Non-technical summary of the Environmental Statement Transport and Works Act 1992 Docklands Light Railway (Capacity Enhancement) Order







The Capacity Enhancement Project



At some times of the day Docklands Light Railway (DLR) trains are crowded. New homes and offices and other development along the route between Bank and Lewisham will make overcrowded trains more common in the future unless measures are introduced to improve the efficiency and capacity of the network. Docklands Light Railway Limited (DLRL) is, as a result, proposing to increase capacity on the DLR route between Bank/Tower Gateway and Lewisham by upgrading stations and other facilities to enable the operation of 3 car trains. At present the route is generally designed for 2 car trains only.

Docklands Light Railway Ltd (DLRL) is owned by Transport for London (TfL) which is the Greater London Authority's organisation responsible for planning and provision of transport in London. TfL came into being on 3 July 2000, and reports to and carries out the requirements of the Mayor for London.

A number of alternative ways of increasing capacity were explored before deciding on the Capacity Enhancement Project. DLRL evaluated whether these alternatives met the objectives of the scheme, which are to:

- provide sufficient capacity
- provide other benefits
- · be feasible to implement
- be cost-effective

Alternatives to the project

The alternatives and their pros and cons are discussed below.

Development of junctions

The junctions on the DLR network provide the main constraint to increasing the capacity of the service. The routes to and from Tower Gateway, Bank, Stratford and Lewisham, for instance, intersect at North Quay Junction, north of West India Quay station. This junction is currently close to capacity, with a train passing every two minutes. DLRL investigated the feasibility of constructing flyovers at this and other junctions to separate trains on the different routes. However, not only would parts of the DLR system have to be closed for long periods to undertake this work, but the completed flyovers would offer significantly less additional capacity than introducing 3 car trains.

Capacity of trains

Other changes to the trains themselves were considered. Removing seats from trains, for instance, would enable more passengers to travel. However, DLRL considered this to be unacceptable since it would result in discomfort for passengers. The introduction of double-decker trains was also considered, but this would mean that the size of the DLR tunnels would have to be increased. This would result in significant disruption, cost and a long closure of the railway during construction.

Number of trains

DLRL also considered reducing the number of trains on less busy sections of the route in order to free up capacity to increase services on the busier sections, such as Stratford to Canary Wharf. This would have created some additional capacity on the network. However, this would have been at the expense of other passengers having to wait longer or change trains.

Frequency of trains

Changing the signalling system to increase the frequency of trains is not an option, since the system is projected to be operating close to capacity by 2007. Further increases in frequency would be limited by the infrastructure constraints discussed above, for example at junctions. Simply adding more vehicles would not lead to an increase in capacity either, since there are currently no routes on DLR where capacity is constrained due to a shortage of vehicles.

The only scheme to meet the capacity requirements for the future was the Capacity Enhancement Project

The proposed scheme will involve modifications to stations, structures, electrical and ventilation systems, viaducts, bridges and a depot.

The following sites will be modified

Tower Gateway Shadwell Limehouse

Westferry Poplar West India Quay South Quay Crossharbour Mudchute

Greenwich Deptford Bridge Elverson Road

Lewisham Beckton Depot



Why is the project being promoted?

About this document

To obtain the powers necessary to construct the project, DLRL is applying to the Secretary of State for a Transport and Works Act Order. As part of the application process, DLRL is required to provide the Secretary of State with an Environmental Statement (ES) setting out the environmental effects of the scheme. This enables the Secretary of State to make a decision about the scheme based on a full understanding of any impacts, positive or negative, that the scheme might have on the local environment. This document is a non-technical summary (NTS) of the ES. The purpose of an NTS is to provide an overview, in non-technical language, of the main findings of the ES.

The Mayor's Transport Strategy (2001) for London emphasises the need to develop the capacity of the transport network to meet the requirements of London's growth, particularly in east London. It acknowledges the key role that the DLR has played in: creating the financial district in the Isle of Dogs; enabling continuing development in the City and Docklands; and enabling the regeneration of east London.

