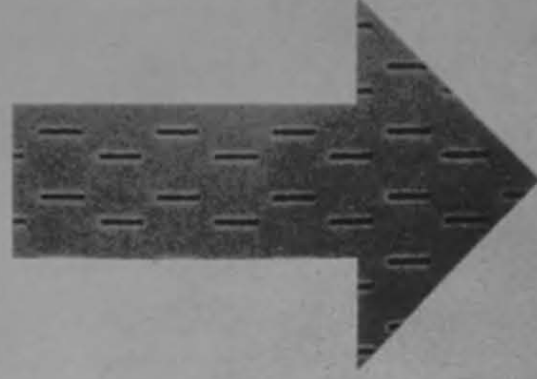
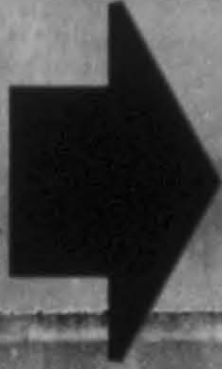
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01 Introduction

“First impressions count. City planners have recognised this for thousands of years. The Colossus of Rhodes, the triumphal arches in Rome, the Parthenon in Greece, were all designed to impress and amaze visitors and to establish in their mind that they had arrived in one of the world’s great cities.

In more recent times, the dramatic sight of the Statue of Liberty or the grandeur of the Golden Gate Bridge told ship-borne travellers they were arriving somewhere special.”

Making Cities Work: George Hazel and Roger Parry (2004)

Across the world, leading cities are rediscovering the value of civic improvements that contribute to the structure and legibility of the city, and the vitality of urban life and culture through public realm design. These civic-minded improvements can – in part - be considered broadly as ‘Gateways’: entry or arrival points, points of visual interest or landmarks, points or transition or behaviour change, and points of particular social, economic, environmental or cultural interaction, are one such improvement.

The 2012 Olympics is fast approaching. This event represents an unprecedented opportunity to showcase Waltham Forest to the rest of the world and to capitalise upon influxes in visitors and associated infrastructural investment to the betterment of the borough and its citizens generally.

As part of a wider program of civic-minded public realm improvements, Waltham Forest is seeking to improve the quality, character and distinctiveness of the boroughs gateways relevant to Waltham Forest’s predominantly suburban position on the northeastern fringe of Greater London.

Critically, the Olympic Gateways Project’s purpose is to deliver projects on the ground. This initial stage focuses on developing concept designs (with preliminary costing) for a number of case studies that cover the breadth of gateway types found in the borough, with a view to providing a framework for the roll-out of similar design solutions by the council in the future.

Case study locations have been selected on the basis of their relationship to the Olympic Value Capture area and wider programmed investment in key locations leading to and from the Olympic Village and Park.

This document is set out as follows:

- Section 2 defines what a gateway is both generally and in relation to the borough, then identifies the case study locations
- Section 3 documents the existing condition, design strategy and concept design response for each of the case study areas
- Section 4 describes the next steps into successfully implementing these designs.
- The Annexes contain the draft funding bid forms for the proposed schemes and the cost estimate sheets produced.



A successful landmark defines the gateway to a world city

02 WHAT IS A GATEWAY?

The textbook definition of gateway is “an opening or a structure such as an arch, framing, entrance or passage that may be closed by a gate. Something that serves as an entrance or a means of access.”

However a gateway is far more than this. It is a reference point, an aid for navigation an understanding of territory, and the imprinting of space with identity.

Gateways are – almost by definition – located in high profile, heavily travelled locations and therefore subject to wide public exposure and influence. Their design is an essential component of creating a legible urban environment and requires a very thorough treatment that engages and enlists public support and presents a visible symbol of design excellence.

For this study the term gateways is defined as:

- entry features or place making devices that mark arrival points to and within the Borough;
- access points to the open space system or leading to civic, historic or topographic points of special interest;
- points of visual interest or a landmark that signifies the crossing of a boundary;
- place-making devices that transform strategic access points in the network of transportation corridors and open spaces into pleasing and memorable arrival points;
- a signal to drivers and pedestrians that they have arrived at a distinct place;
- distinctive transition points (in form and/or function) that adds positively to Waltham Forest’s character and image;
- points where the physical and social context and range of observable activities begin to intensify;
- welcoming points that celebrate the moment of passage and build anticipation for an arrival – or departure; and
- the Borough’s ‘front door’!



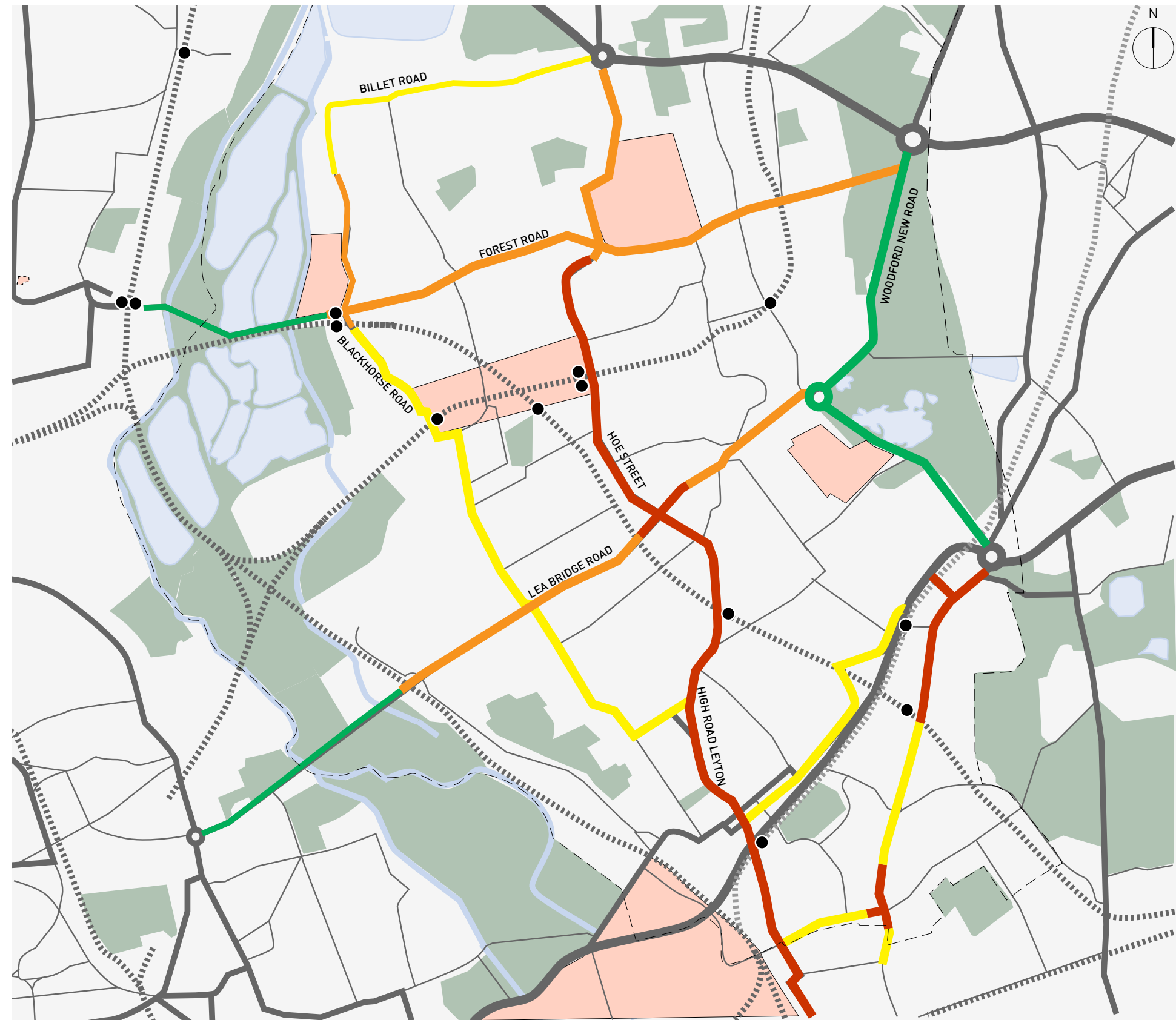
Various examples of gateways

GATEWAYS in WALTHAM FOREST

Waltham Forest can be characterised as a low-density suburban borough to the north, transitioning into a more urban context the further south one goes. The borough is bounded on its eastern and western edges by two regionally significant green spines of Epping Forest and Lea Valley River Reservoirs respectively.

The stronger urban context of southern Waltham Forest is reflected in the concentration of town centres and regeneration areas in this part of the borough, as well as in the character of its streets as shown opposite.

Lea Bridge Road is characterised within the Olympic Approach Business Case as an Urban Main Street flanked at its eastern extreme by Park Edged Roads east and north of the Whipp's Cross Roundabout. Subsequent design assessment has refined this typological allocation to an Avenue with the section of Urban Main Street limited to that section of carriageway between Shernhill Road and the Bakers Arms junction.

