

Croxley Rail Link Project:

**DESIGN & ACCESS STATEMENT**  
December 2011



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London Underground	David Leboff/Deryck Povey	eml

Notwithstanding anything to the contrary contained in the Report, Mouchel Ltd is obliged to exercise reasonable skill, care and diligence in our performance. Mouchel Ltd shall not be liable except to the extent that it has failed to exercise reasonable skill, care and diligence, and this report shall be read and construed accordingly. This Report has been prepared by Mouchel Ltd. No individual is personally liable in connection with the preparation of this Report. By receiving this Report and acting on it, the client or any other person accepts that no individual is personally liable whether in contract, tort, for breach of statutory duty or otherwise.

We have used our reasonable endeavours to provide information that is correct and accurate and have discussed the reasonable conclusions that can be reached on the basis of the information available. Having issued a range of conclusions as part of this report it is for the client to decide on the implementation and next steps.

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# 1 Introduction

1.1	<b>Project Overview</b>	The need for, and aims of, the Croxley Rail Link (CRL) scheme are summarised at <b>Appendix 1 - Statement of Aims</b> (Section 1.0) and an overview of the scheme proposals is set out at <b>Appendix 2 -The Proposed Scheme</b> (Section 1.1), which contains extracts from Chapter 6 of the Environmental Statement (ES) accompanying the Transport and Works Act Order application. The proposed scheme is also illustrated in the Proposed Scheme plan in <b>Appendix 3</b> .
1.2	<b>The Design &amp; Access Statement</b>	This document has been prepared in accordance with the 2010 DCLG guidance and CABE guidance on Design and Access Statements (2006).

## 2 Assessing the Context

2.1	<b>Physical context</b>	
2.1.1	Landscape and townscape character	<p>The proposed scheme is situated in a predominantly urban area south west of Watford Town Centre. The character of the site is dominated by C19th Victorian terraced and C20th – C21st housing, with some greenbelt land including the listed Cassiobury Park to the north-west, the River Gade and the Grand Union Canal and Colne Valley Linear Park to the south-east. In addition, two nearby business parks, Watford Football Stadium and Watford General Hospital are the major nearby attractors.</p>
2.1.2	Transport connections	<p>A number of dual carriageways including the A412 and Ascot Road Western Gateway serve the west of Watford town well, but traffic seeking access to the south must travel via the town centre.</p> <p>Watford Junction provides a quick and efficient National Rail connection into central London, whilst the Metropolitan line that currently terminates at Watford (Met) Station serves the local area around West Watford. A significant feature of the local rail network is the lack of an existing link between residential communities in the western part of the town and the principal core business, leisure and employment opportunities which are focused towards the central and eastern part of the urban area.</p> <p>The area is relatively well served by bus services whilst the pedestrian and cycle network is adequate but primarily along main roads. Important public rights of way are the Ebury Way and the towpath along the Grand Union Canal.</p>

## 2 Assessing the Context

2.2	<b>Socio-economic context</b>		
2.2.1	<table border="1"> <tr> <td data-bbox="286 395 600 499">Overview</td> <td data-bbox="600 395 2058 499">An overview of the socio-economic context can be found in <b>Appendix 1</b> (Statement of Aims).</td> </tr> </table>	Overview	An overview of the socio-economic context can be found in <b>Appendix 1</b> (Statement of Aims).
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## 3 Consultation

3.1	<b>Consultation</b>	<p>Refer to <b>Appendix 5</b> (Extract from the Consultation Report).</p> <p>Information has been sought from a wide range of consultees during the planning, design and assessment of the proposed scheme. Correspondence and information has been exchanged and discussions held with statutory environmental organisations, planning authorities, non-statutory environmental bodies and groups and landowners. Public exhibitions have been held and information relating to the scheme has been shared through the project website and a free phone hotline for telephone enquiries.</p>
3.1.1	Public exhibitions	<p>Public Exhibitions were held over 4 days within Watford and Croxley. They were well attended, with 538 people visiting the Watford venue and 229 visiting the Croxley venue.</p> <p>Brochures were available and a 3D visualisation was on display showing the public how the scheme would fit in the existing landscape. All of the information that was presented at the exhibitions has been published on the project website including the 3D visualisation. This has allowed individuals who were unable to make the exhibitions to view the information.</p>
3.1.2	Inclusive community engagement	<p>The delivery of leaflets to around 53,000 properties within Watford Borough Council, Three Rivers District Council and Hertsmere Borough Council boundaries.</p> <p>Erection of posters in public places in Watford and Croxley Green and at stations along the Metropolitan and London Overground lines advertising the scheme and alerting people to the consultation period. Further posters were erected towards the end of the period to remind people how to respond and of the closing date. Newspaper adverts in the Watford Observer and Watford Free papers.</p> <p>A press release, and radio adverts and interviews on the local stations Heart Radio and BBC Three Counties.</p> <p>The website <a href="http://www.croxleyrailink.com">www.croxleyrailink.com</a> contains information on the consultation process, feedback and response to key issues.</p>

## 3 Consultation

3.1.3	Enabling communication	331 people commented via the project website, emails and letters. 750 people completed survey forms either online through the project website or in hard copy.
3.2	<b>Statutory bodies, non-statutory bodies and stakeholder consultation</b>	<p>The project team gave presentations to a variety of different organisations in the area including Croxley Green Area Forum, Disability Watford, Harrow Rail Users Group and Croxley Green Business Park.</p> <p>Regular design development meetings, specific issue or user group meetings and a series of workshops as part of the public realm concept design were also held. Attendees included the Croxley Rail Link Design Development Group, key Planners and Officers from HCC, Three Rivers District Council (TRDC), Watford Borough Council (WBC), Transport for London (London Underground (LU)), Network Rail, Secure by Design (LU &amp; British Transport Police Review) and relevant design and engineering disciplines.</p> <p>Feedback from the meetings was recorded and incorporated into the designs as they evolved. London Underground was regularly consulted to ensure that all elements are designed to LUL standards where appropriate. Opportunities identified at the workshops for public realm improvements outside the scope of the CRL project will be added to the consultation feedback for the South West Herts Cycling Strategy and input into the South West Herts Urban Transport Plan for April 2014.</p>



## 3 Consultation

3.3	<b>Evaluation</b>	<p>Where feasible the design process has accommodated responses received during the consultation process. The visual impact of the viaduct for example, was a key issue raised. In response, the design of the structure has sought to minimise the impact on the local area by cladding the structural beams that support the deck of the viaduct and the elliptical design of the piers which will contribute to the integration of the structure within the local townscape. Further information on the response to key issues can be found at <b>Appendix 6</b>, 'The Project's response to the issues raised' fact sheet (also available on the website), and further information on the website <a href="http://www.croxleyrailand.com">www.croxleyrailand.com</a> itself.</p> <p>Design changes have been accommodated to reflect WBC's needs, for example moving the location of a temporary site compound on Cardiff Road and reducing the size of the land required for the substation at Tolpits lane. WBC submitted a cabinet paper seeking authority to release the land required which was approved on 5 December 2011. The Environment Agency was concerned about the piling works for the viaduct within the chalk aquifer. In consultation the project has submitted a foundation works risk assessment summarising the proposed methodology to limit the impact on that feature.</p> <p>The impact on Watford Road playground has involved officers from different departments to achieve a solution that is acceptable to the council and the project. Agreement has been reached to redesign the layout of the existing playground site to allow a play facility to remain in that location and provide an additional piece of exchange land elsewhere in Croxley Green to compensate for the loss of the open space at Watford Road.</p>
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## 4 CRL Design Principles

4.1	<b>Design Process</b>	<p>A rigorous design process has been followed, including the assessment of a number of alternative options to building the CRL. A total of 12 potential solutions to the issues of congestion and improved accessibility to and within Watford have been considered.</p> <p>The design process has sought to reconcile the necessary technical and current design and safety standards adopted by LUL with a number of other potentially conflicting issues. The ES explains the design rationale behind a number of design features (as described in <b>Appendix 2 – The Proposed Scheme</b>). In summary, the design approach across the CRL project has considered the following elements amongst others:</p> <ul style="list-style-type: none"> <li>• Operational and functional requirements of the railway</li> <li>• Environmental effects as well as impacts during construction</li> <li>• Access for maintenance and inspection</li> <li>• Materials durability, life span and appearance</li> <li>• Health and safety; passenger usability</li> <li>• Buildability</li> <li>• Aesthetics and quality of design</li> <li>• Views and feedback from stakeholders and consultees</li> <li>• Fit with local context</li> <li>• Site constraints</li> </ul> <p>Many specific design details are yet to be determined and will be addressed in the detailed design phase.</p>
4.1.1	Evaluation of Information	<p>The full Environmental Statement details the Environmental Assessments undertaken, which each evaluate information gathered. In summary, the methodology for this includes</p> <ul style="list-style-type: none"> <li>• Assessment of statutory and planning context</li> <li>• Assessment of the baseline context (with particular reference to environmental resources and receptors)</li> </ul>

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		<ul style="list-style-type: none"> <li>• Prediction of the potential impact associated with the introduction of the proposed scheme</li> <li>• Evaluation of the nature of the impact</li> <li>• Identification of mitigation measures in light of the evaluation of the predicted impacts.</li> <li>• Evaluation of the likely significant environmental effects in light of the identified impacts, taking into account proposed mitigation measures.</li> </ul> <p>Where the ES has advised mitigation measures, these have been fed back into the scheme design.</p> <p>For example, landscape planting along much of the length of the route (see <b>Appendix 3 - Scheme Plan</b>) serves to reduce the visual impact resulting from the loss of some trees and scrub along the route, most noticeably where cutting and embankment slopes will be re-graded to meet present day design and safety standards. Areas of new planting will be introduced as part of the proposed scheme. This will serve to re-establish the role of the existing disused line as a green corridor. New planting will also include an increased diversity of tree and shrub species which will be of benefit to the habitat types and the wildlife they support (as referred to in <b>Appendix 2</b>).</p> <p>Further changes to the scheme's design that have resulted from issues raised include:</p> <ul style="list-style-type: none"> <li>• Incorporation of badger fencing (see <b>Appendix 3 - Scheme Plan</b>), relocation of reptiles, provision of bat boxes and timing of construction works to avoid disturbance of breeding birds</li> <li>• Design of the viaduct to ensure continuity of the river and watercourse corridors beneath the structure and the retention of existing piers and abutments supporting existing bridges crossing watercourses to avoid construction within the existing channel and disturbance of that habitat to ensure that the value of the rivers and local watercourses as ecological corridors is safeguarded.</li> <li>• Design features including the cladding of the structural beams that support the deck of the viaduct as well as the sympathetic design of the piers to reduce the visual influence of the viaduct and to contribute to the integration of the structure within the local townscape.</li> <li>• A proposed area for flood compensation (see <b>Appendix 3 - Scheme Plan</b>) as a result of the introduction of the proposed gabion walls immediately east of Stripling Way which will result in the loss of existing floodplain capacity.</li> </ul>
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## 4 CRL Design Principles

4.1.2	Design Overview	<p>The track and permanent way alignment has been designed to follow existing alignments wherever possible thus minimising the amount of engineering works required.</p> <p>The scheme description at <b>Appendix 2 -The Proposed Scheme</b> - which is an extract from Chapter 6 of the ES - describes the amount of development proposed, the scale, proposals for appearance of the various structures and landscaping.</p> <p>The plan at <b>Appendix 3</b> illustrates the various components of the scheme in their physical context.</p>
4.2	<b>Extent of development</b>	Refer to <b>Appendix 2 -The Proposed Scheme</b> and <b>Appendix 3 – Proposed Scheme Plan</b> .
4.3	<b>Land Use</b>	Refer to <b>Appendix 2 -The Proposed Scheme</b> and <b>Appendix 3 – Scheme Plan</b> .
4.4	<b>Appearance</b>	Refer to <b>Appendix 2 -The Proposed Scheme</b> .
4.5	<b>Landscape</b>	Landscape measures included as part of the proposed scheme are described in <b>Appendix 2 - Proposed Scheme</b> (paragraph 1.6) and are illustrated in <b>Appendix 3 - Proposed Scheme Plan</b> .
4.6	<b>Sustainability and Climate Change Adaptation</b>	<p>The CRL has sustainability fundamentally built into its project aims. Indeed, two of the three major aims of the CRL project have climate change and sustainability at their core: one to enhance sustainable links, and two, to provide a credible alternative to car travel. More passengers travelling by train will reduce the adverse effects of car use and road congestion including noise, pollution and safety within the town.</p> <p>The proposed scheme integrates sustainability and climate change adaptation into the design and</p>

## 4 CRL Design Principles

		<p>construction approach where practicable. The track and permanent way alignment follows existing alignments wherever possible in order to minimise the amount of engineering works required and reduce environmental impacts. Moreover, the Viaduct includes Glass Reinforced Plastic (GRP) cladding that will minimise the need for repainting and other maintenance operations and will also allow inspection and maintenance of the structure without the need for road and canal closures.</p> <p>The possibility and long term whole life cost benefit of using sustainable solutions for some of the scheme components will be addressed at the detailed design phase of the project where possible. This may include use of LED lighting, rainwater harvesting and ground source heat pump technology at the stations. Measures for the public realm may include water run-off at the station forecourts to be directed to tree pits and planting areas where appropriate.</p> <p>Minimisation of waste during excavation for the viaduct pile foundations is will also be investigated at detailed design. The proposed scheme is expected to generate some 5,010 tonnes of spoil which will be removed from site by HGV during construction of the viaduct. Options in terms of re-use on or off site will be investigated following analysis of the material and will follow the established hierarchy of 'reduce, reuse, recycle' in order to minimise waste.</p>
4.7	<b>New Stations</b>	<p>The CRL scheme includes two new stations at Ascot Road (ARS) and Vicarage Road (Watford Hospital - WHS). The scheme description at <b>Appendix 2 -The Proposed Scheme</b> – (an extract from Chapter 6 of the ES) - describes the proposals for layout and form, scale, appearance and landscape of the station buildings.</p> <p><b>Appendix 3 – Proposed Scheme Plan</b> illustrates the orientation and location of the stations and <b>Appendix 7</b> shows the outline design concept for the station forecourt areas.</p>
4.7.1	Layout	<p>Locations and designs were developed through balancing environmental issues with operational requirements, specific site constraints, quality of architecture and consultation with key stakeholders. For instance the site of the station on Vicarage Road was chosen in consultation with the council planning department to ensure it would most appropriately serve the planned Watford Health Campus, which is being</p>

## 4 CRL Design Principles

		<p>developed simultaneously and in close proximity to CRL.</p> <p>See <b>Appendix 2 - Proposed Scheme</b> (paragraph 1.2.6 (ARS) and 1.2.20 (WHS) and associated Figures).</p>
4.7.2	Scale	<p>The scale of the station buildings will be proportionate to their surroundings. Stations have been designed to accord with LU standards and operational requirements for a LU designated Category C station.</p> <ul style="list-style-type: none"> <li>• Ascot Road Station is approximately 20x30m wide and 14m high.</li> <li>• Watford Hospital Station is approximately 44x20m wide and 10m high.</li> <li>• (Note: Heights do not include lift plant which extend approx 2.5m above roofline)</li> </ul> <p>See <b>Appendix 2 - The Proposed Scheme</b> (paragraph 1.2.8 (ARS) and 1.2.21 (WHS)).</p>
4.7.3	Appearance	<p>See <b>Appendix 2 - The Proposed Scheme</b> (paragraph 1.2.7 (ARS) and 1.2.24 (WHS)).</p>
4.7.4	Landscape	<p>Although public realm design at the stations will be finalised at the detailed design phase, outline concept designs that apply urban design principles have been progressed concurrently with the design of the stations and land ownership requirements. The Station Forecourt Public Realm Concept Designs are available in <b>Appendix 7</b>.</p> <p>Design of the station forecourts will aim to create a clear and legible pedestrian environment, ensure good views, appropriate lighting and height variation for passive surveillance and to minimise opportunities for crime and anti-social behaviour. Enabling ease of movement and natural wayfinding from the CRL to local facilities, attractors and pedestrian routes is also reflected in the plans. In addition, a clear and consistent signposting strategy will be subject to further development at the detailed design phase. Pedestrian priority principles will aim to reduce conflict between pedestrians and other forms of transport. Materials for the external spaces around the station will be restrained, co-ordinated and simple to maintain.</p>

