EXHIBIT LIST

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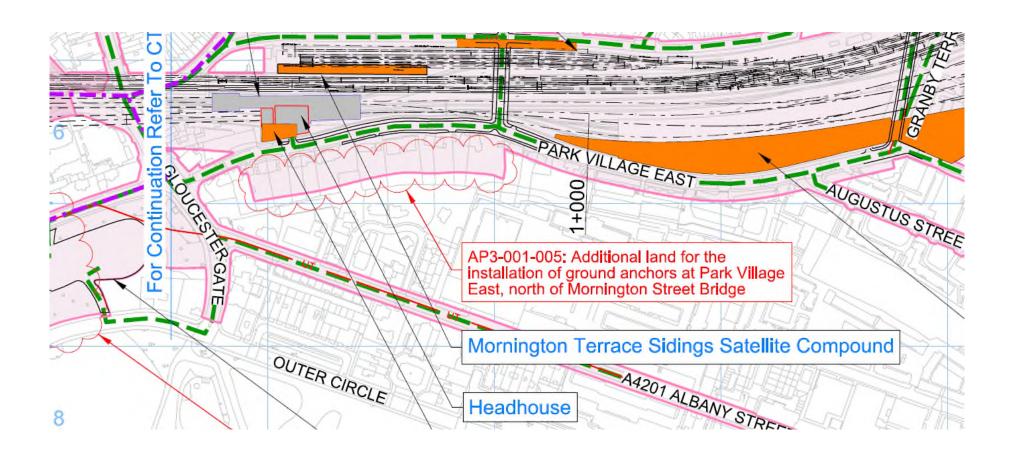
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Park Village East & Parkway

Park Village East & Parkway





Introduction

- It should be noted that exhibits are provided by topic (e.g. air quality, traffic and transport, construction compounds) under the relevant headings of the 'Promoter's Exhibits: Documents'.
- These slides provide some additional specific information for the Park Village East area.



Key Activities for Park Village East

Timeline	Stage	Detail							
Q3 2016 -Q4 2018	Utilities in Park Village East	Primarily initial diversion of 42" water main, sewer, gas main and communication cables							
Q3 2017 -Q4 2017	Ramp into cutting constructed at Granby Terrace	First significant construction vehicles into Station Approach at track level							
Q4 2017 - Q3 2018	Construct temporary utilities bridge at Mornington Street	To the south of Mornington Street Bridge and will include stair and ramp access for pedestrian and cycle (demounted) movements.							
End by Q3 2017 (Line E). End by Q4 2018 (Line X)	Network Rail enabling works	NR reconfigure OHLE gantries and other railway systems to facilitate removal of Lines E and X							
Q3 2017 - Q2 2020	Install ground anchors	Ground anchors installed above track-level to strengthen retaining walls. Installation works are non-continuous and staged intermittently over this period of works.							

Key Activities for Park Village East

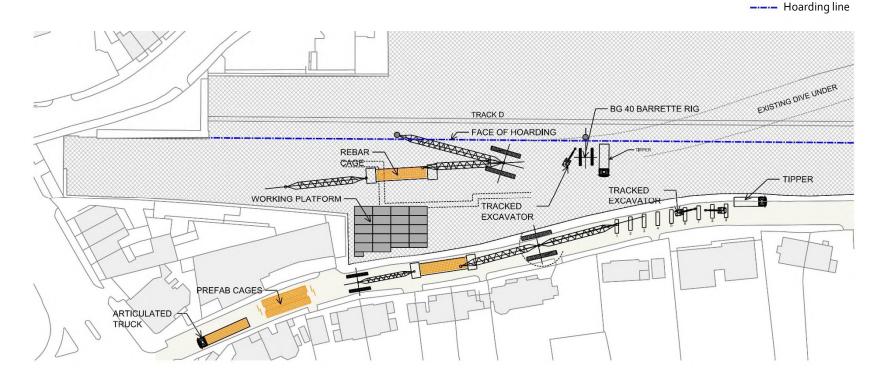
Timeline	Stage	Detail							
Q3-Q4 2018	Demolish Mornington Street Bridge	Removal of existing bridge. Listed assets will be stored until they can be reinstated as per the Heritage Agreement, which will be made with LBC							
Q4 2018 – Q3 2023	Construct portal structure	Will include the removal of the existing central retaining wall followed by the construction of a contiguous piled wall. A proportion of this work will be undertaken during possessions.							
Q2 2019 – Q1 2020	Barrette construction at street level in Park Village East	A street-level work site will be established on PVE. This will extend approximately 150m restricting vehicular access to properties and move southwards from the north. Emergency and pedestrian access will be maintained. Capping of the barrettes may extend beyond this date.							
Dec 2018- Dec 2021	Line X out of use	HS2 remove Line X, strengthen Bridge 7, construct Line X support, reinstate and realign Line X including new drainage							
Q2 2022	TBM arrival	Preparation for first Tunnel Boring Machine (TBM) arrival							
Q4 2023	Rail Systems	Rail Systems can commence installation in selected areas							
Q3 2023	Head house construction	Complete civils for the portal headhouse to enable fit out							





 PVE works at street level extend approximately 150 m for a period of 6 months

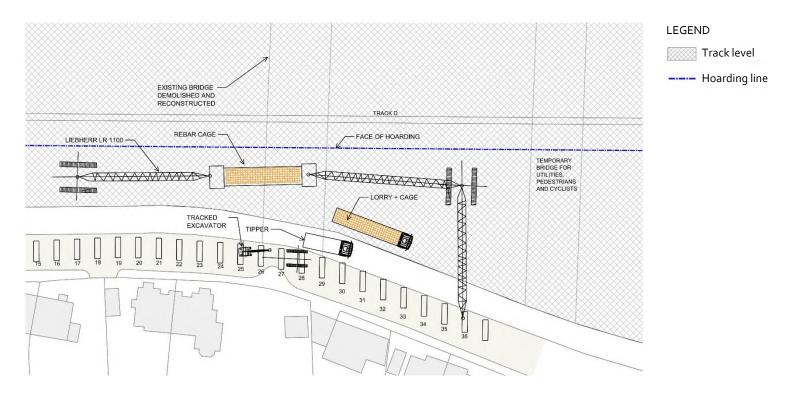
Works will also be taking place at track level





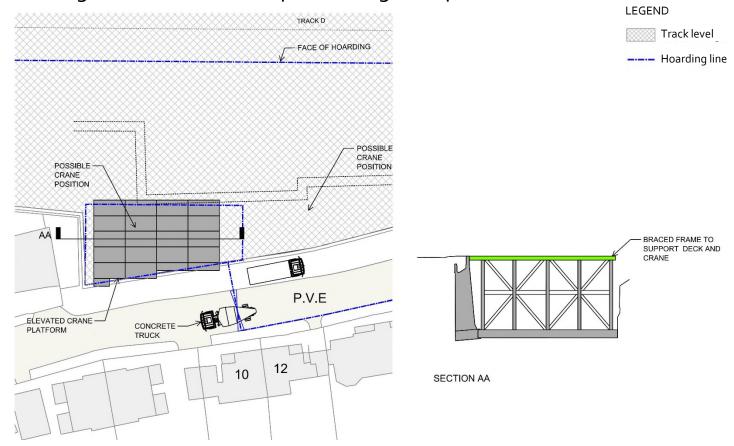
Track level

- Southern sector of site will have rolling work sites at street level of approximately
 50 metres undertaken along Park Village East for a period of 9 months.
- Works will also be undertaken at track level.