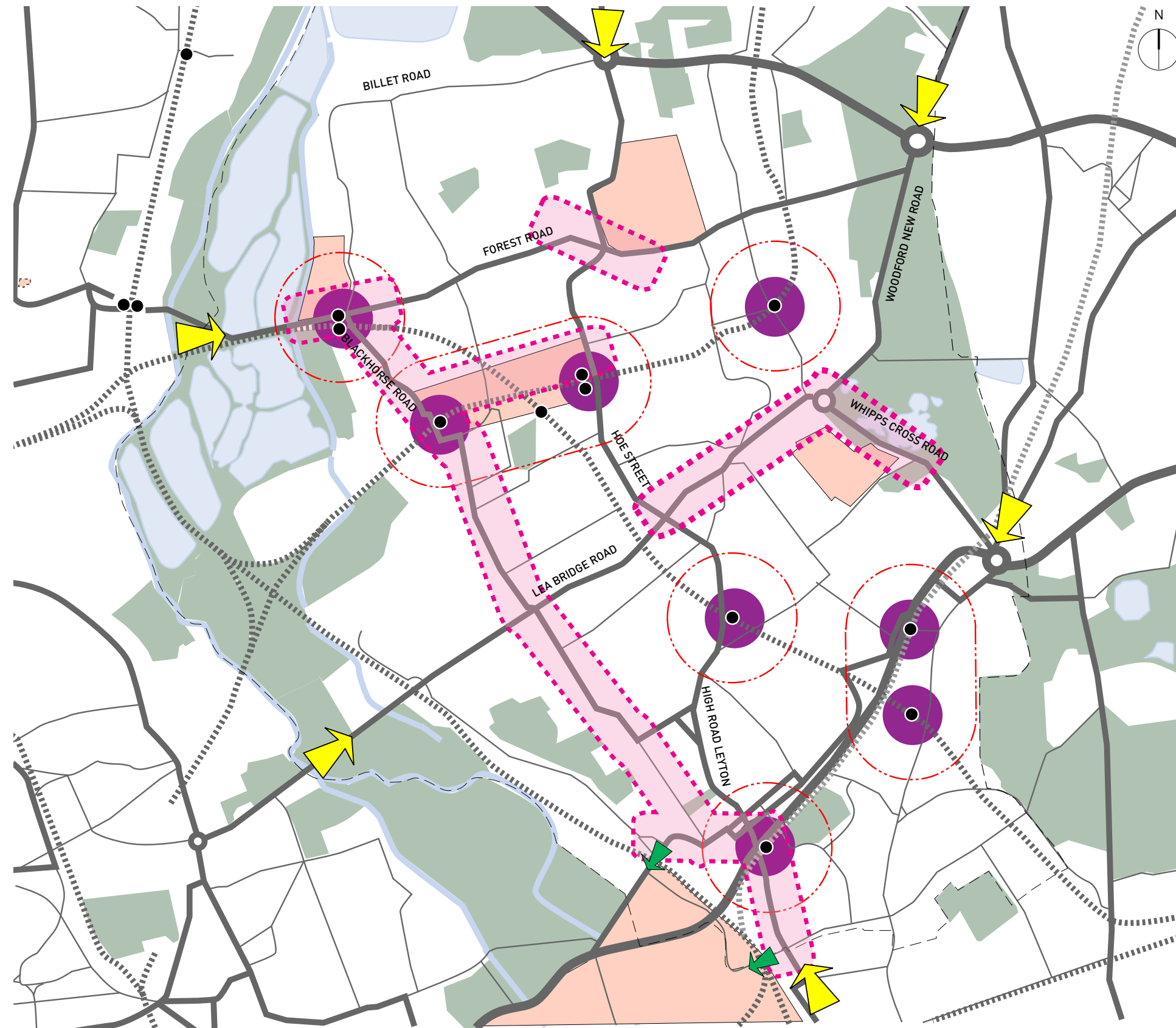


Following on from the analysis of the overall borough in the Olympic Approach Business Case, a more concerted desktop analysis has identified a series of gateway locations, which in turn have been broadly characterised on the basis of whether they are vehicular entry and exit points, public transport arrival points, and/or more socially focused gateways relevant to pedestrians and cyclists.

A reoccurring theme for gateway treatments is the need to manage traffic in a manner that improves safety for other modes – particularly for the pedestrian and the cyclist. Gateways can be used as ‘mental speed bumps’ (Engwicht, 2005) which alter driver perceptions of surrounding context in order to change driver behaviour.

This is often achieved through subtle changes in design and the use of landmarks/activities that signal an increase in driver uncertainty and risk, having the effect of lowering peoples propensity to take risks and behave in a manner that is incompatible with other local street users – particularly the pedestrian and the cyclist. The safety benefits of a more ‘shared’ street layout has been proven in many projects throughout the UK, the most notable of which is that of Kensington High Street.

Each of these three types are represented on the plan opposite and defined below:



Vehicular Gateways

Vehicular Gateways are aimed at creating a landmark and/or entry point for motorists. A large part of a driver's focus is concentrated on the road itself and the driving task. One of the challenges of designing a Vehicular Gateway is to create a memorable landmark that can be read in passing, from a distance, often at high speeds, without distracting the driver significantly.

The design response in such circumstances addresses speed, scale and information. Design parameters for a Vehicular Gateway must respond to the magnitude of the landscape, the scale of the built infrastructure and the speed of its perception.

A landmark in this context would have to be large enough to be significant at a distance and seen above the existing highway topography. The information conveyed by a landmark in a highway landscape would have to be limited to the speed of its perception and the distraction of the driving task.

Treatments might include:

- Large-scale artworks as a landmark feature and/or as a point of transition in street character
- Landscaping or themed planting, to express a sense of entry into a more shared public realm,
- Boulevard tree planting along Gateway corridors,
- Bold, striking architecture, and
- Feature lighting of existing large-scale or high-quality buildings to create landmark buildings at gateway sites.

Many vehicular Gateways also serve pedestrians or other modes, and this must be a fundamental consideration in their design. In the experience of the pedestrian, many different types of gateways exist throughout Waltham Forest: at points of arrival in the city centre; at points of transition between the quarters or the precincts within; or along the sequence of spaces of a movement route.

Public Transport Gateways

As discussed above, Gateways are often arrival points, denoting the first point of contact between the individual and the Borough. This is never more true than for those arriving in Waltham Forest by public transport, where visitors emerge from hyperspace – as it were – into the urban realm, and first impressions count.

Railway stations and bus terminals can be a squalid and exhausting experience. They are often disordered, confusing and challenging. But they need not be.

Arrival points are a window to the Borough. They should reflect civic aspiration whilst meeting transport needs. They succeed by recognising what travellers need in terms of information and comfort and what cities want in terms of image projection.

Public Transport Gateways focus on the quality of the arrival experience; on the quality of the public realm where a visitor emerges, and the legibility of the urban environment. Ideally, they should pay attention to the quality of the arrival experience even before one emerges into the public realm; that is, within the public transport facility itself (for example, the station). However, such a focus is outside of the remit of this study.

Of course, Public Transport Gateways cater for those leaving Waltham Forest as well, and as such should be fully integrated into the surrounding vicinity, highly legible, and easy to find. They should also provide a pleasant environment to create a positive lasting experience of the Borough.

Suitable treatments include:

- High Quality materials, lighting and street furniture;
- Pleasant, welcoming environments through activation of frontages;
- Arrival space integrated with the adjacent public realm;
- Measures to improve the legibility of the space, and
- Use of Public Art to announce the location of the facility

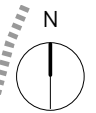
Of course, the operational functionality of the gateway is also of primary importance; it matters not whether the design and appearance of the space is attractive and pleasing if the arrival and departure point simply doesn't function.

Social Gateways

Social Gateways are primarily aimed at pedestrians. They do not generally need to make grand statements, but seek to support Placemaking initiatives and give character and identity to neighbourhoods and communities. They can be more subtle and read intuitively, as they are aimed at people travelling at low speed. Obvious gateway signage should not be necessary if other elements within the gateway are well designed. There are a number of means that can be used to signify this type of gateway:

- Gateway sites can be marked with a significant public space,
- Land uses can create a focus of activity at gateways, such as a busy shop or café, a market entry or an important public building,
- Changes in public realm details such as lighting, planting or surface materials can signify transition or arrival,
- Public artworks can be used to denote a point of arrival or as landmarks along a series of spaces,
- A narrowing of entry passages can signify arrival by creating a sense of anticipation and then surprise at what lies beyond, and
- Landmarks and views used strategically as orientation tools can imprint with significance a sequence of spaces and buildings.

The plan opposite has highlighted in very broad terms the higher order social gateways that are relevant at the Borough wide scale. In reality, this type of treatment will be an integral component of the delivery of the streets strategy on a street-by-street basis.



- National Rail and underground stations
- Green spaces and water
- Regeneration areas
- Commitment to Sustainable Development (CSR) schemes
- ⊞ Public transport and vehicular gateways
- ⊞ Social Gateway
- ➔ Olympic access points

Case study locations

The gateway locations as shown in adjacent plan were chosen for the following reasons:

- Their 'representativeness': the extent to which the issues and opportunities they present are representative of similar gateways in the Borough, and as such the ability for the design principles to be replicated by Council at other gateway locations. This links to the proposed Street Culture brief which seeks training for Waltham Forest Officers to enable them to deliver future Gateway (and similar) schemes internally.
- Their deliverability: these Gateways are likely to form the extent of what is deliverable ahead of the Olympics and in the years immediately following.
- Their interaction with overlapping schemes: Waltham Forest have commissioned Placemaking designs for a series of locations in the Olympic Value-Capture area with a view to submitting those designs for external funding and specifically to the Olympic-related Commitment to Sustainable Regeneration (CSR) programme. They are:
 1. Leyton Underground Station
 2. Leytonstone Station
 3. Thatched House junction
 4. Leyton Midland Road Rail Station

The Olympic Gateways were chosen to complement the schemes coming forward as part of that programme, such that Waltham Forest might achieve maximum coverage within the Olympic Value-Capture Area, thereby maximising the potential for delivery ahead of the Games.

The following gateway locations were identified:

1. A Vehicular Gateway at the Green Man Roundabout as representative of many other vehicular gateways across the borough, in particular along the north circular
2. A Public Transport Gateway at the Leytonstone High Road rail station, and
3. The Lea Bridge Road corridor between Whipp's Cross Roundabout, and the Baker's Arms junction was selected as it contained a range of smaller social gateways along the length of the street, with the added benefit of fleshing out design responses as part of wider Avenue and Mainstreet typologies

Each of these Gateway types have been developed and designed to Outline Design including a preliminary costing the scheme for submission to funding authorities. Further, the design principles have been drawn together into a design framework by gateway types to allow in-house designers to develop future schemes.

As part of the wider urban realm improvement programme outlined in the Olympic Approach Business Case, the Olympic Gateway project has the opportunity to fundamentally transform the quality of the borough's public space, and the experience of Waltham Forest, with Sustainable Communities Strategy benefits for civic participation, regeneration, wealth creation and retention.

Each of the Gateway schemes is discussed in Section 3.



03 GATEWAY SCHEMES

GREEN MAN ROUNDABOUT

EXISTING SITUATION

The Green Man roundabout is located at the junction of the A2 and Leytonstone High Road to the north of Leytonstone Town Centre. It is bordered by the edge of the town centre, Epping Forest and residential areas. Despite the fact that access for all modes is provided across or through the roundabout, each of the surrounding elements is severed from the others by the presence and design of the roundabout. Indeed, the green elements that border the roundabout on two sides do not even feel connected to each other and there is an overall lack of legibility.

Functionally, the Green Man roundabout is a major grade-separated roundabout, which acts as a key vehicular gateway point to Leytonstone town centre. The roundabout exists on three levels:

- a tunnel structure providing for east west traffic movement as part of the A12;
- a middle tier green space where segregated walking and cycling facilities are provided; and
- an upper 'interchange' level roundabout providing for off and onramp movements to the A12 and the surrounding street network.

The middle tier green space is characterised by poorly maintained and overgrown grass with little amenity to speak of, and is currently the main walking and cycling route through the junction. Access to the middle tier is via a series of subways, which can be an intimidating experience for pedestrians and cyclists. Further, these subways are reached via routes that are less than fully legible.

A segregated cycle and footway runs through the middle level with signage and 'road' markings similar in nature to that used to manage traffic. The end result of this is a route that feels over-engineered, where users are encouraged to 'stay in their lane' and 'obey the rules', rather than move through with awareness and respect for other users needs.

At the upper level, the roundabout design is almost entirely for the benefit of drivers, with sub-standard or non-existent provision for cyclists and pedestrians. Further, drivers are encouraged by the carriageway design to drive in a manner more appropriate for the motorway-like A12 than the urban environment that the roundabout borders.



