

EXHIBIT LIST

Reference No: HOL/10018

Petitioner: EUSTON STANDARD PACK

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Alexandra Place

Alexandra Place – Shaft construction



Shaft Description

- The shaft is circular with an internal diameter of approximately 23m and a depth of 57m.
- There will be a 25m by 27m two-storey high headhouse building and a strip of hardstanding area for maintenance and emergency access.
- Potential for an oversite development is currently being investigated and would be subject to the normal planning processes.

Shaft Construction

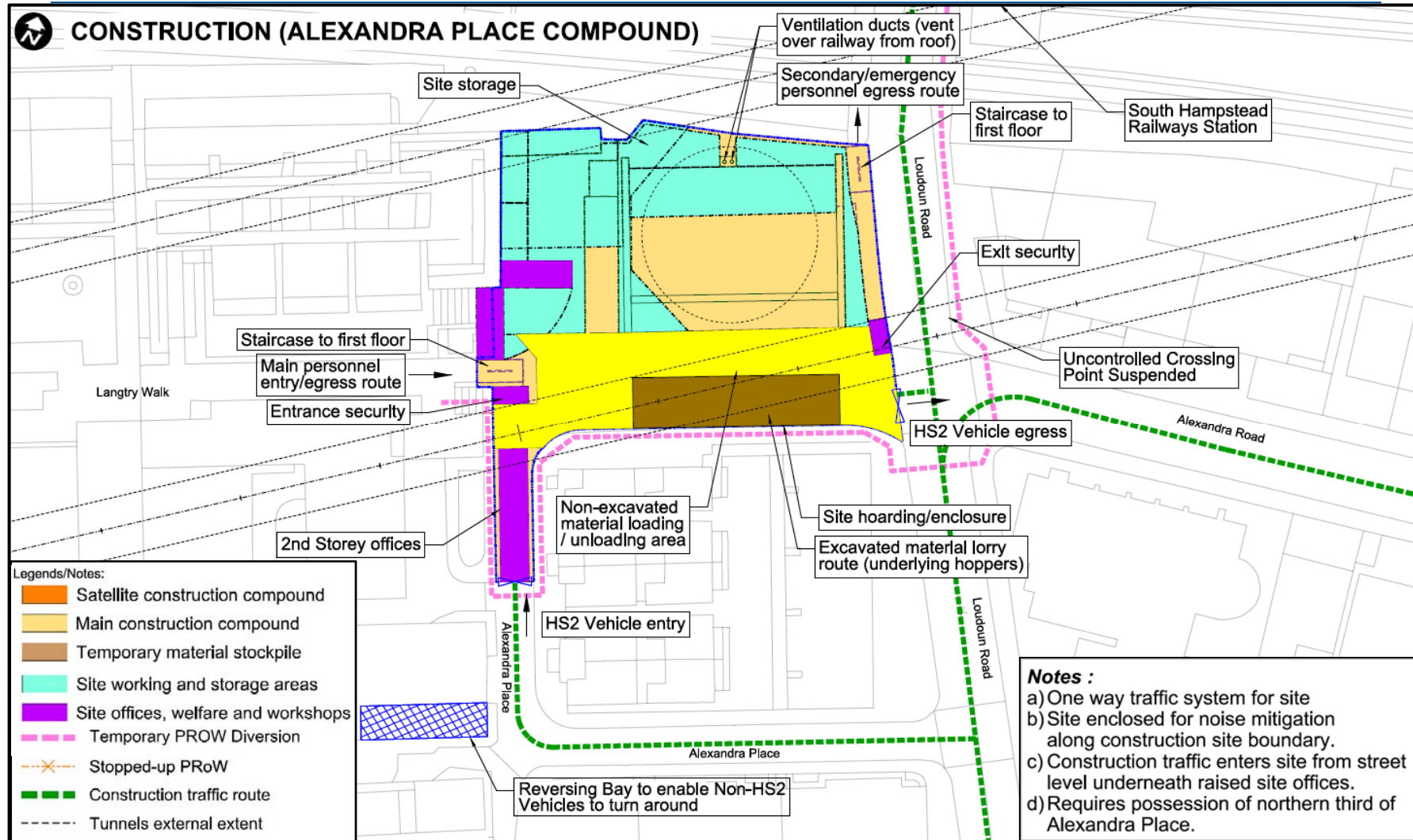
- Requires the temporary closure of the northern side of Alexandra Place for 2.5years.
- Construction of the vent shaft will take two years, from 2019.
- Railway installation works and headhouse construction will start in 2023 and take one year.
- The construction site will have a separate vehicle entrance and exit.
- Offices and site facilities will be 'double stacked' to save space.