The principal aim of the Capacity Enhancement Project is to accommodate the greater numbers of passengers that will use the Bank/Tower Gateway to Lewisham route in the near future. It has been estimated that, by 2009, the DLR as a whole will be carrying over 80 million passengers per year. The majority of growth on the railway is expected on the Bank to Lewisham route. At present, the DLR carries some 50 million passengers each year. The Capacity Enhancement Project will, therefore, assist in easing congestion and reducing delays along this route, thus enhancing the quality of passengers' journeys.





Alternative design options

In developing the Capacity Enhancement Project,
DLRL identified a number of alternative design options.
In assessing these alternatives the following criteria
were considered:

- Safety whether the design would meet the railway standards as set by the HM Railway Inspectorate, for example to ensure safe escape in an emergency and that gaps between platforms and trains comply with standard width requirements.
- Operation whether the design would improve the reliability of the railway.
- Capacity whether sufficient capacity for passengers would be provided.
- Environment whether environmental benefits and ways of minimising any environmental impacts would be provided.
- Engineering feasibility whether the design would be feasible and could be cost-effectively constructed.

The principal reasons for the rejection of the alternative designs, which included environmental issues, are listed opposite.

DLRL investigated ten sites for providing the additional depot capacity required to store the extra vehicles required. Land to the north and south of the existing Beckton depot facility was considered as the most appropriate site for storing an enlarged fleet. The alternative sites were rejected following investigation and site inspection, due to a combination of environmental, operation, cost and/or lost opportunity factors.

Bank

Platforms at Bank can already accommodate 3 car trains. Other than ventilation upgrading, no physical modifications at the station are required as a result of the Capacity Enhancement Project.

Tower Gateway

Six options were rejected including single and twin track options involving a number of alternative station configurations.

Principal reasons for rejection

Operational and safety issues eg. ensuring that flexibility is retained for train operations and ensuring that the passenger capacity at the station is sufficient.

Shadwell

Two options were rejected which involved extending platforms to the west.

Principal reasons for rejection

Trackworks would be necessary, as would an extension to the viaduct and the potential demolition of properties.

Limehouse

No options were considered due to the physical constraints at this station.

Westferry

One option was considered to extend the platforms to the west.

Principal reasons for rejection

Difficulties in providing access to the extended platform, since adjacent pavements are narrow. Potential for environmental impacts on a playground and nursery during construction. An access to the west would be away from the more likely source of passengers, which is to the east.

Poplar

No options were considered due to the physical constraints at this station.



West India Quay

One option of extending the platform to the north was rejected.

Principal reasons for rejection

Would have resulted in unacceptably large gaps between trains and platforms at the northern end of the station.

Canary Wharf

No options were considered as station can already accommodate 3 car trains.

Heron Quays

No options were considered as station can already accommodate 3 car trains.

South Quay

Ten alternative station arrangements at existing location were rejected which involved minor or major alterations to existing viaduct.

Principal reasons for rejection

Unacceptably long closure of the DLR during construction. High construction costs. Further from new developments in Millennium Quarter.

Crossharbour

Two rejected options included extending platforms to the south only or providing three platforms instead of two.

Principal reasons for rejection

Would require trackworks to the south to maintain access to a siding. Further from London Arena, the main source of passengers.

Mudchute

One option was rejected to extend platforms along existing alignment to the north.

Principal reasons for rejection

Unacceptable gaps between trains and platforms due to alignment of platforms.

Island Gardens

No options were considered as station can already accommodate 3 car trains.

Cutty Sark

Four options were rejected. These involved major civil engineering works to extend tunnels to the north and/or south to accommodate extended platforms.

Principal reasons for rejection

Cost and environmental impact of construction.
Unacceptably long closure of DLR during construction

Greenwich

No options were considered due to the physical constraints at this station.

Deptford Bridge

One option to extend platforms to the north was rejected.

Principal reasons for rejection

Would have required demolition of property and may have resulted in environmental impacts on the Ravensbourne River.