Poor pedestrian environment



Over engineered pedestrian and cycle route



Highly engineered transition from A12 to urban environment



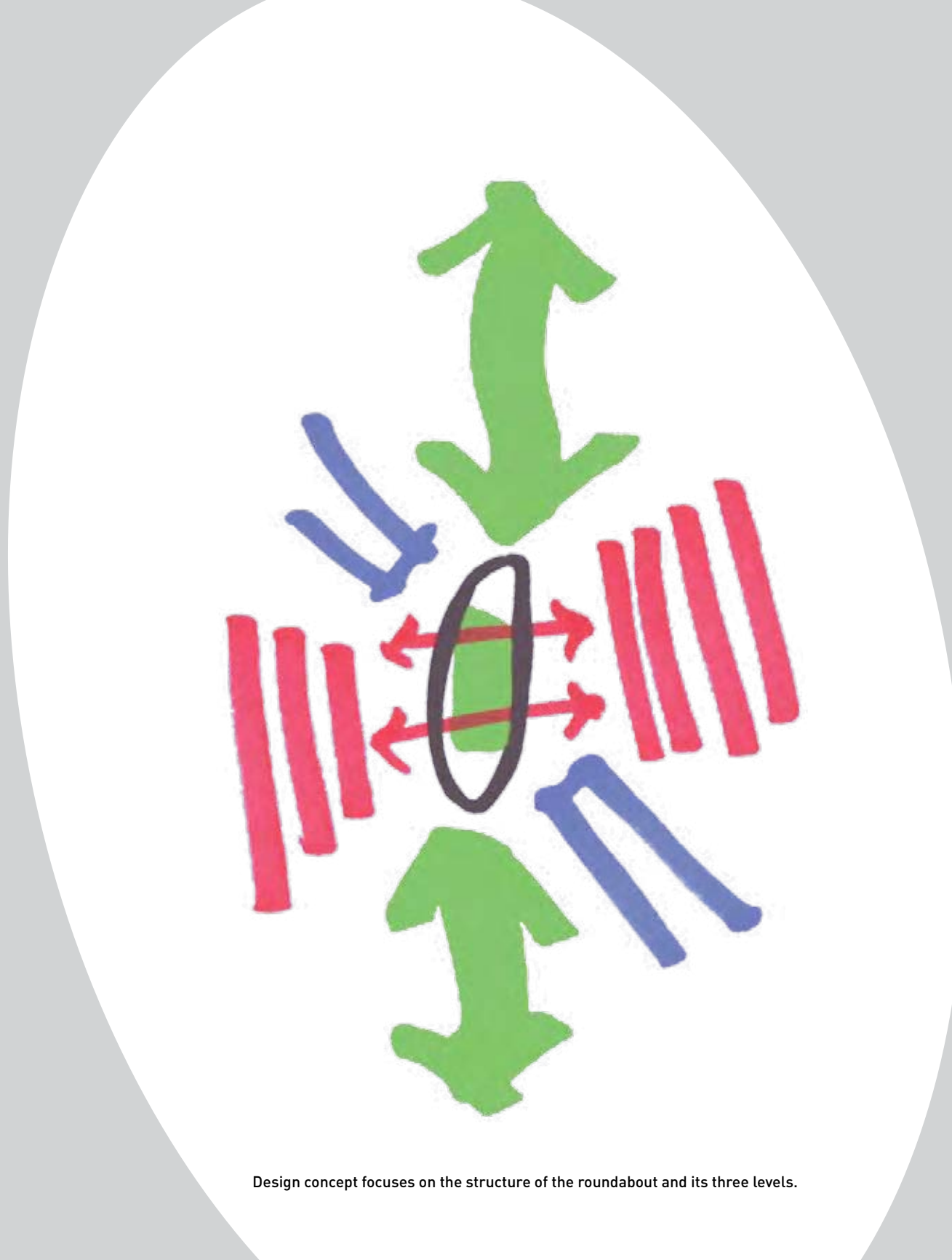
Need for improved legibility

DESIGN STRATEGY

In line with its status as a vehicular gateway and the specific challenges outlined above, the design strategy for the Green Man roundabout can be summarised as follows:

- Announce the presence of the roundabout by use of a large-scale artwork, perhaps representing the Green Man theme, responding to the local context;
- Help drivers to better-manage the transition from the motorway-like A12 to the more 'human' spaces immediately off it, through the introduction of behaviour-changing interventions; and
- Reduce the severance of the roundabout structure by connecting the different character elements bordering the roundabout structure.
- Improve legibility and safety using public art and public realm improvement.

How this is to be achieved for each element is discussed below.



Design concept focuses on the structure of the roundabout and its three levels.

DESIGN RESPONSE

Announce the Presence of the Roundabout

It is recommended that the London Borough of Waltham Forest commission a large-scale public artwork to announce the presence of the roundabout and the Gateway into the borough. The artwork should be of sufficient scale to be viewed from a significant distance away, taking into account the fact that it is likely to be located on the middle tier of the structure and will need to be visible from the upper tier. Such monuments can work on a number of different levels; they delight children on long car trips, invite tourist snapshots, appear on postcards, mark destinations, and can sometimes be the only icons of a place that remain in our memories.

In these ways, the public artwork can act as a Gateway feature for the vehicle drivers it is aimed at, but can also function as a legibility point for all users of the Public Realm, enabling them to orient themselves by referencing to it.

It is proposed that the London Borough of Waltham Forest commission a large scale public art element based on the theme of the Green Man. In line with the above, it should be clearly visible from the A12, thereby identifying this otherwise non-place. Introducing an object here that is charged with local meaning will enable the development of a stronger identity of the users of this space, be they daily commuters, weekend walkers or visitors to the area, and contribute to a sense of security for pedestrians and cyclists crossing the middle tier.

Transition Management

A key function of a Vehicular Gateway is to manage the transition for drivers between two different corridor typologies. This is especially important for drivers leaving the A12 (which acts as a motorway function where vehicle speeds are higher) and entering the wider public realm (where vehicle speeds are much lower and – importantly – pedestrians and cyclists are expecting vehicle speeds to be lower). In such cases, safety problems can occur as a result of vehicles entering the public realm (say, Leytonstone High Road) while still being driven in 'motorway-mode'.

To counter this, we propose the following measures:

- The use of public artworks on the walls of the A12 sliproads: Large scale images on the walls, especially if they are of human imagery, can help to soften and 'humanise' the sliproad, giving drivers a better sense of a changed typology from an exclusively vehicular realm to a space that more closely relates to the town and is used by pedestrians, a social space. In addition, it is felt that an increased density of image towards the roundabout itself can potentially operate in a traffic-calming manner by giving drivers the impression they are driving increasingly quickly as they approach the junction. We suggest the use of human faces – perhaps local schoolchildren - as a base for the public art intervention, as shown in the example.
- Improve the signals around the junction such that they better facilitate pedestrian movement around the roundabout at 'interchange' level. This will help to more quickly reinforce the notion that drivers are in an environment that they share with pedestrians and others.

Reduce the severance

The principle is to attempt to connect the differing characters areas through the roundabout. This will be achieved in different ways:

Green Spaces:

The use of continuous, matching, structured planting in the green spaces on both sides of the roundabout and within the structure itself. We suggest introducing a strong planting scheme that changes with the seasons, introducing a clear dynamic to this place that will be enjoyed by pedestrians and cyclists using this intermediate medium level. The plants used should be hardy and require low maintenance in order to guarantee the sustainability of this intervention. In this way, the layout of the green spaces will help to reinforce the perception that they are in fact all part of a single continuous space, rather than separate locations divided by the roundabout structure.

Also, it is proposed that a formal tree alignment be introduced that links this roundabout with the Whipps Cross roundabout, suggesting a continuity of character, or at least of visual context between both spaces.

In addition, improvements to the green tier are proposed, including the provision of a shared cycle and footway with no demarcation between them, and feature lighting – especially at the underpasses.

Residential connection:

The provision of pedestrian facilities at interchange level in the form of footway buildouts, and improved traffic signals to facilitate pedestrian movement will better connect the residential and retail elements to the north and south of the roundabout. This will provide an alternative route to the underpass that has higher levels of passive surveillance afforded by general traffic and thus is a much safer and less intimidating facility for people to use during evening periods. This intervention will need to be worked through in terms of capacity implications and can be progressed in isolation to other proposals.



Announce the Presence of the Roundabout



Transition Management



Structured planting contributes to legibility and continuity





Proposed intervention on Green Man roundabout



LEYTONSTONE HIGH ROAD STATION

EXISTING SITUATION

Leytonstone High Road station is – as the name suggests – located on Leytonstone High Road immediately south of Leytonstone Town Centre. It serves the Barking and Gospel Oak line, which forms part of the London Overground network.

As a Public Transport Gateway, Leytonstone High Road station suffers from poor street presence to the extent that it is often difficult to know where the station is even when within a direct line of sight. In addition, the experience of entering and leaving the station is less than an entirely positive experience; there is little or no sense of welcome with blank, featureless frontage into and out of the station itself. All of this results in little or no natural surveillance and a consequent sense of insecurity.



Lack of activity at interchange point



Poor quality access point



Poor quality of surrounding public realm environment



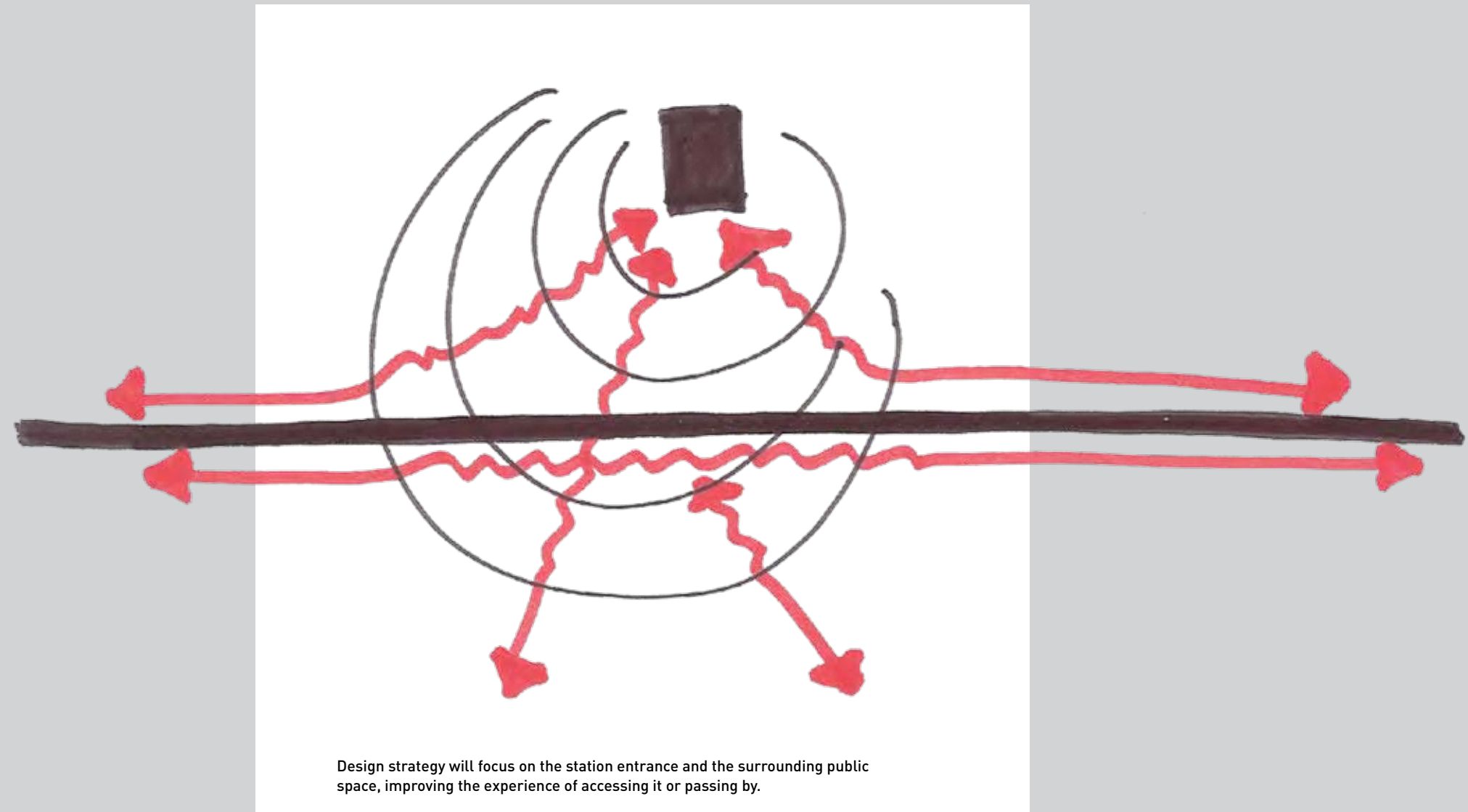
Entrance of station cut off from street

DESIGN STRATEGY

In line with its status as a public transport gateway and its specific challenges outlined above, the design strategy for Leytonstone High Road station can be summarised as follows:

- Improve the visibility of the station from Leytonstone High Road;
- Enhance the station concourse and the experience of utilising the station, either by arrival or departure.