Park Village East satellite compound / logistics platform



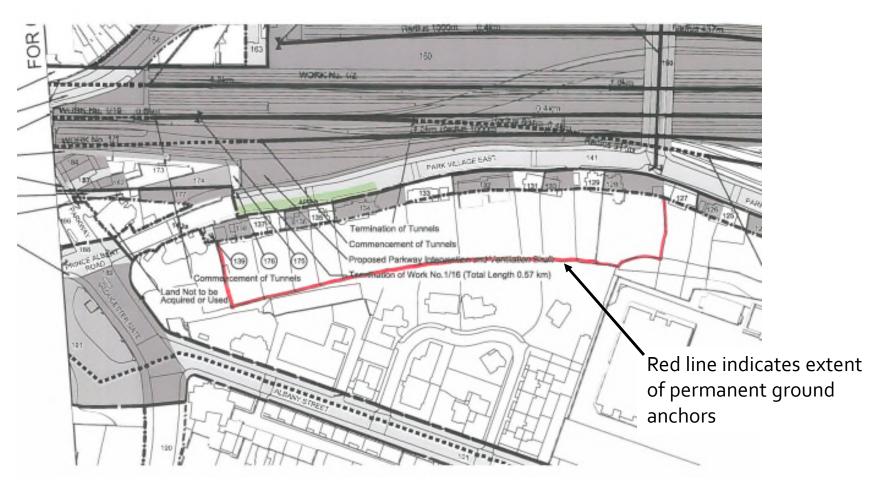


Ground Anchors

- Settlement associated with anchors
 - Minor settlement can be expected when installed (up to 10mm). Similar has been observed when excavating compensation grouting tubes on Crossrail beneath buildings.
 - Following installation, the ground anchors minimise displacements to the properties thereafter from installing the retaining wall along Park Village East and the subsequent excavation to form the HS2 diveunder.



Permanent Ground Anchors





Ground anchors



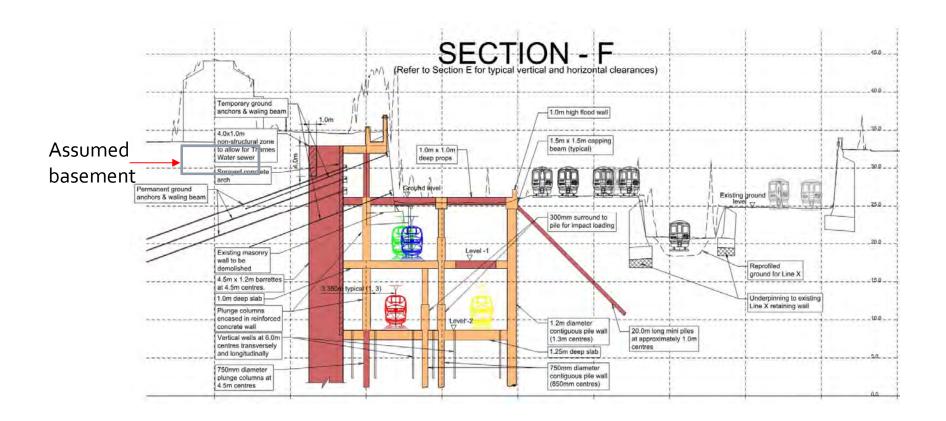




- Temporary ground anchors required during barrette construction are 20m long
- Permanent ground anchors may extend to property rear boundary
- Ground anchors will be installed from within the station approach/cutting



Typical Basement/anchors





Why is it needed?

- Western pier of current bridge sits over the location of proposed HS dive under;
- Current western bridge abutment to be removed and reconstructed as part of Park Village East retaining wall works to give clearance to high speed tracks;
- The age of the bridge and the length of construction means that temporary works to retain the bridge whilst allowing high speed dive under construction are not viable.



Proposed Scheme:

- Existing bridge is an early steel / wood composite structure;
- Proposed replacement: precast concrete beams with concrete deck, low maintenance required;
- Replacement piers are concrete leaf piers to comply with current standards;
- Grade II listed lamp standards will be reinstated;
- Brick clad to resemble the original parapets.

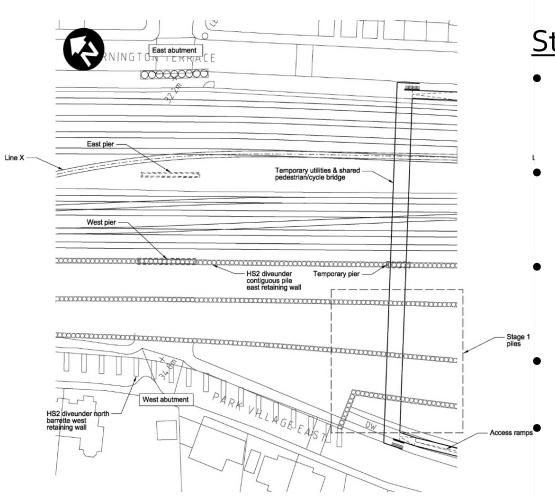


Stage 1 (2017-2018)

- Temporary bridge will be open and usable, providing ramps and stairs for pedestrian and cycle access, before Mornington Street Bridge is closed.
- Construct temporary bridge foundations in rail possessions.



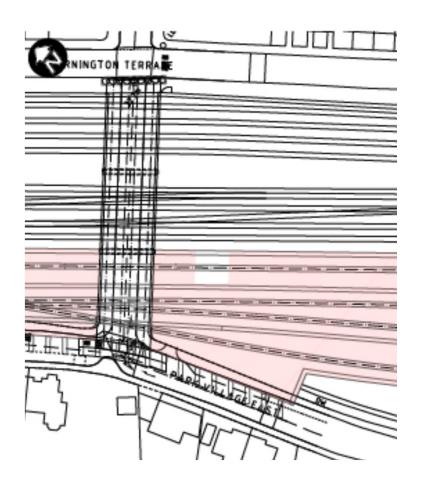




Stage 2 (2018-2021)

- Crane in temporary bridge piers& deck
- Divert utilities, pedestrians / cycles to temporary bridge
- Demolish existing bridge in rail possessions
 - Build HS dive under
 - Build piers for replacement bridge





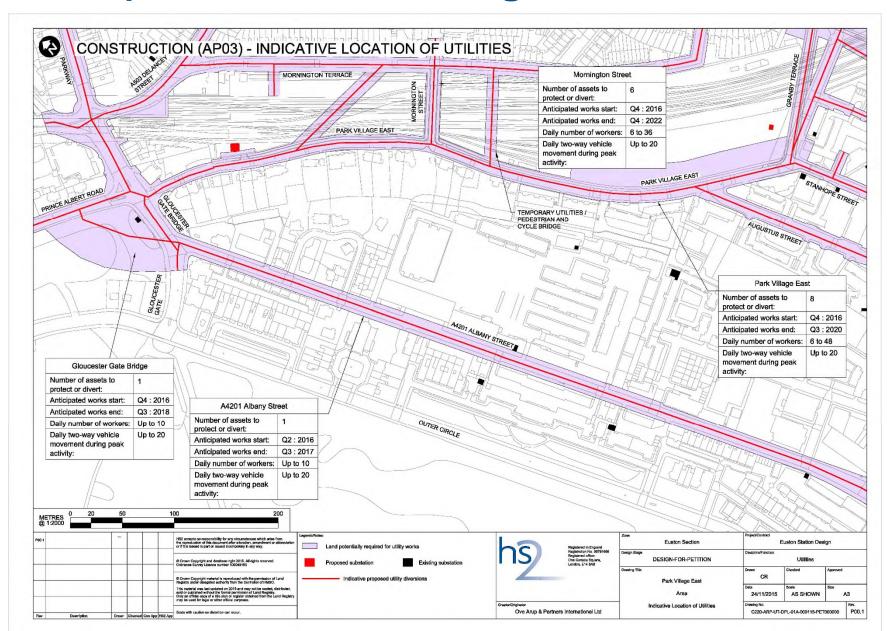
Stage 3 (2021-2022)

