

Part B

The Illustrative Designs

04

Vision & Approach

4.1 Scheme Vision

4.2 Design Principles

4.3 Illustrative Scheme

04

Vision & Approach

4.1 Scheme Vision

4.1.1 The overall design vision for the surface elements of the Silvertown Tunnel is for a new piece of highway infrastructure that would meet the future expectations of all road users while addressing the current problems. To achieve this, TfL have identified four core principles:

- **Reliable Infrastructure** - a robust new Tunnel, integrated with existing infrastructure, which addresses current problems while accommodating future changes, and which optimises the operational capacity;
- **Green (environmentally-friendly) Infrastructure** - reducing the environmental impact of traffic and highway infrastructure on people, being resilient to climate change, and providing high quality facilities for pedestrians and cyclists as well as motor vehicle users;
- **Safe and Smart Infrastructure** - meeting the needs of all categories of road users, optimising traffic flows and creating a safe environment for road construction, working and maintenance, including use of appropriate crossings;
- **People focused Infrastructure** - Designing infrastructure for people not just vehicles; designing for how pedestrians and cyclists would experience the space as they move through and around it.

4.1.2 The tunnel design would have a positive impact on its local environment by design and operation. It would support the regeneration of the area around it, stimulating new jobs and supporting the delivery of new homes.

4.1.3 The design would take account of all users, and where provision cannot be made in the tunnel itself, as is the case for cyclists and pedestrians, then appropriate complementary measures are being explored to support those users, principally by enhancing access to the Emirates Air Line.

4.1.4 The junction layouts would be designed to comply with highway engineering standards whilst still retaining an urban nature and a human scale. Crossings would be located on desire lines and streets would be multi-modal with provision for cyclists and pedestrians as well as vehicles, including allowance for future development in the area. The layouts would provide for street-based networks that accord with the recommendations of the Roads Task Force, balancing the requirements of movement and place.

4.1.5 The Scheme is also designed to be green. Road charging would manage use, but design can also help make the Scheme green by combining new technologies to reduce the potential impacts of traffic such as noise, air and water pollution and with the introduction of landscape features such as green walls.

4.1.6 The design of the Scheme roads would include potential for the use of materials such as low-noise surfacing while the design of the landscape could deliver environmental enhancements and improved conditions for pedestrians and cyclists. Where barriers are required for noise or visual mitigation, they could be used as a canvas for public art or for signage and safety measures.

4.1.7 They could also be embedded with active particles for pollution control / abatement, or be designed and shaped in a way to increase their effectiveness. This is explored in more detail below.

4.2 Design Principles

4.2.1 The Scheme proposals and the illustrative designs have been developed as a direct response to the Scheme objectives, relevant policy, consultation and engagement and the context to which they would be integrated as described in Part A. This section describes this approach through a number of design principles.

4.2.2 It is an established planning principle that good design is a fundamental component of sustainable development. The National Policy Statement for National Networks (NN NPS), which is the guiding document for NSIP highway schemes, states that good design must be an integral consideration from the outset of a proposal.

4.2.3 Visual appearance should be a key factor in working up the design of new infrastructure, as well as safety, functionality, fitness for purpose, sustainability and cost. Applying 'good design' to national network projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, and a structural appearance that demonstrates good aesthetics as far as possible.

4.2.4 The NN NPS criteria for 'good design' does recognise that, given the nature of many infrastructure networks, there may be a limit on the extent to which a Scheme can contribute to the enhancement of the area around it, but it goes on to emphasise that good design is not just about how something looks, but also about its effectiveness at meeting Scheme objectives. Ultimately, Scheme design should be a material consideration in decision making. The Secretary of State for Transport would need to be satisfied that national networks infrastructure projects are sustainable and as aesthetically sensitive, durable, adaptable and resilient as they can reasonably be (having regard to regulatory and other constraints as applicable).

4.2.5 Whilst there may be limited choice in the physical appearance of some elements of the Scheme (such as road surface materials), there are opportunities to demonstrate good design in terms of siting and design of structures relative to existing landscape and historical character and function, landscape permeability, landform and vegetation.

4.2.6 The visual appearance of each of the portals and surface areas is closely governed by the engineering requirements, which determine the scale of the structures and to a certain extent constrain their location. Further details on the engineering design is contained in the Engineering Design Report.

4.6.7 In developing designs, it is essential to strike an appropriate balance between current site specific requirements, and more flexible solutions which may be applicable to the sites in the future if adjacent uses change.

4.2.8 TfL devised a series of six design principles that establish guidelines for the design of the permanent elements and spaces created by the project.

These overarching design principles are:

- Celebrate functional components through articulation of portals and associated structures and create potentially iconic

landmark structures;

- Embedding public art into built fabric to be experienced by all;
- Integrate landscape to tie the Scheme into it's surrounding context and provide new surface linkages;
- Connect communities that are isolated or severed by the existing road infrastructure through appropriate mitigation;
- Sensitive lighting that not only fulfils a functional requirement, but also brings interest and enhances townscape at night specifically in respect of improved pedestrian and cycle lanes;
- Use quality materials that would be robust and through innovative application and use can become instantly recognisable; and
- Acknowledge that this is in an area of change and the Scheme needs to be future proofed to an evolving urban context.

4.2.9 The immediate context at both portals is one of great change with the transformation of an industrial landscape to an urban one with a much greater mix of uses. The Silvertown Tunnel Scheme has the potential to support this positive change both by enabling safeguarded land to be released for regeneration and through the way that it is designed to integrate with both the current and future context. To achieve this the Scheme has however been designed to be flexible and future proofed.

4.2.10 As part of the regeneration of the area TfL are keen to explore the potential for signature elements, which would be common features to both the north and south portals, but which could be adapted to suit the specific context of the north and south - perhaps through telling the story of the area, and past uses of the land. On the south there may be scope for more lighting and elements that reflect the entertainment industry around The O2, whereas on the north side dock-based motifs may be more appropriate. This is explored further in the Chapter 9.