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		<p>The public realm design aims to fulfil the principles outlined in TfL's Design and Evaluation Framework for interchange stations set out under the 4 key themes,</p> <ul style="list-style-type: none"><li>• Efficiency</li><li>• Usability</li><li>• Understanding</li><li>• Quality</li></ul> <p>External spaces will be uncluttered with clearly identified obstacle-free routes connecting well-defined station entrances to the car park at Ascot Road Station and other station facilities at both stations. The transition from street to station will be seamless, minimising level changes and avoiding stepped access to accommodate a wide range of access needs. Surface drainage shall be unobtrusive whilst paved surfaces should be safe in wet and icy weather.</p> <p>Watford Hospital Station will need to accommodate large event crowds heading for the Vicarage Road Stadium. Space, security, comfort, ease of movement and inclusive access will be integrated into the design process at the detailed design stage.</p>
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## 5 CRL Access Principles

5.1	<b>Local access and the CRL</b>	<p>The CRL will enable improved access through increased travel choices for local communities (especially for locations in the Metropolitan line corridor). Improved access will be enabled between core facilities and amenities including schools and hospitals and core retail, commercial and leisure facilities within Watford town centre as well as access to and from London via the CRL.</p> <p>The sites of the stations were influenced by their potential accessibility to and from local facilities. Indeed, the site of the station on Vicarage Road was chosen in consultation with the council planning department to ensure it would most appropriately serve the planned Watford Health Campus, which is being developed simultaneously and in close proximity to CRL.</p>
5.2	<b>Accessibility and inclusive access at the stations</b>	<p>Accessibility to the CRL via the two new stations and station forecourts has been integrated with the CRL design process through continuous dialogue between Urban Designers, LUL, Architects, Engineers and key stakeholders. This incorporated a number of meetings, workshops and topic specific workshops with groups including Disability Watford and Secure by Design (LU &amp; British Transport Police Review).</p> <p>The new station buildings include step-free access and include stairs and lifts within the station providing access to platforms above or below. Necessary measures including handrails at key locations to provide additional mobility support and use of tactile paving where appropriate will be in accordance with LUL standards.</p> <p>Although public realm design at the new stations will be finalised at the detailed design phase, outline concept designs that apply urban design principles have been progressed concurrently with the design of the stations and land ownership requirements. The Station Forecourt Public Realm Concept Designs are available in <b>Appendix 7</b>.</p>
5.3	<b>Integration with other modes of transport</b>	<p>Ascot Road station takes advantage of its situation at the Western Gateway road junction through enabling access to the CRL by a range of modes including car and bus. The car park to the south of the station provides opportunity for use as a multi-modal interchange between rail, bus, taxi and car, with a bus stop(s), taxi drop-off point and cycle stands provided at the station forecourt.</p> <p>Watford Hospital Station specifically accommodates pedestrian and cycle interchange, influenced by the site's physical and topographical constraints which limit access for vehicles and buses.</p>



## 5 CRL Access Principles

5.3.1	Vehicles	<p>Vehicle access to the station forecourt areas for loading and maintenance will be enabled by a limited number of suitably located drop-bollards. The car park at Ascot Road improves accessibility to the CRL for disabled and vulnerable users and should also reduce car journeys into Watford Town Centre by encouraging passengers to use the CRL both for accessing Watford town and for continuing onward journeys from Watford Junction station as a park and ride option.</p>
5.3.2	Integration with pedestrian and cycle routes	<p>The proposed closure of Watford Met Station will have an impact on passengers who currently walk to and from this station. A Walking and cycling Audit was carried out (which is available in Volume 3, Appendix 15B of the ES). It is anticipated that the key routes and opportunities identified will be subject to further design and consultation as part of Hertfordshire County Council's Local Transport Implementation Plan (LTP3) and that they will be developed in accordance with the Cycling Strategy and Walking Strategy and included in the South West Herts Urban Plan.</p> <p>The public realm at the stations will also integrate cycle parking that will enable ease of use as well as Secure by Design principles such as natural surveillance to reduce risk of crime – <b>see Appendix 7 - Station Forecourt Concept Plans</b> which illustrate potential cycle stand locations. Pedestrian and cycle signage will aim to create a clear and legible pedestrian environment enabling ease of movement in addition to public realm design that enhances natural wayfinding from the CRL to local facilities, attractors and pedestrian routes.</p>
5.4	<b>Emergency access</b>	<p>Proposed drop-bollards will be included around the station forecourt areas to enable access to stations for emergency vehicles.</p> <p>Station designs include a Secondary Means of Escape from platforms in accordance with LU standards. <b>See Appendix 3 - Proposed Scheme Plan</b> for locations of these.</p>

# Appendices and Figures

Appendix 1	Statement of Aims
Appendix 2	The Proposed Scheme (edited extracts from Chapter 6 of the Environmental Statement (ES)) <ul style="list-style-type: none"><li>○ Figure 2.1: Ascot Road Station</li><li>○ Figure 2.2: Electricity Sub Station</li><li>○ Figure 2.3: Watford Hospital Station</li><li>○ Figure 2.4: Viaduct Bridge Pier Detail</li></ul>
Appendix 3	Proposed Scheme Plan
Appendix 4	Policy Context
Appendix 5	Consultation (extract from sections 3-7 of the Report Summarising Consultation Undertaken)
Appendix 6	Project Response to Key Issues (fact sheet from the Croxley Rail Link website)
Appendix 7	Indicative Concept Plans for the Station Forecourt Public Realm

# Appendix 1

## Statement of Aims

# TRANSPORT AND WORKS ACT 1992

## Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006

### THE CROXLEY RAIL LINK ORDER

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#### STATEMENT OF AIMS (required by Rule 10(2)(c))

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#### 1.0 Introduction

1.1 The purpose of this application is to provide Hertfordshire County Council and London Underground Limited with powers to construct a railway linking the Watford branch of London Underground Limited's Metropolitan line to Watford Junction national rail station via Watford High Street, with new stations at Ascot Road (providing a new park and ride site) and Watford Hospital (serving the proposed Watford Health Campus).

1.2 As part of the scheme, the existing Metropolitan line Watford terminus adjacent to Cassiobury Park will close to passenger traffic, with services being diverted to serve the new terminus at Watford Junction.

1.3 This Transport and Works Act Order is promoted jointly by Hertfordshire County Council and London Underground Limited, working in collaboration with Network Rail Infrastructure Limited. Watford Borough Council and Three Rivers District Council are providing local input and guidance.

#### 2.0 The Applicants

2.1 Hertfordshire County Council has an established track record as a successful client organisation for the development, procurement and delivery of major infrastructure projects.

2.2 Hertfordshire County Council has in place a series of technical and professional support contracts to ensure that the best and most appropriate expertise is focussed on each area. HCC will also use its well established client expertise to procure additional specialist input as required.

2.3 London Underground Limited ("LUL") is a company incorporated under the Companies Act with limited liability, and since 15 July 2003 has been a wholly owned subsidiary of Transport for London ("TfL"). TfL is an executive arm of the Greater London Authority reporting to the Mayor. TfL is the integrated body responsible for the capital's transport system and its role is to implement the Mayor's transport strategy for London and manage the transport services for which the Mayor is responsible.

2.4 LUL is responsible for operating the London Underground train network and is the freehold owner of most London Underground stations.

### **3.0 The Need for Croxley Rail Link**

3.1 South West Hertfordshire has been underperforming economically. The local economy is still £200 million per year lower than it was in 2001 and the area continues to experience significant job losses. The Regional Transport Economic Evidence Study showed Watford as having growth potential, but in an area where the cost of congestion and rail crowding is high.

3.2 South West Hertfordshire offers proximity to London, its airports and rail infrastructure, as well as the outer London balance of city-working, country-living. However, the close proximity to London has not been exploited due to lack of easy access to and within Watford.

3.3 The existing rail network does not connect residents of Croxley, Moor Park and other settlements along the Metropolitan line to the business, leisure and employment opportunities located in Watford. Several strategic development projects, including the planned Watford Health Campus, and Croxley and Watford business parks, require access to an integrated transport system in order for the surrounding local communities to benefit from the opportunities they present.

3.4 It has been recognised for many years that the Croxley Rail Link project would make travelling in the area quicker, easier and more convenient for local people as well as unlocking economic potential within Watford and South West Hertfordshire.

### **4.0 Aims of the Scheme**

4.1 The Croxley Rail Link scheme addresses a wide range of objectives which were set out in detail in the Major Scheme Business Case (MSBC) submission, prepared in 2008 and updated in 2009. As part of the recent application for Department for Transport funding, the objectives were condensed into three primary aims listed below:

- To enhance sustainable links to, and between, residents and employment, business, education, health and leisure opportunities within Watford and across Hertfordshire, and to key external attractors, notably north west, central and the city of London and the national rail network, thus reinforcing Watford's role as a key transport hub north of London;
- To improve local connectivity within Watford between current/potential employees, the town centre and the key development areas of Watford Junction, Watford Business Park / Ascot Road and the Health Campus thus providing a catalyst for both economic and housing development; and
- To provide a sustainable and value-for-money alternative to car travel, with inherently lower environmental impacts per trip including noise and greenhouse gas emissions.

## Appendix 2

### The Proposed Scheme

This appendix is an edited version of Chapter 6 (The Proposed Scheme) from the Environmental Statement (ES) to include information on design criteria of amount, scale, layout and appearance relevant to the Design and Access Statement.

#### 1.1 Introduction

- 1.1.1 The proposed scheme, shown in Appendix 2, involves the extension of LUL's Metropolitan Line to Watford Junction station via the disused Croxley Branch Line, currently owned by Network Rail. It is intended that the section of the existing Metropolitan Line running north from the proposed point of diversion onto the branch line and the existing terminus at Watford Metropolitan Station will be closed to passenger services, but will continue to be used by LUL for stabling of trains.
- 1.1.2 The connection between the Metropolitan Line and the currently disused rail corridor east of Ascot Road dual carriageway will be achieved by the widening of the south east embankment slope supporting the existing dual track Metropolitan line, to accommodate the transfer onto a new dual track line via a curved nine-span viaduct crossing over Baldwins Lane, an existing storage compound, the A412 Rickmansworth / Watford Road, Watford Road playground, the Grand Union Canal, Beggars Bush Lane and the River Gade. A reinforced concrete abutment will provide the support for the western end of the viaduct and will be integrated with 'wing walls' which will tie the abutment to the modified embankment slope.
- 1.1.3 The eastern end of the viaduct will terminate at the abutment of a reinforced earth wall which will be located between the River Gade and the small watercourse close to and west of the river. The existing bridge crossing the Grand Union Canal, Beggars Bush Lane and the River Gade will be retained.
- 1.1.4 The eastern abutment to the reinforced earth wall will be located at the back of the verge to the west of the Ascot Road dual carriageway. A new three-span bridge supported on the earth wall abutment will provide for the crossing of the dual carriageway and the old Ascot Road. The existing bridge over the old Ascot Road will be demolished.
- 1.1.5 A new station at Ascot Road will be located between the dual carriageway and old Ascot Road (**Figure 2.1 - Ascot Road Station**).
- 1.1.6 East of the old Ascot Road the three-span bridge will be supported on a reinforced concrete abutment at the back of the verge to the old road. The existing embankment which carried the disused branch line onto the old Ascot Road bridge from the east will be raised to provide for increased vehicle clearance beneath the new bridge and will be designed to

accommodate the new station platforms which will extend to the east from the new station building.

- 1.1.7 A new 1.8m high culvert will be constructed through the new reinforced earth wall, to the west of the Ascot Road dual carriageway. The culvert will be built on the line of the existing culvert to enable the course of the Beggars Bush Lane Drain to be maintained.
- 1.1.8 Continuing east, the new dual-track will be aligned along the currently disused branch line as far as a reinstated connection with the existing operational London Overground line east of Wiggshall Road. A new electricity sub-station (**Figure 2.2**) will be constructed adjacent to the disused branch line, off Tolpits Lane.
- 1.1.9 Along this section, lengths of existing cutting slopes will be re-profiled and sheet piling retaining walls will be introduced at the base of the cutting to achieve current design and safety standards adopted by LUL for the slopes and provide for the introduction of the proposed dual track in the bottom of the cutting.
- 1.1.10 Existing bridges crossing roads and watercourses will be modified to accommodate the additional track and facilitate maintenance access.
- 1.1.11 A second new station will be built on the west side of Vicarage Road (Watford Hospital Station) where the existing bridge currently carries the road over the disused branch line (**Figure 2.3 - Watford Hospital Station**). The station will effectively replace the former Watford West Station (located to the west, off Tolpits Lane) and former Watford Stadium Halt (located just to the east of Vicarage Road). The platforms associated with both the former station and halt will be removed or modified to accommodate the two new tracks.
- 1.1.12 East of Wiggshall Road, the new dual track will merge with the existing dual track London Overground line which will be jointly used by Underground and Overground trains to the termination of the proposed scheme at Watford Junction Station. A fourth rail will be installed to accommodate the new electrically powered trains and some minor works, such as signalling modifications, will be undertaken.
- 1.1.13 Platforms at Watford High Street Station and Watford Junction Station will be extended to cater for the longer underground trains and some localised modification to the track approaching Watford Junction Station will be required to accommodate the platform extensions in this location.
- 1.1.14 The total length of the new link, comprising viaduct, new dual track on the currently disused branch line and the existing section of the London Overground Line will be around 4.8km.

## 1.2 Key components

### Viaduct

- 1.2.1 The nine-span viaduct will be around 400m long with spans in the order of 45m. The bridge deck will be of continuous steel / concrete composite construction with cantilevers supporting walkways. The overall width of the deck will be 12.7m. There will be solid 1.2m high parapets along each side of the decking.
- 1.2.2 Exposed faces of reinforced concrete abutments at each end will be in a textured finish. The steel and concrete frame of the viaduct deck will be enclosed beneath the decking in Glass Reinforced Plastic (GRP) to enhance the appearance of the viaduct structure.
- 1.2.3 Reinforced concrete piers will be supported on piled foundations. They will be elliptical in plan form as indicated in **Figure 2.4 Bridge Pier Detail**. The height of the piers will vary from approximately 8m above ground level at the western end in the vicinity of the tie-in with the Metropolitan Line, to around 5m where the viaduct crosses the Grand Union Canal, Beggars Bush Lane and the River Gade.
- 1.2.4 Piers will be located as indicated in **Appendix 2 – Proposed Scheme Plan** and described below:
- one pier at the toe of the existing LU embankment north of Baldwins Lane;
  - three piers within the existing Cinnamond Engineering vehicle and construction plant parking, storage and maintenance compound north of the A412 Watford / Rickmansworth Road roundabout;
  - one pier in the central reserve of the A412 Watford / Rickmansworth Road in the vicinity of the existing pedestrian crossing;
  - two piers within the existing Watford Road playground; and
  - one pier between the Grand Union Canal and the River Gade.

### Reinforced earth wall

- 1.2.5 Construction of the reinforced earth wall west at the Ascot Road dual carriageway will require modification of the existing embankment at the eastern end of the existing bridge crossing the Grand Union Canal, Beggars Bush Lane and the River Gade. A section of sheet piling will be provided to retain the embankment and provide working space for construction of the wall. The wall will be approximately 7.8m high and faced in concrete modular block. There will be a safety fence which will continue the line of the parapet from the viaduct.



### Ascot Road bridge and Ascot Road Station

- 1.2.6 The bridge and station are integral elements of the three-span structure crossing the Ascot Road dual carriageway and the old Ascot Road, the station being located within the central span.
- 1.2.7 The new bridge spanning the Ascot Road dual carriageway and old Ascot Road will be of steel / concrete composite construction with minimum clearance of 5.5m.
- 1.2.8 The arrangement and form of the proposed station is shown in **Figure 2.1 - Ascot Road Station**. It will be a two-storey structure with a 30m long frontage onto the old Ascot Road and approximately 30m depth. It will be 14m high with lift housings that will be 2m taller. The track and platforms will be aligned through the central west to east axis of the building and flanked by upper level platform access and platform canopies. The entrance to the station will be off the old Ascot Road. Access to the westbound and eastbound platforms from the ticket hall will be via lifts and stairs on each side of the building. The platforms will extend to the east of the station and will be 138m long. The platforms and structural floors will be in-situ reinforced concrete.
- 1.2.9 The building will be of steel-framed construction with cross bracing. External walls will comprise a combination of glass and curtain walling with brick or blockwork where necessary.
- 1.2.10 Lighting will be in accordance with current LUL standards and will employ 'horizontal cut-off' reflectors to minimise light spill to the surrounding area.
- 1.2.11 External lighting will take the form of bollard lights around the station perimeter and illuminated signage in line with LUL requirements.
- 1.2.12 A Public Address system in the station and on the platforms will be used to communicate travel information, with target levels at 10dBA above the background noise level and designed such that noise overspill to the surrounding environment is limited as far as practicable.
- 1.2.13 There will be car parking provided on the site of a former waste transfer station immediately south of the new station. A bus stop(s), taxi drop-off point and cycle stands will also be provided at the station forecourt. This site will also be used as the principal compound during construction of the station and new bridge over the dual carriageway and the old Ascot Road.