- Crane in new deck beams
- Complete in-situ concrete deck and parapets
- Replace lamp standards
- Replace utilities
- Reopen bridge
- Remove temporary bridge following reopening of Mornington Street bridge

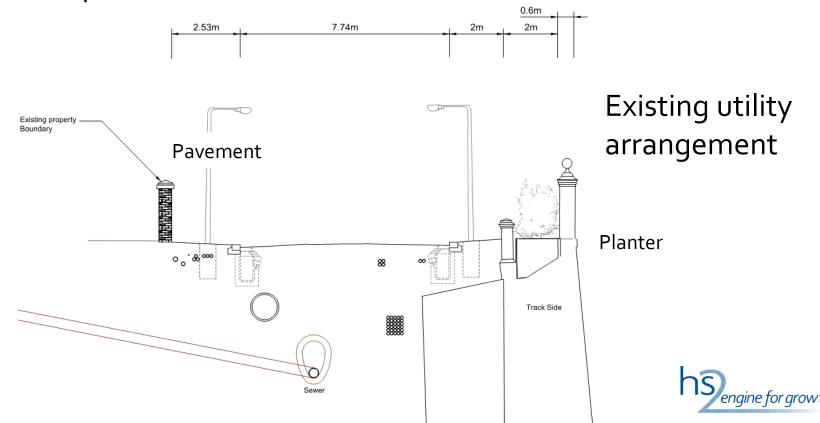


- There are significant utility works within Park Village East (PVE) immediately prior to the Line X works, barrette wall construction and portal works commencing.
- These works will proceed on a moving front along PVE from Q4 2016 to Q3 2018 and will be immediately followed by barrette wall construction (including temporary anchor works).
- Proposed utility works Permanent and temporary diversions of various services, comprising sewer, gas and water mains (including a major 42 inch water main), electrical cables and numerous telecommunications cables.
- Building services connections will also need to be altered to maintain building supplies.



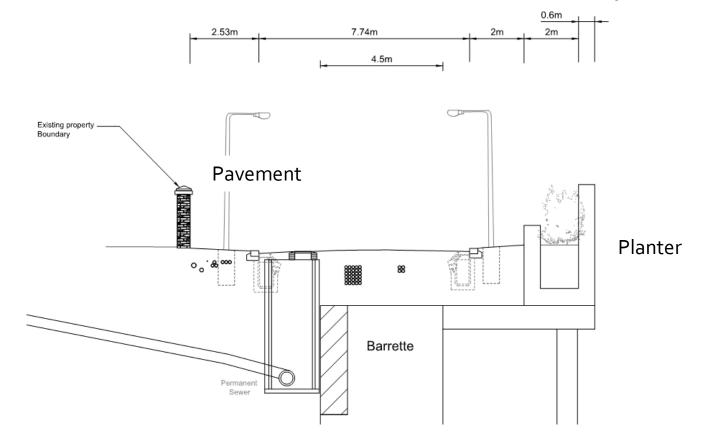


- Utilities currently distributed in road way.
- In order to construct barrettes, utilities must be relocated to the pavement.



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 Following relocation and barrette wall construction services will be located towards pavement side of PVE with some additional utilities in new roadway.





Park Village East – Access Arrangements

- During the construction of the barrette retaining wall and utility works (before and after the barrette works), vehicle access to properties will be restricted by a work site at street-level.
- The worksite for the barrette works will initially be positioned at the northern end of PVE and progress down the street.
 Worksites for the utility works will also be phased and restrict access temporarily.
- Properties along PVE will have vehicular access to their properties interrupted intermittently between Q₃ 2016 and Q₃ 2023.



Working Hours

Core Hours

- Core working hours will be from o8:00 to 18:00 on weekdays (excluding bank holidays) and from o8:00 to 13:00 on Saturdays.
- Guidance on the site specific variations to core hours and/or additional hours likely to be required will be included within the Local Environmental Management Plan (LEMP) following consultation with the relevant local authority.

Start Up and Close Down

• The nominated undertaker's contractors will require a period of up to one hour before and up to one hour after normal working hours for start-up and close down of activities.



Working Hours

Works Outside of Core Hours

- At Euston, part of the construction will take place on or immediately adjacent to the existing operational railway where safety considerations for the workforce and operation of trains mean that work has to be completed during possessions or blockades of the railway.
- Possessions and blockades close or limit the use of the railway for trains, so normally take place at night, weekends or over bank holidays, so that there is less disruption to services and passenger access/movements.



Works Outside Core Hours - Compounds

Compounds

A400 Hampstead Road overbridge (north)

 May occasionally operate outside of core working hours for rail possession when construction on or adjacent to the conventional railway.

Mornington Street overbridge

 May operate out of core working hours for occasional short periods during railway possessions and utilities works.



Works Outside Core Hours - Compounds

Mornington Terrace Sidings

• Majority of work outside of core working hours in railway possessions.

Carriage Shed and Park Village East (directly south of area)

 On occasion, compound will operate 24 hours per day for independent work on railway possession. Barrette construction may extend work beyond core working hours.



Works Outside Core Hours - Compounds

Park Village East (north) satellite compound

• The construction compound will operate predominantly during core working hours but will, on occasion, operate 24 hours per day for works dependent on railway possessions. During installation of barrettes in Park Village East, each barrette has to be concreted in a single operation. If this operation is interrupted or prolonged for any reason these works may extend beyond core working hours as set out in the draft CoCP.



Working Hours

The following slide has been produced from the SES2 and AP3 ES programme to summarise the key activities that will take place and identify where it is likely that a proportion of the works will occur outside of core working hours.

- Frequency of works outside core hours:
 - Green = Low
 - Amber/Orange = Medium
 - Red = High
- Relative intensity of construction activity:
 - Green = Low
 - Amber/Orange = Medium
 - Red = High



Park Village East	G-IUW		When: start to	Works outside core hours: Not in Compounds (Stage A) Colours represent Intensity grading										Notes	
	Frequency	Intensity	finish	2016	2017	2018	2019 4Q1Q2Q3Q4	2020	2021	2022	2023	2024	2025	2026	
Occasional utility and highway works		incensity .	Q3 2016- Q3 2022	<u>Q1 </u>		<u>Q1</u> Q2 Q3 Q		<u>(1) (2) (3) (4)</u>		1 Q 2 Q 3 Q 4	<u> </u>	Q1Q2Q3Q4	Q1Q2Q3Q4		When short term traffic management measures required
Railway systems clearance			Q4 2016- Q1 2019												When proximity of works interferes with railway operations
Delivery of large items (plant, materials)			Q1 2017- Q3 2024												When short term traffic management measures required
Demolition (Buildings/ Structures)			Q1 2017- Q3 2017												When proximity of works interferes with railway operations
Bridge construction			Q4 2017- Q3 2022												Mornington St, Granby Terrace & nearby utility bridges
Bridge demolition			Q2 2018- Q4 2018												Mornington St & Granby Terrace bridges only
Piling, Barrettes			Q3 2018 - Q4 2021												When proximity of works interferes with railway operations
Occasional large concrete pours			Q1 2020- Q3 2024												Where large concrete pours occur at some locations
Railway systems installation			Q4 2023- Q4 2026												When proximity of works interferes with railway operations



Loss of Parking

During construction Stage A, 38 on-street residential permit holder parking bays will be temporarily lost with the loss of an additional 12 on-street pay and display bays.

