

# Northern line extension

## Core Community Liaison Group

### Meeting 30.07.2015

# Summary Update



- Code of Construction Part B (COCP B) approved earlier in the year
- Enabling and site establishment works started March 2015 and site accommodation is ready at Montford Place and Nine Elms. Progress is ongoing on all four sites
- Office cabins at Battersea have been installed and fit out is ongoing to allow project team to move in later this summer.
- Community Drop in Sessions held during April, May, June and July of 2015 at Kennington, Nine Elms and Battersea
- NLE 24/7 Helpdesk now on **Option 1** of TfL number **0343 222 2424**



# NLE Summary timetable

Year	Key milestones
2014	Transport and Works Act Order decision, Design & Build contract signed
2015	Agreement on Code of Construction Practice Part B Start of main works at all sites
2016	Start of Tunnel Boring Machines
2017	Completion of tunnelling
2018	Fit out of new stations, Kennington shafts complete inc reinstatement, work at Kennington station complete
2019	Testing, commissioning, trial operations
2020	NLE complete and in service



# Kennington Green progress

Year	Key milestones
• Mar- Jun 15	<ul style="list-style-type: none"><li>• Site establishment</li><li>• Obstruction clearance</li><li>• Surveying works</li><li>• Starting of diversionary utility works</li></ul>
• Jun – Aug 15	<ul style="list-style-type: none"><li>• Commence Kennington Road</li><li>• Installation of Hoarding on Green</li><li>• Removal Gingko tree</li><li>• Install Traffic Management for north and south utilities works</li><li>• Install Piling Mat</li><li>• Appoint piling contractor</li></ul>
• Sep – Nov 15	<ul style="list-style-type: none"><li>• Complete pre-construction utilities diversionary works</li><li>• Install guide walls</li><li>• Commence Secant Piling</li><li>• Demolish Chivas wall by Montford Place</li></ul>



# Summary Update March-June 2015



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1) Cabin install at Montford Place



2) Traffic Management in place



3) Multi Utility Trench



4) Installation of Substation bases



5) Service trial holes



6) Montford Place Compound Set-up



# Kennington Park progress

Year	Key milestones
• Mar- Jun 15	<ul style="list-style-type: none"> <li>• Site establishment</li> <li>• Obstruction clearance</li> <li>• Surveying works</li> <li>• Starting of diversionary utility works</li> </ul>
• Jun – Aug 15	<ul style="list-style-type: none"> <li>• Commence and complete hoarding</li> <li>• Install construction accommodation onsite</li> <li>• Demolish lodge</li> <li>• Lay piling mat</li> <li>• Complete surveys</li> <li>• Appoint piling contractor</li> <li>• Progress utilities diversionary works</li> </ul>
• Sep – Nov 15	<ul style="list-style-type: none"> <li>• Complete pre-construction utilities diversionary works</li> <li>• Install guide walls</li> <li>• Commence Secant Piling</li> </ul>

# Kennington Park March-June 2015



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1) Hoarding Install



2) Demolition of Lodge



3) Closing of Road for Gas Diversion



4) Laying New Gas main



5) Topsoil strip



6) Piling Mat Install



# Nine Elms progress

Nine Elms	Enabling Works
Mar – Jun 15	<ul style="list-style-type: none"><li>• Hoarding installation</li><li>• Installation of office cabins.</li><li>• Substation foundations</li><li>• Access ramp in Pascal Street</li><li>• Tarmac removal and piling mat excavation</li><li>• Piling mat construction</li><li>• Obstruction removal</li><li>• Boiler House and Covent House demolition.</li><li>• Chimney demolished</li></ul>
Jun – Sept 15	<ul style="list-style-type: none"><li>• Demolition of Banham's building</li><li>• Installation of hoarding and scaffold erection at the front of Banham's building</li><li>• Continue obstruction removal and build of piling platform and guide wall</li><li>• Piling enabling works (bentonite plant construction)</li><li>• Piling works in former Sainsbury's car-park</li><li>• Exit gate in Pascal Street will be used for site traffic</li><li>• Hoarding graphics installed to TfL standards</li></ul>



# Nine Elms Update March-June 2015



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1) Hoarding installation



2) Installation of office cabins.  
Fit-out being carrying out



3) Substation foundations



4) Access ramp in Pascal Street



5) Tarmac removal and  
piling mat excavation



6) Piling mat construction



# Nine Elms Update March – June 2015



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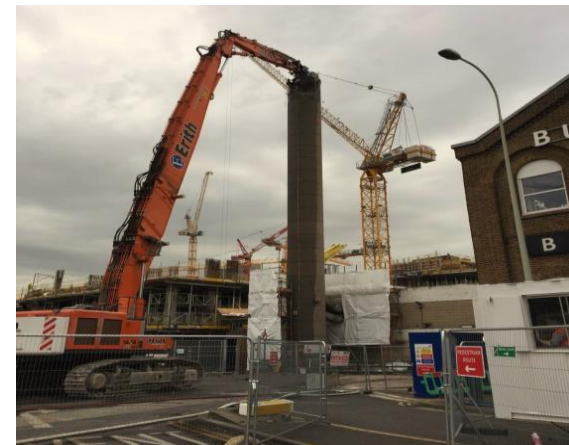
7) Obstruction removal



8) Boiler House demolition



9) Covent House demolition



10) Demolition of Chimney



# Battersea Progress and Update

Year	Key milestones
Mar - Jun 15	<ul style="list-style-type: none"> <li>• Surveys. Radar detection from ground level</li> <li>• Construction of conveyor foundations</li> <li>• Hoarding Survey</li> <li>• Hoarding Installation</li> <li>• Preparation site and sheet piling operations</li> <li>• Continue diaphragm walling</li> </ul>
July - Sept 15	<ul style="list-style-type: none"> <li>• Install conveyor to Jetty</li> <li>• Install tie-backs around sheet pile wall</li> <li>• Install and commission Bentonite Plant</li> <li>• Complete 4 storey office installation</li> <li>• Provide access road around Crossover Box</li> <li>• Complete services laying to site in Battersea Park Road (traffic management needed)</li> <li>• Commence diaphragm walling operations</li> </ul>
Oct - Dec 15	<ul style="list-style-type: none"> <li>• Commence bored piling and plunge column installation</li> <li>• Install new site access road and pedestrian crossing (continuation of traffic management scheme)</li> <li>• Capping beam construction</li> <li>• Commence excavation operations inside the Crossover Box</li> </ul>