### Reinforced soil embankment

- 1.2.14 The existing embankment east of the old Ascot Road will be removed and reconstructed to enable the new dual track to be continued east and along the disused branch line corridor. The new embankment will be approximately 100m in length and some 12m wide at the top. It will be

reinforced to provide for the adoption of side slopes which can be accommodated in the existing railway land.

- 1.2.15 The existing embankment east of the old Ascot Road will be removed and reconstructed as indicated in Figure 6.5A [refer to *Environmental Statement Chapter 6*] to enable the new dual track to be continued east and along the disused branch line corridor.. The figure demonstrates that it will be necessary to bench the existing slope to ensure the material that will be introduced to establish the required gradient above the sheet piling will not be subject to slippage. This work will necessitate the clearance of any established vegetation along the affected sections of cutting slope.

#### Sheet piling toe-walls

- 1.2.16 The location of lengths of sheet piling toe-walls required between Ascot Road and Stripling Way is shown in Appendix 2.
- 1.2.17 The introduction of the sheet piling and modification of the cutting slope profiles will involve the removal of existing semi-mature tree planting and areas of extensive scrub along these sections of the corridor.

#### Electricity sub-station

- 1.2.18 A new electricity sub-station will be built on a site to the south of the disused Watford West Station, off Tolpits Lane as indicated in Appendix 2.
- 1.2.19 It will be located adjacent to the track and on the opposite side to the site of the former disused Watford West Station. The building will be approximately 40m east to west by 20.5m and 10.65m tall (see **Figure 2.2**).

#### Watford Hospital Station

- 1.2.20 The proposed station immediately west of the existing Vicarage Road overbridge is shown in **Figure 2.3**.
- 1.2.21 The new station will comprise a two-storey building spanning over the tracks. It will have an 18m long frontage onto Vicarage Road and extend some 44m west along the line. The Vicarage Road elevation will be some 4m high with 2.5m high extensions at the lift housings.
- 1.2.22 The station platforms will extend to the west and will be 144m long. The principal building containing the ticket hall and offices will be over the new tracks with access off Vicarage Road via the upper level. Access to the platforms will be through the ticket gates and down to the platforms via lifts or flights of stairs.
- 1.2.23 There will be no provision for car parking. Facilities for leaving and securing cycles will be provided to the south of the station forecourt.
- 1.2.24 The upper station building will be a steel-framed structure. Vulnerable external walls will be of brick or blockwork construction to limit the risk of damage from possible vandalism. Other façades will be of expanded metal

cladding and glazing. The main façade will be glass or curtain walling where feasible and brick or blockwork where necessary. The internal walls will be of blockwork construction.

- 1.2.25 Lighting and communications will be as described for the proposed Ascot Road Station (see paragraphs 1.2.10 to 1.2.12 above).

#### **Gabion walls**

- 1.2.26 Gabion toe-walls to embankments will be provided in the vicinity of Scammell Way which can be seen in Appendix 2. A typical section for the toe-walls is provided in Figure 6.5B [*refer to Environmental Statement Chapter 6*].
- 1.2.27 The introduction of the toe-walls and modification of the embankment slope profiles will involve the removal of existing semi-mature tree planting and areas of scrub in these locations.

#### **Existing bridges**

- 1.2.28 There are seven existing bridges and culverts which cross over the disused branch line that will remain and will be modified to accommodate the two new tracks. These are indicated in Appendix 2 along with the new Ascot Road bridge and the River Colne (south) underbridge which does not require any modification works. Construction associated with the seven bridges will range from routine maintenance such as re-pointing of brickwork and cleaning of graffiti to reinforcement of bridge decking and widening and addition of walkways which will be built onto the existing structures.
- 1.2.29 The works required at each of the bridges is summarised below:
- The Tolpits Lane bridge will require minor works to the parapet and possible fencing on approaches.
  - Vicarage Road bridge will require minor works to the eastern parapet and possible fencing on approaches, as well as works to the western parapet to accommodate access to Watford Hospital Station.
  - Cardiff Road underbridge will require widening by approximately 4m on the south side and 1m on the north side to accommodate a second track and for provision of walkways. The existing bridge deck will remain in place and an additional deck will be placed alongside, using the existing abutments.
  - The Colne River Side Channel bridge will require widening of the bridge deck by approximately 1m on each side in order to accommodate walkways.
  - The River Colne (north) underbridge will require widening of the bridge deck by approximately 1m on each side to accommodate walkways.
  - The Brook bridge will require widening of the bridge deck by approximately 1m on each side to accommodate walkways.
  - The Wiggenhall Road bridge will require minor works to the parapet and possible fencing on approaches.

#### Platform extensions and associated works

- 1.2.30 It is proposed to extend the single 'island' platform at Watford High Street Station by 14m to accommodate the longer LU trains. Of the four platforms to be used by the LU trains at Watford Junction, platforms 1 and 2 will be extended by 13.5m and platforms 3 and 4 will be extended by 45m. The extension of platforms at Watford High Street Station and Watford Junction Station will require the use of temporary site compounds during construction.
- 1.2.31 There will be a need to realign some of the existing track to the south of Watford Junction Station in order to accommodate the extended platforms.
- 1.2.32 Works will be required to facilitate the installation of enhanced traction power supply and signalling on this section, including a minor extension to the existing Network Rail Watford sub-station within the "Tip Sidings" to the south of Watford Junction station, north of Radlett Road.

#### Drainage

- 1.2.33 The approach to the drainage design for the proposed scheme has been informed by its location in relation to the primary Source Protection Zone which extends across a substantial part of the underlying chalk aquifer associated with central and west Watford.
- 1.2.34 The design allows for the capture of surface water run-off from the viaduct, the platforms and station buildings and sub-station via a combination of gullies, slit drains, guttering and down pipes.
- 1.2.35 The non-perforated carrier drains have been sized to provide online attenuation storage and ensure that the design target of 5 litres per second per hectare (l/s/ha) required by the Environment Agency (EA) for discharge rates to the watercourse can be met. Oil interceptors and silt traps will be provided at the outfalls to the river and brook.
- 1.2.36 The station drainage system will consist of separate surface and foul water sewer systems. The platform drainage system will also be discharged into local Thames Water public sewers. The actual connection points into the Thames Water sewer network will be determined in consultation with Thames Water during detailed design.

#### Flood Compensation

- 1.2.37 The assessments undertaken into the water environment and drainage associated with the proposed scheme have established that the introduction of the proposed gabion walls immediately east of Stripling Way will involve the loss of existing floodplain capacity in areas designated by the EA as Flood Zone 2 and Flood Zone 3 within the River Colne floodplain. The assessments have concluded that, subject to modelling during detailed design, a conservative level for level compensatory capacity of 500m<sup>3</sup> within or attached to the existing floodplain will be required.

- 1.2.38 The proposed location for the compensatory storage is shown in Appendix 2. It is located in Flood Zone 2 between the River Colne side channel and main river channel.

### 1.3 Construction access routes

- 1.3.1 It is anticipated the principal construction access routes to the work sites and work compounds during construction of the scheme will be as illustrated as 'Construction Traffic' in the plan at Appendix 2 and as shown in Table 6-2 below.

**Table 6-2: Construction access routes**

Construction access routes
A4008 Stephenson Way
A411 (Beechen Way – Exchange Road – Beechen Way)
A412 - St Albans Road – Hagden Lane)
A411 (London Road – Dalton Way – Westfield Way)
A412 (Hagden Lane - Watford Road)
A411 (Westfield Way – Lower High Street – Eastbury Road – A4148)
A4145 (Vicarage Road – Willow Lane)
A4145 (Vicarage Road – Hagden Lane – Tolpits Lane)
A412 – Hagden Lane – Tolpits Lane
A4008 Pinner Road

- 1.3.2 Further information on the principal construction two-way vehicle movements associated with each part of the proposed scheme corridor can be found in the ES Chapter 6 Section 6.3.
- 1.3.3 Provision has been made in the TWA Order for temporary closure of roads and rights of way which will be spanned by the viaduct during the placement of the fabricated decking sections. It is anticipated that such closures will be no longer than 48 hours in any one location.

### 1.4 Land take and construction compounds

#### Permanent land take and rights of access

- 1.4.1 A substantial part of the work will be undertaken within the confines of the existing branch line corridor and will not require the acquisition of land

additional to that already owned by Network Rail. Permanent land take and rights of access for the various components of the scheme will be in the order of 4,925m<sup>2</sup>. Detailed explanation of land take specific to individual land holdings and land use is provided in **Appendix 14 – Land Use and Community Effects** (an extract from Chapter 16 of the ES).

- 1.4.2 One of the areas of the permanent land take, comprising land which currently forms part of the Watford Road playground, is designated as Public Open Space (POS). Provision has accordingly been made for exchange land to be made available to Three Rivers District Council, the current owners of the land. The proposed exchange land is located south of Croxley Green Station, between Croxley Hall Wood and the Grand Union Canal, with access via Harvey Road.

#### Temporary land occupation and rights of access

- 1.4.3 There will be a need to temporarily acquire land to facilitate the construction of bridge and viaduct piers west of Ascot Road Station (see sections below) and the embankment at the merge / diverge with the existing Metropolitan Line as well as the sub-station at Tolpits Lane, Harwoods Recreation Ground and a small amount of land at Holywell Allotments and 42 and 44 Stripling Way. The total temporary land occupation will be of the order of 7,400m<sup>2</sup>. Detailed explanation of temporary land occupation specific to individual land holdings and land use is provided in **Appendix 14 – Land Use and Community Effects**.

#### Site compounds and work sites

- 1.4.4 Temporary working areas and compounds within and outside of the land required for the temporary and permanent works are shown at Appendix 2.

## 1.5 Landscape and Environmental Proposals

### Landscape proposals

#### *Planting*

- 1.5.2 The landscape proposals for the proposed scheme are shown in Appendix 2.
- 1.5.3 Where existing semi-mature and mature tree planting will be removed east of Ascot Road to facilitate the re-profiling of cutting slopes, new planting will be introduced on the re-profiled upper cutting slopes.
- 1.5.4 The new planting will be in accordance with the standards provided by London Underground (Landscaping and Vegetation, April 2010, Ref: 1-165A2), specifically the defined Planting Zones, Vegetation Types and Species.
- 1.5.5 In the area of the existing Metropolitan Line, woodland will be restored to the southern verge and also above the gabion retaining wall at Stripling Way. At the eastern end of the viaduct approaching Ascot Road, a species rich native

grass mix will be introduced to the reinforced embankments as well as species appropriate to the existing wet woodland. Some of the existing trees will be retained opposite the entrance to the proposed station at Ascot Road.

- 1.5.6 To the east of the proposed Ascot Road station, a native shrub mix will be planted along the shallow cutting and embankment slopes. Further east and on the approach to the proposed Watford Hospital station, a native woodland mix will be introduced to reinstate the green corridor and restore the visual outlook.
- 1.5.7 Within the River Colne corridor, the proposed rail line is on re-profiled embankment where native species rich grasses will complement the surrounding river corridor character. Any disturbance to existing vegetation alongside the rail line in the area of Cardiff Road and Wigenhall Road will be kept to a minimum.
- 1.5.8 No significant works are proposed for the section of existing line between the merge with the existing London Overground line and Watford Junction Station, therefore the landscape strategy is limited to the area of currently disused line.

#### **Environmental proposals**

##### *Badger Fencing*

- 1.5.9 Badger fencing will be installed in key areas around Cardiff Road, where an existing sett exists and where badgers may otherwise be able to access the operational railway. The badger fencing will comprise of wire mesh and will be sunk below ground level to prevent the animals burrowing underneath.

##### *Bat Boxes*

- 1.5.10 Bat boxes will be introduced on trees alongside the scheme to provide artificial roosting sites in the vicinity and the side verges managed to provide a wildlife corridor for bats.
- 1.5.11 Further details in respect of the environmental proposals are provided in Chapter 10 of the ES. These proposals, along with the landscape proposals set out above, will be incorporated as mitigation for the proposed scheme.