How this is to be achieved for each element is discussed below.



DESIGN RESPONSE

Improving the Station's Visibility

It is proposed that a continuous visual link is created from the public realm to the station steps by:

- Extending the existing community art panel on the railway bridge into the station;
- Utilising continuous footway materials both within the station access and on Leytonstone High Road footway;
- Altering the existing gate separating the station access from the High Road such that when it is open, the entire entranceway is usable. In this way, the gate will feel less of a barrier and a more inviting entranceway can be created to the station; and
- Introducing feature lighting over the entranceway and extending it back towards the station in order to capture one's attention in passing the entrance.

In addition, it is proposed that a waiting/drop-of area be introduced under the bridge facing the road. In this way, not only is a necessary function for smooth station operation introduced, but the station itself will have an enhanced presence on Leytonstone High Road itself.

Improving the Station Concourse

In addition to the footway improvements and the feature lighting within the station area, it is proposed that the following measures can be introduced to ensure that the experience of arriving or leaving Waltham Forest by public transport at Leytonstone High Road station is a pleasant one:

Negotiating with Hitchcock Business Estate to promote "open door" activities in the arches within the station entrance such as workshops or cafeteria.

In this way, the arches could help animate the station entranceway, making it an active destination and a place people choose to go to whether they are travelling or just living near by. A good example of a successful implementation of such initiatives is the "Light at the End of the Tunnel" project in Southwark.

It is important that this immediate positive first impression is not lost as soon as one leaves the station, and as such, it is proposed that high quality lighting as a public-art feature be introduced under the bridge on Leytonstone High Road.

It is recognised that issues relating to third-party land will need to be addressed in order to achieve a holistic intervention and that – if necessary – Compulsory Purchase Orders or discussions with business forums might be applicable. However, no consideration of such measures has been included in the cost estimates contained within this report.

Improving the surrounding public spaces

In order for this station to build upon the potential of becoming a destination, the experience of approaching it is important. Comfortable accessible, safe and legible routes to and from the station are to be introduced giving a clear indication of a transitional point at this location. In turn, this would make for a very positive first impression for people visiting or returning to the Borough.



Improving the Station's Visibility



Improving the Station Concourse



Improving the surrounding public spaces



Leytonstone High Road Station



Proposed intervention on Leytonstone High Road Station



LEA BRIDGE ROAD

EXISTING SITUATION

Lea Bridge Road is one of two main east-west routes through the Borough linking it with Hackney to the west and Redbridge to the east via Woodford New Road and the North Circular Road (A406).

The road is both a critical gateway to the borough at both the eastern and western ends and also showcases various different 'place' contexts along it. It's the activities at these spaces that give identity to the place and important rhythm to this long road. For this reason it has been chosen as a social gateway both to and through the borough.

For the purposes of this study, focus has been maintained on the stretch of Lea Bridge Road from Bakers Arms (Lea Bridge Road and Hoe Street junction) through to and including Whipps Cross roundabout

Currently, there is approximately 12m of carriageway on Lea Bridge Road between Whipps Cross and Shernhill Road made up of an eastbound bus lane, two general travel lanes and an advisory cycle lane. The westbound cycle lane is a substandard facility (1m width). The traffic lanes are generally wider than necessary, and this has created an environment where drivers are encouraged to move at speed without interacting with the surrounding context, philosophically representing a bias towards vehicular movement needs over those of other modes or of the surrounding place.

West of Shernhall Street, the existing carriageway narrows to 10m and operates as a single-carriageway. In addition to the two movement lanes, there is intermittent on-street parking and a continuous cycle lane of variable width. Although this section does not suffer from the levels of casualties experienced in the 'Avenue' section of the road, the width of the travel lanes can encourage high vehicular speeds in the off-peak periods when congestion levels allow.

The roads leading onto Lea Bridge Road at both the western and eastern ends cater for approximately over 30,000 vehicles per day (vpd), roads that can be characterised by their highway layout and open space context, with no land uses or activity to slow motorists. By comparison, Lea Bridge Road is estimated to cater for 20,000 or fewer vpd with varied residential, school, main street retail and business uses found along its length.

An interrogation of accident statistics (Source: London Accident Analysis System) demonstrates that the section of Lea Bridge Road between Burwell Road and Church Road is the most dangerous link in the entire borough; the section between West End Avenue and Leyton Green Road as the sixth most dangerous; and the section between West End Avenue and Whipps Cross roundabout is the tenth most dangerous.

What this shows is that the design of Lea Bridge Road fails to provide appropriate signals to motorists as to the change in context they are passing through and associated change in behaviour required when using an urban street like Lea Bridge Road.



Lea Bridge Road



Whipps Cross Roundabout



Place identity along Lea Bridge Park



Small pocket spaces along road: a focal point and activity hub



Bakers Arms junction



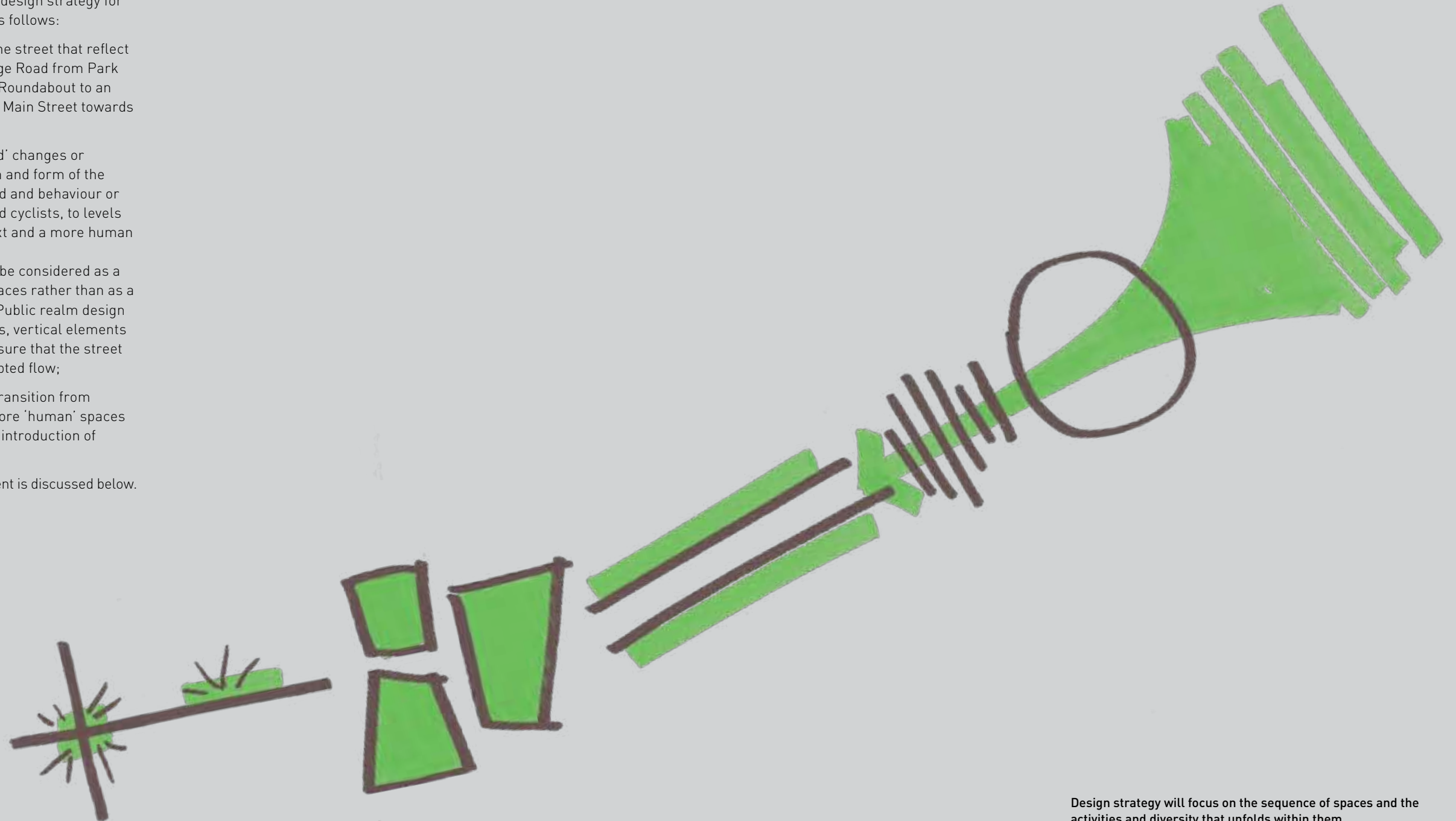
This identity of Bakers Arms junction by the street market activity

DESIGN STRATEGY

In line with its status as a multi-modal linear gateway and its specific challenges outlined above, the design strategy for Lea Bridge Road can be summarised as follows:

- Introducing emerging elements in the street that reflect the changing nature of the Lea Bridge Road from Park Edged Street beyond Whipps Cross Roundabout to an Avenue typology and on to an Urban Main Street towards the Bakers Arms junction;
- Reinforce this by a series of 'stepped' changes or 'secondary gateways' in the function and form of the street, ensuring a transition in speed and behaviour of vehicles, and indeed pedestrians and cyclists, to levels commensurate with its wider context and a more human scaled and walkable public realm; To this end Lea Bridge Road should be considered as a series of intermittent places and spaces rather than as a linear movement focused corridor. Public realm design including street layout and materials, vertical elements and junction/crossing points will ensure that the street functions on the principle of interrupted flow;
- Help drivers to better-manage the transition from Whipp's Cross Roundabout to the more 'human' spaces along Lea Bridge Road, through the introduction of behaviour-changing interventions.

How this is to be achieved for each element is discussed below.



Design strategy will focus on the sequence of spaces and the activities and diversity that unfolds within them.