# Battersea Progress Mar – June 15



Battersea Crossover Box sheet piling operation completed



Conveyor Belt installation



Site Accommodation  
Establishment



Removal of obstructions within Station Box left behind from  
previous industrial use



# Code of Construction Practice Part B



- The Code of Construction Practice was approved by the London Boroughs of Wandsworth and Lambeth in May. Consulted also with Southwark.
- The requirements of the Code of Construction Practice parts A and B have been incorporated into the FLO practices and procedures
- Core working hours are from
- **08:00 to 18:00hrs Monday to Friday and**
- **08:00 to 13:00hrs on Saturdays**



# Update – Ground Investigations

- The NLE team is approaching completion of what is called concept design
- Early findings are consistent with expectations
- Compensation grouting is to be eliminated from the project. Detailed design planning has reduced the size of the two step plate junctions length. Armed with a smaller footprint, predicted settlement extents are reduced.
- Ground Conditions for tunnelling are predominantly London Clay, an ideal tunnelling medium.



# Update – Ground Investigations

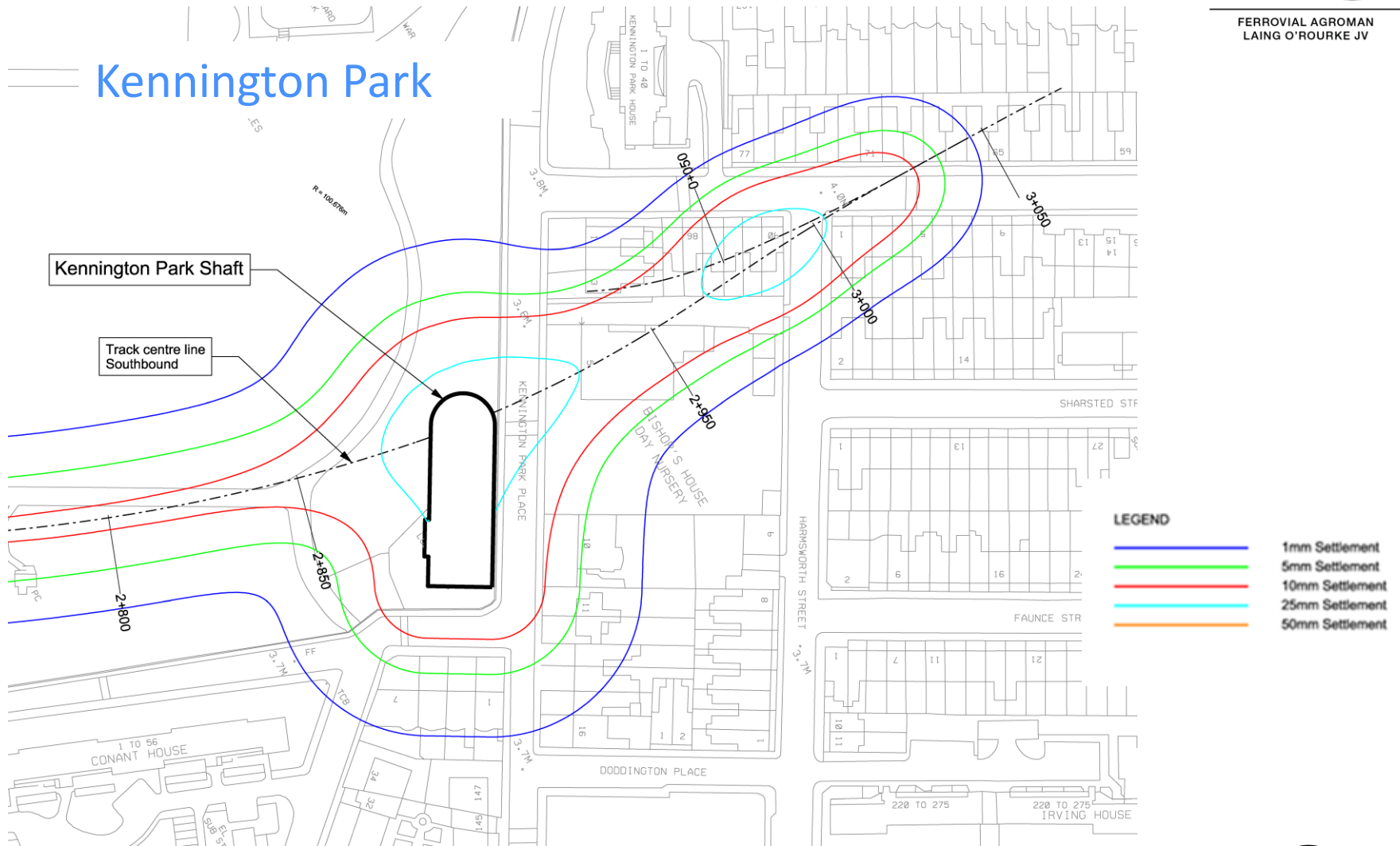
- Groundwater - The step plate junction (SPJ) is predominately within a full face of impermeable London Clay.
- The invert of the Southbound SPJ (Kennington Park shaft) is adjacent to the bottom of London Clay / Top of the water bearing Lambeth Group.
- Local “de-pressurisation” wells from within the tunnel maybe utilised. Large scale dewatering will NOT be required.
- Tunnelling – The main tunnel will be driven utilising a new Earth Pressure Balance Tunnelling Boring Machine. This will control settlement to tight acceptable parameters.
- Arrangements for archaeological works are being progressed