#### **1.6 Maintenance and operation**

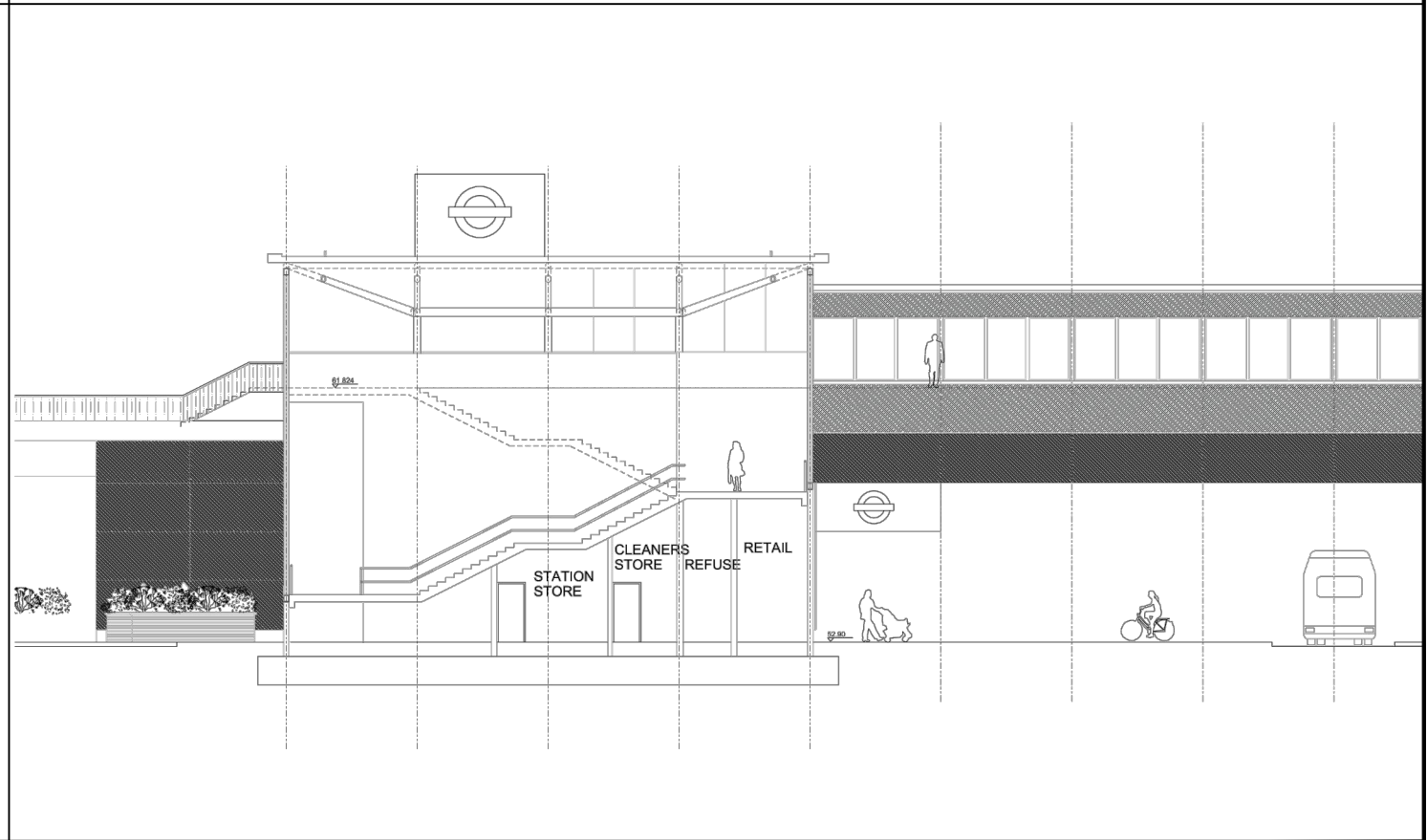
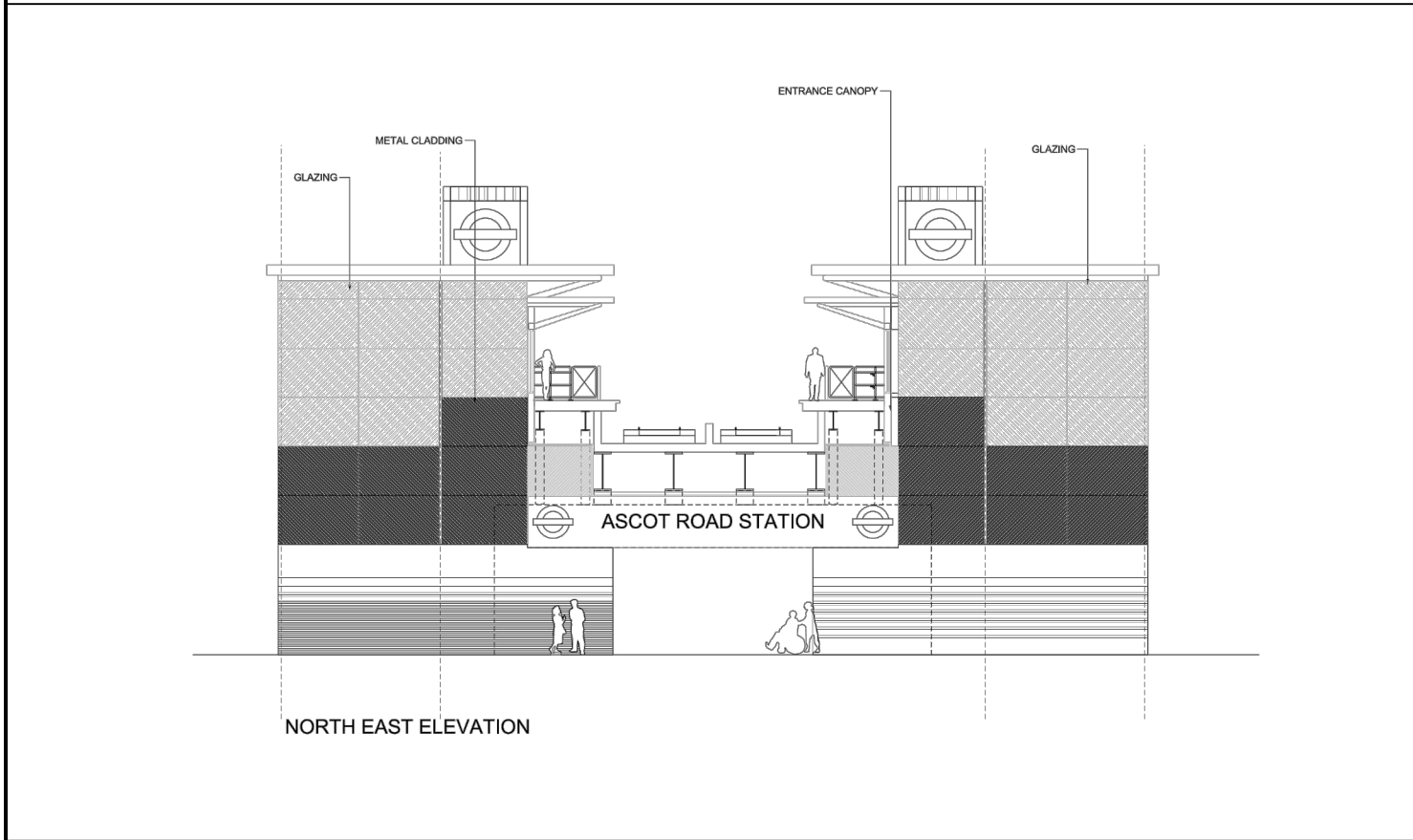
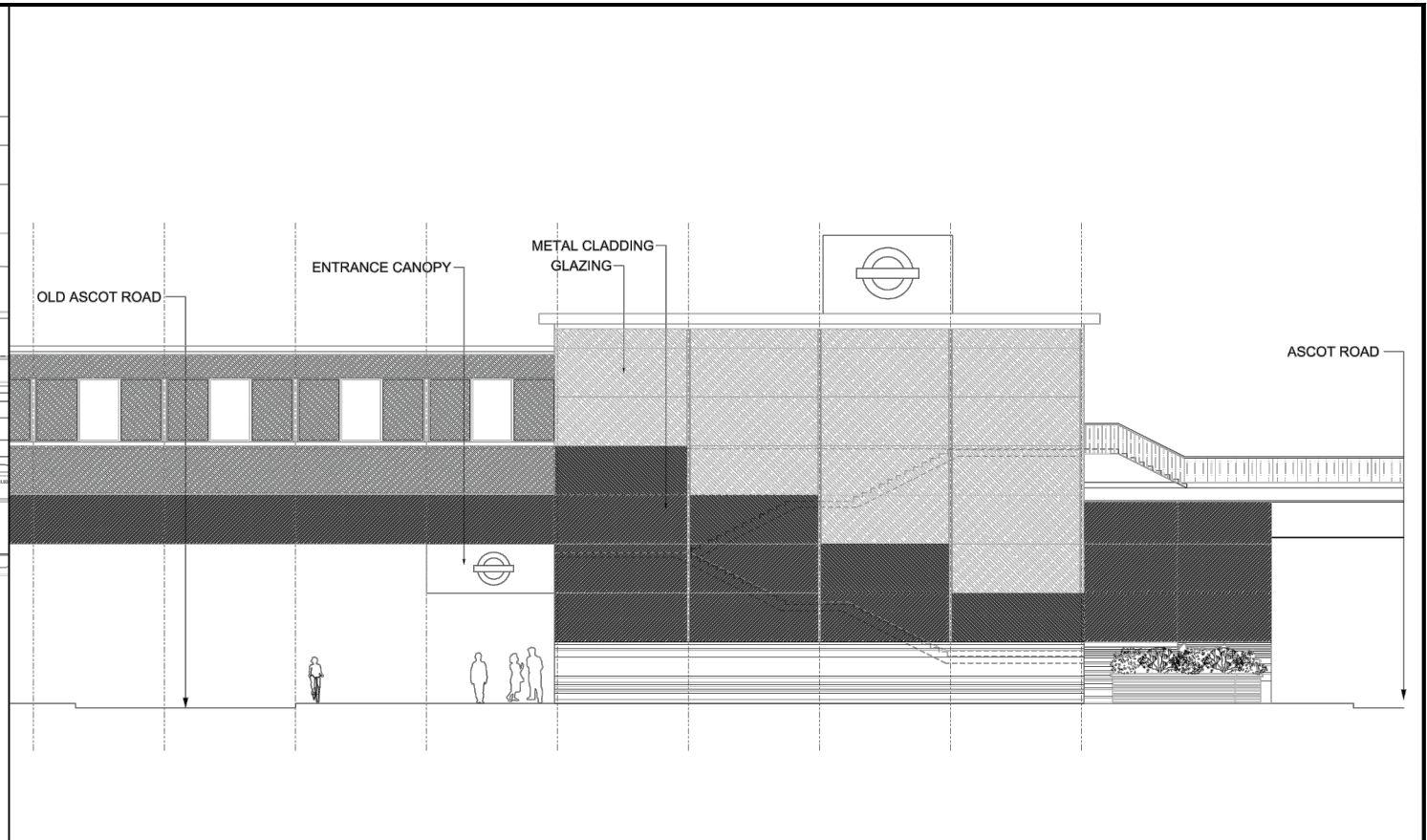
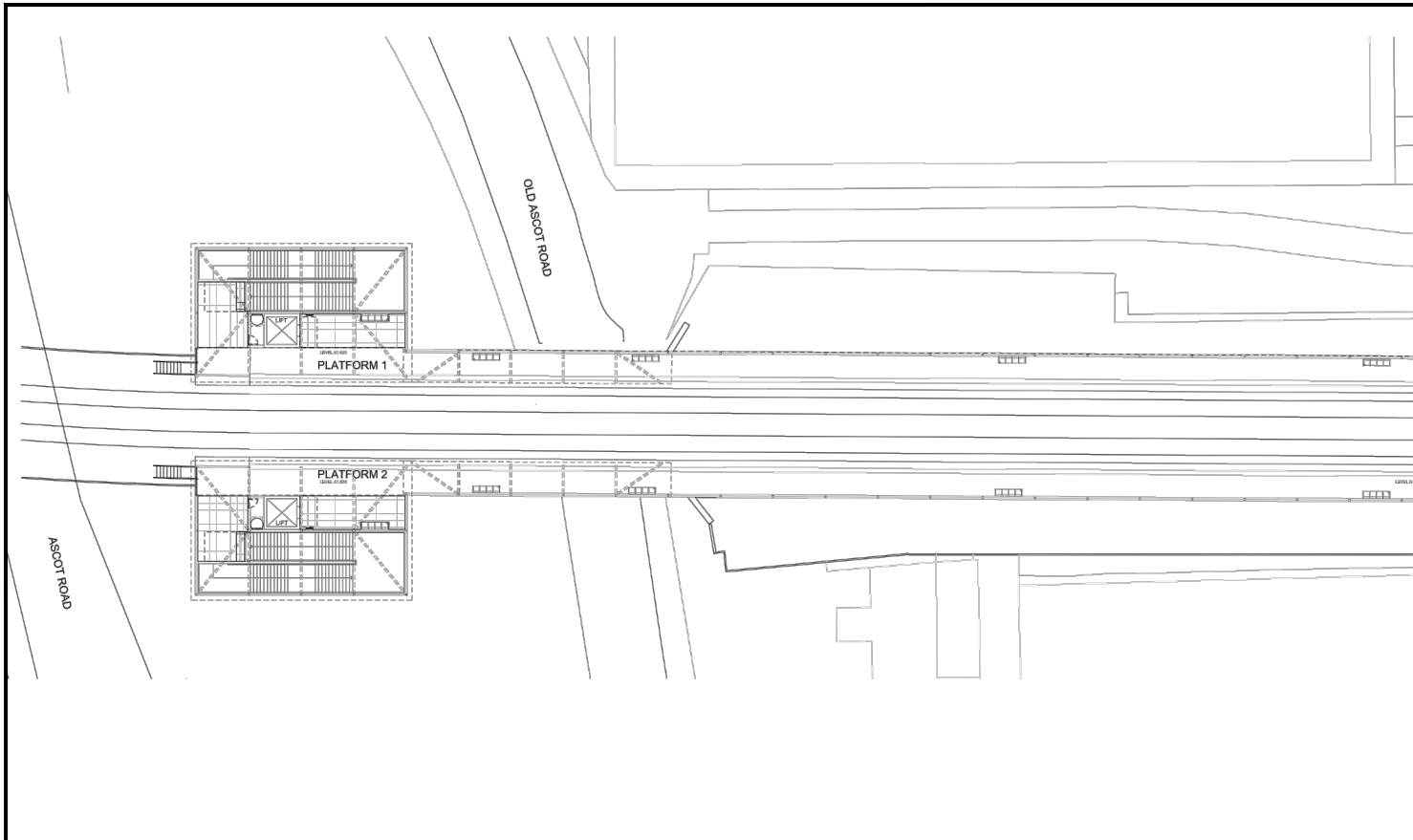
- 1.6.1 It is intended to use the former Watford Metropolitan station for the stabling of up to five trains, which will constitute an addition of one extra train over the existing stabling arrangements. No additional infrastructure will be required to facilitate this.
- 1.6.2 The new railway will be operated and maintained in accordance with LU standards, which will comprise regular inspection, site walkovers and minor maintenance works (such as clearing of debris and management of vegetation) as and when required.

- 1.6.3 A permanent access route for the purpose of track maintenance during operation will be established to the east of the proposed Watford Hospital Station, via Cardiff Road, as indicated in Appendix 2.