Elverson Road

Two options to extend the platforms further to the south were rejected.

Principal reasons for rejection

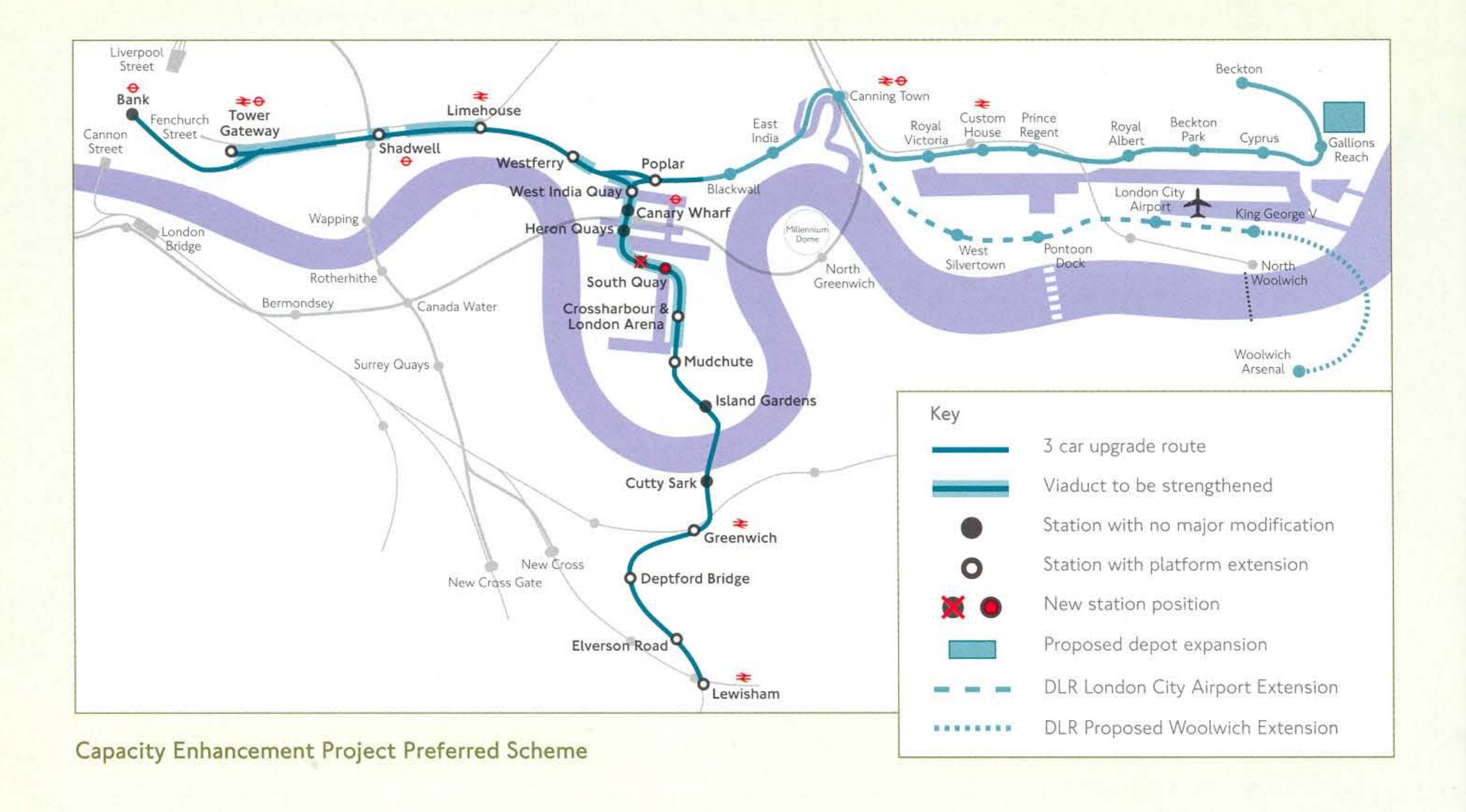
Platform would overshadow the Ravensbourne River, potentially resulting in environmental impacts.