Alexandra Place - Diversions



- A temporary closure of the northern entrance to Alexandra Place will be required for 2.5 years for construction of the vent shaft. During this time the existing southern one-way section will be converted to two-way operation.
- A temporary turning area will be provided for non-HS2 vehicles in the Dinerman Court car park requiring 6 spaces to be suspended.
- During the closure on street parking on Alexandra Place will also be suspended.
- A short pedestrian diversion will be in place.

Alexandra Place - Site compound



Alexandra Place

- Site selection

Alternative shaft locations were reviewed at

- Boundary Road - not progressed as it would require the demolition of a Care Home and be located within a residential area surrounded by apartment blocks and housing.
- Alexandra Road - not progressed as the site was subsequently developed for residential housing.

At Alexandra Place nine options were considered for the extent of the land required. The chosen option minimised demolition whilst providing sufficient space to carry out the construction works safely.



Boundary Road



Alexandra Road



Alexandra Place



Alexandra Place – Headhouse



Alexandra Place vent shaft: Heritage

| Asset identified in ES | Significant effects (as reported in the main ES and SES2 and AP3 ES) | Mitigation (in addition to draft CoCP) |
|--|--|---|
| Non-designated 1 to 8 Langtry Walk/61 to 83 Loudoun Road (odd numbers only) (PRMo42) * | Significant permanent moderate adverse effect as a result of demolition. | A programme of built heritage works will be prepared to investigate, analyse, report and archive these assets. |
| Alexandra Road Conservation Area (PRMo04) | Significant permanent moderate adverse effect due to the permanent presence of the Alexandra Place vent shaft within the Conservation Area. | Detailed design of the Alexandra Place vent shaft headhouse: <ul style="list-style-type: none"> retain architectural features that are characteristic of the Alexandra Road Conservation Area; and use of materials and style could be designed to be in keeping with the Alexandra Road Estate; and consideration of the scale and mass of the headhouse to be similar to 1 to 8 Langtry Walk/61 to 83 Loudoun Road (odd numbers only). |
| Grade II* listed Alexandra Road Estate (PRMo21) | Significant temporary moderate adverse effect for a period of approximately five years as a result of temporary impacts from construction activities on the setting of the designated asset. Significant permanent moderate adverse effect as a result of: <ul style="list-style-type: none"> physical impacts to the asset associated with the removal of the concrete ramp and planter, which provides the pedestrian link between the Alexandra Road Estate and Loudoun Road; and changes to the setting of the asset due to the permanent presence of the Alexandra Place vent shaft. | |