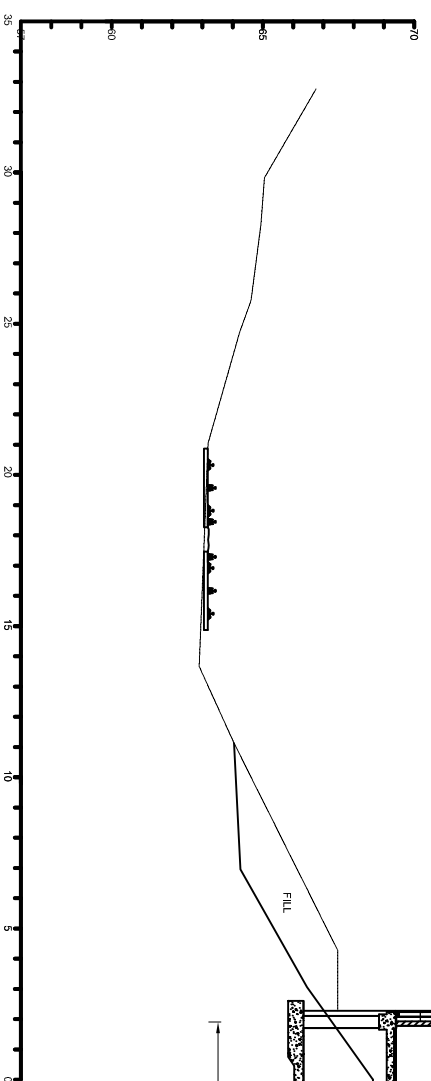
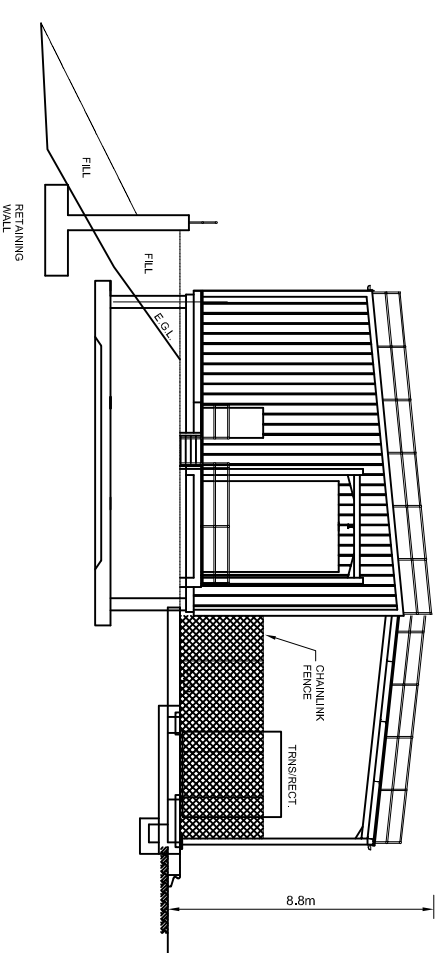
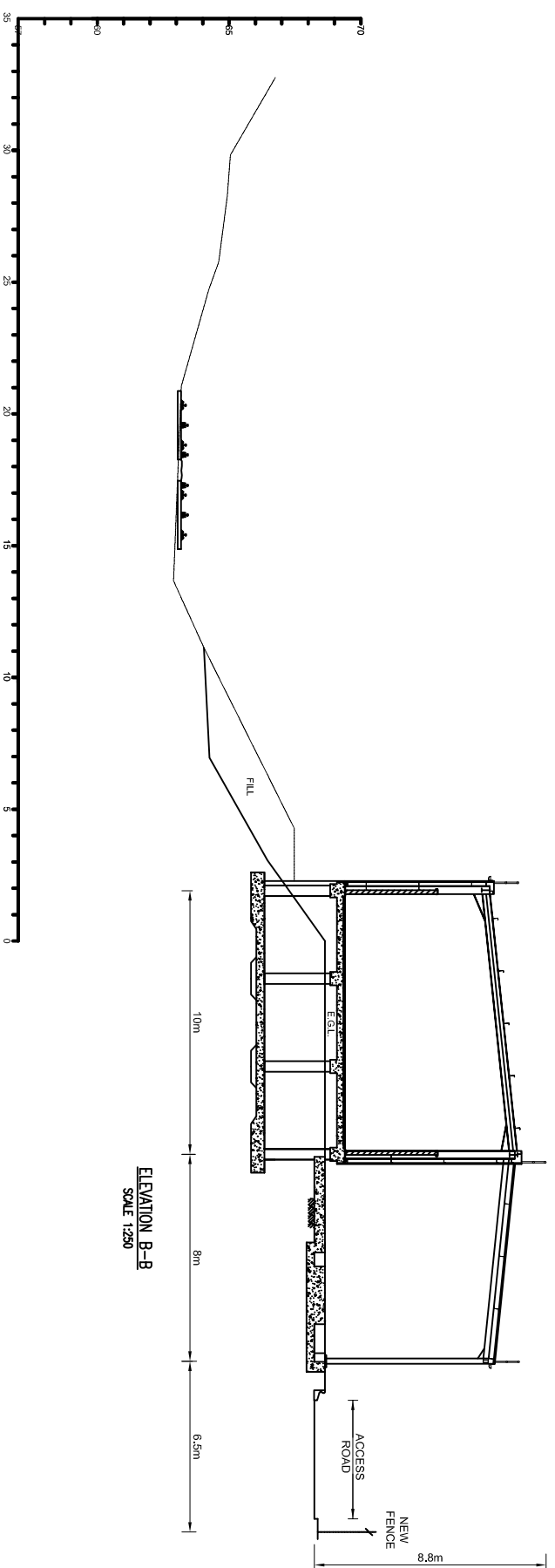
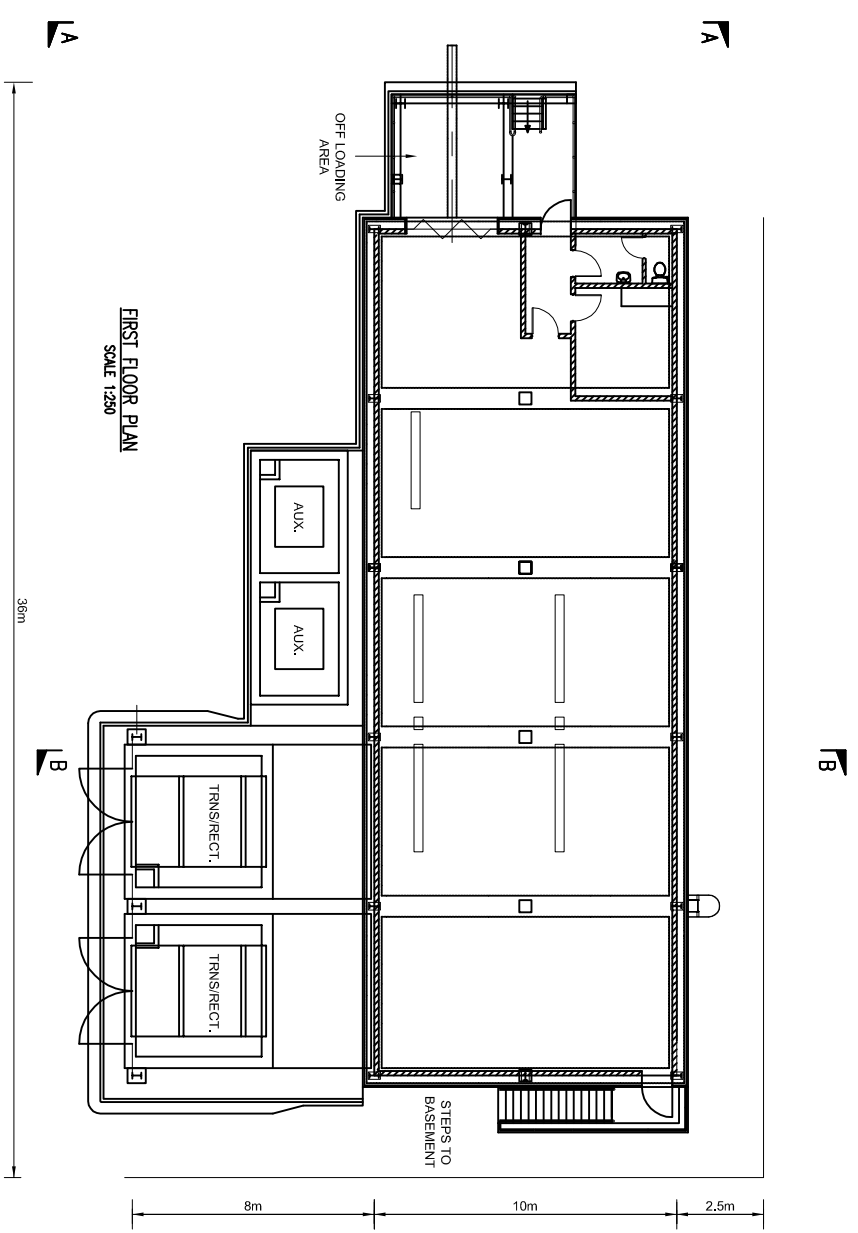
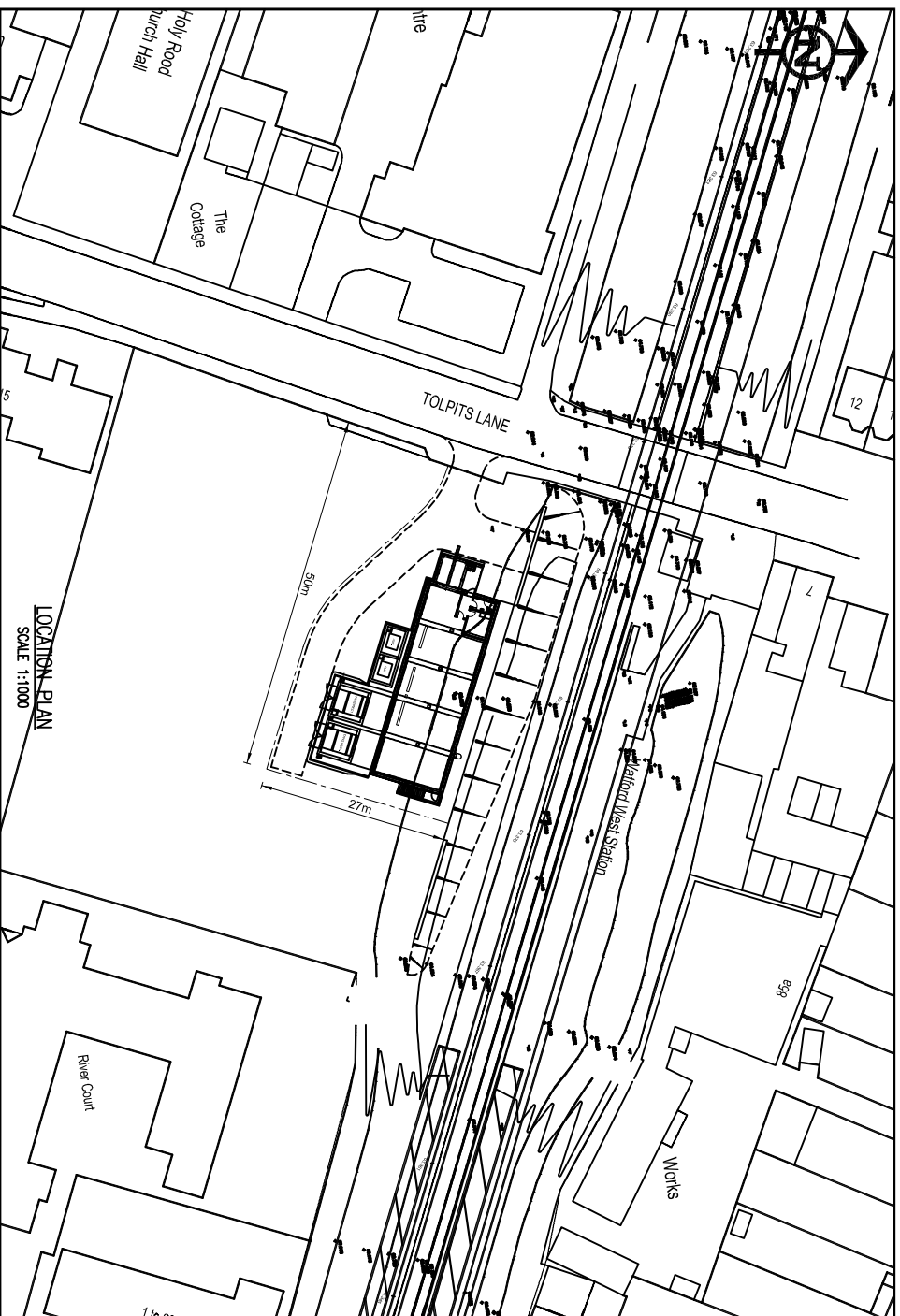
## **1.7 Code of Construction Practice**

- 1.7.1 A draft Code of Construction Practice (CoCP) is appended to the ES at Volume 3, Appendix 18A. It describes the incorporated mitigation measures assumed for the construction phase of the proposed scheme and the general obligations which will be imposed on the contractor. The Code will be finalised in agreement with the local planning authority before construction works commence and through planning conditions they will be able to ensure that the mitigation measures in the Code are complied with.

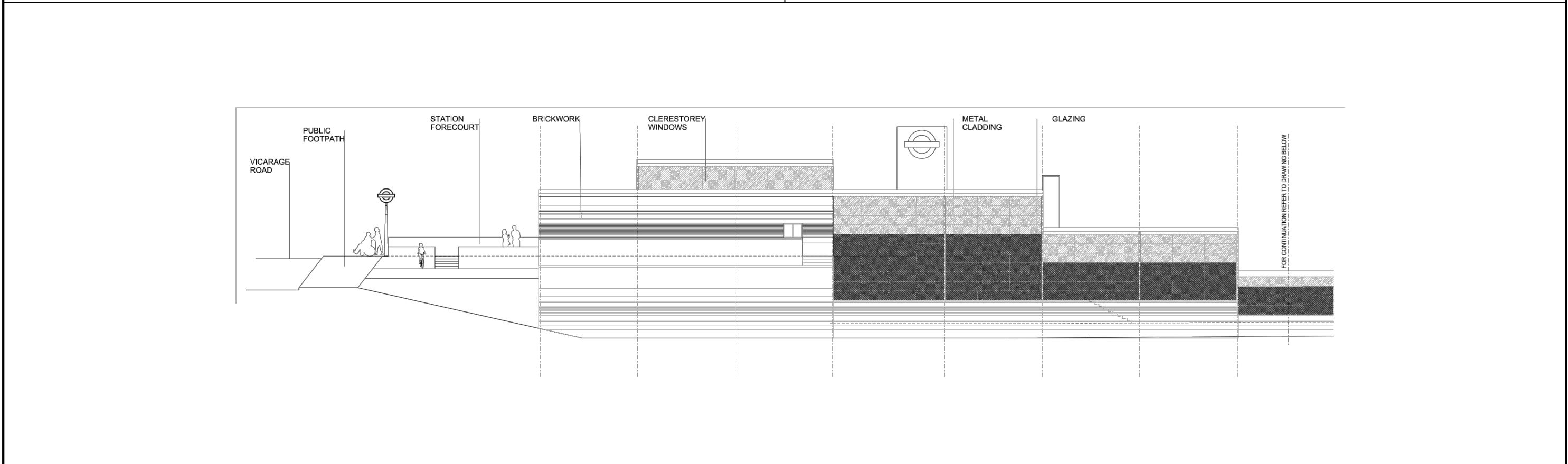
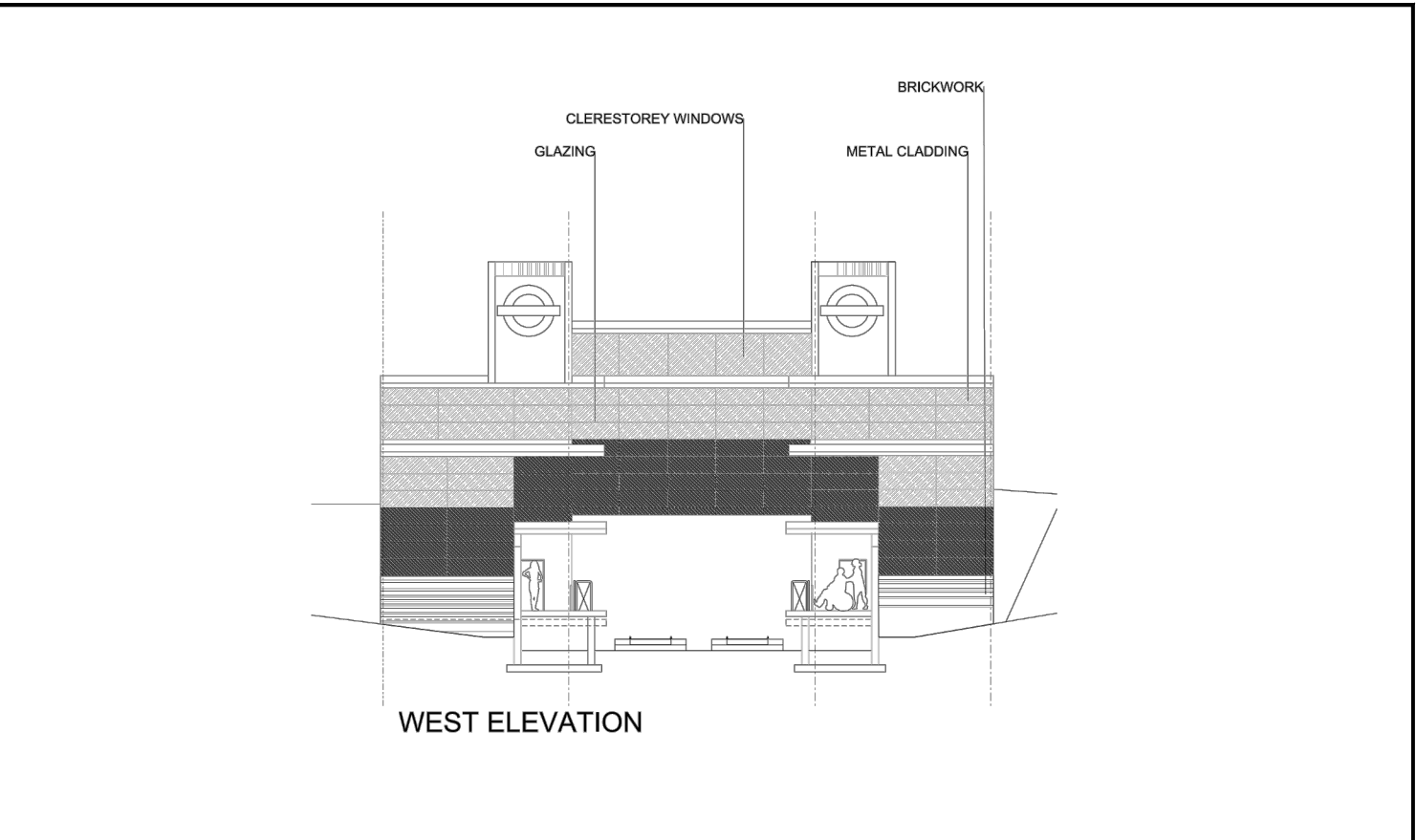
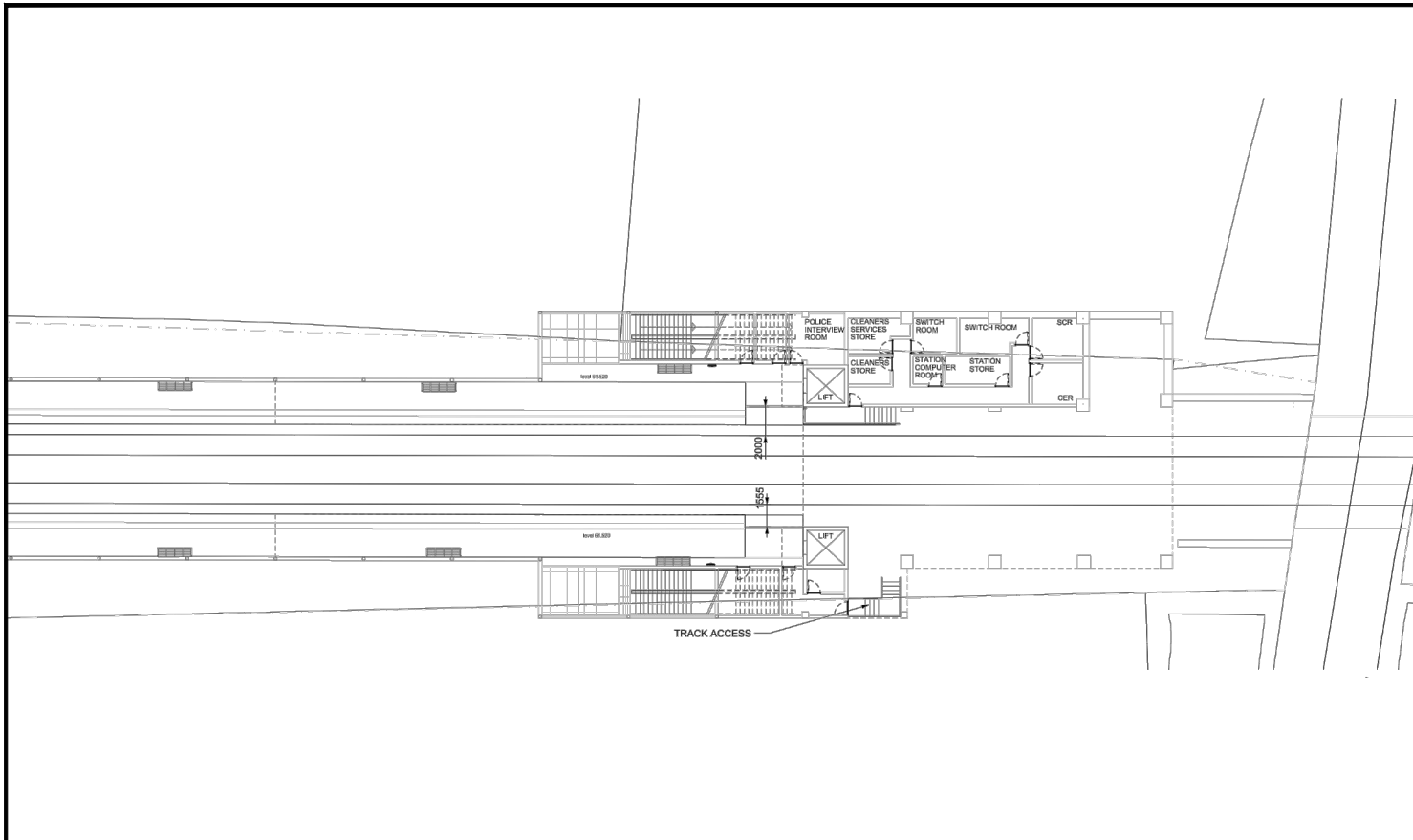