DESIGN RESPONSE

Emerging elements

It is proposed that a series of elements are introduced that reflect the corridor transition from a Park Edged Street beyond Whipps Cross roundabout to an Avenue typology and an Urban Main Street. These are discussed below:

Footway Layout

Along the entire corridor, the footway will be widened to create improved pedestrian amenity, and to create space to introduce the following elements:

1. Introducing an avenue-type treatment through structured, large-scale tree-planting. The location and frequency of planting should be closely related to the situative context of the street and the level of urban grain. The further one travels towards Bakers Arms, the more interspaced the planting and the smaller the trees should be;
2. The potential exists for this programme to follow a similar approach to the one taken for the "Peace Year 1986" scheme, that is, to give identity to each tree planted, potentially allowing its adoption by local businesses and/or community.



Large-scale tree planting to mark Avenue-type treatment

Carriageway Layout

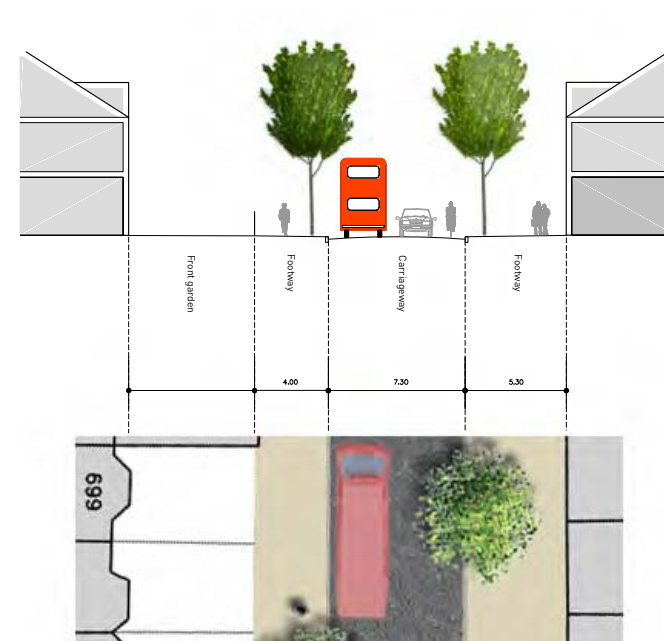
Baker's Arms to Shernhall Street (pp. 30, 31 top):

The design response seeks to radically alter the condition of the street from one where carriageway and parking dominates, to one where there is a better balance between movement and place. In functional terms, it is proposed that the carriageway is narrowed to 7.3m, with 3.65m travel lanes in each direction. The additional carriageway space is then given over to additional footway, and footway parking in retail areas, the net result being a complete change in the nature of the street, without losing capacity.

There will be no centre line, which – combined with the narrower carriageway space – will require greater negotiation between drivers.

For cyclists, this means a reduction of width from what currently exists, although it is felt that proposed widths will still provide adequate room for cyclists to share a lane with a car.

Parking will be rationalised, and the vehicles will be required to slow down and take greater care when entering and exiting the parking spaces. The narrowed carriageway will also ensure that cars are forced to queue as opposed to weave in and around buses and cars, reducing danger to cyclists.



Typology 1

Shernhall Street to Whipps Cross (pp.30, 31 bottom):

A substantial change in the layout and use of the carriageway is proposed to improve conditions for all modes of transport and reflect local context in public realm design.

This provides for a 3.2m Bus and Cycle Lane eastbound (London Cycling Design Guidance advises that Bus and Cycle Lanes should be either 3.2m or narrower or 3.9m or wider). On the opposite side of the street would be located a continuous full-width Advisory Cycle Lane (1.5m). Between these two facilities, some 5.8m of carriageway space will be provided which will facilitate the two general traffic lanes.

Again, the centre-line will be removed except in the immediate vicinity of junctions. In the event that two large vehicles need to pass each other, then the westbound driver will be able to utilise the Advisory Cycle Lane, which – together with the remaining carriageway – gives an effective two-way space of some 7.3m.

It is considered that this arrangement will likely result in lower vehicle speeds, a better safety record, and a much-improved provision for cyclists.

In addition, a new series of highly legible bus hubs are proposed along the length of the street, Bus stops are positioned on the far side of formal crossing facilities, creating a situation where passengers always cross the road behind the bus with clear sightlines of oncoming traffic.



Typology 2

Gateway public spaces

The above treatments should be overlaid with a series of step changes or secondary gateway treatments based on strengthening the character and identity of specific enclaves or identifiable locations along the corridor, specifically:

Poplars Road Junction

At this junction, a corner building functions as an attractive focal point for westbound movement. It is recommended that a small pocket space is created. This will include the planting of a small group of trees to define a seating area, while maintaining clear views towards the corner building focal point. It is expected that the existing A3 activities in this vicinity will potentially be able to benefit from this improvement through the introduction of tables and chairs, enhancing both the on-street activity, natural surveillance as well as their potential income stream.



Creating a destination and giving identity to a small pocket space

Leyton Green Road junction

This junction has the potential to act as a secondary gateway by virtue of the green spaces located either side of it (on the south).

It is recommended that the alignment of Leyton Green Road be altered at its eastern end such that it intersects with Lea Bridge Road further west. This new alignment will reduce the westerly green space and increase it on its eastern side, which creates the potential to clearly differentiate these two spaces, as follows:

1. the smaller space will become more enclosed and private, thereby promoting its appropriation by the local community; it can be planted with fruit trees that the local community may adopt;
2. the open and mature eastern side will remain more public, potentially introducing play or sports facilities.



Open green space appropriate for active uses

Shernhall Street junction (illustrated in next page)

As part of a series of measures to break-up the linearity of Lea Bridge Road it is proposed that at the junction with Shernhall Street the existing priority junction is re-modelled. At present drivers on Lea Bridge Road can pass this junction and the adjacent green spaces without any encouragement to interact with their surroundings. The following changes are recommended:

1. The introduction of a continental-style roundabout to encourage drivers to interact with one another, reduce vehicle speeds, and reduce the severity of future road accidents;
2. Implementation of a raised table (or alternatively a reduction in kerb height) at the junction to encourage drivers to be more aware of pedestrians and adjacent land uses;
3. Provision of a new children's play area to the south of Grove Road, which will help to animate the streetscene, create a strong local context for drivers, strengthen the area's sense of place, act as a local landmark, provide a valuable local amenity, and improve natural surveillance;
4. Reduce the level of road markings, which will encourage drivers to negotiate with one another and become more aware of each others actions; and
5. Introduce Zebra- style, courtesy crossings, which will increase pedestrian priority, reduce the barrier to movement caused by Lea Bridge Road, as well as force all road users to interact with each other and anticipate each others actions.



Provision of a children's play area as a support to the community

Eastern Road/West End Avenue junction

It is proposed that a new signalised junction is installed at the Eastern Road and West End Avenue junction. This junction experiences a substantial proportion of turning movements and represents a key access point to the college to the south and elsewhere. It also suffers from a significant number of accidents in the immediate vicinity.

Signalisation will improve facilities for pedestrians across Lea Bridge Road and help to calm traffic travelling from Whipps Cross Roundabout.



Signalised pedestrian crossing



Proposed intervention on Shernhall Street junction





Bakers Arms

At the western end of the study area lies the Bakers Arms junction, where Lea Bridge Road crosses Hoe Street. Linked to the gateway measures proposed for Lea Bridge Road is a placemaking proposal at this junction. This comprises:

- Removal of the left turn lane from Hoe Street (southbound) into Lea Bridge Road, and the creation of a new public square there. It is suggested that this space, while providing for tables and chairs and the creation of a 'café-culture' there, will also be able to support weekly or monthly activities such as a Farmer's Market. In order to reinforce special character of this place we suggest the planting of small trees with distinctive foliage colour, fruit or flower;
- Introduction of surface materials improvements in and around the fruit and vegetable market stalls;
- Implementation of footway widening and straightened kerbs on the western approach;
- Consolidation of bus stops on the western approach, with nearby parking removed to help improve bus stop capacity and efficiency.
- Anti-skid treatment at junction to reduce traffic speed.





Proposed intervention on Bakers Arms

Whipps Cross Roundabout

Lea Bridge Road functions as a multi-modal linear gateway (including vehicles). A key gateway function for vehicle drivers is to manage the transition for drivers between two different corridor typologies. This is especially important for drivers leaving Whipps Cross Roundabout and the Park Edge Streets north and east of there, and entering the Urban Main Street function of Lea Bridge Road (where vehicle speeds are much lower and – importantly – pedestrians and cyclists are expecting vehicle speeds to be lower). In such cases, safety problems can occur.

To counter this, we propose a range of measures designed to alter driver behaviour. These include:

1. Alter the kerb alignments away from a high-speed, free-flow alignment to a more continental form that requires drivers to slow and turn left onto the roundabout;
2. Narrow the vehicular approaches to the roundabout;
3. Re-model the Wood Street junction by narrowing the carriageway width, introducing a clear transition to a residential area;
4. Introduce pedestrian crossings across the roundabout.
 1. Narrow the carriageway: as well as increasing provision for pedestrians and space for additional tree planting, this has a substantial traffic calming impact;
 2. Improve the pedestrian crossing immediately south of the roundabout from a staggered Toucan crossing to a straight-across facility.

Whipps Cross Roundabout acts as a secondary gateway, reinforcing its function in managing the transition between two different realms, the vehicular and the social realm.

For the roundabout to become a feature within the overall Lea Bridge Road linear gateway, the implementation of the following measures is proposed:

1. Improved bus interchange, incorporating the bus stop into a small building that anchors community needs as a meeting point, provides toilets for bus drivers and the public, additional retail facilities, and constitutes an iconic element for the roundabout. This building would also define an edge to Ealington Road, therefore functioning as a buffer for this residential street;
2. Enhanced green space in the immediate vicinity of the bus stop providing improved pedestrian access to the hospital;
3. Additional focused planting that responds to the existing Poplars on the roundabout by planting similar tall trees along the Lea Bridge Road's median. This allows the green space of Epping Forest and the roundabout to be extended towards Lea Bridge Road, and at the same time reacts to the existing nearby tall buildings by introducing similarly scaled planting. In line with this concept, the trees should descend in scale as they move away from the roundabout;
4. Plant additional mature Horse Chestnut trees around the side of the roundabout. These will function as a green buffer for the existing housing and will contribute to a more pleasant pedestrian route linking these to the centre;
5. Introduce a ring to group the trees and serve as a public art element, potentially using light (see case study image);
6. Introduce feature uplighting for the individual trees located on the roundabout and a ring of light for the grouped ones and for the war memorial located to the south of the roundabout.



Distinction of street typology by changes in materials and layout



Improved bus interchange



Public art intervention proposed for the group of trees at roundabout



Proposed intervention on Whipps Cross Roundabout

04 NEXT STEPS

The final section locates this report within a series of processes for delivery, focused on all aspects of the street design, build, and management process; in effect a new holistic way of integrating all the process, skills and actions together as part of a single initiative. It also proposes how the schemes contained within this report should be taken forward in the context of that overall series of processes.

This report sits within a wider programme of improvements proposed initially within the Olympic Approach Business Case. In that document, six processes or actions were set out (see diagram), which were proposed to raise better design quality and deliver more holistic projects on the ground. They were:

Street CHARTER – the charter will outline our commitment to the street and urban realm within Waltham Forest. It will be a statement of intent, providing high level aims and objectives, with support pledged from every level within the council, its stakeholders and ultimately the people of Waltham Forest.