Approximately 31 off-street private parking spaces will also be temporarily lost during Stage A.

Through development of the local Traffic Management Plan, HS2 will seek to minimise loss of parking. HS2 will work with the Council to reduce the impact of any losses including opportunities for alternative provision.

HS2 anticipates that the Council will identify its priorities in the use of available parking. This could involve the reallocation of parking spaces to priority uses such as, for example, disabled parking bays. HS2 will work with the Council to address those priorities.

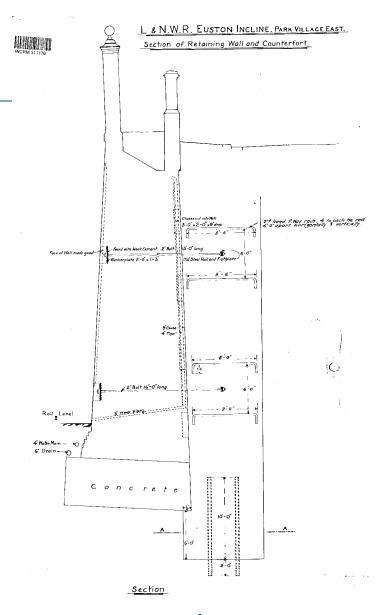


Temporary On-Street Parking Loss at Construction (Stage A)



Park Village East Planters

- The existing retained height of the retaining wall varies between approx. 9.6m and 10.9m
- The original gravity brick wall thickness varies from approx. 2.8m at PVE level to 4.om at the wall toe level
- The retaining wall was strengthened in various stages with mass concrete counterforts and sheet piles at the wall toe
- The existing planters parapet wall is approx.
 o.6m thick and extends to approx.
 above footway level.





Park Village East Planters

- The new planter dimensions of 1.7m width x 1.3m depth of soil will be adequate for the new mature tree root balls, soils, associated drainage layers and guying fittings.
- Vegetation shown is what could be achieved by 2026 if semi-mature planting is used. The design of planters, parapets and planting will be developed through detailed design in conjunction with stakeholders and approved by LBC.





Design of intervention and ventilation shafts

 Structures such as the headhouse, Mornington Street ventilation building and Granby Terrace intervention building are designed with an assumed 8m high envelope in relation to the adjacent street level.





Design of intervention and ventilation shafts

• Information Paper D1: Design Policy, sets out that:

"all visible elements of the built and landscaped environment are sympathetic to their context, environment and social setting"

- The Environmental Memorandum sets out the approach to landscape and visual mitigation which takes account of the historic environment, including listed buildings. The draft Heritage Memorandum describes how heritage assets and their setting will be addressed, providing a framework for the Nominated Undertaker, Historic England, LBC and other stakeholders to work together.
- The detailed design of new structures in the throat will be approved by LBC through the planning regime established under Schedule 17 to the Bill.

Noise Insulation Scheme Engagement

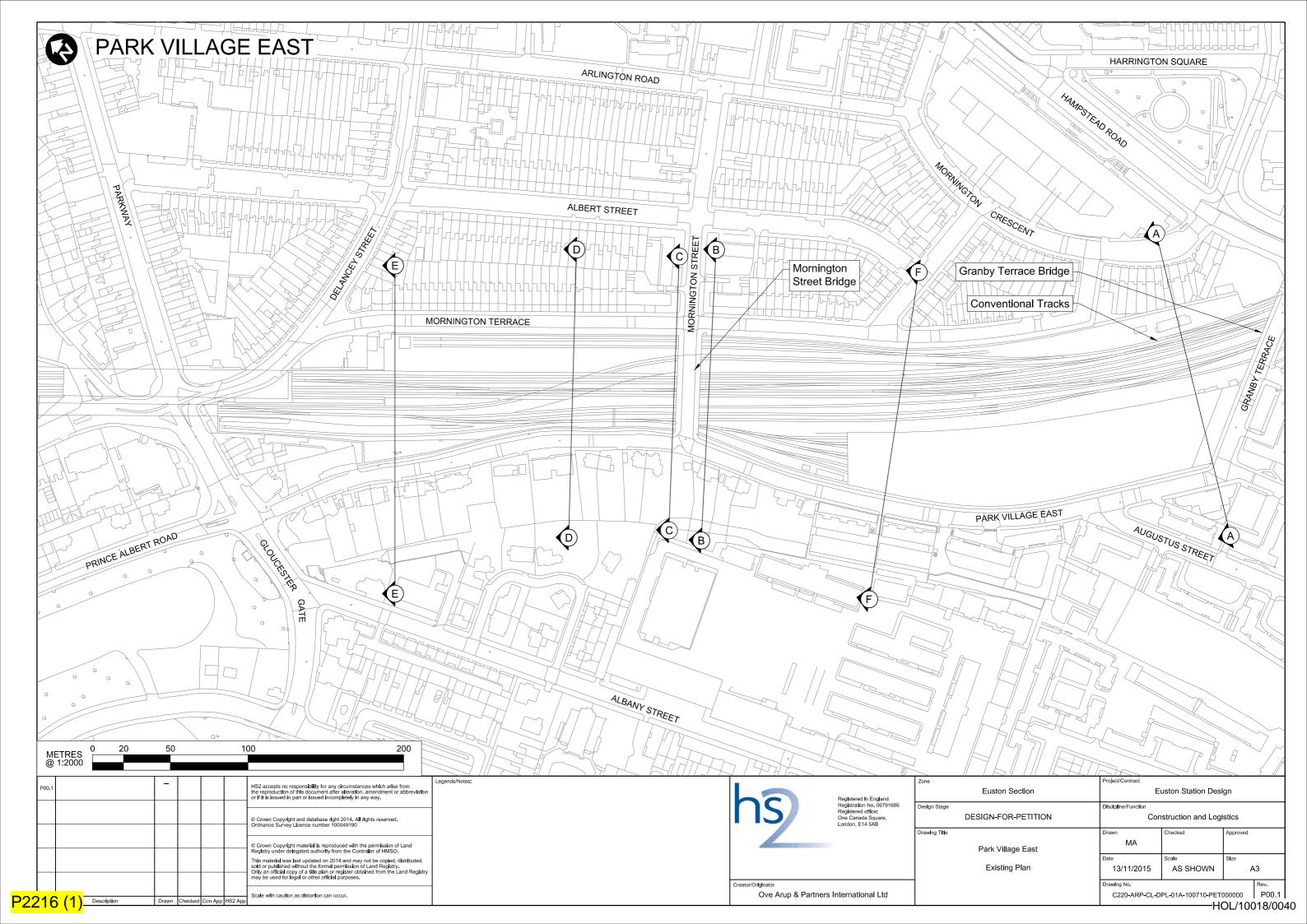
- HS2 Ltd have undertaken specific engagement with Park Village East residents on the noise insulation scheme.
- In addition to the area wide engagement initiatives, HS2 Ltd have undertaken:
 - A visit to Park Village East on 4 July 2016 to provide specific detail on the noise insulation scheme for the residents in the Nash properties. The two hour visit was for a small group of key residents (who the residents selected themselves).
 - An event in Silsoe House for 16 residents on 10
 August 2016 to address questions about the noise insulation scheme in their properties.