# Settlement Contours

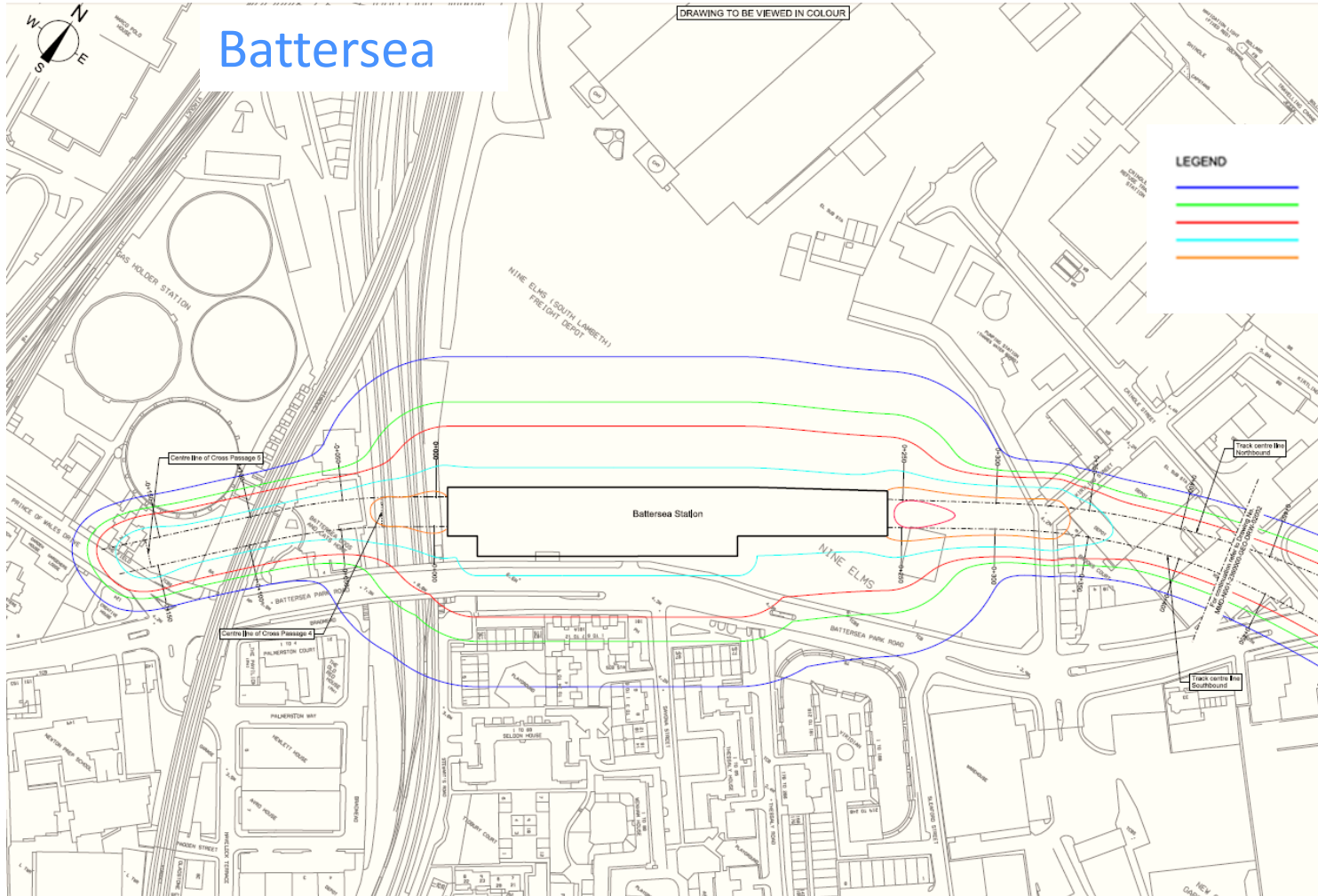




# Settlement Contours



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# Defect / Condition Surveys

- To be undertaken on properties predicted to experience 1mm or more settlement.
- TfL has started contact to affected properties via introductory letter.
- Subcontract awarded to CPM Surveys Ltd.
- Defect Surveys progress:
  - 75 % of the properties within the zone of influence of the pilling works in the south area of Nine Elms have now been successfully completed.
  - Surveys commenced in July to properties around the Kennington shafts and to continue through August to ensure they are undertaken no earlier than 12 weeks, and no later than 4 weeks prior to the commencement of construction of the relevant part of the works.
- In areas of Spray Concrete Lining (SCL) works and Step Plate Junctions surveys will be undertaken at a later date in advance of construction (second half of 2016 and first half of 2017)
- Where necessary, a second survey will be undertaken to establish the difference between the two assessments. Report is photographic and written.



# Settlement Deeds

- TfL has contacted affected properties via letter about Settlement Deeds.
- Settlement deeds have been offered to property owners where the property falls within the NLE Limits of Deviation (limits on which the NLE tunnels are to be built)
- A further letter, answering Frequently Asked Questions, was sent out following the initial one.
- Differences between Settlement deeds and Defect Surveys discussed at March and June 2015 CLG meetings.

# Instrumentation & Monitoring

- Consultants finalising damage assessments which will inform the detailed monitoring scope – which is crucial for programme success required in this period.
- Monitoring tender returns are currently under review. Monitoring subcontract award is imminent.
- A minimum of 4 weeks notice is given to building owners prior to the installation of monitoring equipment.
- Monitoring equipment will comprise Building Research Establishment (BRE) studs (structure levelling studs) and 3D geodetic prisms.
- Installation of ground monitoring studs around shafts/stations areas commenced April 2015. Base readings have been taken.
- Installation of BRE and Prisms started already in the residential area at the south of Nine Elms.