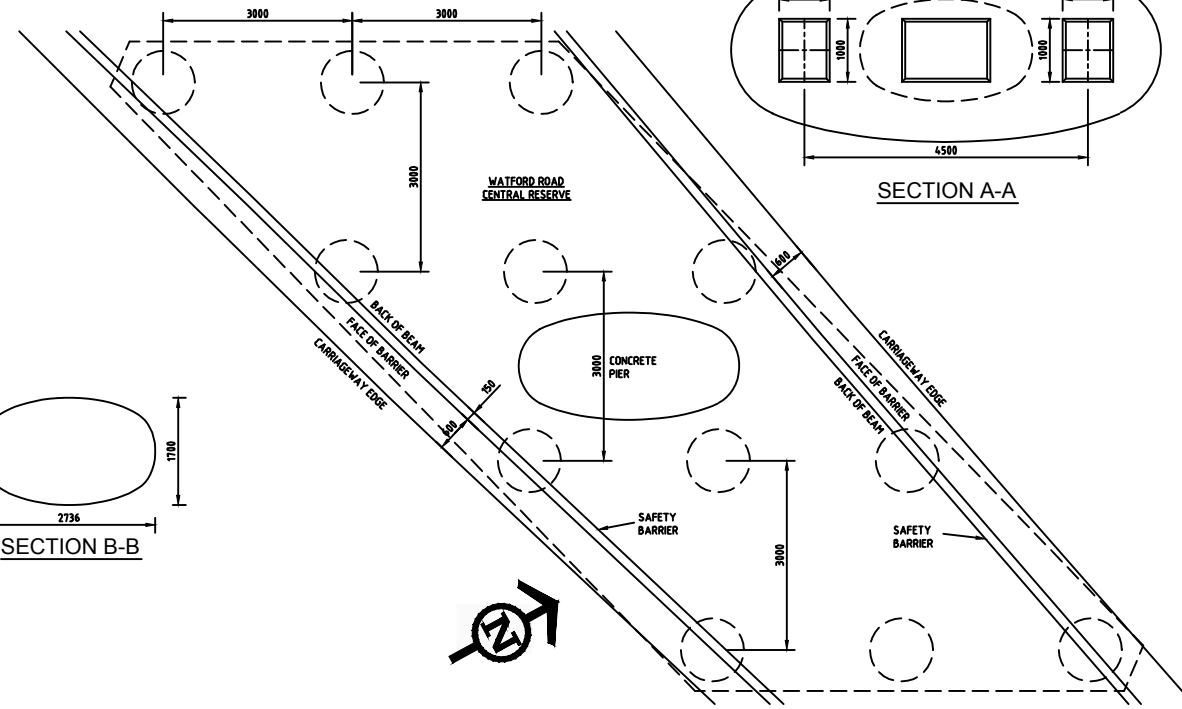
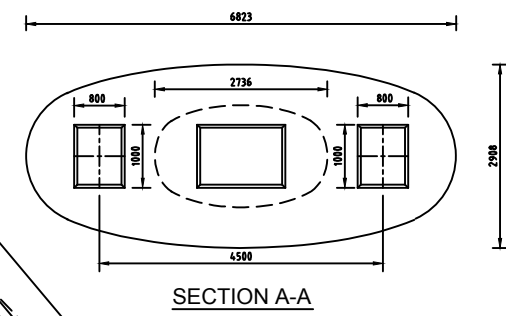
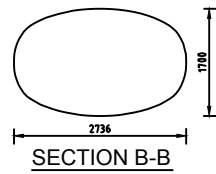
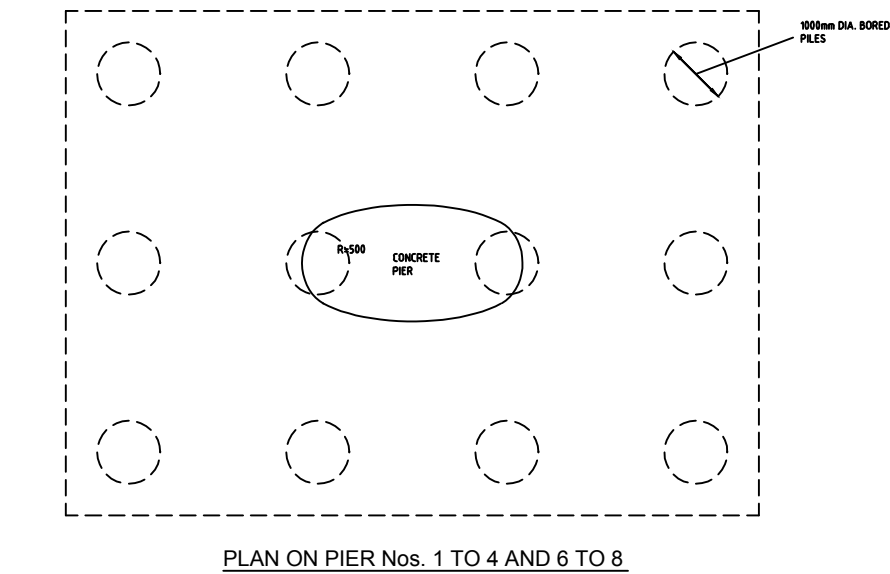
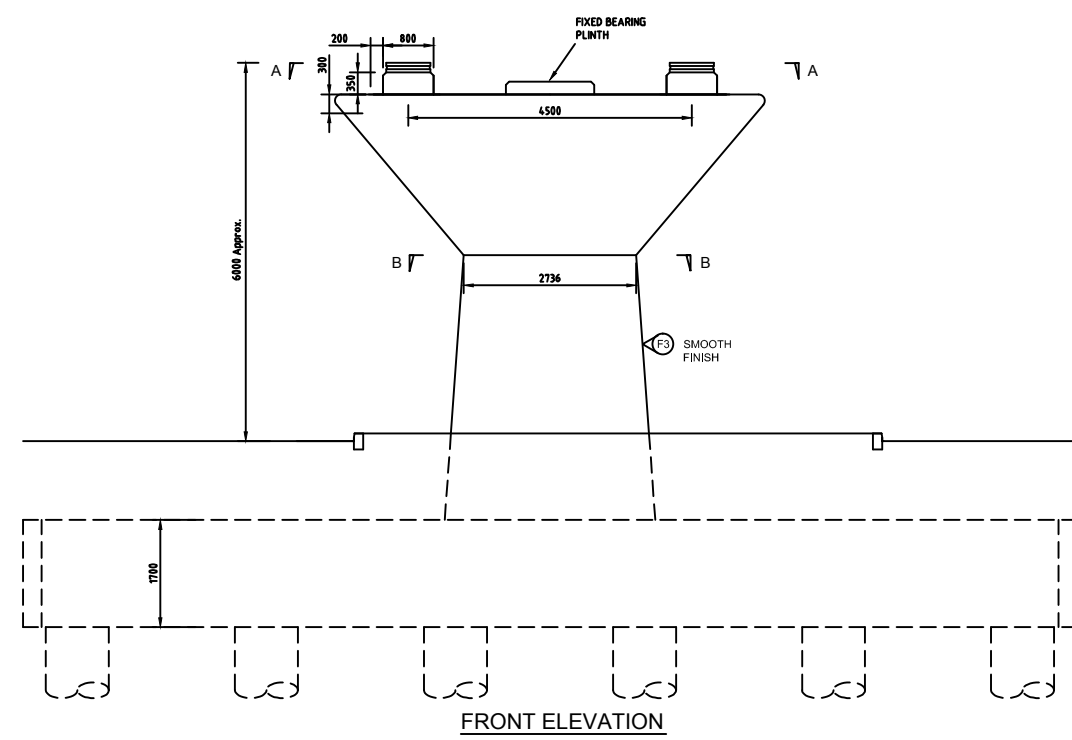
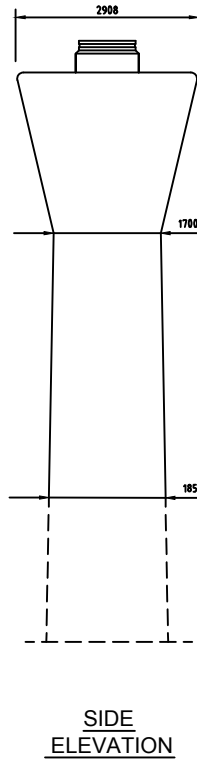
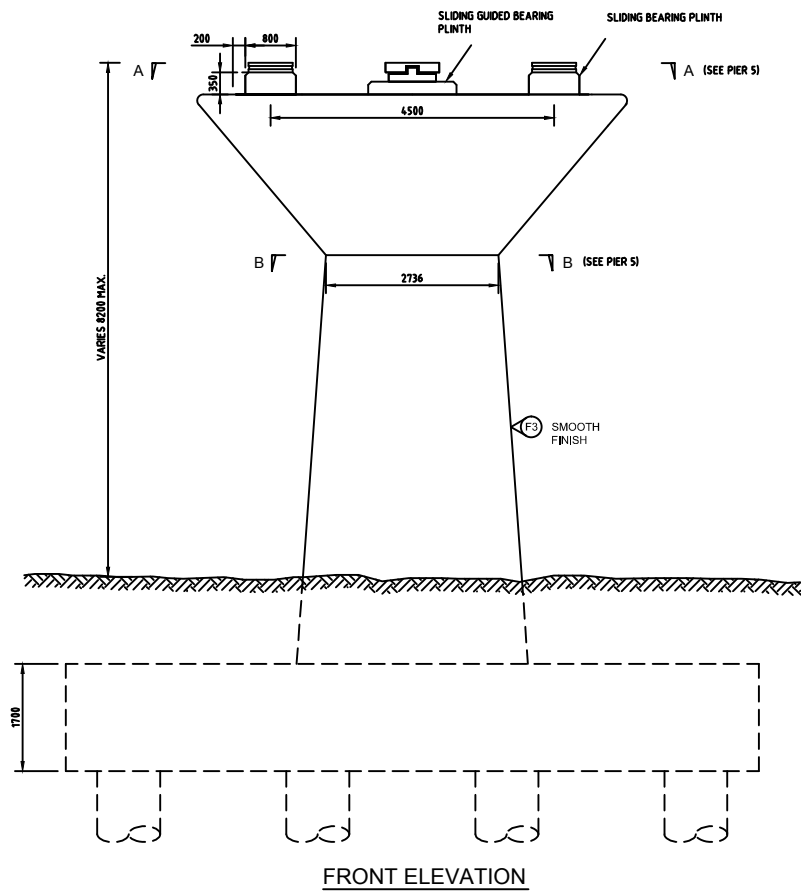
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	Project		
	CROXLEY RAIL LINK DEVELOPMENT		
	Title		
ASCOT ROAD STATION			Drawing Number
FIGURE 2.1			






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Project <b>CROXLEY RAIL LINK DEVELOPMENT</b>			Title <b>PROPOSED NEW SUB STATION OPTION 3 - WATFORD WEST STATION</b>		
Drawing Number <b>FIGURE 2.2</b>					



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	Title WATFORD HOSPITAL STATION		
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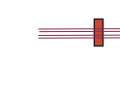









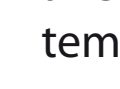

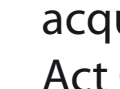


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	Title	BRIDGE PIER DETAIL	
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# Appendix 3

## Proposed Scheme Plan

# Legend

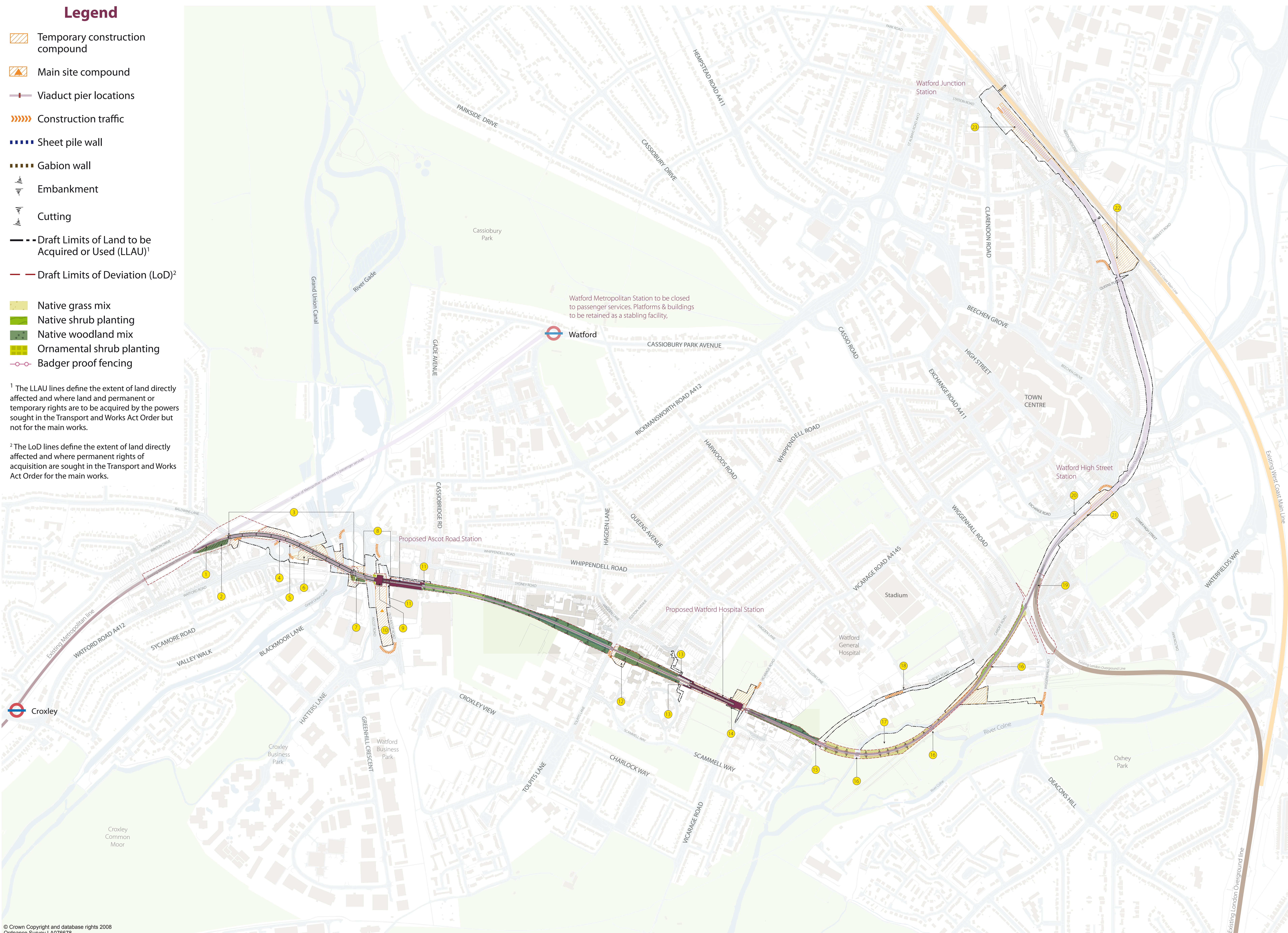
-  Temporary construction compound
-  Main site compound
-  Viaduct pier locations
-  Construction traffic
-  Sheet pile wall
-  Gabion wall
-  Embankment
-  Cutting
-  Draft Limits of Land to be Acquired or Used (LLAU)<sup>1</sup>
-  Draft Limits of Deviation (LoD)<sup>2</sup>
-  Native grass mix
-  Native shrub planting
-  Native woodland mix
-  Ornamental shrub planting
-  Badger proof fencing

<sup>1</sup> The LLAU lines define the extent of land directly affected and where land and permanent or temporary rights are to be acquired by the powers sought in the Transport and Works Act Order but not for the main works.

<sup>2</sup> The LoD lines define the extent of land directly affected and where permanent rights of acquisition are sought in the Transport and Works Act Order for the main works.

# Key

- 1 New Junction with Metropolitan line to Watford
- 2 Existing embankment modified
- 3 Viaduct
- 4 Realigned access to Cinnamon House
- 5 Modifications to cycle ways, footways & pedestrian crossing
- 6 Watford Road playground closed. Replacement sites are being reviewed
- 7 Works to existing earthworks & culvert
- 8 New bridges over Ascot Road
- 9 Ascot Road Station
- 10 Car park
- 11 Emergency exit points from platforms
- 12 New substation
- 13 Emergency exit points from platforms
- 14 Watford Hospital Station
- 15 Widening of bridge & addition of maintenance walkways
- 16 Addition of maintenance walkways to bridge
- 17 Land provided for flood management
- 18 Right of access for construction and maintenance
- 19 New junction with existing London Overground line (Network Rail) to Watford Junction
- 20 Emergency exit point from platforms
- 21 Platform extension/modifications
- 22 Modifications to existing substation
- 23 Platform extensions/modifications (1 - 4)



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# Croxley Rail Link - Proposed Scheme

November 2011

DRAFT FOR DISCUSSION PURPOSES ONLY



# Appendix 4

## Policy Context

This appendix contains relevant excerpts from the Environmental Statement.