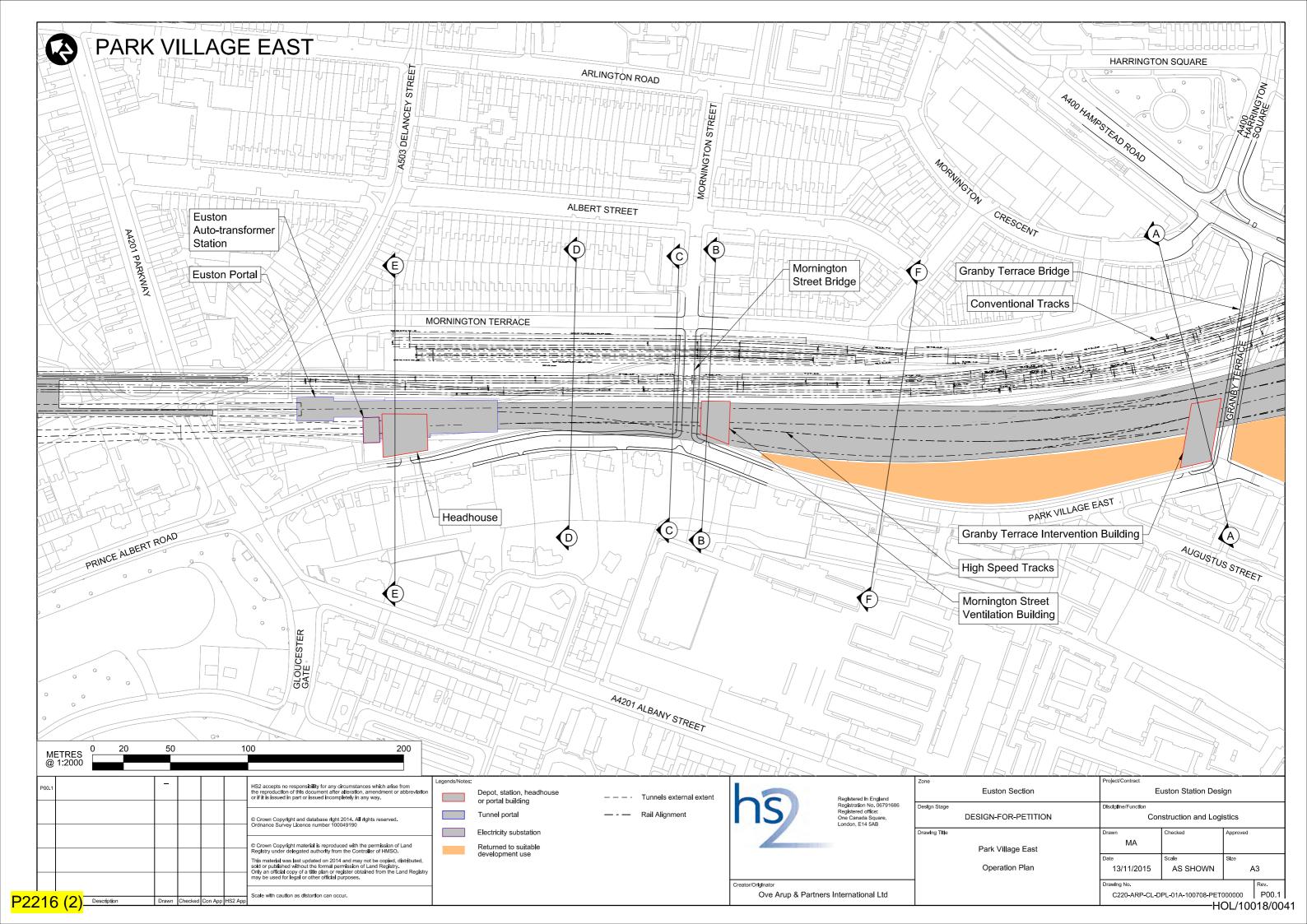


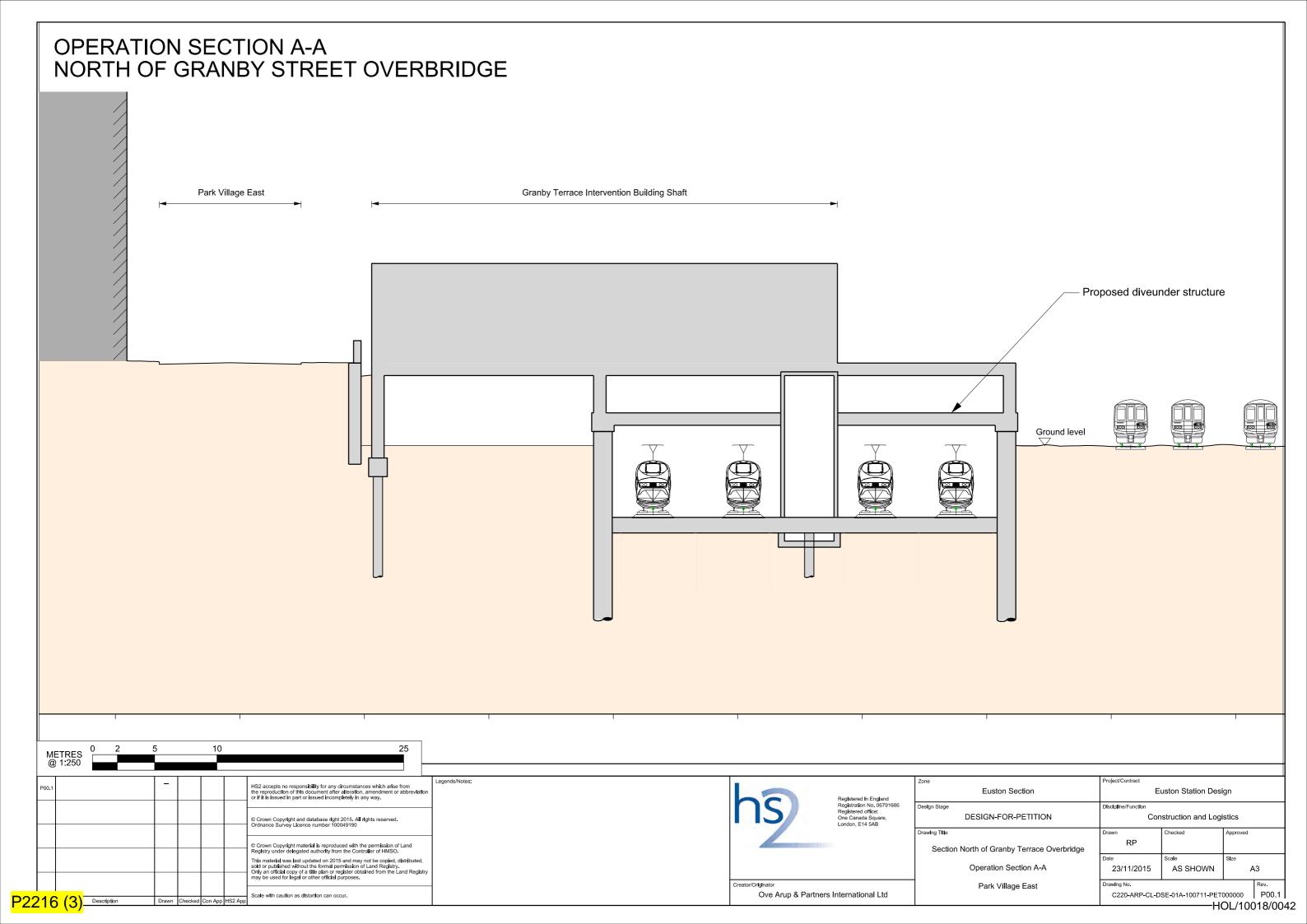
Noise Insulation Scheme Engagement

- Following both targeted events, there remains ongoing engagement with local residents in Park Village East over noise insulation.
- HS2 Ltd has been addressing additional comments and questions raised by residents in the Nash properties following the visit and remain in correspondence on the matter.
- A number of local residents in Silsoe House have returned their noise insulation application forms following their targeted event and have been engaging with HS2 Ltd over additional queries.