# Monitoring techniques Buildings – Real time data: 3D geodetic prisms



Automatic Total Station (ATS)



Prisms

**ATS: an electrical/optical instrument used in modern building construction to measure slope distances from the instrument to a particular point.**



# Monitoring techniques

## Buildings – Manual data:

### BRE studs (structure levelling studs)





# Construction Environmental Monitoring



- Works have been assessed using the NLE construction noise and vibration mitigation scheme and no properties were found to be above the threshold for secondary glazing or temporary re-house
- Unattended noise monitors are installed at Kennington Green.
- Unattended monitoring for Battersea and Nine Elms will also be completed over the coming weeks.
- Attended monitoring is currently being undertaken by specialist consultant (Temple) on all sites.
- Noise predictions show that an acoustic shed will be needed at Kennington sites to minimise the noise associated with 24/7 tunnelling works.
- Noise modelling is being updated from the Environmental Statement, to include more detailed construction methodologies and mitigation measures for the duration of the scheme



# Construction Environmental Monitoring...



- Passive dust monitoring in place. Dust glass slides installed at strategic locations outside sites boundaries. Data analysed on a fortnightly basis.
- Unattended air quality monitoring to be installed within 6 weeks. Prior to major sites works commencing.
- Noise predictions will be reviewed on a 6 monthly basis to capture any design changes and informs Section 61 consents
- Best Practicable Means will be applied to mitigate noise and vibration at source
- We are contacting other developers and Nine Elms on the Southbank to share data

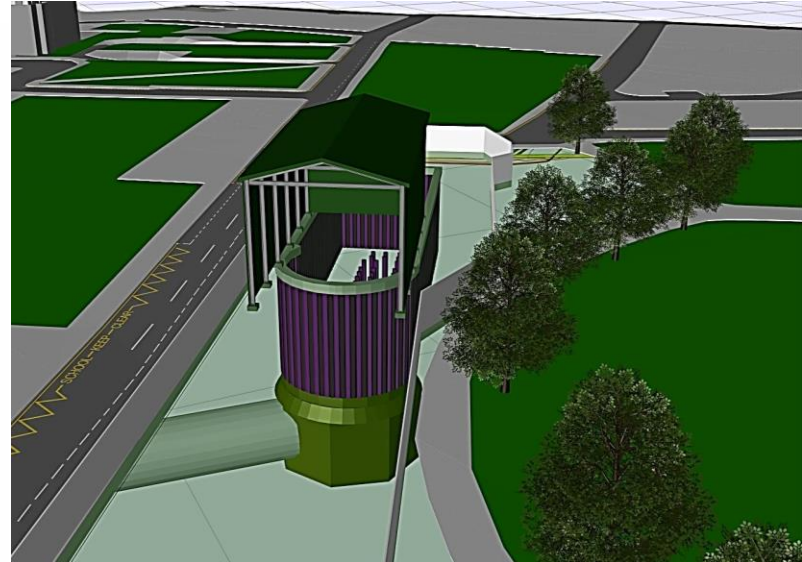


# Proposed Acoustic Enclosures

## Kennington Green



## Kennington Park



- Dimensions : Approx. 14m high x 34 long x 18m wide
- In place for over 18months whilst tunnelling operation is ongoing
- Colour to complement the existing environment