Street CULTURE – this initiative is focused at institutional capacity building and training. It will through workshops and training sessions, raise awareness of urban design principles as an overarching concept for all street and urban realm projects. Where necessary it will provide specific or focused training and identify skill shortages or problems and may be used to assist in possible team restructuring. It will also focus on the structure of the Council and the delivery processes that are utilised to ensure that the individual skills and cross-team working that are developed are best utilised.

Street STRATEGY – this will involve the comprehensive rewrite of the existing Waltham Forest Street design manual. It will be developed in tandem with the Street CHARTER and street CULTURE project and thus be fully informed by current issues and thus be better placed to deal with the complex design issues surrounding streets and public realm. The development of the Street STRATEGY will therefore be a highly inclusive process with all involved in street playing their part. The Street STRATEGY will focus on the following areas

- Context & Analysis – providing an analysis of the wider borough and more detailed tissue studies of a representative selection of Waltham Forests street types, with a particular focus on how local character affects the design of the public realm
- Strategy – providing further guidance on various street typologies and opportunities for public space, including how to respond to local context
- Materials Palette – a core palette of materials with variants for character area to better coordinate street design

Street DESIGN – this will implement the outcomes of the above three areas and will focus on design of the schemes coming forward. To this end, it will provide guidance on the design process with a focus on cross team working and better alignment of top and bottom ranks.

Street DELIVERY – this will implement the outcomes of the above areas, focussing on delivery of the schemes designed.

Street MAINTENANCE – provide guidance on maintenance regimes for various street types and locations.

Good progress has been made against this programme. A first draft of the Street CHARTER has been drafted, a Brief for the Street CULTURE and the Street STRATEGY documents have been issued, and this document represents the first step in the Street DESIGN process.

Ordinarily, it would be proposed that the initial three areas (Street CHARTER, Street CULTURE and Street STRATEGY) should be pursued in the first instance, out of which the Street DESIGN and Street DELIVERY would emerge. However, given the opportunity that the 2012 Olympics represents in funding terms, Street DESIGN elements that relate to the Olympic Value-Capture Area have been progressed here.

It is therefore recommended that – in parallel to the continuing Street CHARTER, Street CULTURE and Street STRATEGY processes, the Street DESIGN process for the schemes included in this report should be progressed as quickly as possible, alongside specific funding bids for their further development towards Street IMPLEMENTATION. It should be recognised that completion of all of the schemes within this report ahead of the 2012 Olympics represents a substantial challenge. As such, in order to maximise the funding potential of the Olympics, it is recommended that the funding submissions and the wider scheme development should be progressed as a matter of some urgency as soon as possible.

05 DESIGN FRAMEWORK

The following tables summarise the design guidance described for each of the three gateways. This guidance informs future interventions on similar gateways on Waltham Forest.

For each type of Gateway a series of principles are illustrated through examples.

GATEWAY TYPE	SUITABLE INTERVENTIONS	SPECIFIC RECOMMENDATIONS FOR GREEN MAN ROUNDABOUT
VEHICULAR GATEWAY	<ul style="list-style-type: none"> Large-scale artworks 	<ul style="list-style-type: none"> Commission a large-scale public artwork representing the Green Man theme to announce the presence of the roundabout and the Gateway into the borough. Commission public artworks based on human faces on the walls of the A12 sliproads as a traffic calming measure and to identify a changed typology from an exclusively vehicular realm to a social space.
	<ul style="list-style-type: none"> Landscaping or themed planting 	<ul style="list-style-type: none"> Introduce continuous, matching, structured planting in the green spaces on both sides of the roundabout and within the structure itself. Implement improvements to the 'green tier', including the provision of a shared cycle and footway with no demarcation between them, and feature lighting – especially at the underpasses. Introduce formal tree planting in a distinctive alignment that can be replicated at similar gateways.
	<ul style="list-style-type: none"> Boulevard tree planting 	<ul style="list-style-type: none"> None proposed
	<ul style="list-style-type: none"> Bold, striking architecture 	<ul style="list-style-type: none"> No appropriate structures available, so introduce feature lighting on planting and the 'Green Man' public art commission.
	<ul style="list-style-type: none"> Feature lighting of existing large-scale or high-quality buildings 	<ul style="list-style-type: none"> [At Whipp's Cross Roundabout] Introduce feature uplighting for the trees located on the roundabout, the war memorial located to the south of the roundabout, and for the twelve storey residential block to the west

GATEWAY TYPE	SUITABLE INTERVENTIONS	SPECIFIC RECOMMENDATIONS FOR LEYTONSTONE HIGH ROAD STATION
PUBLIC TRANSPORT GATEWAY	<ul style="list-style-type: none"> High Quality materials, lighting and street furniture 	<ul style="list-style-type: none"> Introduce feature lighting over the entranceway and extending it back towards the station
	<ul style="list-style-type: none"> Pleasant, welcoming environments through activation of frontages 	<ul style="list-style-type: none"> Negotiate with the Hitchcock Business Estate to promote "open door" activities in the arches within the station entrance such as workshops or a cafeteria.
	<ul style="list-style-type: none"> Integration of arrival space with the adjacent public realm 	<ul style="list-style-type: none"> Utilise continuous footway materials both within the station access and on Leytonstone High Road footway, Alter the existing gate separating the station access from the High Road such that when it is open, the entire entranceway is usable.
	<ul style="list-style-type: none"> Measures to improve the legibility of the space 	<ul style="list-style-type: none"> Introduce a waiting/drop-off area to be introduced under the bridge facing the road.
	<ul style="list-style-type: none"> Use of Public Art to announce the location of the station 	<ul style="list-style-type: none"> Extend the existing community art panel on the railway bridge adjacent to the station into the station Introducing feature lighting over the entranceway and extending it back towards the station in order to capture one's attention in passing the entrance Introduce high quality lighting as a public-art feature under the bridge on Leytonstone High Road.

GATEWAY TYPE	SUITABLE INTERVENTIONS	SPECIFIC RECOMMENDATIONS FOR LEA BRIDGE ROAD NOTE – Lea Bridge Road is considered a Multi-Modal Gateway, so those elements appropriate to Vehicular Gateways also apply
SOCIAL GATEWAY	<ul style="list-style-type: none"> New and/or improved public space 	<ul style="list-style-type: none"> Enhance the green space in the immediate vicinity of the bus stop providing pedestrian access to the hospital Provide a new children's play area to the south of Grove Road Improve the green spaces at the junction of Lea Bridge Road and Leyton Green Road potentially including the planting of fruit trees and the introduction of play or sports facilities
	<ul style="list-style-type: none"> Focussed activities, such as a busy shop or café, a market entry or an important public building, 	<ul style="list-style-type: none"> Create a small pocket space at the Poplars road junction to define a seating area around the existing A3 activities in this vicinity
	<ul style="list-style-type: none"> Changes in public realm details such as lighting, planting or surface materials 	<ul style="list-style-type: none"> Widen footways to create improved pedestrian amenity, and to create space to introduce an avenue-type treatment through structured, large-scale tree-planting Introduce a scheme that allows adoption of each tree by local businesses or the community Add focused planting along the Lea Bridge Road's median immediately south of Whipp's Cross roundabout, supplementing the existing Poplars there.
	<ul style="list-style-type: none"> Public artworks and/or landscaping to denote a point of arrival or as landmarks along a series of spaces 	<ul style="list-style-type: none"> Commission the design and implementation of a ring to group the trees and serve as a public art function
	<ul style="list-style-type: none"> Strategic landmarks as orientation and identity tools. 	<ul style="list-style-type: none"> Improved bus interchange, incorporating the bus stop into a small building that anchors community needs as a meeting point, provides retail facilities as well as toilets for bus drivers and the public.

APPENDIX A: BID SUBMISSIONS

As mentioned previously, one of the key functions of this document is to provide a bid submission document that can be used to access funding to implement the schemes as set out above. It was agreed that these submissions should use Transport for London's (TfL's) Area Based Scheme (ABS) Step One submission as a template. In this way, in the potential absence of other funding streams, the authority would be able to submit ready-made applications to TfL through the ABS process.

It should be noted that the applications differ slightly, in that the submission for the Leytonstone High Road Station Gateway is based on TfL's 'Station Access' form, whereas the other two submissions are based upon TfL's 'Streets for People' form.

Each scheme bid can be found below:

SCHEME TITLE	GREEN MAN ROUNDABOUT VEHICULAR GATEWAY	
Problems & Issues	<p>Briefly describe the problems that the proposed scheme will address</p> <p>The Green Man roundabout is located at the junction of the A2 and Leytonstone High Road to the north of Leytonstone Town Centre. It is bordered by the edge of the town centre, Epping Forest and residential areas.</p> <p>The Green Man roundabout is a major grade-separated roundabout, which acts as a key vehicular gateway point to Leytonstone town centre. The roundabout exists on three levels:</p> <ul style="list-style-type: none"> • a tunnel structure providing for east west traffic movement as part of the A12; • a middle tier green space where segregated walking and cycling facilities are provided, and access through the structure is achieved via a series of tunnels. The green space here is poorly maintained and overgrown grass with little amenity, and is currently the main walking and cycling route through the junction. Pedestrian and cycle access is via a series of subways, which suffer from poor legibility, and can be intimidating, especially at night; • an upper 'interchange' level roundabout providing for off and onramp movements to the A12 and the surrounding street network. Despite the fact that access for all modes is provided across or through the roundabout, each of the surrounding elements is severed from the others by the presence and design of the roundabout. The upper level, the roundabout design is almost entirely for the benefit of drivers with sub-standard or non-existent provision for cyclists and pedestrians. Further, drivers are encouraged by the carriageway design to drive in a manner more appropriate for the motorway-like A12 than the urban environment that the roundabout borders. 	
Scheme Objective(s)	<p>Describe briefly why the scheme is needed e.g. part of rail line station improvement programme – supporting relevant reports, leaflets, diagrams welcomed</p> <p>The scheme will re-design the Green Man Roundabout and its immediate environs in line with its status as a vehicular gateway and as part of a wider programme of Olympic Gateway Upgrades to improve the welcome to Waltham Forest.</p> <p>To address the specific challenges outlined above, the scheme will:</p> <ul style="list-style-type: none"> • Announce the presence of the roundabout by use of a large-scale artwork based on the Green Man theme. • Help drivers to better-manage the transition from the motorway-like A12 to the more 'human' spaces immediately off it, through the introduction of behaviour-changing interventions. • Reduce the severance of the roundabout structure by connecting the different character elements bordering the roundabout structure, and 	
Meeting Key Objectives	Improving the physical & living environment	Y
	Improve personal security, reduce the fear of crime, particularly for travel during the hours of darkness	Y
	Increase the opportunities for local people to use streets as social spaces	Y
	Reduce social exclusion	Y
	Facilitate regeneration and increase transport opportunities for local communities, whilst encouraging shorter journeys to be made	Y
	Reduce the adverse effects of travel	Y
	Improve conditions of cyclists, pedestrian and bus users to encourage more journeys by these modes	Y
	Improve accessibility of the public transport network for everyone	Y
Scheme Components	<p>Describe briefly the main scheme elements, e.g. footway works, street lighting, etc.</p> <p>In line with the objectives outlined above, the scheme components are:</p> <p>Announce the Presence of the Roundabout</p> <p>Commission a large-scale public artwork based on the theme of the Green Man to announce the presence of the roundabout and the Gateway into the borough. The artwork should be of sufficient scale to be viewed from a significant distance away, even allowing for the fact that it is likely to be located on the middle tier of the structure and will need to be visible from the upper tier. This will function as a Gateway feature for the vehicle drivers but can also function as a legibility point for all users of the Public Realm – enabling them to orient themselves by reference to it.</p> <p>Transition Management</p> <p>Introduce public artworks on the walls of the A12 sliproads using increasingly dense human imagery to calm traffic, soften the environment and 'humanise' the sliproad, giving drivers a better sense of a changed typology from an exclusively vehicular realm to a social space.</p> <p>Improve the signals around the junction such that they better facilitate pedestrian movement around the roundabout at 'interchange' level.</p> <p>Reduce the severance</p> <p>Connect the green spaces north and south of the roundabout and within the structure itself using a strong planting scheme to reinforce the perception that they are in fact all part of a single continuous space, rather than separate locations divided by the roundabout structure.</p> <p>Introduce a formal tree planting alignment that links this roundabout with the Whipps Cross roundabout, to suggest a continuity of character between both spaces.</p> <p>Connect the residential and retail elements to the north and south of the roundabout by providing an alternative route to the underpass at interchange level through footway buildouts, and improved pedestrian crossings on the roundabout.</p> <p>In addition, improve the green tier for pedestrians and cyclists by removing the demarcations on the shared cycle and footway, and providing feature lighting – especially at the underpasses.</p>	