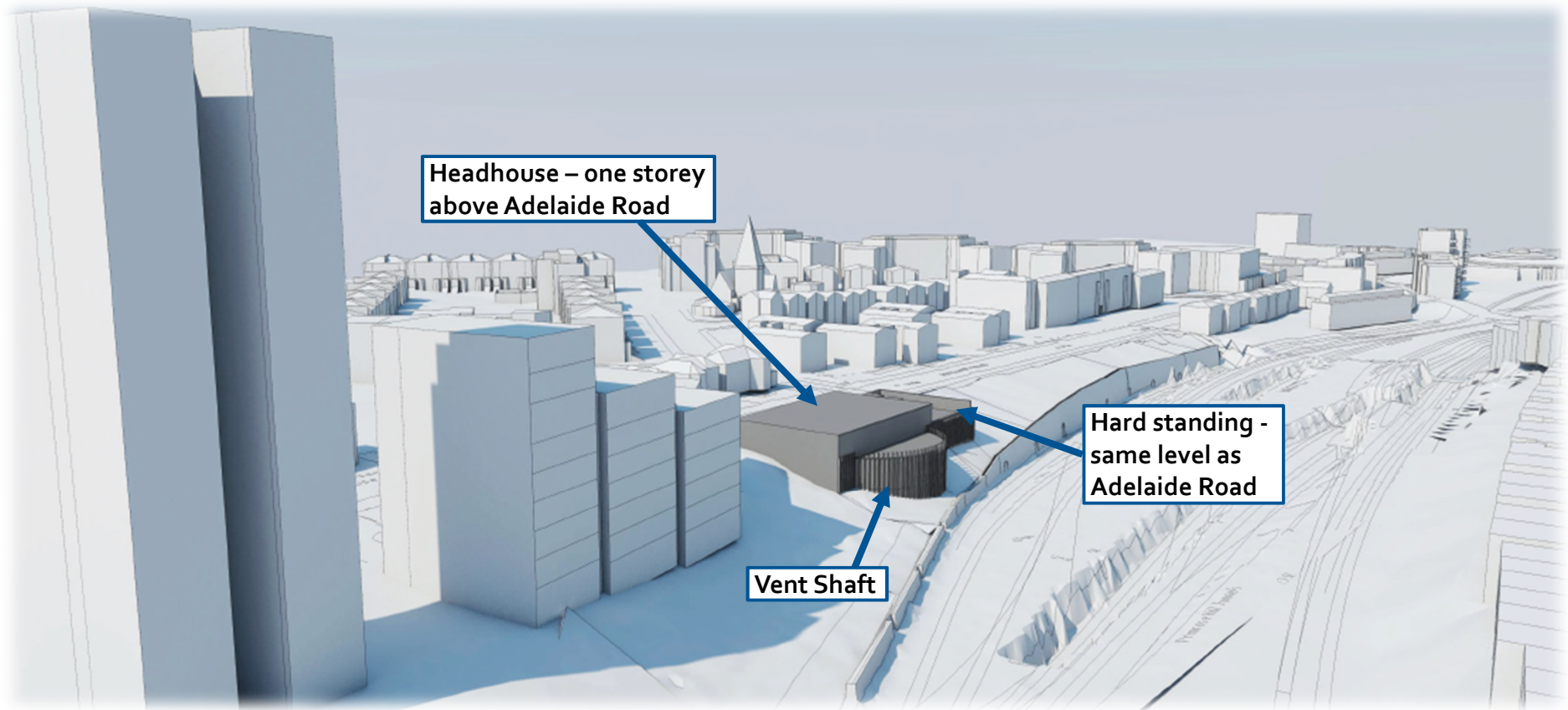
* Paragraph 1 of Schedule 18 of the Bill disapplies the requirement for listed building consent in respect of the listed buildings set out in table 1, or which were listed on or after 30 September 2013. This asset was listed (Grade II) on 11th February 2016 and therefore Paragraph 1 of Schedule 18 is applicable.



Adelaide Road Shaft

Summary and Requirement for Partial Road Closure

Adelaide Road Shaft - Operational Plan



Adelaide Road Shaft Construction

- The Shaft is circular with an internal diameter of 23m and depth of approximately 50m.
- Will be constructed from a level working area cut into the existing Chalk Farm Embankment slope.
- Requires a piled retaining wall to be installed along the southern edge of Adelaide Road.
- This work had previously been expected to require a 4 month road closure. However, since the House of Commons Committee hearings a plan has been developed to keep Adelaide Road open to vehicular traffic.