4.3 Illustrative Scheme

4.3.1 The illustrations and plans contained in this report are for illustrative purposes only and have been provided to give an idea of the quantum of development involved in the Scheme. They do not necessarily reflect the final appearance or layout of all its elements. The final appearance would be developed as part of the next stage of design work and would need to be agreed with the local planning authorities.

4.3.2 This illustrative material is valuable for the consultation process as it allows people to better understand how the Scheme could be delivered and importantly, how it could sit within the wider aspirations for areas around the portals.

4.3.3 The Illustrative landscape and public realm Schemes are shown here (Figures 4.1 - 4.4), and are set out in more detail in Chapter 5, which also shows potential enhancements that could be made to better integrate the Scheme with the adjacent evolving land uses and potential development sites.

Figure 4.1 Illustrative Scheme - Northern Portal at Silvertown



Figure 4.2 Illustrative Scheme - Northern Portal at Silvertown

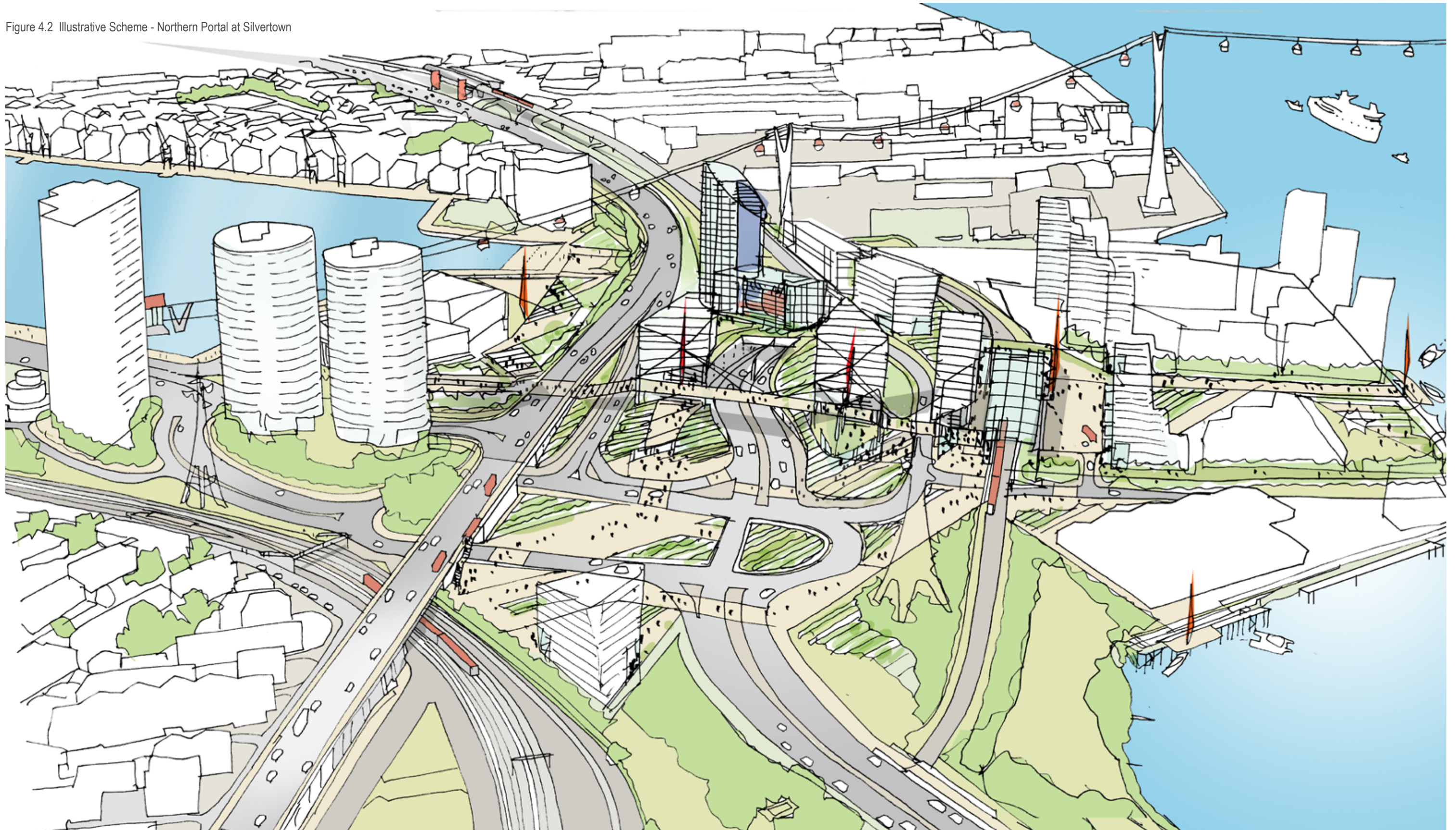


Figure 4.3 Illustrative Scheme - Southern Portal at Greenwich

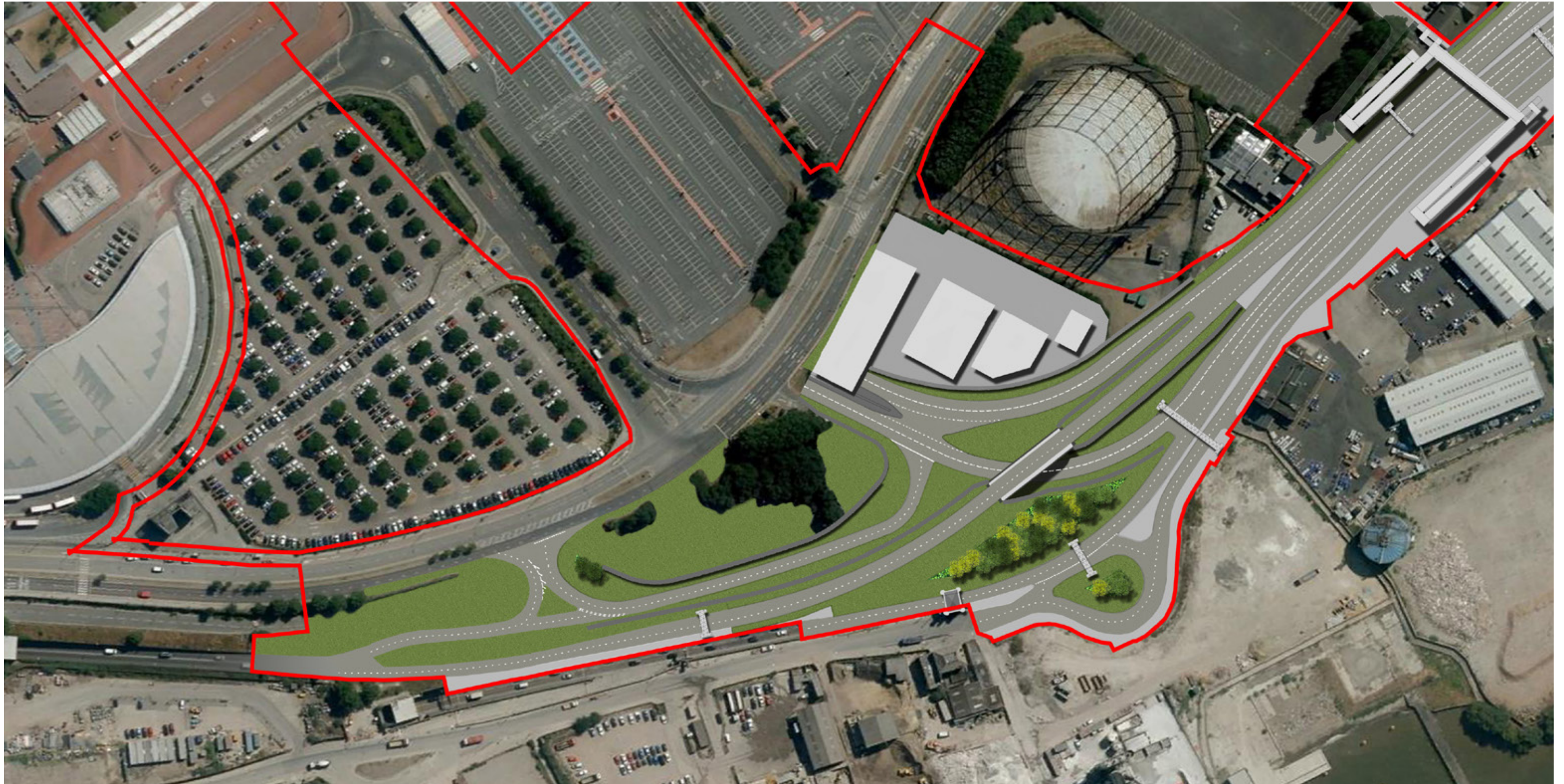
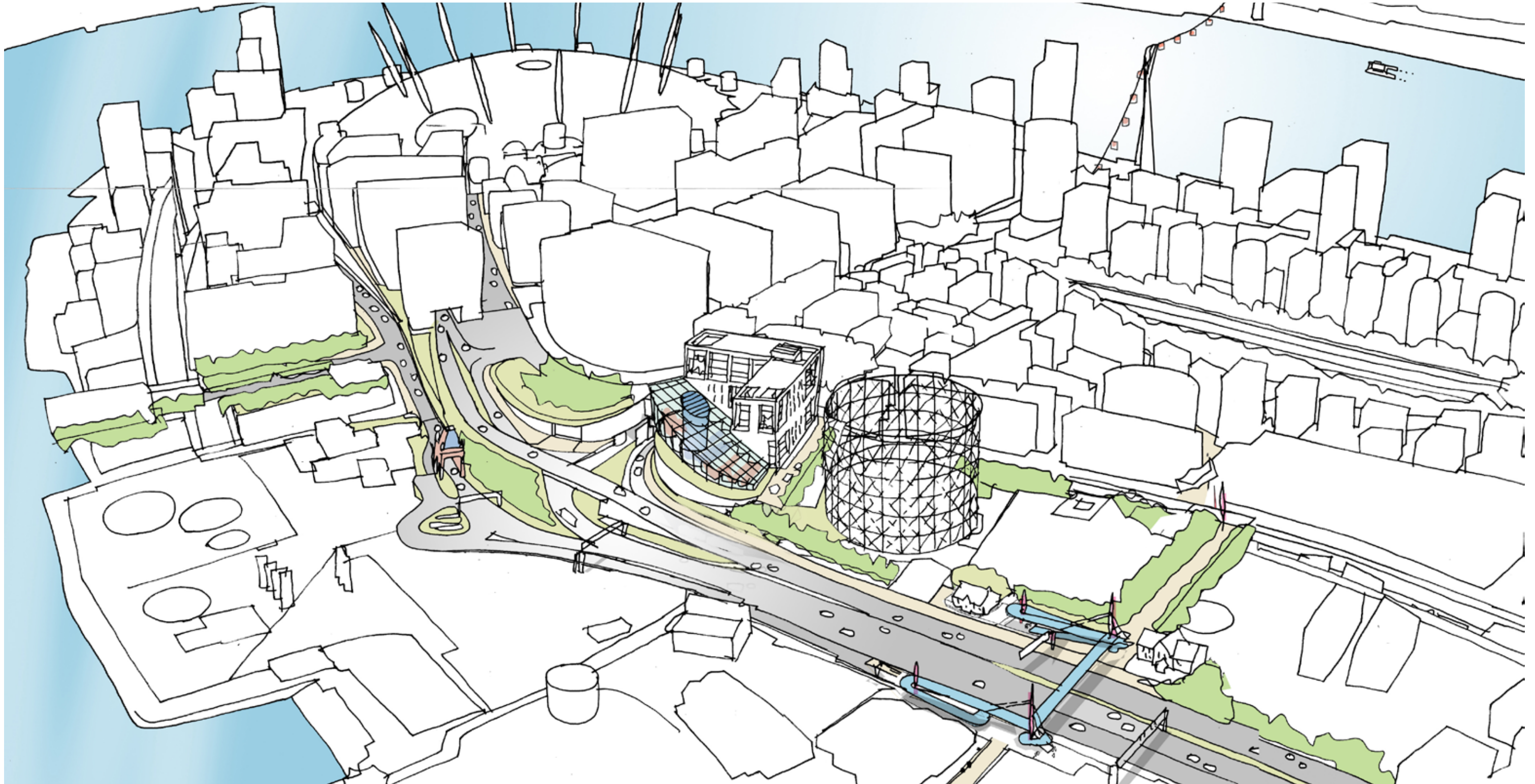