SCHEME TITLE	GREEN MAN ROUNDBABOUT VEHICULAR GATEWAY	
Complementary Funding	Funding Source	%
	Transport for London – Area Based Schemes	
	Developer Contributions (where known)	
	Business Improvement Districts	
	Network Rail / TOC	
	Other BSP Programme / TfL Funds - specify	
	Borough's own resources	
	EU Funds - state which programme	
	Others – specify	
Complementary Schemes	Identify any complementary TfL initiatives in the area likely to be active	
Total Estimated Scheme Implementation Cost	£3.500k	
Materials		
Other	Utility works, site supervision	
Estimated Scheme Development Costs	Amount requested from TfL to develop full scheme bid through Step 2. This should typically be between 5% & 10% of the total estimated cost. The final sum will be agreed with TfL.	
	Is this sum included in the Total Scheme Estimated Cost?	Y/N
Scheme Development Needs	Describe the specific tasks and activities that will be carried out in Step 2 using the scheme development funds, e.g. traffic surveys, design work etc	
Proposed Project Programme	Earliest Detailed Design Start Date	Give year quarter e.g. 2/06.
	Anticipated Design Duration	Months
	Earliest Consultation Start Date	Give year quarter
	Anticipated Consultation Duration	Months
	Earliest Scheme Build Start	Give year quarter
	Anticipated Scheme Build Duration	Months

SCHEME TITLE	LEYTON HIGH ROAD STATION PUBLIC TRANSPORT GATEWAY	
Problems & Issues	<p>Briefly describe the problems that the proposed scheme will address</p> <p>Leytonstone High Road station is located on Leytonstone High Road immediately south of Leytonstone Town Centre. It serves the Barking and Gospel Oak line, which forms part of the London Overground network.</p> <p>As a Public Transport Gateway, Leytonstone High Road station suffers from poor street presence to the extent that it is often difficult to know where the station is even when within a direct line of sight. In addition, the experience of entering and leaving the station is less than entirely positive, as there is little or no sense of welcome with blank, featureless frontage into and out of the station itself. All of this results in little or no natural surveillance and a consequent sense of insecurity.</p>	
Scheme Objective(s)	<p>Describe briefly why the scheme is needed e.g. part of rail line station improvement programme – supporting relevant reports, leaflets, diagrams welcomed</p> <p>The scheme will introduce a wide-ranging package of improvements both within and around the station to enhance its status as a public transport gateway to the Borough. The scheme is part of a wider programme of Olympic Gateway Upgrades to improve the welcome to Waltham Forest.</p> <p>The improvements here will:</p> <ul style="list-style-type: none"> • Improve the visibility of the station from Leytonstone High Road • Enhance the station concourse and the experience of utilising the station, either by arrival or departure 	
Meeting Key Objectives	Improving the physical & living environment	Y
	Improve personal security, reduce the fear of crime, particularly for travel during the hours of darkness	Y
	Reduce social exclusion	Y
	Improve conditions of cyclists, pedestrian and public transport users to encourage more journeys by these modes	Y
	Improve accessibility of the public transport network for everyone	Y
Scheme Components	<p>Describe briefly the main scheme elements, e.g. footway works, street lighting, etc.</p> <p>In line with the objectives outlined above, the scheme components are:</p> <p>Improving the Station's Visibility</p> <p>Create a continuous visual link from the public realm to the station steps by:</p> <ul style="list-style-type: none"> • Extending the existing community art panel on the railway bridge adjacent to the station into the station, • Utilising continuous footway materials both within the station access and on Leytonstone High Road footway, • Altering the existing gate separating the station access from the High Road such that it constitutes less of a barrier when open and a more inviting entranceway can be created, and • Introducing feature lighting over the entranceway and extending it back towards the station in order to capture the attention of pedestrians passing the entrance. • Introducing a waiting/drop-off area on Leytonstone High Road under the bridge. <p>Improving the Station Concourse</p> <p>In addition to the footway improvements and the feature lighting within the station area, it is proposed that "open door" activities (e.g. cafes) are promoted in the arches within the station entrance. In this way, the arches could help animate the station, making it an active destination and a place people choose to go to.</p> <p>This would be supported by high quality lighting as a public-art feature under the bridge on Leytonstone High Road to ensure that this positive immediate first impression is not lost as soon as one leaves the station.</p>	
Complementary Funding	Funding Source	%
	Transport for London – Area Based Schemes	
	Transport for London – Area Based Schemes	
	Business Improvement Districts	
	Network Rail / TOC	
	Other BSP Programme / TfL Funds - specify	
	Borough's own resources	
	EU Funds - state which programme	
Others – specify		

SCHEME TITLE	LEYTON HIGH ROAD STATION PUBLIC TRANSPORT GATEWAY	
Complementary Schemes	Identify any complementary TfL initiatives in the area likely to be active	
Total Estimated Scheme Implementation Cost	£1.250k	
Materials		
Other	Utility works, site supervision	
Estimated Scheme Development Costs	Amount requested from TfL to develop full scheme bid through Step 2. This should typically be between 5% & 10% of the total estimated cost. The final sum will be agreed with TfL.	
	Is this sum included in the Total Scheme Estimated Cost?	Y/N
Scheme Development Needs	Describe the specific tasks and activities that will be carried out in Step 2 using the scheme development funds, e.g. traffic surveys, design work etc	
Proposed Project Programme	Earliest Detailed Design Start Date	Give year quarter e.g. 2/06.
	Anticipated Design Duration	Months
	Earliest Consultation Start Date	Give year quarter
	Anticipated Consultation Duration	Months
	Earliest Scheme Build Start	Give year quarter
	Anticipated Scheme Build Duration	Months

SCHEME TITLE	LEA BRIDGE ROAD MULTI MODAL GATEWAY	
Problems & Issues	<p>Briefly describe the problems that the proposed scheme will address</p> <p>Lea Bridge Road is one of two main east-west routes through the Borough linking it with Hackney to the west and Redbridge to the east via Woodford New Road and the North Circular Road (A406). This scheme focuses on the stretch of Lea Bridge Road from the Bakers Arms junction (Lea Bridge Road and Hoe Street junction) through to and including Whipps Cross roundabout.</p> <p>Lea Bridge Road is characterised as an Avenue between Whipps Cross and Shernhill Road flanked at its eastern extreme by Park Edged Roads east and north of the Whipp's Cross Roundabout. Between Shernhill Road and the Bakers Arms junction, Lea Bridge Road takes on an Urban Main Street typology.</p> <p>The Avenue section of Lea Bridge Road is design-biased towards vehicular movement needs over those of other modes or of the surrounding place. In addition to an unnecessarily wide carriageway, pedestrians and cyclists suffer from substandard facilities.</p> <p>The section of Lea Bridge Road between Burwell Road and Church Road is the most dangerous link in the entire borough; the section between West End Avenue and Leyton Green Road is the sixth most dangerous, and; the section between West End Avenue and Whipps Cross roundabout is the tenth most dangerous. This shows that the design of Lea Bridge Road fails to provide appropriate signals to motorists as to the change in context from fast-moving Park Edged Road to Urban Main Street.</p>	
Scheme Objective(s)	<p>Describe briefly why the scheme is needed e.g. part of rail line station improvement programme – supporting relevant reports, leaflets, diagrams welcomed</p> <p>The scheme will introduce a wide-ranging package of improvements along the length of the corridor to enhance its status as a gateway to the Borough. The scheme is part of a wider programme of Olympic Gateway Upgrades to improve the welcome to Waltham Forest.</p> <p>In line with its status as a multi-modal linear gateway and its specific challenges outlined above, the improvement will:</p> <ul style="list-style-type: none"> • Introduce emerging elements in the street that reflect the changing nature of the Lea Bridge Road from Park Edged Street beyond Whipps Cross Roundabout to an Avenue typology and on to an Urban Main Street towards the Bakers Arms junction • Reinforce this by a series of 'stepped' changes or 'secondary gateways' in the function and form of the street, ensuring a transition in speed and behaviour for vehicles, and indeed pedestrians and cyclists, to levels commensurate with its wider context and a more human scaled and walkable public realm, and • Improve the poor safety record along the corridor to help drivers better-manage the transition from Whipp's Cross Roundabout to the more 'human' spaces along Lea Bridge Road. 	
Meeting Key Objectives	Improving the physical & living environment	Y
	Improve personal security, reduce the fear of crime, particularly for travel during the hours of darkness	Y
	Increase the opportunities for local people to use streets as social spaces	Y
	Reduce social exclusion	Y
	Facilitate regeneration and increase transport opportunities for local communities, whilst encouraging shorter journeys to be made	Y
	Reduce the adverse effects of travel	Y
	Improve conditions of cyclists, pedestrian and bus users to encourage more journeys by these modes	Y
Improve accessibility of the public transport network for everyone	Y	