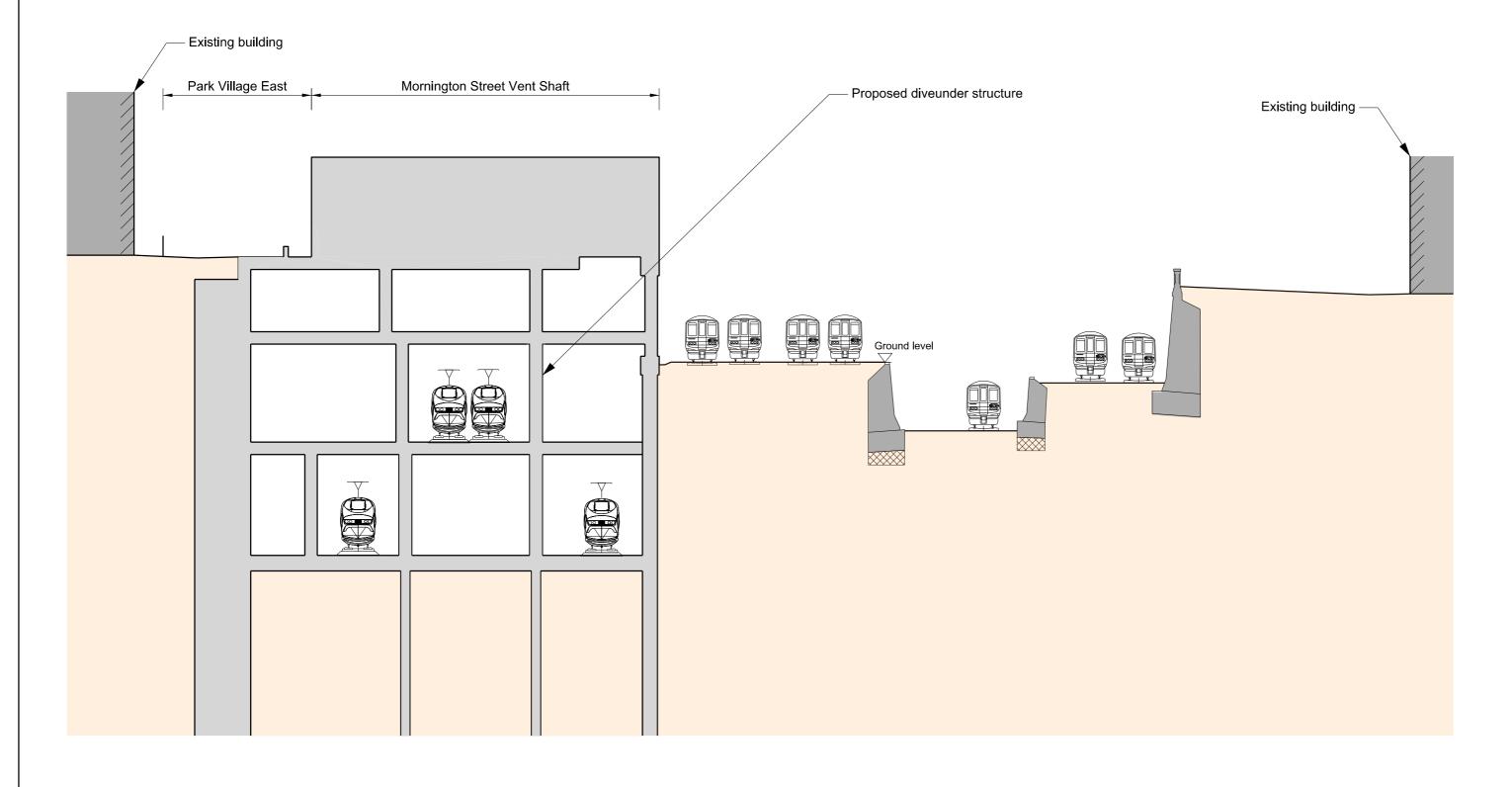








OPERATION SECTION B-B SOUTH OF MORNINGTON STREET OVERBRIDGE



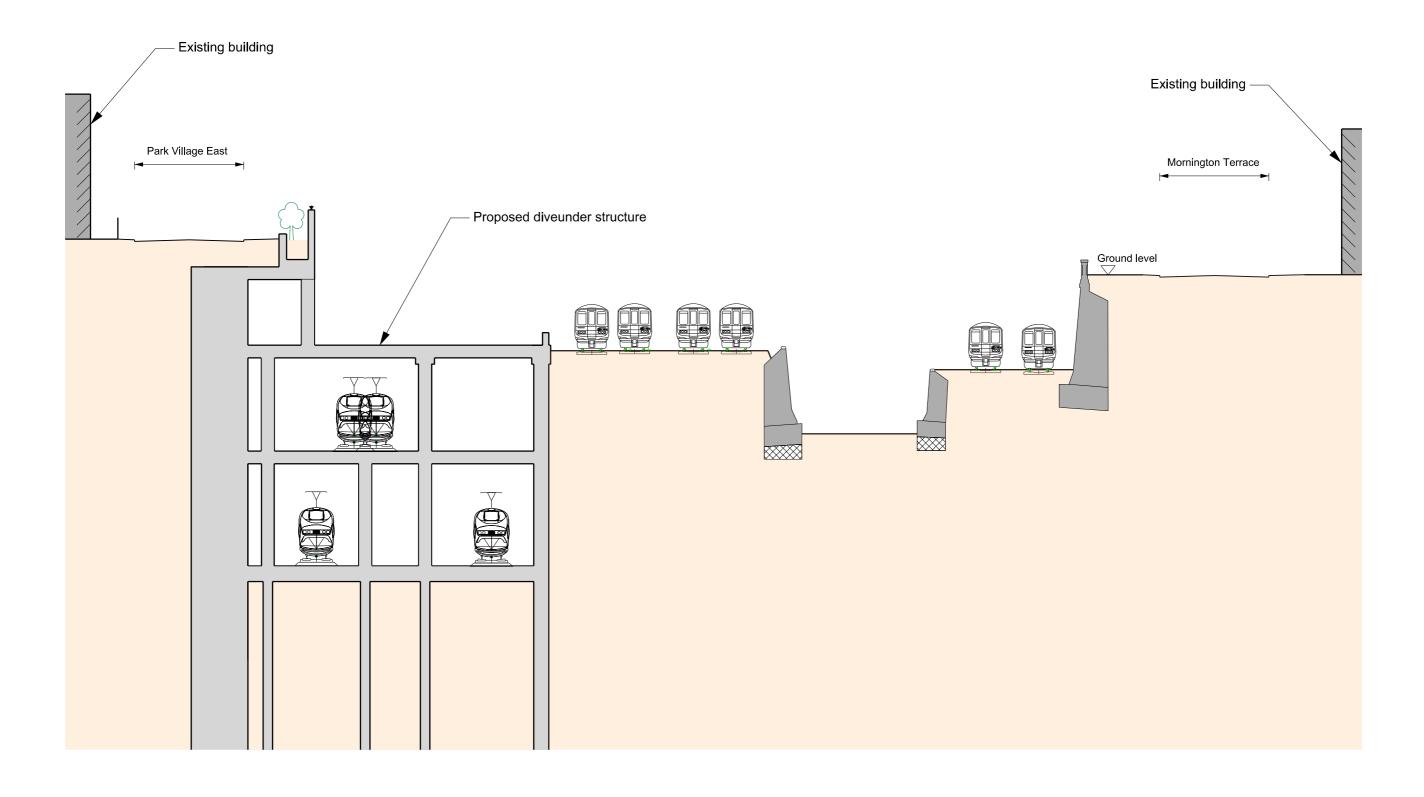
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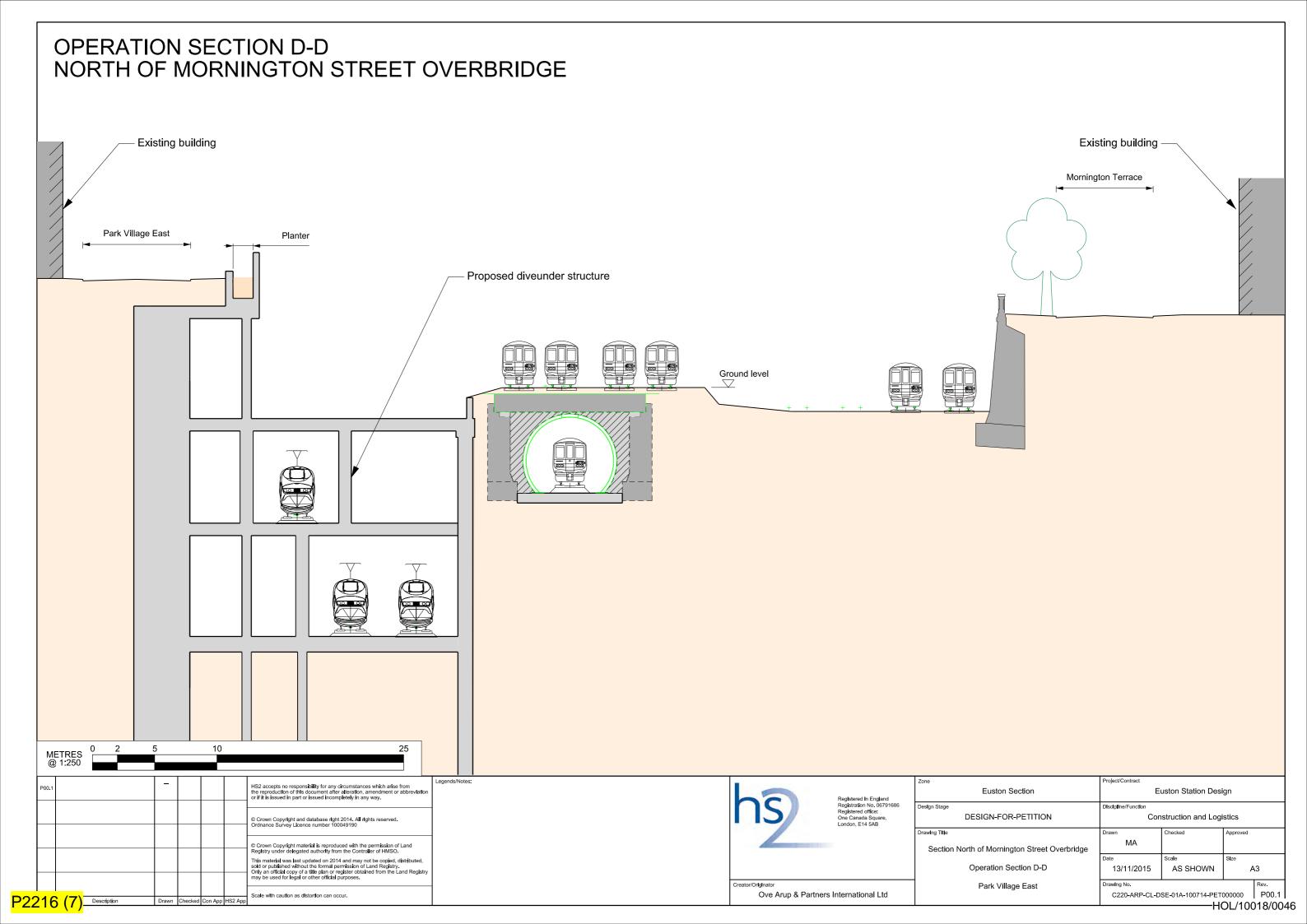