Figure 4.4 Illustrative Scheme - Southern Portal at Greenwich



05

Landscape & Public Realm Design

5.1 Scheme Requirements

5.2 Illustrative Scheme - Silvertown

5.3 Illustrative Scheme - Greenwich

5.4 Next Steps

05

Landscape & Public Realm Design

5.1 Scheme Requirements

General Requirements

5.1.1 There are a number of requirements which are equally applicable to the north and south portal areas. These include:

- Enhancing pedestrian and cycle provision and connectivity around the portal area;
- Providing access to Tunnel service buildings, where required; and
- Minimising land take and optimising future development potential of adjacent sites.

Additionally, there are also a number of specific technical requirements for each of the portals individually.

5.1.2 There is a requirement to provide an ecological offset for any existing landscape and habitat that would be lost as a result of the Scheme. Where possible and appropriate this would be worked into the landscape Scheme and work is ongoing on how to ensure that replacement habitats can be provided in the most appropriate way. More information on the ecological aspects of the Scheme can be found in Chapter 8.

Silvertown Portal

5.1.3 The existing urban area around the northern portal of the tunnel is industrial land, some of which is now disused, but much of which is still actively used on a daily basis. While this is likely to change significantly in coming

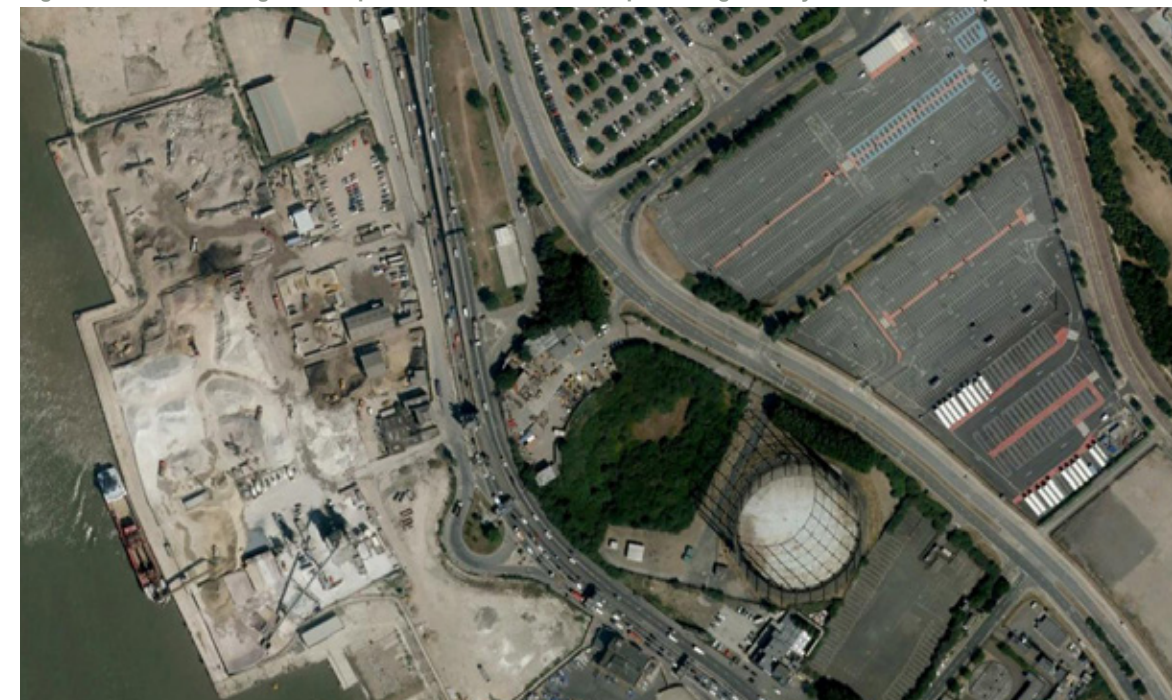
years, the design for the landscape and public realm in the vicinity of the Tunnel portal must optimize land parcels for development through size and shape and provide access to unlock existing and future development sites.

5.1.4 The character of the public realm around the Scheme is also important and should help to deliver the recommendations of the Mayor's Roads Task Force, by rebalancing the movement and place function of the roads, and creating a better environment for pedestrians and cyclists. The area around the Silvertown portal would become much more urban in the future and it is important that the landscape and public reflect this. The improvements to the streets would make the area more attractive for future residents and business occupiers.

Figure 5.1. The existing landscape at the Silvertown portal is predominantly industrial



Figure 5.2. The existing landscape around the Greenwich portal is generally inaccessible to pedestrians



Greenwich Portal

5.1.5 The requirements of the southern portal are different to those of the north. It is less accessible to the public, and therefore the design has differing requirements. One of the main functions of the landscape and public realm on the south side is to help manage surface water. Another function is the replacement of habitats that may be lost as a result of the Scheme. New planted areas provide opportunities for replacement habitats and other ecological benefits. A new pedestrian and cycle bridge at Boord Street would be re-provided as part of the Scheme, and the public realm would be designed to improve access to this facility.

5.2 Illustrative Scheme - Silvertown

Silvertown Portal - Overview

5.2.1 The illustrative scheme for the Silvertown portal and vicinity is focused around enhancements to the Tidal Basin Roundabout, which would be significantly reconfigured by the project, with new arms to provide access to and from the tunnel, and a realigned Dock Road. This would create additional pockets of land which have the future potential to become development sites.

5.2.2 An overarching aim of the public realm design is to play down the presence of the roads so that the pedestrian spaces, planting and future buildings would define the character, not the roads.