SCHEME TITLE	LEA BRIDGE ROAD MULTI MODAL GATEWAY
Scheme Components	<p>Describe briefly the main scheme elements, e.g. footway works, street lighting, etc.</p> <p>In line with the objectives outlined above, the scheme components are:</p> <p>Emerging elements</p> <ul style="list-style-type: none"> • Widen the footway along the entire corridor • Introduce an 'avenue-type' treatment through structured, large-scale tree-planting. • Encourage local adoption by launching an 'Adopt-A-Tree' scheme for the new planting. • Substantially realign the layout and use of the carriageway between Whipps Cross Roundabout and Shernhill Road to improve conditions for all modes of transport and reflect local context in public realm design. • Radically alter the condition of the street between Shernhill Road to Baker's Arms from one where carriageway and parking dominates, to one where there is a better balance between movement and place, such that there is a complete change in the nature of the street, without losing capacity. • Gateway public spaces <p>Whipps Cross Roundabout</p> <ul style="list-style-type: none"> • Improve the bus interchange, incorporating the bus stop into a small building that provides toilets for bus drivers and the public, additional retail facilities, and constitutes an iconic element for the roundabout. • Enhance the green space around the bus stop providing pedestrian access to the hospital, • Add focused tree-planting that reinforces the existing Poplars on the roundabout by planting similar tall trees along the Lea Bridge Road's median. In line with this concept, the trees should descend in scale as they move away from the roundabout. Introduce a ring to group the trees and serve as a public art function, • Introduce feature uplighting for the trees located on the roundabout and for the war memorial located to the south of the roundabout. <p>Eastern Road/West End Avenue junction</p> <ul style="list-style-type: none"> • Install a new signalised junction to improve facilities for pedestrians across Lea Bridge Road and help to calm traffic travelling from Whipps Cross Roundabout <p>Shernhill Road junction</p> <ul style="list-style-type: none"> • Introduce a continental-style roundabout to encourage drivers to interact with one another, reduce vehicle speeds, and reduce the severity of future road accidents, • Implement a raised table to encourage drivers to be more aware of pedestrians and adjacent land uses, • Provide a new children's play area to the south of Grove Road, to animate the streetscene, create a strong local context for drivers, strengthen the area's sense of place, act as a local landmark, provide a valuable local amenity, and improve natural surveillance, • Reduce the level of road markings, to encourage drivers to negotiate with one another and become more aware of each others actions, • Introduce Zebra- style, courtesy crossings to increase pedestrian priority, reduce the barrier to movement caused by Lea Bridge Road, and force interaction between all road users <p>Leyton Green Road junction:</p> <ul style="list-style-type: none"> • Alter the alignment of Leyton Green Road so it intersects with Lea Bridge Road further west. This will reduce the westerly green space and increase it on its eastern side • Enclose and plant the smaller space with fruit trees • introduce play or sports facilities on the larger space

SCHEME TITLE	LEA BRIDGE ROAD MULTI MODAL GATEWAY	
Scheme Components	<p>Leyton Green Road junction:</p> <ul style="list-style-type: none"> Alter the alignment of Leyton Green Road so it intersects with Lea Bridge Road further west. This will reduce the westerly green space and increase it on its eastern side Enclose and plant the smaller space with fruit trees introduce play or sports facilities on the larger space <p>Poplars Road junction:</p> <ul style="list-style-type: none"> Create a small pocket space with new tree-planting, a public seating area and space for tables and chairs, enhancing both the on-street activity, natural surveillance as well as local retail income Transition Management <p>Whipps Cross Roundabout:</p> <ul style="list-style-type: none"> Alter the kerb alignments away from a high-speed, free-flow alignment to a more continental form that requires drivers to slow and turn left onto the roundabout, Narrow the vehicular approaches to the roundabout, Improve the pedestrian crossing immediately south of the roundabout from a staggered Toucan crossing to a straight-across facility. <p>Bakers Arms Junction</p> <ul style="list-style-type: none"> Remove the left turn lane from Hoe Street (southbound) into Lea Bridge Road, and create a new public square there. Introduce additional tree-planting Introduce surface materials improvements in and around the fruit and vegetable market stalls Implement footway widening and straightened kerbs on the western approach Consolidate the bus stops on the western approach, with nearby parking removed to help improve bus stop capacity and efficiency. 	
Complementary Funding	Funding Source	%
	Transport for London – Area Based Schemes	
	Developer Contributions (where known)	
	Business Improvement Districts	
	Network Rail / TOC	
	Other BSP Programme / TfL Funds - specify	
	Borough's own resources	
	EU Funds - state which programme	
	Others – specify	

SCHEME TITLE	LEYTON HIGH ROAD STATION PUBLIC TRANSPORT GATEWAY	
Complementary Schemes	Identify any complementary TfL initiatives in the area likely to be active	
Total Estimated Scheme Implementation Cost	Bakers Arms: £800k Lea Bridge Road: £3.500k Whipps Cross Roundabout: £3.150k	
Materials		
Other	Utility works, site supervision	
Estimated Scheme Development Costs	Amount requested from TfL to develop full scheme bid through Step 2. This should typically be between 5% & 10% of the total estimated cost. The final sum will be agreed with TfL.	
	Is this sum included in the Total Scheme Estimated Cost?	Y/N
Scheme Development Needs	Describe the specific tasks and activities that will be carried out in Step 2 using the scheme development funds, e.g. traffic surveys, design work etc	
Proposed Project Programme	Earliest Detailed Design Start Date	Give year quarter e.g. 2/06.
	Anticipated Design Duration	Months
	Earliest Consultation Start Date	Give year quarter
	Anticipated Consultation Duration	Months
	Earliest Scheme Build Start	Give year quarter
	Anticipated Scheme Build Duration	Months

APPENDIX B: COST ESTIMATE

The following Spreadsheet contains all the assumptions adopted to estimate the implementation costs for the Gateways above described and is to be used as a working tool for further iterations.

COST	DESCRIPTION	UNITS	WHIPPS CROSS ROUNDABOUT			LEA BRIDGE ROAD			BAKERS ARMS			GREEN MAN			LEYTONSTONE HIGH ROAD STATION		
			Quant	Cost	Cost+30%	Quant	Cost	Cost+30%	Quant	Cost	Cost+30%	Quant	Cost	Cost+30%	Quant	Cost	Cost+30%
	SITE CLEARANCE																
£70.00	Furniture clearance	Item	10	£700.00	£910.00	10	£700.00	£910.00	10	£700.00	£910.00	10	£700.00	£910.00	10	£700.00	£910.00
£100.00	trees removal	Un		£0.00	£0.00		£0.00	£0.00		£0.00	£0.00		£0.00	£0.00		£0.00	£0.00
£3.00	soft landscape clearance	M2		£0.00	£0.00		£0.00	£0.00	450	£1,350.00	£1,755.00	300	£900.00	£1,170.00		£0.00	£0.00
£6.00	demolition kerb	Lm	5000	£30,000.00	£39,000.00	2500	£15,000.00	£19,500.00	450	£2,700.00	£3,510.00	300	£1,800.00	£2,340.00	280	£1,680.00	£2,184.00
	SURFACE TREATMENTS																
£28.00	Carriageway asphalt		4500	£126,000.00	£163,800.00	3000	£84,000.00	£109,200.00		£0.00	£0.00	350	£9,800.00	£12,740.00	880	£24,640.00	£32,032.00
£25.00	FOOTWAY precast concrete 600x600		4000	£100,000.00	£130,000.00	12500	£312,500.00	£406,250.00	3000	£75,000.00	£97,500.00	3400	£85,000.00	£110,500.00	3000	£75,000.00	£97,500.00
£100.00	KERB granite		1610	£161,000.00	£209,300.00	2200	£220,000.00	£286,000.00	330	£33,000.00	£42,900.00	300	£30,000.00	£39,000.00	230	£23,000.00	£29,900.00
	PLANTING																
£10.00	soft landscape			£0.00	£0.00	6500	£65,000.00	£84,500.00		£0.00	£0.00	9000	£90,000.00	£117,000.00		£0.00	£0.00
£1,000.00	TREES		25	£25,000.00	£32,500.00	100	£100,000.00	£130,000.00	7	£7,000.00	£9,100.00	50	£50,000.00	£65,000.00	4	£4,000.00	£5,200.00
	STREET FURNITURE																
£200.00	Litter bins	Un	7	£1,400.00	£1,820.00	20	£4,000.00	£5,200.00	6	£1,200.00	£1,560.00	6	£1,200.00	£1,560.00	4	£800.00	£1,040.00
£1,000.00	Benches - street	Un	9	£9,000.00	£11,700.00	60	£60,000.00	£78,000.00	6	£6,000.00	£7,800.00	6	£6,000.00	£7,800.00	4	£4,000.00	£5,200.00
£1,000.00	Bus shelter	Un	2	£2,000.00	£2,600.00	8	£8,000.00	£10,400.00	2	£2,000.00	£2,600.00	2	£2,000.00	£2,600.00	2	£2,000.00	£2,600.00
£500.00	Bike Stands	Un	6	£3,000.00	£3,900.00	40	£20,000.00	£26,000.00	14	£7,000.00	£9,100.00	4	£2,000.00	£2,600.00	12	£6,000.00	£7,800.00
£500.00	tree pits	Un	8	£4,000.00	£5,200.00	150	£75,000.00	£97,500.00	5	£2,500.00	£3,250.00	50	£25,000.00	£32,500.00	4	£2,000.00	£2,600.00
	LIGHTING																
£1,000.00	LAMP POST	Un	14	£14,000.00	£18,200.00	40	£40,000.00	£52,000.00	6	£6,000.00	£7,800.00	50	£50,000.00	£65,000.00	5	£5,000.00	£6,500.00
£1,000.00	Special lighting - beacons	Un	2	£2,000.00	£2,600.00	5	£5,000.00	£6,500.00	1	£1,000.00	£1,300.00	10	£10,000.00	£13,000.00	1	£1,000.00	£1,300.00
£1,000.00	Special Lighting - uplighters	Un	10	£10,000.00	£13,000.00		£0.00	£0.00		£0.00	£0.00	50	£50,000.00	£65,000.00		£0.00	£0.00
	TRAFFIC																
£200,000.00	Traffic lights new	Un	4	£800,000.00	£1,040,000.00	3	£600,000.00	£780,000.00		£0.00	£0.00		£0.00	£0.00	2	£400,000.00	£520,000.00
£2,500.00	Traffic Lights removal	Un		£0.00	£0.00	3	£7,500.00	£9,750.00	4	£10,000.00	£13,000.00		£0.00	£0.00		£0.00	£0.00
£1,000.00	Road Markings	Item	3	£3,000.00	£3,900.00	5	£5,000.00	£6,500.00	4	£4,000.00	£5,200.00	5	£5,000.00	£6,500.00	4	£4,000.00	£5,200.00
	PUBLIC ART																
£250,000.00	sculptures	Item	1	£250,000.00	£325,000.00		£0.00	£0.00	1	£250,000.00	£325,000.00	5	£1,250,000.00	£1,625,000.00		£0.00	£0.00
£20,000.00	lighting	Item	2	£40,000.00	£52,000.00	2	£40,000.00	£52,000.00		£0.00	£0.00	5	£100,000.00	£130,000.00	3	£60,000.00	£78,000.00
	WORK COSTS				2055430			2160210			532285			2300220			797966
£0.10	STATS 10% of total cost			£205,543.00	£267,205.90		£216,021.00	£280,827.30		£53,228.50	£69,197.05		£230,022.00	£299,028.60		£79,796.60	£103,735.58
	Preliminaries (10% of sub total)	%			£205,543.00			£216,021.00			£53,228.50			£230,022.00			£79,796.60
	Restrictive Working Hours (15% uplift)	%			£308,314.50			£324,031.50			£79,842.75			£345,033.00			£119,694.90
	Contractors profit (15%)	%			£308,314.50			£324,031.50			£79,842.75			£345,033.00			£119,694.90
	Sub-total				£3,144,807.90			£3,305,121.30			£814,396.05			£3,519,336.60			£1,220,887.98
	Contingency (30 % at detailed design reducing to 5 % at site start)	%			£943,442.37			£991,536.39			£244,318.82			£1,055,800.98			£366,266.39
	TOTAL				£4,088,250.27			£4,296,657.69			£1,058,714.87			£4,575,137.58			£1,587,154.37