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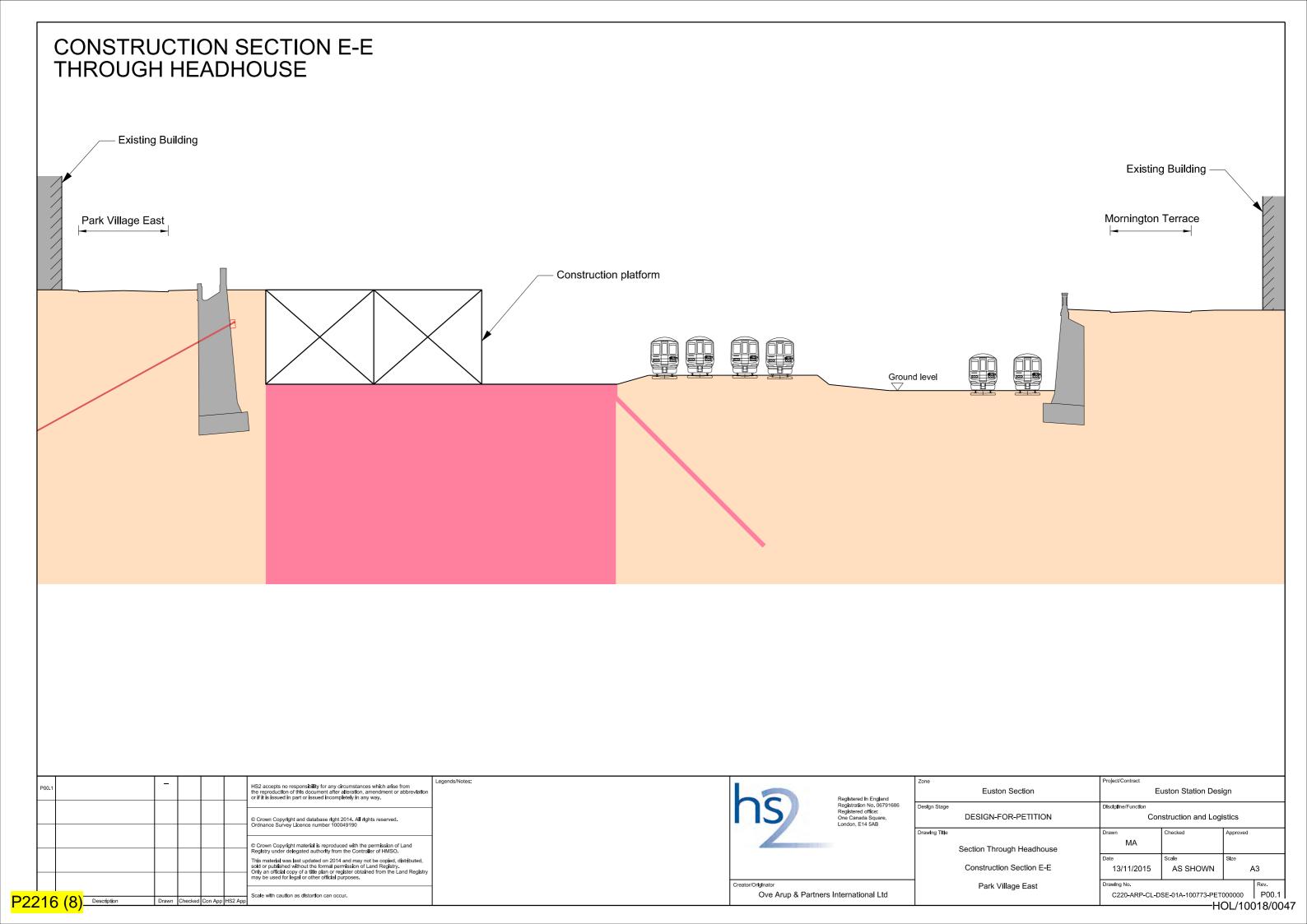
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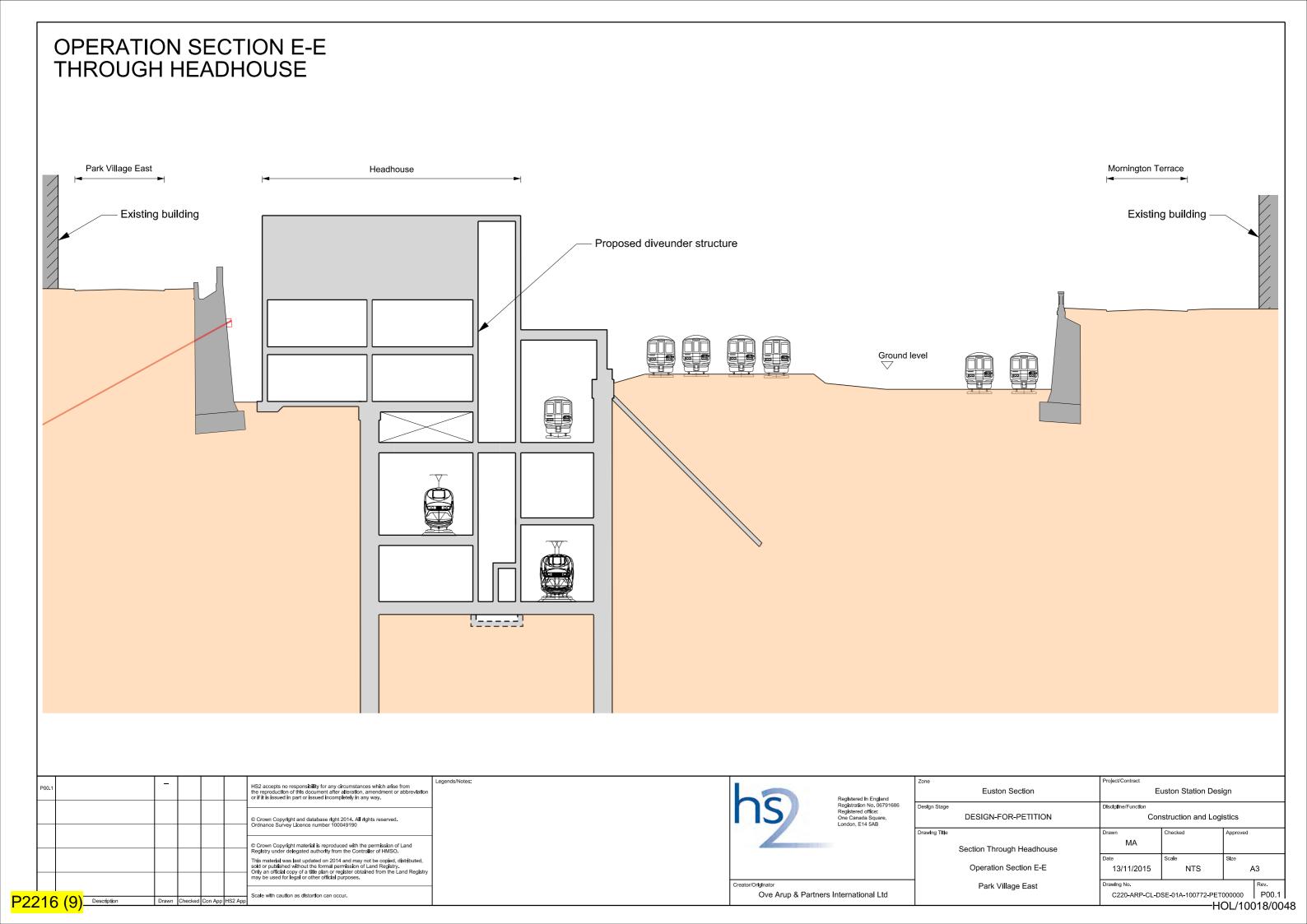
OPERATION SECTION C-C NORTH OF MORNINGTON STREET OVERBRIDGE