### **National Planning Policy**

- PPS 1: Delivering Sustainable Development
- PPG 13: Transport

### **Watford Borough Council Planning Policy**

- Watford Borough Council Core Strategy Pre-Submission (Publication) Version May 2011
- Special Policy Areas and Infrastructure Projects
- Policy SPA 3 - Health Campus
- Policy IP 1 - Croxley Rail Link
- Policy T 3 - Accessibility
- Policy GI 1 - Green Infrastructure
- Watford's Core Strategy Special Policy Areas (SPA1 Town Centre /SPA2 Watford Junction / SPA3 Health Campus / SPA4 Lower High Street / SPA6 Western Gateway)

### **Three Rivers Core Strategy**

- Three Rivers Core Strategy (submission version, March 2011)
- Policy CP9 - Green Infrastructure
- Policy CP10 - Transport and Travel
- Three Rivers District Core Strategy Special Policy Areas

### **Transport Strategy**

- Hertfordshire's Local Transport Plan (LTP3) 2011-2031
- South West Hertfordshire Transportation Strategy Review and Action Plan (2008)

# Appendix 5

## Consultation

This appendix includes extracts from the Report Summarising Consultation Undertaken - sections 3-7.



# 1 Consultation Overview

As the scheme has had a long development history there have been previous consultations in 1990s and early 2000s. Over the years there has been considerable dialogue with key stakeholders and the scheme is well known within the local communities of Watford and Croxley Green. This report does not cover the history of those consultations.

As a result of this long development history the scheme was already significantly developed with the alignment and station locations fixed. The scope of the consultation was restricted to ascertaining if CRL was deemed to improve travel connections and improvements to the local area and understanding how the scheme would impact on the local communities. Therefore only one round of consultation was required. A further information round was held prior to the application of the TWAO releasing further information into the public realm and providing individuals with an opportunity to discuss concerns with the project.

This iteration of the CRL scheme has been developed between 2009 and 2011. A Major Scheme Business case was submitted to the Department for Transport (DfT) in November 2009 with the project planning to embark on consultation once the DfT had accepted the business case for review. Following the election of the coalition government in 2010 and the comprehensive spending review the project adhered to the advice of the DfT and did not embark on consultation until further clarity was gained on how major schemes were going to be funded. High level discussions were held with key stakeholders to inform them of the proposal aspirations for CRL and what the programme for development would be once the position of funding was understood.

A scheme website was launched on 12 July 2010 providing the public with information about the proposals and provided an opportunity to contact the project team through a 'contact us' page. A dedicated free phone number was also available from 12 July 2010

In addition CRL was represented at the Watford Borough Council consultation on its Core Plan. This consultation was in the form of a public exhibition held between 12 - 24 July 2011 where members of the public were invited to view the information on the development aspirations for the borough as a whole. CRL presented its high level proposals and provided the public with contact information should they have queries. This exhibition helped to raise the profile of the scheme and inform the public about the proposed timeframe for development.

Once it had been announced that the CRL had been included in the DfT development pool of projects seeking funding in February 2011, the project commenced planning for a full public consultation.

CRL has been committed to ensuring the consultation activities are inclusive and accessible. An Equality Impact Assessment is being prepared.

## 2 Public Consultation

The consultation period ran from May to August 2011. It commenced with the delivery of leaflets to c.53,000 properties within Watford Borough Council, Three Rivers District Council and Hertsmere Borough Council boundaries. The leaflet contained high level information of the scheme, information about the forthcoming exhibitions and details on how individuals could make their views known.

Simultaneously the project displayed posters in public places in Watford and Croxley Green and at stations along the Metropolitan and London Overground lines advertising the scheme and alerting people to the consultation period. Further posters were displayed towards the end of the period to remind people to how respond and of the closing date.

A media campaign was launched with the issue of a press release, the publication of Newspaper adverts in the Watford Observer and Watford Free papers and Radio adverts and interviews on the local stations Heart Radio and BBC Three Counties.

A letter and email were sent on 16 May 2011 to the key stakeholders and mailing list members inviting them to the public exhibitions and consultation period. The letter contained details about the scheme and advised where more information about the project could be found. The key stakeholders and mailing list members are made up of.

- Directly affected and neighbouring Local Authorities,
- Elected officials for the local area,
- Statutory Consultees for the Environmental Statement,
- Relevant parties named in Schedules 5 and 6 to the Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006
- Local organisations
- Affected parties
- Relevant Train Operating Companies
- Special Interest Groups
- Media
- Individuals who asked to join the mailing list.

Public exhibitions were held over four days within Watford and Croxley Green (see appendix 2 for details [*Refer to Consultation Report for this appendix*]). The exhibitions contained information about the background and need for the scheme, a proposals plan, and details on the funding and TWA processes. The information was also provided in a brochure for individuals to keep. In addition a 3D visualisation was on display showing the public how the scheme would fit in the existing landscape. All of the information that was presented at the exhibitions has been published on the project website including the 3D visualisation. This has allowed individuals who were unable to make the exhibitions to view the information.

During the consultation period and up to the submission of the application the project also presented at a number of different events.

Croxley Green Area Forum,  
Disability Watford Public Meeting  
Harrow Rail Users Group  
Croxley Green Business Park  
Watford Central Ward Area Forum  
Senior elected officials technical briefing

Department for Transport site visit  
Watford Health Campus Development Partners bidders conference

Feedback on the proposals was sought through a survey which was available in hard copy at the exhibitions and presentations and also online on a dedicated website page.

In addition the comments could be made via

**Email** info@croxleyraillink.com  
**Website query** www.croxleyraillink.com/contactus  
**Free phone** 0800 6125240  
**By writing to** Croxley Rail Link, Hertfordshire County Council, County Hall,  
Pegs Lane, Hertford

At the close of the consultation 750 people completed survey forms either online through the project website or in hard copy. A further 331 people commented via the project website, emails and letters.

581 respondents (77%) of the total people surveyed believe that the current transport provision within Watford is not sufficient for the area and improvements are required. 12% disagreed.

611 of respondents to the survey agreed CRL will provide improvement in transport connections and improvement to the local area

Respondents believed that the Croxley Rail Link would also result in improvements to the environment (61%), travel connections (84%), economic growth (72%) and personal travel choices (86%). The improvement to personal travel choices was the area where most people agreed, with 599 respondents (86%) saying yes.

However a number of people also expressed concerns about some aspects of the project. The five main issues raised were.

	Issue	Number of responses
1.	Closure of existing Watford Terminus Station (Watford Met.)	138
2.	Alternative Proposals (Including Bus or Train Shuttle service from Watford Met., a peak only service to Watford Met., running a service between Amersham and Watford)	45
3.	Noise from construction and operations	39
4.	Increased volume of traffic around Watford	34
5.	Visual impact of viaduct	33

The project's response to the key issues can be found in the full consultation report available on [www.croxleyraillink.com](http://www.croxleyraillink.com).

### 3 Public Information Update

Prior to the submission of the TWA application the project embarked on a public information update. The purpose of this update was to inform the public on progress of the project focusing on feedback from the consultation period, an update on the funding process and features of the forthcoming Environmental Statement.

Six factsheets were available to download from the project website including a scheme plan detailing the proposed limits of the scheme and the purpose for which the land is required.

To support the release of the information drop in sessions were held in four different locations in Watford and Croxley Green (see appendix 2) [*Refer to Consultation Report for this appendix*]. These sessions allowed anyone with specific questions about the scheme to meet with members of the project team and discuss the proposals.

The availability of the new information and the drop in sessions were advertised by

- Distribution of a postcard to c.53,000 properties within Watford Borough Council, Three Rivers District Council and Hertsmere Borough Council boundaries
- Newspaper adverts in the Watford Observer and Watford Free papers
- Interview on the local radio station Heart Radio
- Posters displayed within London Underground and London Overground Stations close to the route and within other public places within Watford and Croxley Green
- An email/ letter update to all key stakeholders and members of the mailing list

The project continued to receive many positive comments at this stage.

A number of issues were raised including

- Increased frequency of trains along the existing Network Rail line between Watford High Street and Watford Junction stations, resulting in increased noise and vibration levels.
- The location of Watford Hospital station resulting in the perceived increase in traffic during the construction period and once the scheme is operational.
- The visual impact of the viaduct and the effect on Croxley Green
- Impact of the closure of Watford Met station on existing users.

An assessment of these issues is covered in the Environmental Statement and outlined in the Best and Final Funding Bid.

## 4 Stakeholder Consultation

### 4.1 Network Rail

Network Rail has been integral to the governance of the project. As members of the Strategic and Project board they are fully involved in the project decision making process. The project's engineering design for alterations to Network Rail assets has followed the Network Rail GRIP process allowing for input and assurance at all stages

### 4.2 Local Authorities & Elected Officials

#### *Watford Borough Council & MP for Watford*

Watford Borough Council (WBC) officers and elected officials have been involved with the development of the project and consulted at every stage. A council officer attends the monthly project board meeting and regular dialogue is maintained between WBC's Chief Executive and Senior Officers within HCC. Regular correspondence is also maintained between Richard Harrington MP and the project. Member update briefings have taken place regularly in the form of a face to face presentation or written brief.

WBC land is required for development of the scheme on a temporary and permanent basis and close consultation has been undertaken with the property team to ensure they are content with the proposals. Changes to the designs have been accommodated to reflect WBC's needs, for example moving the location of a temporary site compound on Cardiff Road and reducing the size of the land required for the substation at Tolpits lane. WBC submitted a cabinet paper seeking authority to release the land required which was approved on 5 December 2011.

The site of the station on Vicarage Road was chosen in consultation with the council planning department to ensure it would most appropriately serve the planned Watford Health Campus, which is being developed simultaneously and in close proximity to CRL.

WBC has also played a key role in how the project has interacted with stakeholders and the public. Prior to any release of information they are integral to the authorisation and sign off procedure to ensure they are comfortable with the messages being presented to their community.

#### *Three River District Council and MP for South West Hertfordshire*

Three Rivers District Council (TRDC) officers and elected officials have been involved with the development of the project and consulted at every stage. A council officer attends the monthly project board meeting and regular dialogue is maintained between TRDC and HCC senior officers. Regular correspondence is also maintained between David Gauke MP and the project. Member update briefings have taken place regularly in the form of a face to face presentation or written brief. On occasions Cllr Brading who represents Croxley Green has attended affected party meetings.

The change in alignment of the viaduct which occurred at an early stage of the design process in 2010 was conducted in consultation with TRDC allowing for a detailed understanding of the engineering requirements resulting in the change.

The impact on Watford Road playground has involved officers from different departments to achieve a solution that is acceptable to the council and the project. Agreement has been reached to redesign the layout of the existing playground site to allow a play facility to remain in that location and provide an additional piece of exchange land elsewhere in Croxley Green to compensate for the loss of the open space at Watford Road.

TRDC land is required for development of the scheme on a temporary and permanent basis and close consultation has been undertaken with the property team to ensure they are content with the proposals. In principle the requirements are acceptable.

TRDC has also played a key role in how the project has interacted with stakeholders and the public. Prior to any release of information they are integral to the authorisation and sign off procedure to ensure they are comfortable with the messages being presented to their community.

In addition to the directly affected authorities consultation has also been undertaken with Harrow Council, Hertsmere Borough Council, St Albans City & District Council and Welwyn Hatfield Borough Council.

### **4.3 Station Operators**

#### *London Midland*

As Station Franchise Operator for Watford Junction the project has met representatives from London Midland and been in contact with them regarding the proposals. They have been consulted on the proposed changes required to the platforms and on the impact of the increased passenger numbers within the station. Dialogue is also maintained by the Network Rail project board representative.

#### *London Overground Rail Operations (LOROL)*

LOROL have been consulted on the GRIP 3 designs for Watford High Street where they are the current Station Franchise Operator and Watford Junction.

London Rail as part of Transport for London group (TfL) have been kept informed through internal communications channels and in turn London Rail who manage the London Overground concession have kept the current concessionaire, LOROL, advised of the principles of the project. This has taken place over the last year.

### **4.4 British Waterways (BW)**

As an affected landowner and the operator of the Grand Union Canal the project has been keen to maintain engagement with BW. The project has met representatives from the planning and property teams on several occasions. The promoters and BW have been working collaboratively to reduce the impact of the boaters situated

beneath the proposed viaduct. BW have found a solution to provide temporary moorings during the construction period for the affected boaters.

BW were also consulted on the environmental screening and scoping opinion in May 2011.

Prior to submission of the TWAO application a copy of the draft Order including protective provisions were issued to the legal department allowing for comments to be incorporated into the Order.

#### **4.5 Environment Agency (EA)**

As a key stakeholder the project has maintained a regular dialogue with the EA. Initially the project gave a presentation to a multi disciplinary team within the Agency briefing them on the elements of the proposals. The project has sought guidance from them in respect of data already held and further environmental survey work required.

The EA was consulted on the environmental screening and scoping opinion in May 2011.

Of particular concern to the EA was piling works for the viaduct within the chalk aquifer. In consultation the project has submitted a foundation works risk assessment summarising the proposed methodology to limit the impact on that feature.

Prior to submission of the TWAO application a copy of the draft Order including protective provisions were issued to the legal department allowing for comments to be incorporated into the Order.

#### **4.6 Affected Parties**

CRL have written to all owners, lessees, tenants and occupiers of land to be acquired or used advising them of the scheme and inviting them to public exhibitions and drop in sessions or individual meetings where they were able to discuss the proposals with members of the project team.

CRL has met several times the freeholders and leaseholders of 33 Baldwins Lane and Cinnamon House, sites significantly affected by the proposed works.

Dialogue has been maintained between the project and the leaseholder of Cassio Wharf, a residential mooring affected by compulsory purchase. The project has also written to all of the individual boat owners offering the opportunity to discuss the impact on their moorings. Only some have responded by contacting the project directly or attending one of the exhibitions and drop in sessions.

The project has met several times the leaseholder and occupier of RS Renown, a building that houses Sea Cadets and Morris Minors Day Nursery which is slightly affected by compulsory purchase.

CRL has had individual meetings and correspondence with Greenhill Property 46 Limited, freeholder of Beggars Bush Lane and Croxley Business Park who are

slightly affected by compulsory purchase. In addition an exhibition was held at the business park on 2 August 2011 for all occupiers to see the proposals. A letter signed by all of the occupiers stating their support for the scheme has been received by the project.

CRL has met Sanctuary Housing, the freeholders of residential properties 42 and 44 Stripling Way which are affected by the works to explain the proposals. The project has also written to the occupiers seeking a meeting.

CRL met members of the Holywell allotment society to explain the impact on the allotment site.

#### **4.7 Other Consultees**

As recommended by the Department for Transport's A Guide to TWA Procedures and in compliance with Rule 10(2)(d), CRL has contacted all those named in Schedules 5 and 6 to the Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006 who are entitled, in this instance, to receive a copy of the documents associated with the application, or notice that the application has been made.

Appendix 1 to this Statement sets out the bodies contained within Schedules 5 and 6 and states how those bodies have been consulted [*Refer to Consultation Report for this appendix*].

CRL has also given presentations and attended meetings to discuss the proposals for the following groups and organisations

- Croxley Green Area Forum
- Harrow Rail Users Group
- Watford Central Ward Area Forum
- London Borough of Harrow Rail Liaison
- Disability Watford public meeting
- Watford Health Campus development partner potential bidders
- The Federation of Metropolitan Line Users' Committees

In addition CRL has also engaged with a large number of consultees by writing via letter or email in May 2011 and November 2011 providing information about the scheme and where further information about the proposals could be found. These communications also included an invitation to talk to a member of the project team at a series of public exhibitions and drop in sessions. The list was compiled by

- Completing a stakeholder identification exercise with representatives of the CRL project board.
- A land referencing exercise for land within the vicinity of the scheme.
- Identification of community organizations as part of the equality impact assessment
- Organizations contacting the project to be included on the mailing list

[*Refer to the Consultation Report for the list of organizations included*].



## 5 Ongoing Consultation

CRL is committed to working with the local community, businesses and stakeholders and will continue to maintain a dialogue throughout the statutory authorisation process and construction period.

Once an announcement on funding has been received a further mailing list update will be issued.