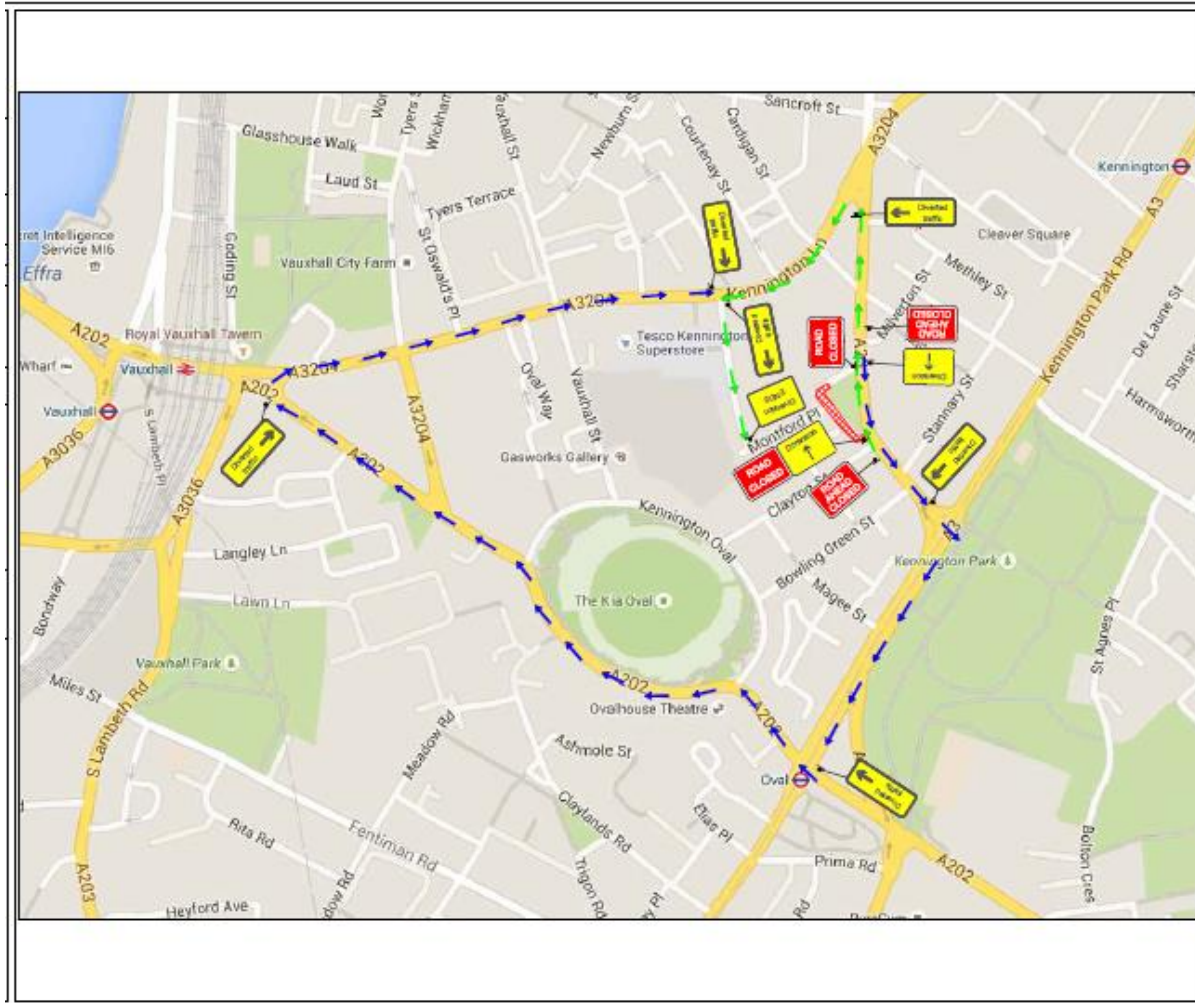
# Traffic Management Plans



- Traffic Management Plans are with Local Authorities. Approval sought for every change
- Val Shawcross, AM, visited Kennington with community representatives to review all traffic management plans
- Vehicles entering and leaving are being modelled for traffic flows
- Road sweepers will operate in the area as required
- LGVs vehicle drivers are required to be trained and vehicles required to comply with cycle safety legislation. NLE check and audit these requirements
- Traffic Management regularly reviewed and adjusted. TfL Surface ride cycle routes integrated into temporary traffic management and road schemes



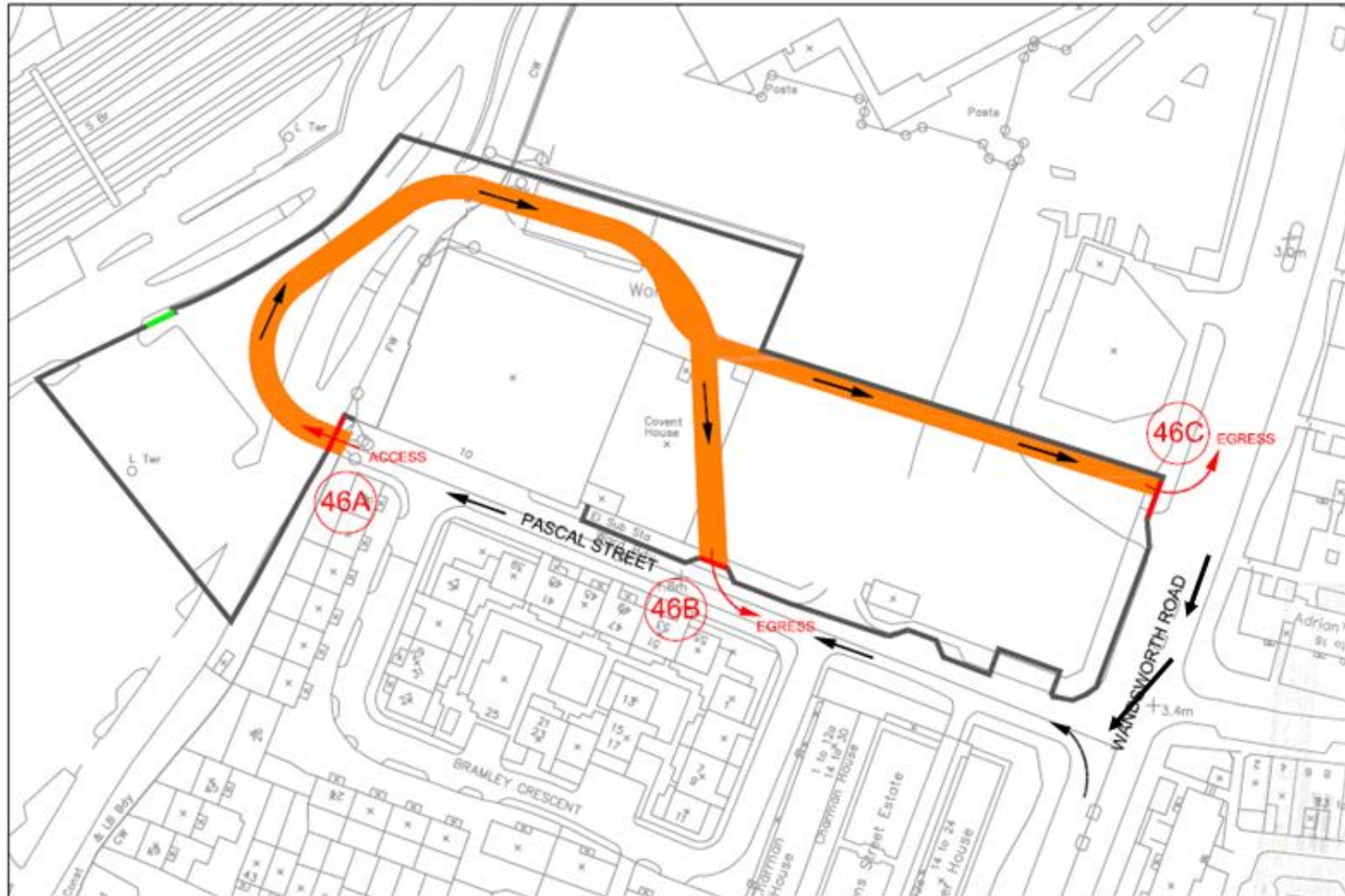
# Traffic Management Plan Kennington Green August 2015