5.2.3 Enhanced pedestrian and cycle routes alongside the new access roads are also a primary feature, in particular an extension of the existing off-road cycleway that runs on the southern side of the Lower Lea Crossing along Dock Road to tie into the routes that run around

the Royal Docks themselves. There is a key desire route running from the north-west to south-east of the junction, providing a link to the stairs that access the bus stops on the flyover, and then link through to Dock Road. This could also be supplemented by off-site links to the Royal Victoria Dock DLR station to the north delivered in partnership with LB Newham.

5.2.4 The illustrative design combines hard surfaces and landscape in the form of trees and low wildflower planting, and provides seating for pedestrians.



Figure 5.3. Illustrative Landscape Proposals - Silvertown Portal & Vicinity



Silvertown Portal - Planting Design

5.2.5 The illustrative planting scheme is predominantly birch trees clustered on a grid formation which have been overlaid across the whole site to help bring a sense of coherence and urban character to the individual pockets of land.

5.2.6 There is then an under-storey of wild flowers and low maintenance grasses which would provide colour and seasonal visual interest. This is planted in the largest spaces, taking into account sightline requirements for the roadways. Additional planting around the perimeter would allow the scheme to tie back into the existing rough grassland or provide positive edges for future development of the adjacent land parcels.

Silvertown Portal - Hard Landscape Features

5.2.7 For the illustrative design the majority of the surfaces would be paved in a resin bound gravel material, which is suitable for both walking and cycling on, and which provides a low key surfacing that is not visually dominant, and which would minimise the visual impact of the macadam surface of the roads.

5.2.8 Different tones of material would be used to denote the movement spaces and the seating areas, to help aid wayfinding and legibility. In some areas where there is no pedestrian access, loose gravel would be used as it aids place making but would aesthetically tie in with the resin bound areas.

5.2.9 Street furniture would be limited to some bench seats and lighting. There may also be scope for cycle racks to be installed should they be needed, but it is anticipated this is an area that will have no demand for cycle parking.

5.2.10 A signage strategy would ensure easy wayfinding for pedestrians, cyclists and vehicles while minimising clutter. More information can be found in chapter 9.

Figure 5.4. CGI of Illustrative landscape proposals looking south west towards tunnel portal



Figure 5.5. CGI of Illustrative landscape proposals looking north east towards tunnel portal and Tidal Basin Roundabout