Lewisham

One option was rejected which involved extending platforms to the north and changing the status of the station from an 'above ground' station to an underground station.

Principal reasons for rejection

Operational requirements and associated costs of an underground station.



A description of the proposed Capacity Enhancement Project and its operation

The Route

The route to be upgraded extends from termini at Bank and Tower Gateway Stations in the west to Lewisham Station in the south. The work consists of:

- Upgrading stations to accommodate 3 car trains

 a minimum platform length of 84m is required with
 a desirable length of 90m. New or extended station
 canopies will be provided at some stations. Additional
 station entry/exit points will also be provided.
- Modifications to track layout at Tower Gateway, Shadwell,
 Poplar and Mudchute to enable platform extensions.
- Strengthening viaducts and other structures between Bank/Tower Gateway and Crossharbour to ensure they will withstand the increased load of 3 car rather than 2 car trains. (The remainder of the route is already designed for 3 car operation).
- Expanding the existing Beckton DLR Depot to accommodate a larger DLR train fleet.
- Upgrading of electrical systems, including the construction of a new DLR sub-station.
- Upgrading of ventilation at Bank and Mudchute.

Design and Operation

The Capacity Enhancement Project will not result in any major changes to train service frequencies when it becomes operational in 2009. However, increased service frequencies will occur on the DLR network due to the DLR London City Airport and Woolwich extension schemes. This has been taken into account in assessing the environmental impacts of the Capacity Enhancement Project.

Additional Railcars

DLRL will buy a minimum of eighteen additional railcars required as part of the scheme.



Overview

It is envisaged that the scheme will be constructed over approximately a two year period, between spring 2007 and mid 2009, with the scheme opening in summer/autumn 2009. Works along the route will be undertaken from forty two worksites.

Where possible, works will be undertaken during the daytime. The likely daytime hours of work will be: 7.30am to 6.30pm on weekdays; and 8am to 1.30pm on Saturdays. These working hours include half hour start up and shut down periods during which time no potentially noisy construction equipment will be used. The start up and shut down periods are: 7.30am to 8am and 6pm to 6.30pm on weekdays; and 1pm to 1.30pm on Saturdays.

The scheme will require potentially noisy construction works to be undertaken, including major works for station extensions and viaduct-strengthening. DLRL wishes to keep the railway operating so as to maintain the transport service and minimise disruption for DLR passengers as far as possible. It is not considered viable to simply close the railway for the required duration in order to undertake the works, yet some work can only be carried out safely when no trains are running. Therefore some works that affect existing track and structures will need to be undertaken

at night, and extensive night-time possessions of the railway will be required. Noise produced by these activities is recognised as a potentially significant environmental impact. It has been assessed in detail, and ways of reducing this impact have been identified.

Station Works

The nature and location of the station works is indicated on the following page.



New station at South Quay

Summary of works required

| | Platform | Station work | | | | | | |
|-----------------|---------------|--------------------------------------|----------------------------|-----|------------------|---------------------|-------|----------------------------|
| | extensions | Additional/ replacement stairs | Emergency stairs/bridge | New | Canopy extension | Additional lifts | Track | Additional ticket machines |
| Bank | | | | | | | | |
| Tower Gateway | East | | | | | | | |
| Shadwell | East | | | | | | | |
| Limehouse | East | | | | | | | |
| Westferry | East | | | | | | | |
| Poplar | East | | | | | | | |
| West India Quay | South | | | | | | | |
| Canary Wharf | | | | | | | | |
| Heron Quays | | | | | | | | |
| South Quay | New station | | | | | | | |
| Crossharbour | North & south | | | | | | | |
| Mudchute | North | | | | | | | |
| Island Gardens | | | | | | | | |
| Cutty Sark | | | | | | | | |
| Greenwich | West | | | | | GL COL | | |
| Deptford Bridge | South | | | | | | | |
| Elverson Road | North & south | | | | | | | |
| Lewisham | North | | | | | | | |

In addition, minor changes will need to be made to ventilation systems at Bank and Mudchute and a new electricity sub-station will be located close to Limehouse station. Signalling works and diversions of utilities, such as telecommunication cables, will also be required.