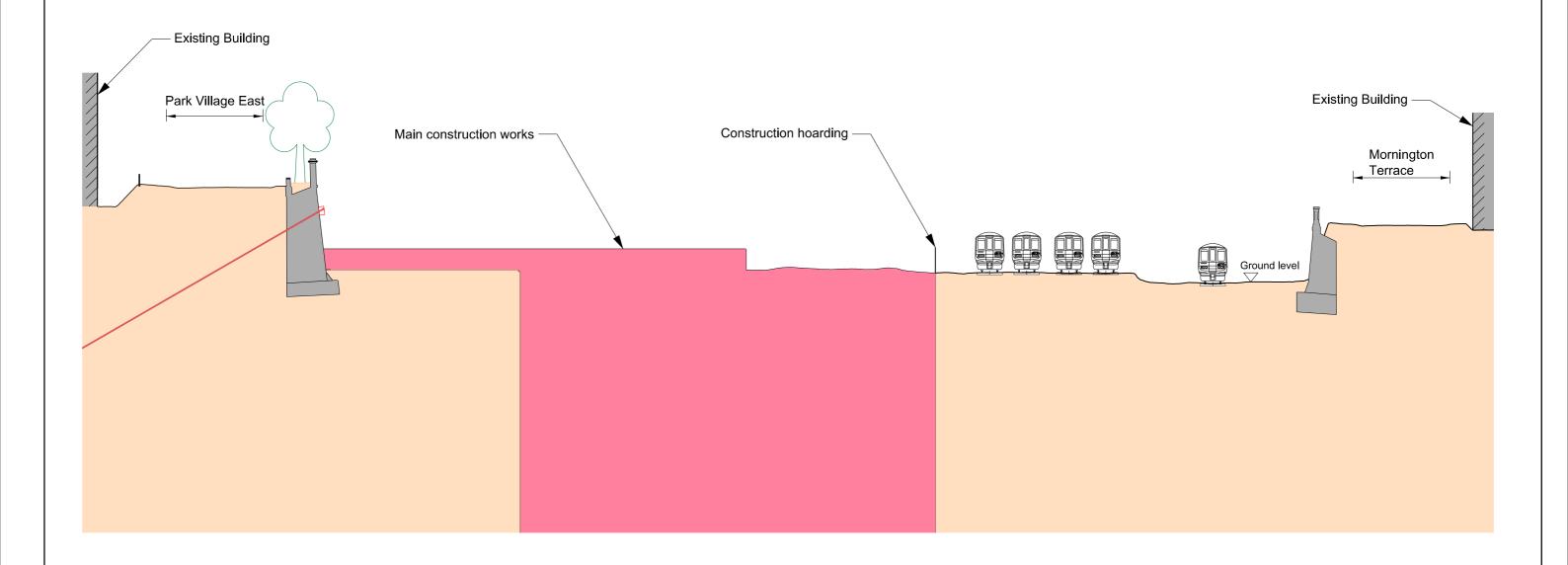
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CONSTRUCTION SECTION F-F THROUGH SILSOE HOUSE



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