Figure 5.6. Location of CGI images

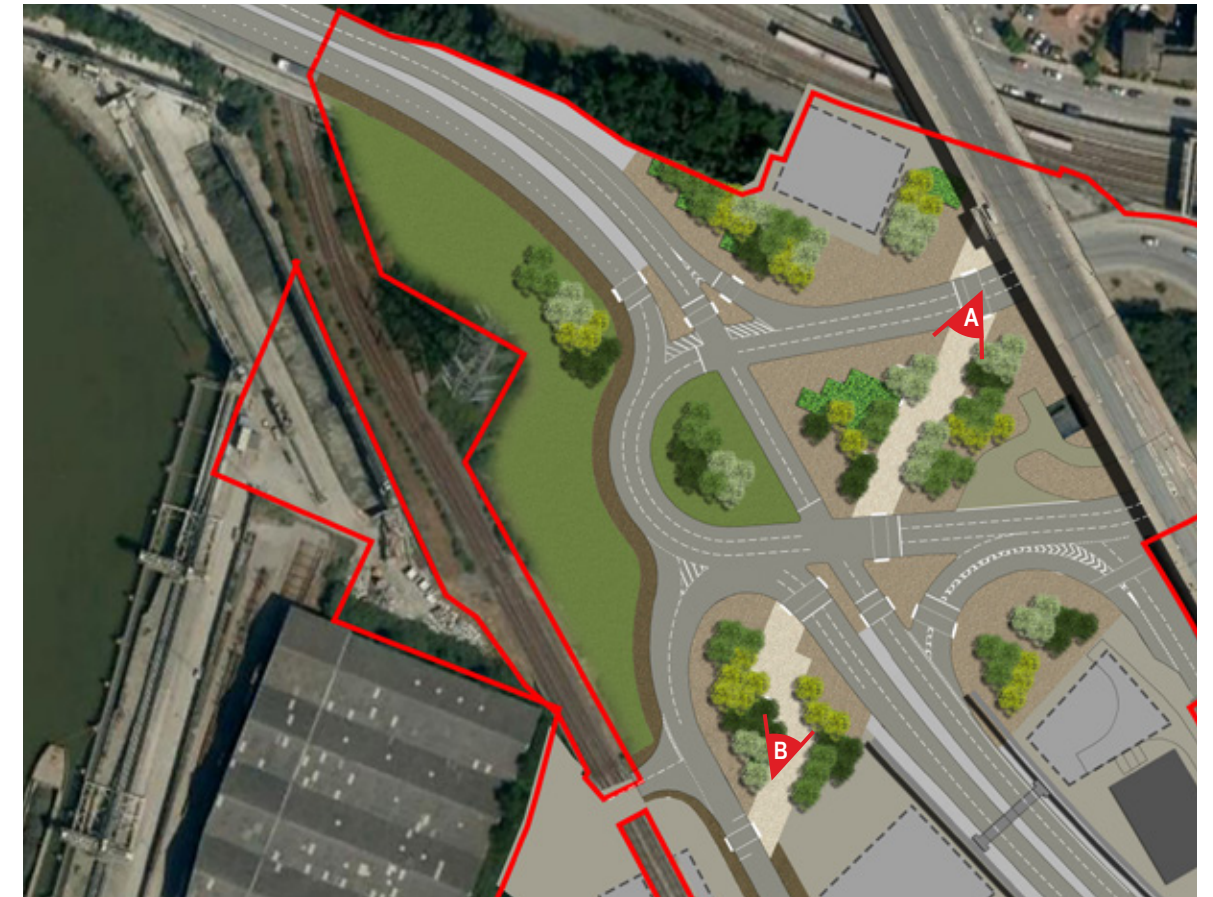


Figure 5.7. Proposed cycle network at the Silvertown portal