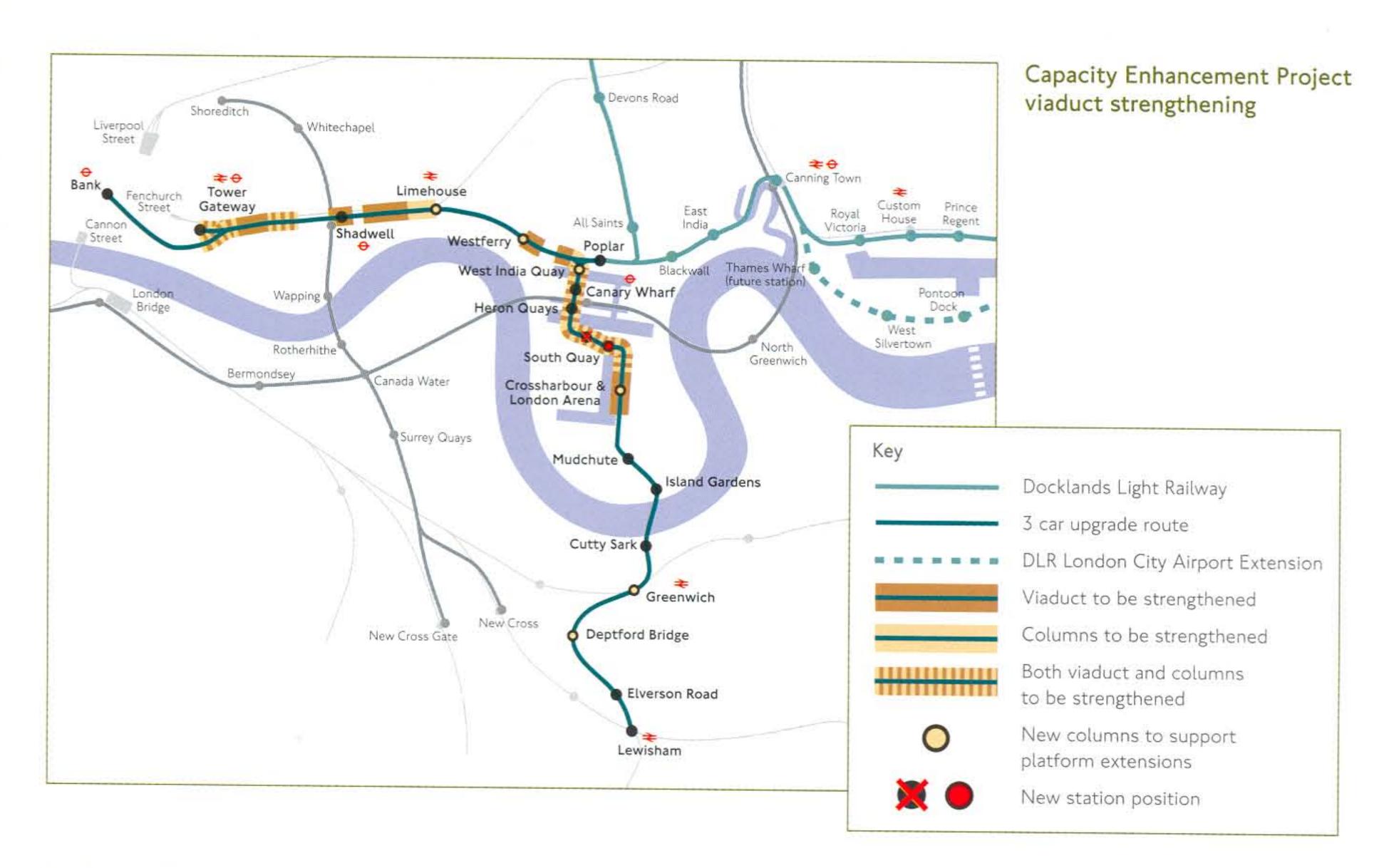
The main works to extend platforms will typically involve the following sequence of events:



South Quay station will be re-located under the Capacity Enhancement Project. The sequence of works to construct the new station will be as follows:



A period of testing will then follow to ensure that the completed scheme is operating satisfactorily.