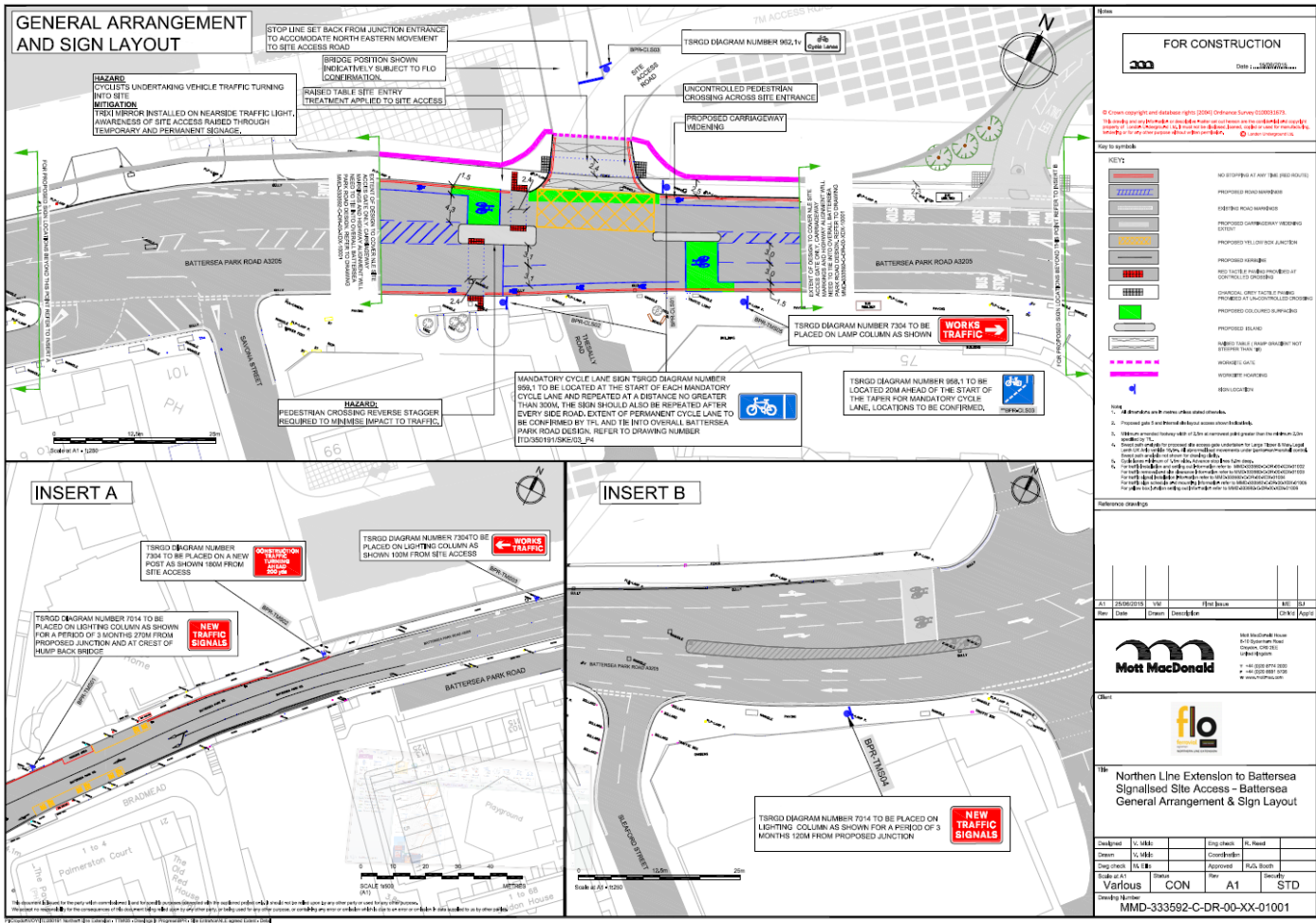
# Traffic Management Plan Nine Elms 2015



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# Traffic Management Plan Battersea from October 2015



# Traffic Management Plan Kennington Park



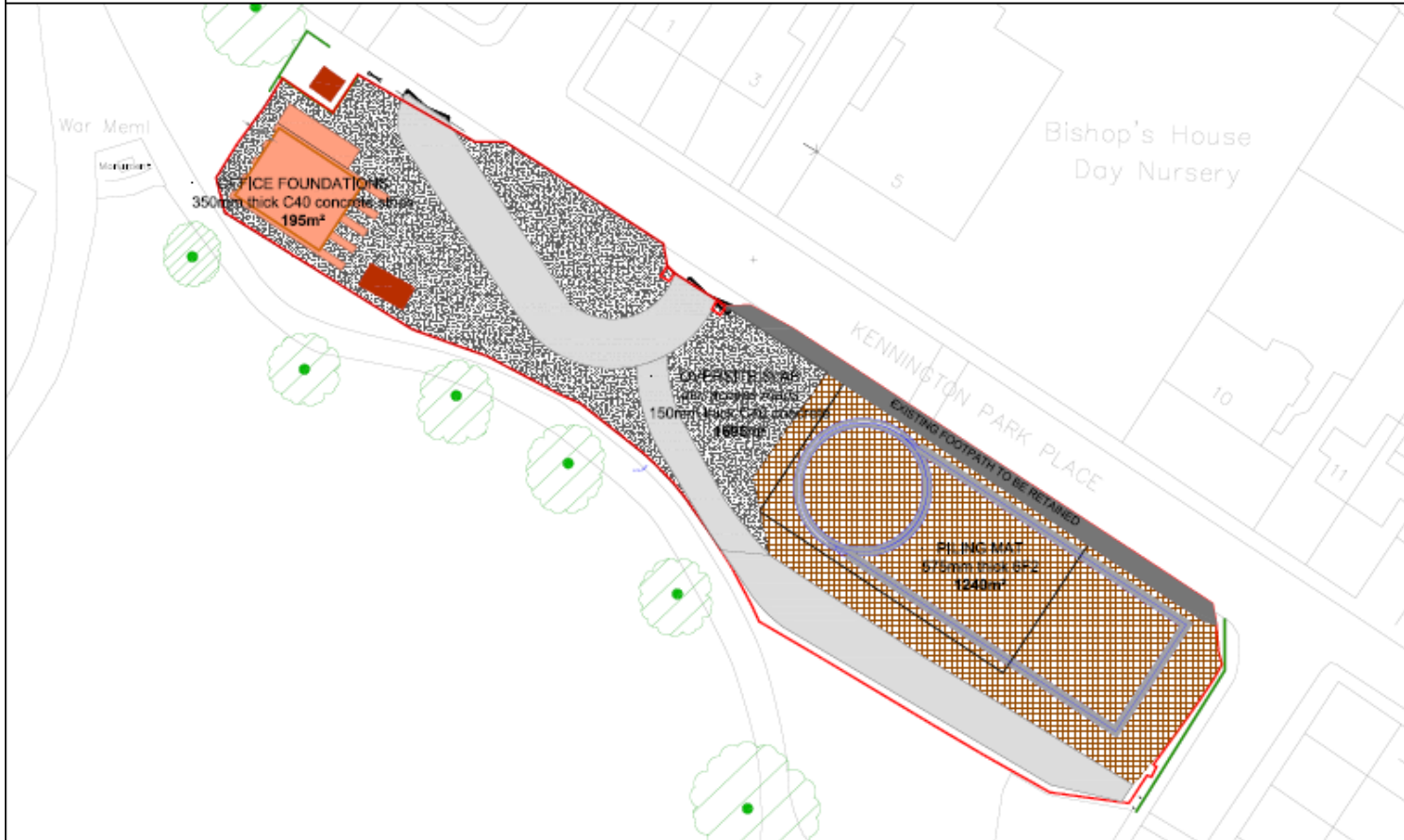
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LAING O'ROURKE JV