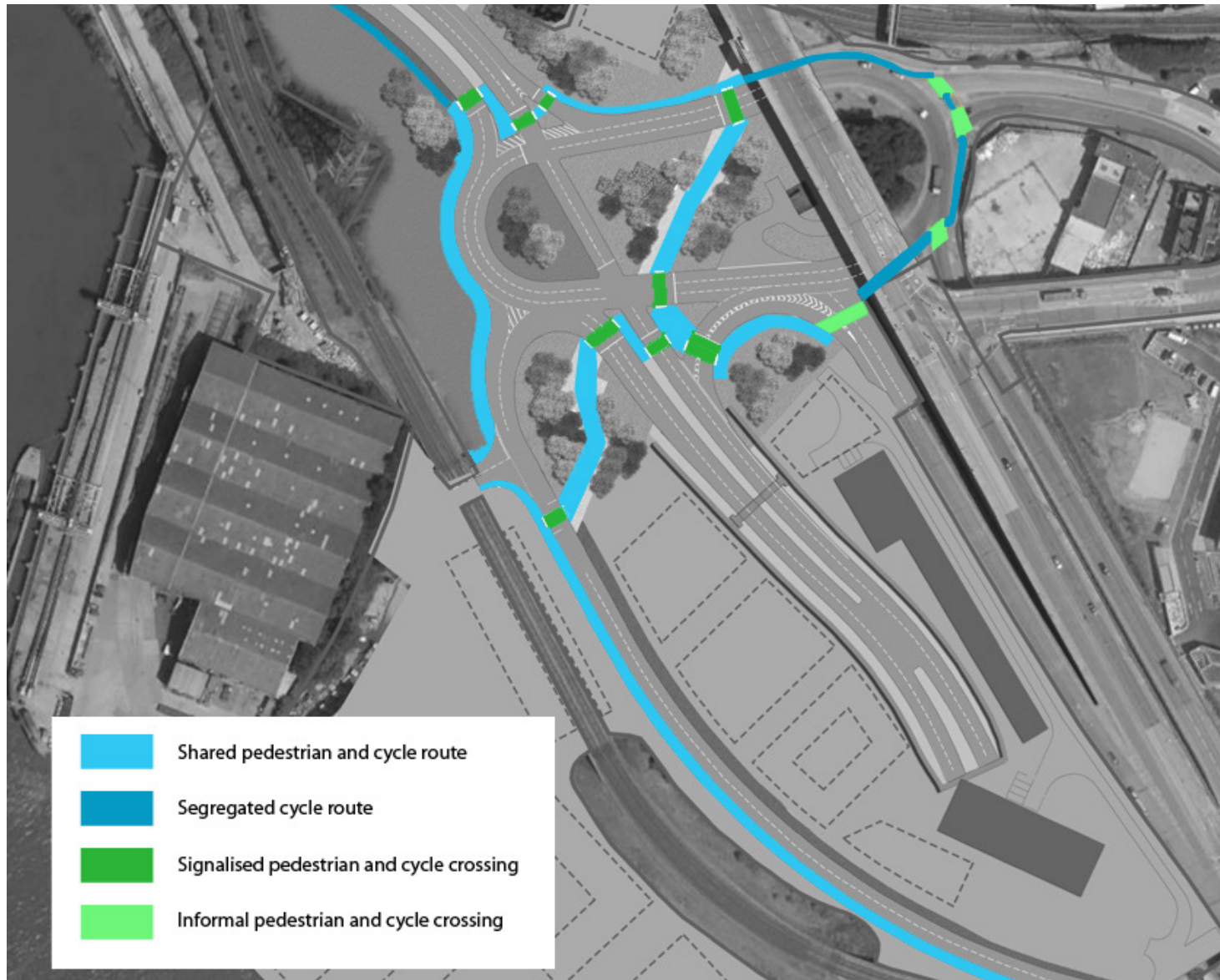


Figure 5.8. Proposed pedestrian network at the Silvertown portal

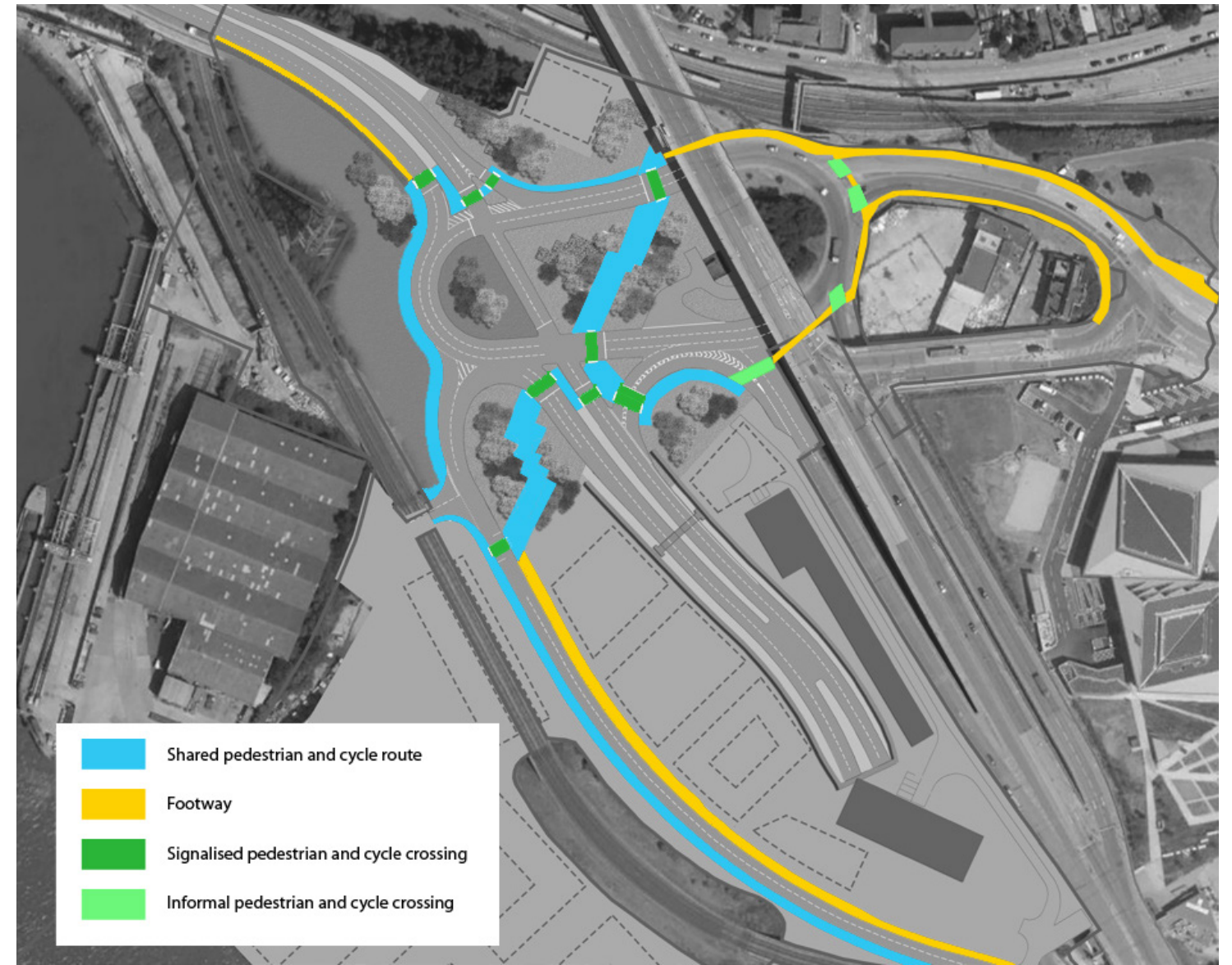