Installation of fencing around site boundary



Earthworks

Construction of access roads

Installation of decontamination capping of the site

Construction of hard standing areas

Construction of rail infrastructure

Installation of depot facilities

Connection of existing depot infrastructure to new infrastructure

Viaduct Strengthening

The location of the viaduct strengthening works is indicated in the figure above.

Depot Works

The existing DLR depot at Beckton will be expanded to accommodate 3 car trains. Land to the north and south of the existing depot will be acquired to construct the expanded depot. The site is contaminated. Measures will therefore be undertaken as part of the project to ensure appropriate site clean-up.

The construction sequence is shown to the left. A period of testing will then follow to ensure that the completed depot is operating satisfactorily.

The positive and negative effects of the scheme

Overall, the scheme is in line with national, regional and local planning policy, including the Mayor's Transport Strategy. Public consultation on the scheme has identified that the project has overwhelming public support and it is envisaged that it will have a major positive impact on the local area.

The project will inevitably cause a degree of disruption while it is being constructed, as with most major transport infrastructure projects. Construction equipment and hoardings are likely to be very visible. Significant noise disturbance may arise at a number of receptors along the route during construction activities. Drivers, public transport users, pedestrians and cyclists may also experience delays during temporary road and footway closures and diversions. The combination of these construction effects is likely to heighten any overall sense of disruption felt by those living and working close to the route of the scheme.

Although the scheme will occupy existing DLR track for the entire route, there will be some minor permanent land take. This permanent land take is required to accommodate platform extensions and associated new accesses, and a new DLR electricity sub-station at Limehouse. Only a small part of this land is not within DLRL ownership and the implications are a matter for compensation assessed in accordance with the statutory compensation code. Expansion of the Beckton Depot will require development of new sites currently owned by British Gas/SecondSite to the north and south of the existing depot.

The scheme will have a number of significant positive effects. It will significantly increase access to job opportunities through enhanced capacity. The scheme will enable an additional 16,200 passengers to travel to/from Docklands and the City in the typical three-hour morning commuting period.

This will enable planned development within Docklands and the City to come forward earlier. The additional capacity is predicted to facilitate the development of 364,500m² of planned commercial floorspace, equating to 17,840 permanent jobs being released in 2009.

The Capacity Enhancement Project will benefit DLR passengers by improving the quality of their journey and the reliability of the service. By increasing capacity on the DLR, the project is also likely to contribute towards the reduction of social exclusion through increased access to local employment opportunities and social facilities.

Assessing the environmental impacts of the scheme

The impacts of constructing and operating the scheme have been assessed in consultation with statutory bodies and in accordance with Environmental Impact Assessment (EIA) legislation and guidance. The environmental topics that have been assessed as part of the EIA include:

- Planning
- Socio-economics
- Land Use and Land Take
- Dust and Air Quality
- Noise and Vibration
- Townscape and Visual
- Traffic and Transport
- Ecology
- Water Resources
- Contaminated Land
- Archaeology and Cultural Heritage
- Electromagnetic Effects



Dealing with the potential impact of constructing the scheme

Code of Construction Practice

It is envisaged that most construction impacts will be controlled by adherence to a Code of Construction Practice (CoCP). The draft CoCP prepared for the Capacity Enhancement Project will be developed through discussions with the Corporation of London and the London Boroughs of Tower Hamlets, Greenwich, Lewisham and Newham and other appropriate statutory bodies. The draft represents a minimum level of mitigation to which the DLRL is committed.

The CoCP sets out the measures that will be undertaken by the Contractor to ensure site safety and good site practice with regard to the environment during construction works.