The TWA order application documents, including the Environmental Statement and Non technical summary, will be accessible to the public through printed versions available at two local libraries. These documents will also be available to download from [www.croxleyrailink.com](http://www.croxleyrailink.com) and on CD Rom.

# Appendix 6

## Project Response to Key Issues

Response to Key Issues Fact Sheets available on the Croxley Rail Link website.



## The Project's response to the issues raised

We have reviewed all of the issues raised as part of the consultation and where possible taken steps to reduce the impact on local communities.

Our responses to the five main issues raised in the public consultation are below.

### 1. Closure of Existing Watford Terminus Station, known locally as Watford Met.

The closure of Watford Met Station has always been part of the Croxley Rail Link proposals.

The project is aware of public opinion towards the proposed closure following feedback from the consultation and the independent online petition.

However to provide the Croxley Rail Link funding bid with the greatest chance of success, the most economically advantageous scheme needed to be presented. Keeping Watford Met open in any capacity, including running a split or shuttle service, would have a negative effect on the scheme overall resulting in poorer service for all users reducing the economic benefits of the rail link.

### 2. Link to Amersham

Whilst Croxley Rail Link does not prevent a service between Amersham and Watford in the future, the project's objectives will not be changed to include it at this stage. The project is focusing its resources in achieving the current preferred scheme. A separate business case and funding bid would need to be completed to obtain the funding to offer an extended service to Amersham.

### 3. Noise disruption

A noise assessment has been carried out as part of an environmental impact assessment. The results show that although the rail link will result in some increase in noise, it is not expected to generate noise to a level that would require insulation to be provided under *The Noise Insulation (Railway and Guided Transport Systems) Regulations 1996*.

Measures to control noise during construction will be agreed with the local authority and the project will use best practicable means to comply with these. More details can be found in the 'Environment' factsheet



#### 4. Visual Impact of Viaduct

The viaduct is an essential part of the scheme connecting the existing Metropolitan line with the disused Croxley Green Branch line. Due to the height of the existing line, and the need to cross the Grand Union Canal, the River Gade and the Ascot Road dual carriageway the railway needs to be kept elevated well above ground level.

The structure has been designed to minimise the impact on the local area by cladding the structural beams that support the deck of the viaduct and the elliptical design of the piers which will contribute to the integration of the structure within the local townscape.

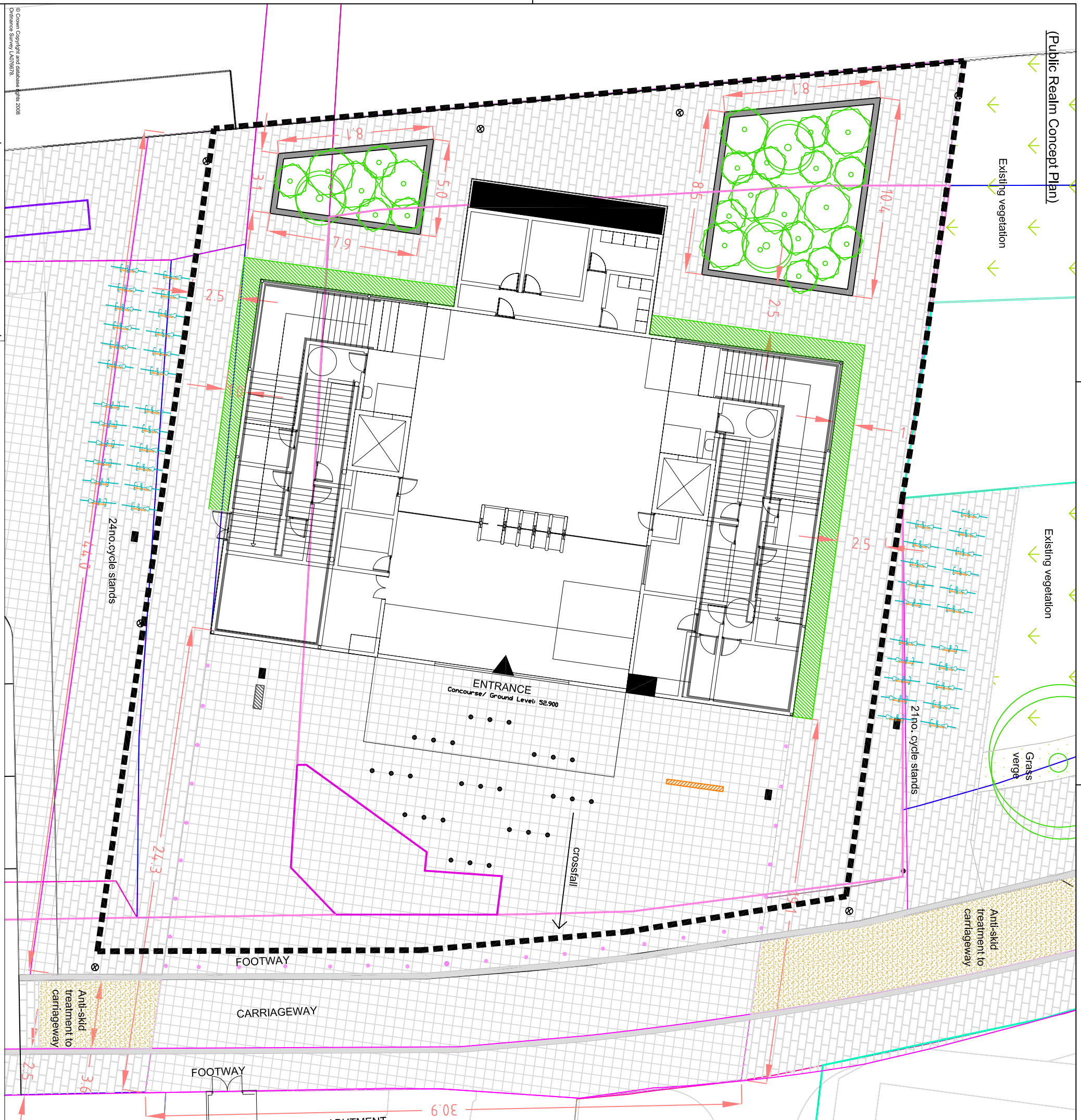
#### 5. Increased Volume of Traffic

During the construction period there will be some localised disruption to the road network, concentrated around Baldwins Lane roundabout, Ascot Road and Vicarage Road. In order to build the rail link an increase in construction traffic is to be expected.

Once the rail link is operational our assessment has shown the scheme will result in 139,000 fewer car trips per year in the local area, thereby reducing road congestion.

Appendix 7  
Indicative Concept Plans for the  
Station Forecourts Public Realm

(Public Realm Concept Plan)



Existing vegetation

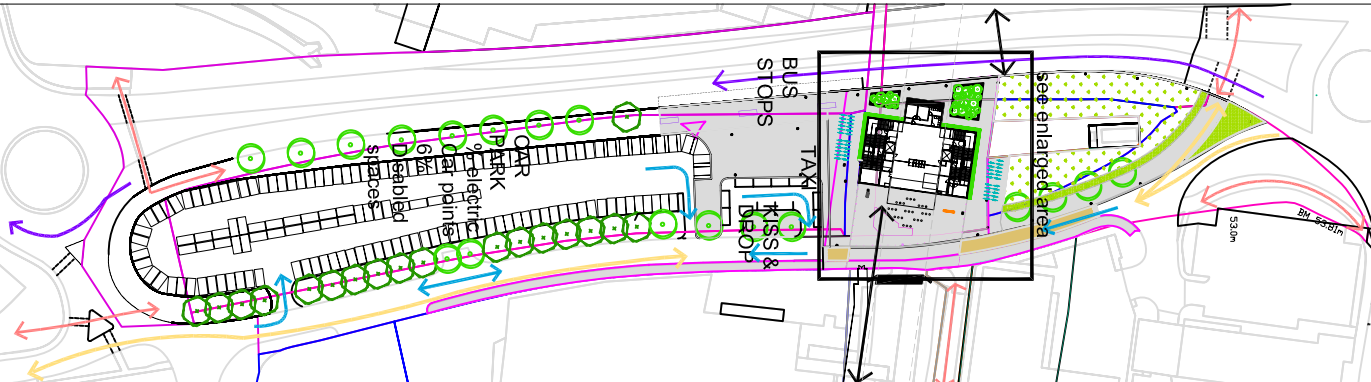
Existing vegetation

Existing vegetation

Anti-skid treatment to carriageway

Anti-skid treatment to carriageway

Access & Wider Public Realm



NOTES

- All specifications to reference TIL Category 1 Standard - 371 Station planning
- Project boundaries: East & West: to existing highway boundary North: to 3rd party ownership boundary South: 5m offset from proposed Station
- NB: Cycle stands and associated pavings included
- All street furniture to LUTFL document standards where required.
- All surface parking laid as falls to drain into carriage east and west.
- Lighting power and control to be supplied to ground marker lights through Station.
- Ground marker lights provisional design extends to interchange beyond project boundary line.
- Amber and red lighting mounted to bridge underside as Street columns as required: responsibility of Highway Authority.
- Paving: design extends provisionally to interchange and public realm areas beyond CDS boundary and are subject to detailed design.
- Landownership: all other areas not noted Hert CC and Watford BC.
- Signage: in line with Watford BC draft signage strategy.



KEY

- Proposed LU ownership boundary
- Natural stone block unit - entrance (see the)
- Natural stone/aggregate slab - (size to c)
- Stainless steel bollard (min 1m), 1no. removable for emergency or service access
- In-ground marker lighting: 27no. 50mm dia.
- Litter bin
- Stainless steel cycle stands: 45 no. for 90 cycles.
- Low level planting (max 1.0m high)
- Shrub and small tree beds with raised natural stone edging (150mm with upstand).
- Local mapping/signage monolith
- Free-standing poster frame unit for TLU/LU plan
- Proposed trees with tree grilles
- Existing trees
- Third Party landownership
- Network rail landownership
- Unknown landownership
- Movement
- Vertical circulation
- Bus circulation
- Cyclist circulation
- Pedestrian circulation
- Potential new pedestrian links

Item No.	Description	Quantity	Unit	Notes
F	...	10	M	...
E	...	10	M	...
D	...	10	M	...
C	...	10	M	...
B	...	10	M	...
A	...	10	M	...

**mouchel**

Herfordshire

Croxley Rail Link

Connecting Watford

**Croxley RAIL LINK**

HERTFORDSHIRE COUNTY COUNCIL

CROXLEY RAIL LINK

ASCOT ROAD STATION

INDICATIVE CONCEPT PLAN

FOR INFORMATION ONLY

Drawn: DORIAN VA, 08.08.2011

Checked: MUI, 08.08.2011

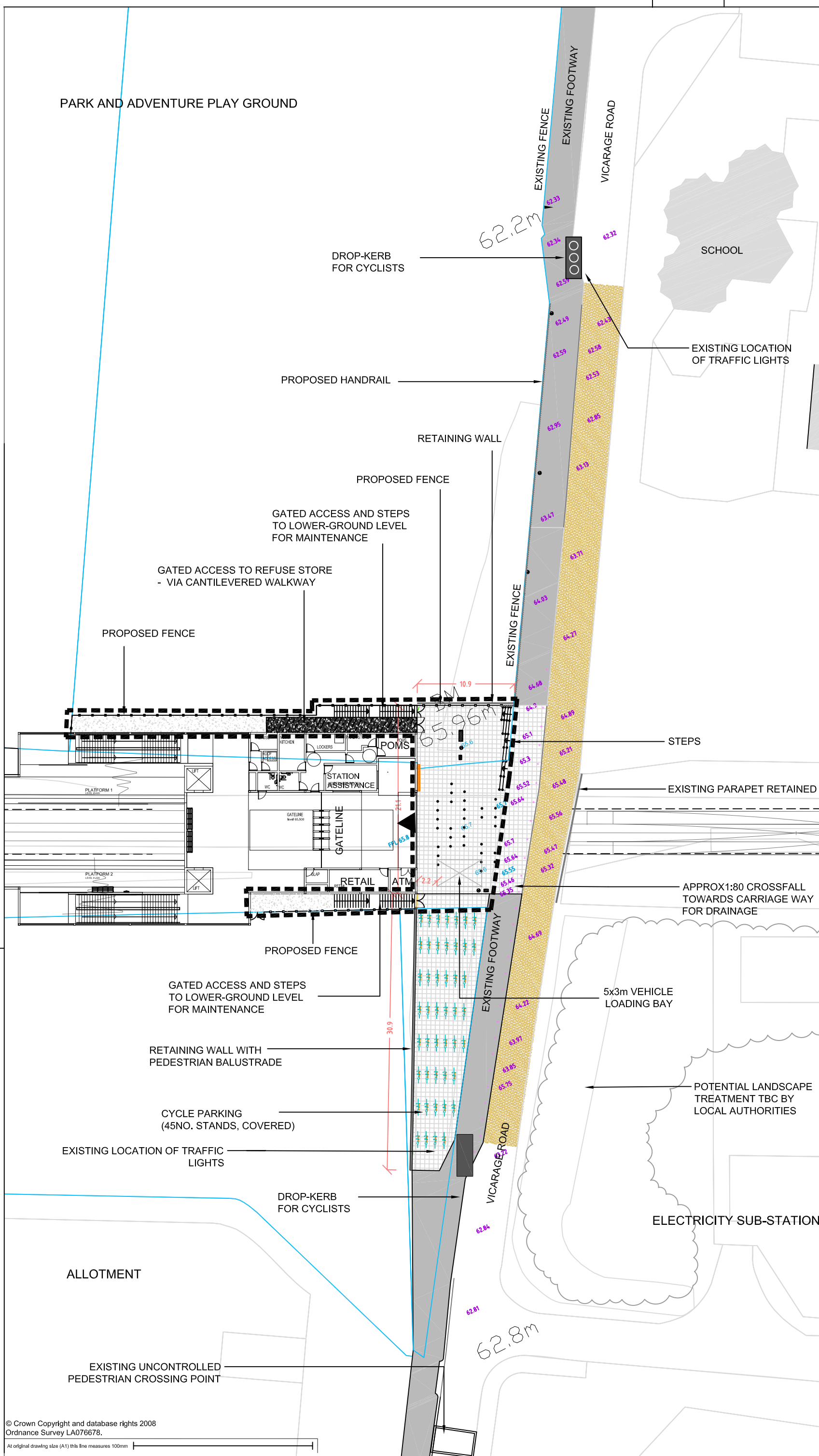
Approved: MUI, 08.08.2011

Scale: 1:100

Drawing Number: 1020781\_ENV\_SIN\_ASS\_FOD\_70\_001

Sheet Size: A1

Version: F



- KEY**
- Proposed LU ownership boundary (external area only)
  - Local Authority land ownership
  - Natural stone slab (size tbc)
  - Natural stone block unit (size tbc)
  - Cantilevered walkway
  - Treatment to carriageway surface
  - Compacted aggregate (eg Type 1)
  - Retaining wall
  - Proposed boundary fence (to match existing)
  - Handrail
  - Stainless steel cycle stands (45no. for 90 cycles)
  - Stainless steel bollard (min 1m)  
1 no. drop-bollard for emergency or service access
  - Wall-mounted poster frame unit for TFL plan
  - Top to bottom: mapping signage, lighting column and litter bin
  - In-ground 50mm LED recessed lighting
  - Lighting column
  - Existing levels  
Proposed levels

**NOTES**

All specifications to reference TFL Category 1 Standard 1-371 Station planning

**Project boundaries:**  
 East: to existing highway kerb  
 North/south: to footway intervention tbc and public realm/station building edge

All street furniture to LU/TFL document standards where required.

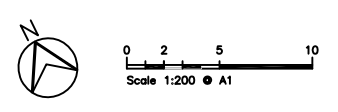
All surface paving laid as falls to drain into carriage east and soft areas (park/allotment to north/south).

Lighting: power and control to be supplied to ground marker lights through Station. Station columns tbc.

Street columns as required: responsibility of Highway Authority.

Landownership: carriageway Hert CC and allotments and park Watford BC.

Signage: in line with Watford BC draft signage strategy.



C		KA	MJ	18.11.11
B		KA	MJ	15.11.11
A	FIRST ISSUE	DRAWN	CHECKED	APPR.
Ver	Amendment	Drn	Chk	App
		Date	Date	Date

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**Croxley Rail Link**  
 Connecting Watford

**Hertfordshire**

Client	HERTFORDSHIRE COUNTY COUNCIL		
Project	CROXLEY RAIL LINK		
Drawing Title	WATFORD HOSPITAL STATION DRAFT CONCEPT SKETCH		
Drawing Status	DRAFT		
Drawn	KA	Checked	MJ
	01.08.11		01.08.11
Approved		Reviewed	
Scale	1:200		Sheet Size A1
Drawing Number	1020781_ENV_STN_ARS_FOS_70_002		Version C

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