Figure 5.9. Proposed cycle network at the Greenwich portal

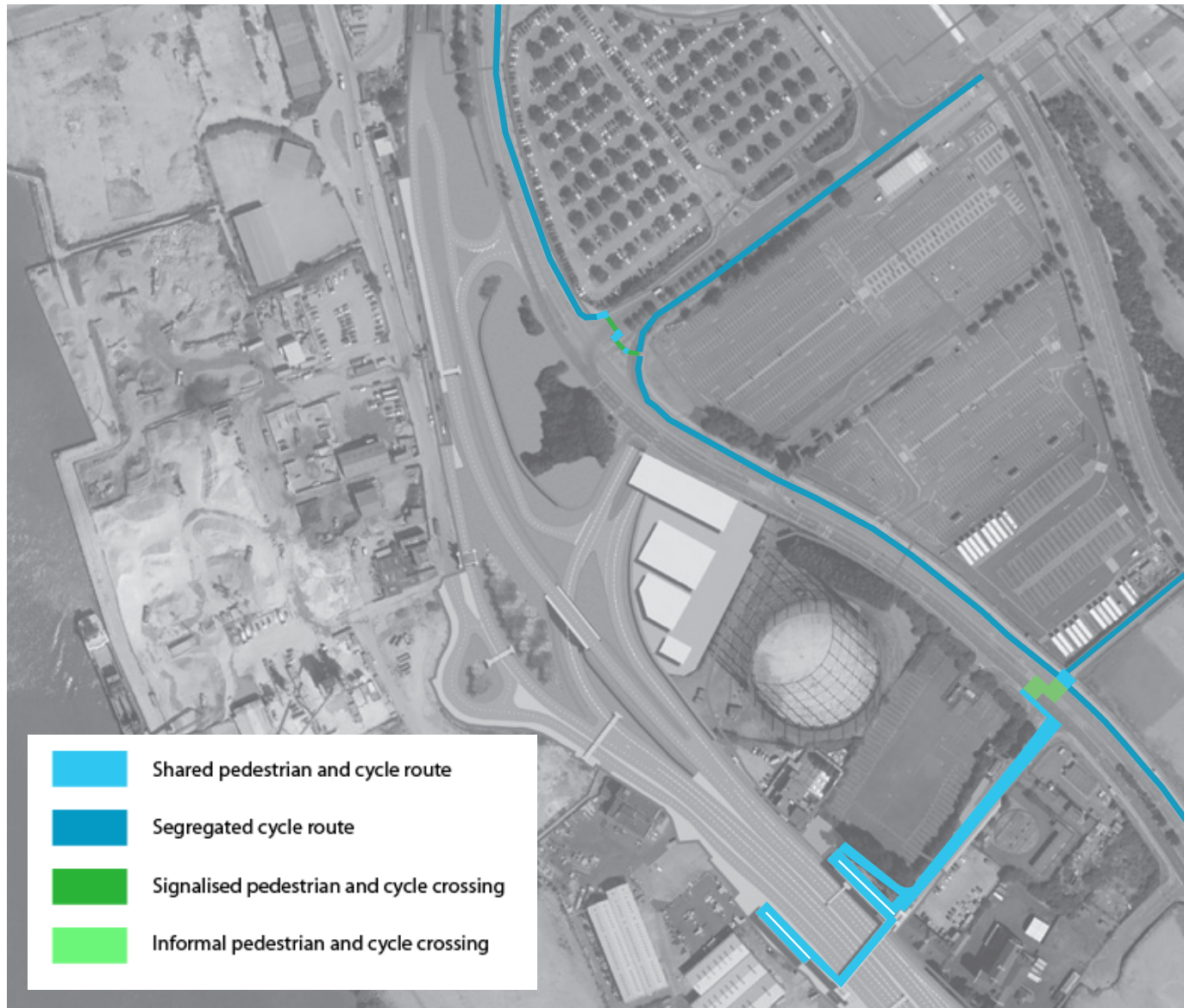
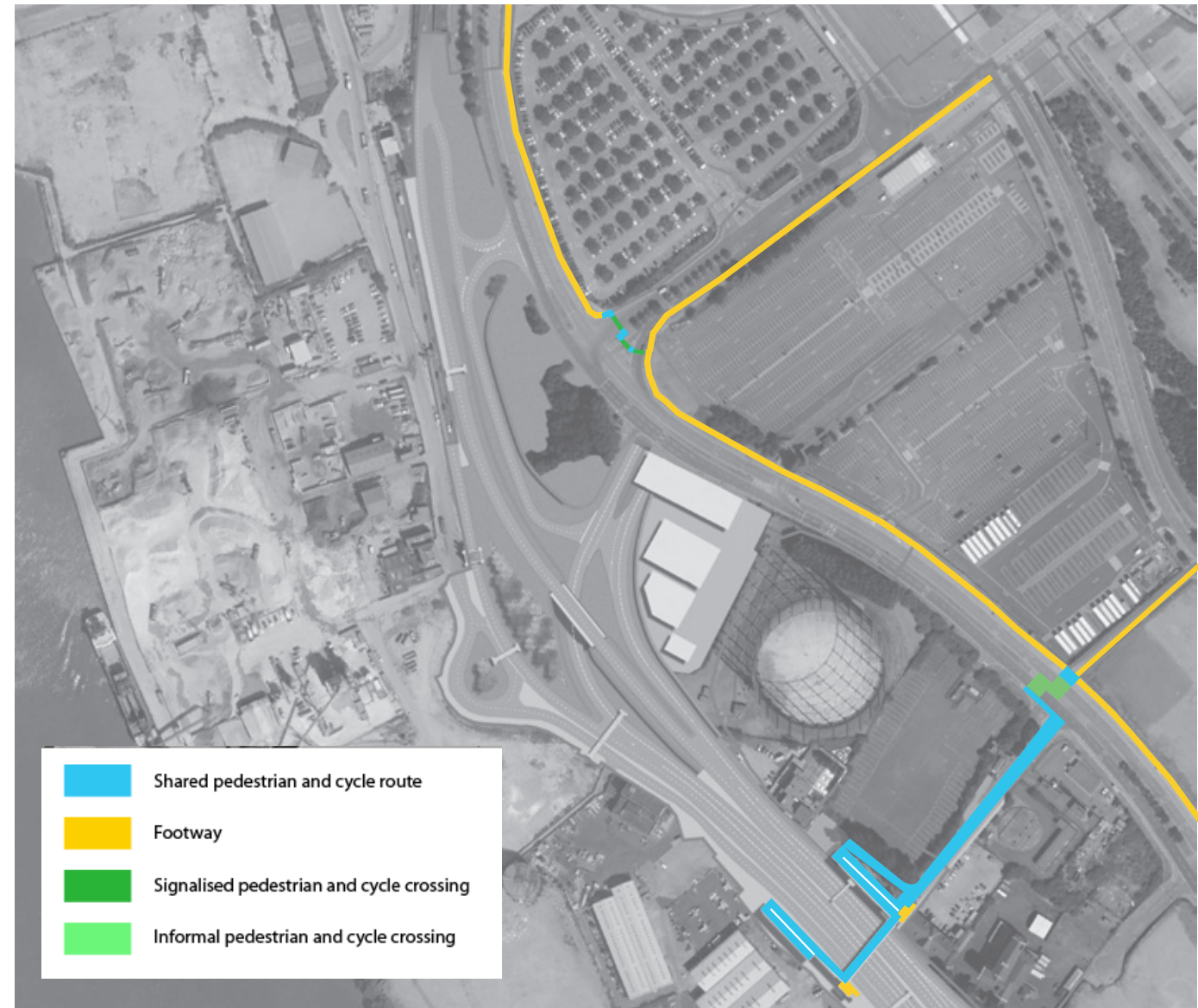