The CoCP contains relevant statutory codes, standards and legislation applicable to the regulation of construction practice and its effects on health and safety and the environment. It sets out a range of good practice procedures to control noise, dust, site discharges and works traffic and measures to protect groundwater and aquifers during works.

The CoCP will be included in the contractual arrangements between DLRL and the Contractor. Adherence to the CoCP will, therefore, be compulsory.

The CoCP requires the Contractor to provide a telephone information and complaints 'hotline' which is staffed at all times during working hours. The number for this hotline will be displayed prominently at all work sites.

Specific Measures

Noise

High noise levels are anticipated at locations along the route for short periods of time during construction works. Various on-site management measures will be used to minimise noise impacts during construction. These measures will be agreed with the Local Authorities before the works commence. In some cases, night time noise

from construction may be mitigated by providing secondary glazing at specified properties.

Visual

Temporary visual intrusion at worksites will be minimised by appropriate hoardings.

Pollution

Potential pollution impacts on watercourses and groundwater from site run-off and discharges will be mitigated through good site practice, as set out in the CoCP, and compliance with Environmental Agency discharge consents.

Traffic

Temporary road closures and footway and cycle path diversions are inevitable during the construction phase. To reduce traffic disruption on closed roads diversion routes will be put in place alongside temporary traffic management measures, which will be agreed with the highway authority in advance of works. Construction traffic will be routed to main roads. Specific HGV routes will be agreed with Transport for London and the other highway authorities, aiming to avoid sensitive residential areas and unsuitable parts of the network wherever possible. Siting, design and layout etc of accesses for construction traffic will be agreed with the highway authority prior to works to ensure highway safety.

Contaminants

Ground investigations indicate that contaminants may be present in the ground at some locations in the vicinity of the scheme, due to the historic and ongoing land uses. For instance, Beckton Depot was the site of an extremely large gas works, which resulted in contamination of this site. An appropriate level of site clean-up will be used to deal with contaminated land. Site investigations will be undertaken before the works start to inform the clean-up measures. The works contractor will comply with the CoCP and relevant legislation with respect to the safe handling and disposal of contaminated materials.



Dealing with potential long term impacts of operating the scheme

Good operational standards will be applied and the project will be designed to minimise any environmental impacts.

Noise impact

The scheme will not bring about a large step change in noise and vibration levels from the railway. The maximum noise increase is expected to be 1.8 decibels, which is unlikely to be noticeable. Impacts will therefore be no more than slight and the need for mitigation measures, such as additional noise barriers, will be small. DLRL operates a Noise and Vibration Policy and the Capacity Enhancement Project will be designed to comply with this. The Policy sets out targets for trackside noise level, ground vibration and ground-borne noise. Adherence to these targets protects people living and working next to DLR rail tracks from potential noise and vibration impacts from trains. Noise barriers will be provided as necessary along the route of the project to attenuate noise levels from passing trains to within levels specified by the Policy.

Visual impact

There will be some adverse impacts on townscape and views in the vicinity of Shadwell, Limehouse, Westferry, Mudchute and Deptford Bridge stations. However, measures such as replacement or additional trees and planting will mitigate these impacts in the longer term, although impacts will remain for a small number of properties at Westferry. The railway viaducts at Limehouse and Greenwich are Grade II listed, as is the mainline station at Greenwich. Listed buildings consent will be required to undertake the works.

The new South Quay Station will obstruct some views across Millwall Dock. However, construction of a station of high architectural quality in this location will help to mitigate this impact. Improvements to the streetscape immediately below the station will also go some way to mitigating the impact. The impact will also be slightly offset by the removal of the existing station, which will open up a currently dark circulation space beneath this station. Creation of a new access stairway at Shadwell will require the unblocking of one of the viaduct arches, which will have a beneficial effect. Overall, the mitigation measures proposed as part of the scheme will reduce adverse townscape and visual impacts.

In developing the Capacity Enhancement Project, DLRL and its consultants have held regular consultations with the City of London and the London Boroughs of Tower Hamlets, Newham, Greenwich and Lewisham, within whose administrative boundaries the upgraded scheme will run. DLRL has also consulted the public, with exhibitions held at a number of locations along the route, and other relevant stakeholders.