## KENNINGTON PARK SITE LAYOUT PLAN - OVERSITE

DATE: 28/07/15

AUTHOR: CC





# Traffic Management Plans



Traffic management around Kennington Green June 2015



Battersea Road June 2015

## Lorry movements.

- Montford Place used as lorry holding for Kennington Park and Kennington Green.
- Peak Lorry Movements to date at Battersea 40 movements per day average 28
- Av. movements Nine Elms 20 per day
- Av. Kennington's sites & Montford 20 total



# Hoardings

- Hoardings procured for all sites and installed at Nine Elms and Kennington Park
- TfL design team working on design options sympathetic with the environment.
- Hoardings will be 2.4 metres high
- Corporate TfL standards to be followed
- Battersea hoardings to be updated and new graphics to be installed to recognise NLE presence



# Consents



## Key approvals granted since the last CLG meeting

Code of Construction Practice Part B (planning condition 7) – all sites	L B Lambeth, Wandsworth
All sites – application to discharge planning condition 10 - Archaeology – all sites	L B Lambeth, Wandsworth
Approval of the Yellow Box Junction (planning condition 18) – Kennington Park	LB Southwark
Marine approvals (TWAO protective provisions) - Battersea	Environment Agency, Marine Management Organisation, Port of London Authority

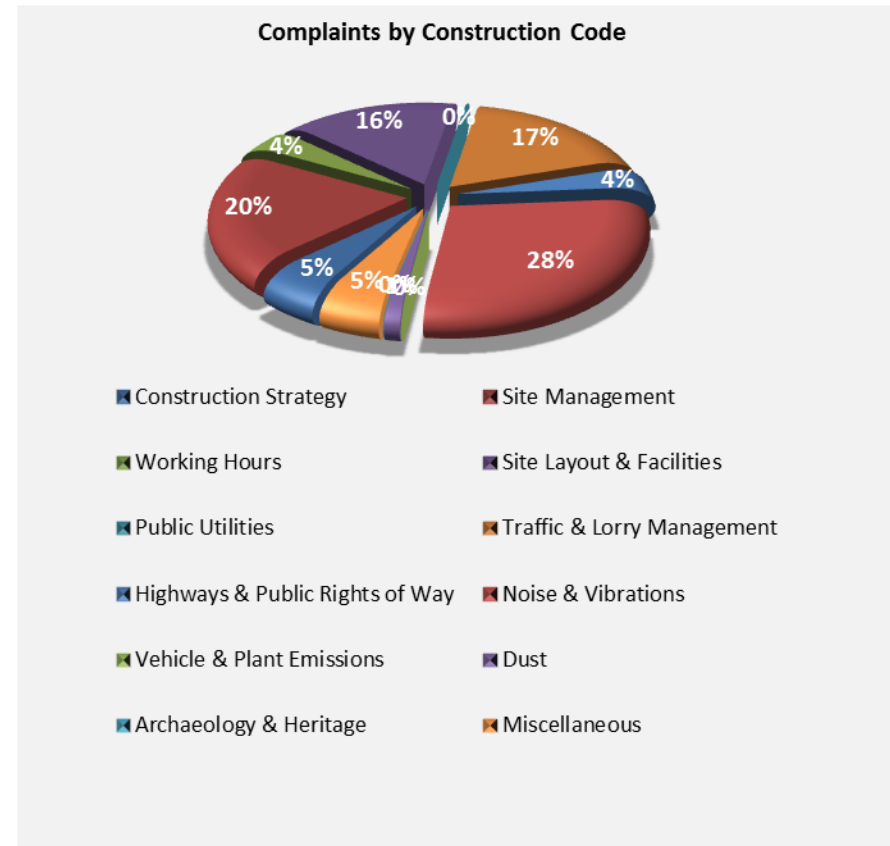
## Current applications under determination

Removal of a single tree (planning condition 5)– Kennington Green	LB Lambeth
Application for the fixing of monitoring to Listed structures (planning condition 11)– Kennington Park and Kennington Green	LB Lambeth and LB Southwark



# NLE Complaints summary

- 63 registered complaints since 1<sup>st</sup> April
- 98% Closed
- Main issues around traffic management, site management
- NLE is coordinating with other developers for interfacing complaints procedures.
- Helpdesk issues are now resolved and there is an Option 1 for NLE .
- Feedback received on complaints handling positive but needs to improve



# Updates and newsletters



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- Activity Notifications are being sent to notify works on all four sites
- Emailing list is updated regularly and notifications are also sent electronically
- TfL NLE Quarterly Newsletters sent in March & June 2015
- Once site offices are completed, the intention for Flo to have regular site “Surgeries” between CLG meetings, so that the community members can visit and speak to site staff should they have concerns or queries.