Figure 5.10. Proposed pedestrian network at the Greenwich portal



5.3 Illustrative Scheme - Greenwich

Figure 5.11. Illustrative landscape designs - Greenwich Portal & Vicinity

Greenwich Portal - Overview

5.3.1 Unlike the Silvertown portal the illustrative scheme for the Greenwich portal vicinity is designed to optimise function and place making for vehicle drivers because it is not a pedestrian space.

5.3.2 There would be a number of grass verge areas created as part of the junction reconfiguration, and these would continue onto the embankments for the new flyover. The area between the flyover and the existing A102 Blackwall Tunnel Southern Approach road provides a greater opportunity for some additional tree planting, and a more extensive grass area beneath.

5.3.3 Appropriate landscape and planting would be included on the Millennium Way edge of the portal buildings to ensure that an appropriate edge is presented to future development.




-  Grassland / Ecological Mitigation
-  Informal Tree Planting

Figure 5.12. Planting would be drawn from native species such as Birch.



Figure 5.13. Paving materials may include resin bound gravels which are low maintenance but high quality.



Greenwich Portal - Planting Design

5.3.4 The illustrative planting scheme is predominantly birch trees clustered on the island formed by the new flyover. These would be a mixture of Birch trees to match the scheme on the north side of tunnel. There would be no wildflower mixes used, with grass instead being a low maintenance standard mix which is more suited to the verges that will typify the design on the southern side.

Greenwich Portal - Hard Landscape Features

5.3.5 The area around the Greenwich portal is designed for vehicles only, rather than pedestrian and cyclists, and the landscape proposals reflect this. There are no paved surfaces for pedestrians or cyclists, so the hard surfaces will all be in macadam or concrete to the highways specification. Likewise, no street furniture is proposed within this area which has been designed to optimise function and place making for vehicle drivers because it is not a pedestrian space.

5.3.6 The two exceptions to this is the landscape on Millennium Way by the portal buildings and the landscape around Boord Street footbridge. Both would be laid to fit in with the existing landscape to an equal or enhanced level of quality.

5.4 Next Steps

5.4.1 Following the Autumn 2015 public consultation, further work will be undertaken to refine the landscape and urban realm design, and TfL will continue to work with local stakeholders - the Boroughs and adjacent landowners - to refine the perimeter treatments, and ensure that access to surrounding land parcels is maintained, and works with any future regeneration aspirations which are on a similar timeline to the Silvertown Tunnel delivery.

5.4.2 The design team will also begin to work with potential DBFM contractors to better understand what their requirements may be, and to ensure the illustrative scheme is in keeping with the long term management and maintenance regimes.

5.4.3 The relationship between the landscape and the buildings will be further explored, and more work is set to be completed looking at the opportunities for greening the proposed engineering elements - through techniques such as green walls and roofs. These also have the potential to further enhance the biodiversity value of the Scheme.

5.4.4 Ultimately a developed landscape and public realm illustrative plan will be submitted as part of the DCO submission in March 2016.