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Chinese

假若你想要中文版的這份小冊,請用上述地 阯 給我們寫信。

Vietnamese

Nếu bạn muốn có tài liệu này bằng ngôn ngữ của bạn, xin gửi thư cho chúng tôi theo địa chỉ trên.

Greek

Αν θέλετε το έγγραφο αυτό στη γλώσσα σας, παρακαλείσθε να μας γράψετε στην πιο πάνω διεύθυνση.

Turkish

Bu belgenin kendi dillerinde çevirisini isteyenlerin yukarıdaki adresimizden bize yazmaları rica olunur.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਪਰਚਾ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦਾ ਹੈ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਉੱਪਰ ਲਿਖੇ ਪਤੇ 'ਤੇ ਸਾਨੂੰ ਖ਼ਤ ਲਿਖੋ। Other formats and languages of this document

DLR Capacity Enhancement Project

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Email cep@dlr.co.uk
www.dlr.co.uk

Hindi

यदि आपको यह पत्रिका अपनी भाषामें चाहिए, तो कृपया हमें उपरोक्त पते पर लिखें।

Bengali

আপনি যদি এই লিফলেট আপনার নিজের ভাষায় পেতে চান তাহলে অনুগ্রহ করে উপরের ঠিকানায় আমাদের কাছে চিঠি লিখুন।

Urdu

پتے پر لکھیں. اگر آپ اس دستاویز اپنی زبان میں چامتے میں تو برائے کرم ممیں اوپر دیئے گئے

Arabic

الحصول على هذه الوثيقة بلغتك الخاصة، الرجاء مراسلتنا على عنواننا المذكور أعلاه. إذا كنت تود

Gujarati

જો તમારે આ પત્રિકા તમારી પોતાની ભાષામાં જોઇતી હોય, તો અમને ઉપરના સરનામા પર લખો.

The Environmental Statement

The Environmental Statement and this Non-technical summary have been prepared by Environmental Resources Management (ERM), on behalf of DLRL. ERM is an independent environmental consultancy with extensive experience of undertaking Environmental Impact Assessments of transport infrastructure schemes.

Copies of the Environmental Statement are available for inspection at the following locations:

Docklands Light Railway Ltd

PO Box 154, Castor Lane, Poplar, London E14 0DX

London Borough of Greenwich - Strategic Planning

Peggy Middleton House, 50 Woolwich New Road, London SE18 6HQ

London Borough of Lewisham - Planning Services

5th Floor, Laurence House, 1 Catford Road, Catford, London SE6 4RU

London Borough of Newham - Environmental Department

25 Nelson Street, East Ham, London E6 2RP

London Borough of Tower Hamlets - Town Planning

41 to 47 Bow Road, London E3 2BS

Corporation of London - City Planning Office

PO Box 270, Guildhall, London EC2P 2EJ

Rees & Freres - Parliamentary Agents and Solicitors

1 The Sanctuary, Westminster, London SW1P 3JT

Beckton Globe Library

1 Kingsford Way, London E6 5JQ

Canning Town Library

Barking Road, Canning Town, London E16 4HQ

Cubitt Town Library

Strattondale St, London E14 3HG

Watney Market Library

30 to 32 Watney Market, London E1 2PR

Limehouse Library

638 Commercial Road, London E14 7HS

Wapping Library

St Peter's Centre, Reardon Street, London E1 9QN

Lewisham Library

199 to 201 Lewisham High Street, Lewisham SE13 6LG

Wavelengths Library

Giffin Street, Deptford SE8 4RJ

Camomile Street Library

12 to 20 Camomile Street, London EC3A 7EX

Blackheath Library

Old Dover Road, Blackheath SE3 7BT

East Greenwich Library

Woolwich Road, East Greenwich SE10 0RL

West Greenwich Library

Greenwich High Road, Greenwich SE10 8NN

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