**Northern line extension**  
ACTIVITY NOTIFICATION  
Karrington Green: Installation of High Voltage power ducts  
24 July 2015

As part of the Karrington Green site enabling activities for the Northern line extension (NLE) we would like to advise you that we will be carrying out a trial hole exploration and installation of High Voltage power ducts in Karrington Green. The area where the work will take place is shown in the red hatched area on the diagram below. We expect the work to commence on Monday 27 July and be completed within three weeks, subject to any unforeseen circumstances. Power supplies to properties close to the work are not expected to be affected.

This work will allow us to provide mains power to both our Montford Place and Karrington Green NLE work sites and, once the work is complete, it will free the space for the installation of the site hoarding around the Green and allow us to discontinue the use of generators at the Montford Place work site. Pedestrian and vehicle access will be maintained to properties at all times.

Our core working hours are: Monday to Friday 0800 to 1800 and on Saturday from 0800 to 1300  
We apologise for any inconvenience this activity may cause. The workforce will endeavour to minimise disturbance and will manage the work in accordance with the Code of Construction Practice, including the control of noise, vibration and dust using best practicable means.  
If you have any concerns or queries, please contact us at [nle@tfl.gov.uk](mailto:nle@tfl.gov.uk) or call our 24/7 helpline on 03-43 222 2424 (Option 1)

Ref: FLO-NI-45-236000-COM-NTF-0001

**Northern line extension**  
MONTHLY UPDATE  
Nine Elms Station  
July/August 2015

The work on constructing Nine Elms Station continues and we would like to give you an update on the main activities planned for July and August.

From this week (w/c 13 July), we will be installing a sheet piling rig (see drawing overlaid) necessary to form the main excavation box where the future station will be constructed. You should expect to see a large crane on site. We will ensure noise monitoring and mitigation is in place to ensure that the work is carried out within agreed limits. The piling method we are using is designed to be less intrusive than standard approaches.

We have constructed a piling mat, which is an area laid to support the piling rig and the crane. We will expect additional concrete deliveries by mixer truck for enabling works. We will endeavour to ensure that concrete operations are carried out during core working hours. It is possible, however, that due to road traffic conditions or any unforeseen circumstances, these operations may continue beyond 1800 on Mondays to Fridays or beyond 1300 on Saturdays as some activities may be carried out in one go. We apologise in advance for any such instance like this which may occur.

Our core working hours are: Monday to Friday 0800 to 1800 and Saturday 0800 to 1300  
We will be adjusting our traffic management to allow vehicles to enter and exit the site via the gates shown by red arrows on the drawing below.

[nle@tfl.gov.uk](mailto:nle@tfl.gov.uk)  
03 432 2424  
[tfl.gov.uk/northern-line-extension](http://tfl.gov.uk/northern-line-extension)

NI05-236000-COM-NTF-0005

**Northern line extension**  
Issue 1 - April 2015

Prep work starts at all NLE sites

Work to prepare the Karrington Green, Karrington Park, Nine Elms and Battersea Power Station NLE sites began in March. This follows the approval of the Code of Construction Practice Part 8 by local authorities. The fact files are tailored to the nature of the works planned at each site.

This is a major accomplishment for the project team and has been achieved through hard work and collaboration with the local authorities as well as very useful feedback from residents along the route.

Work in the last three months at these sites includes:

- Clearing the site
- Setting up for new site accommodation
- Checking the ground for obstructions
- Archaeological and ordnance surveys
- Utility diversions
- Installing temporary hoardings
- Implementing traffic management schemes

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# Skills and apprenticeships



- **Employment & Skills targets agreed with TFL Supplier Skills team**
- Targets outline various opportunities for workless people in London including placement & taster positions, apprenticeships, skills development for staff, engagement with schools
- Delivery Plan for Schools and Young People currently being developed with LA and TfL.
- FLO offered 5 work experience placements for students from Ernest Bevin College, Wandsworth from the 22 June – 3<sup>rd</sup> July 2015, 4 students attended and gained experience across the 3 sites and various office functions
- **Dates being discussed with BEST for work experience academic year 2015/16**
- FLO currently have 2 candidates on work placement from the Southwark charity 2nd Chance for 2 days per week for 8 weeks in site based roles

## Employment/Skills/Diversity on the NLE programme

- FLO is working in partnership with TfL and the local authorities – including the Nine Elms Vauxhall Strategy Board Employment, Training & Business Charter, Wandsworth Chamber of Commerce and Nine Elms Supply Chain
- Processes being implemented to ensure employment / training opportunities are advertised through the local borough brokerages across Southwark, Lambeth & Wandsworth
- Engagement with our supply chain to ensure they follow same processes as well as developing targets for the sub-contractors around employment & skills



# Jobs and Business Opportunities

- Attended the Nine Elms Regeneration event at Lambeth College careers fair in July 2015
- Will also attend a similar event in Wandsworth on 6th August
- Vacancies advertised so far:
  - Receptionist (1 candidate offered)
  - IT Technician (2 candidates submitted)
  - Cleaners x 2 (2 candidates submitted)
  - IT Assistant (2 candidates submitted)
- Opportunities will increase as work progresses
- Small and medium business had the opportunity to meet with major contractors at an event in BPSD. FLO in attendance.
- FLO continues to engage with small and medium companies through events and endeavours to recruit / source locally when possible.



# Community engagement strategy

- Site specific strategy 6 month Look Ahead.
- Includes community comments and forecast activities
- **6 months look ahead includes:**
- Engagement with local groups
- Community Drop-in sessions
- School activities (Started Sacred Heart School, Southwark)
- Identification of new resident groups



Ernest Bevin College Student . Work Experience



# THANK YOU