Adelaide Road – Partial Road Closure



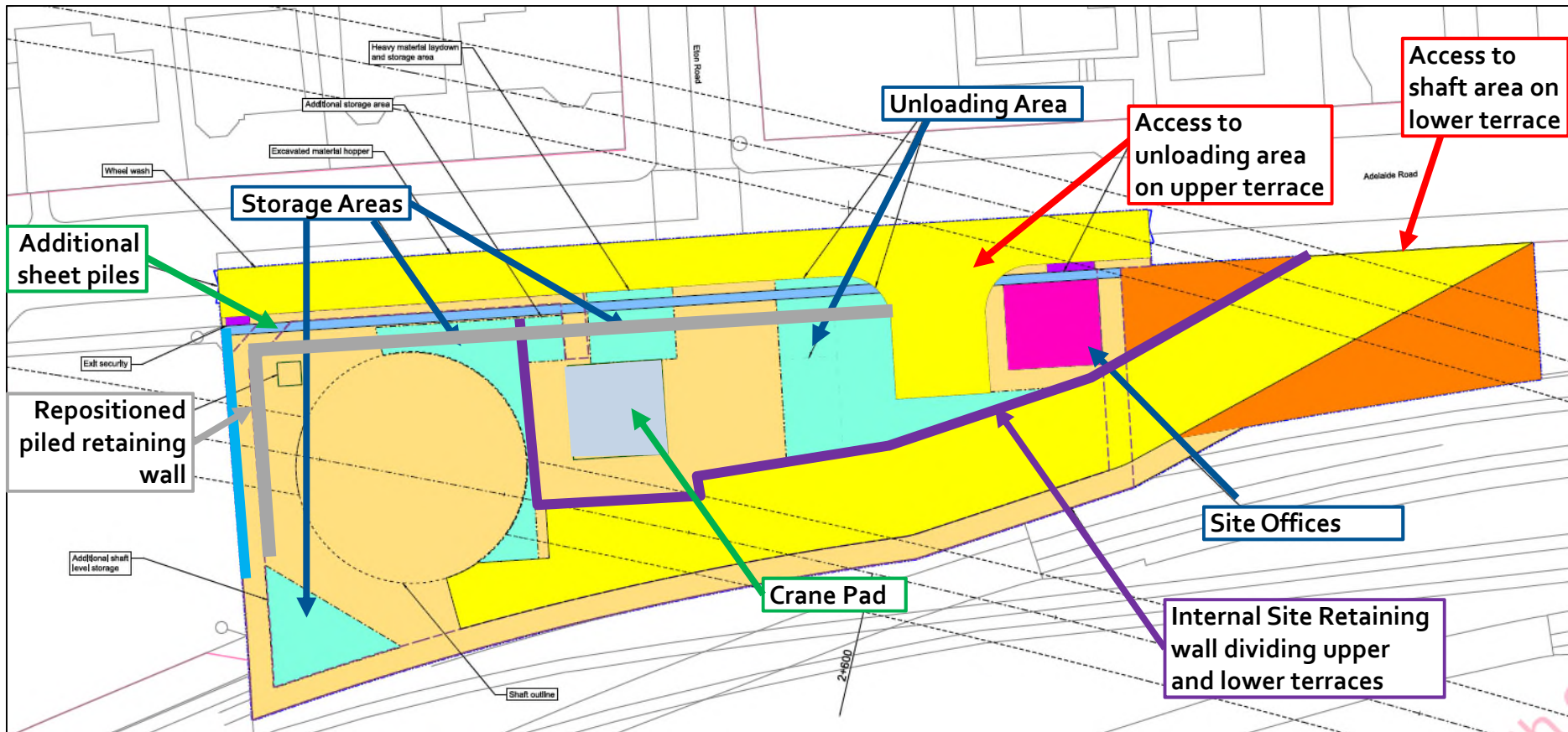
In order to maintain vehicular access along Adelaide Road a temporary sheet piled wall will be installed and the planned bored pile wall will be relocated 2m further away from the road.

The modified construction sequence will avoid a full closure but will require closure of the southern lane and footpath for 10-12 months. A shuttle working traffic system will be installed.

The partial use of Adelaide Road is required as:

- Construction is required from the top of the sloped site as there is a retaining wall which is not capable of taking additional loading and live railway at the base.
- The Adelaide Road southern carriageway and neighbouring site area provides sufficient space to accommodate required piling equipment.
- The construction technique helps to minimise noise and vibration.
- A level site is required for safe working.

Adelaide Road – Partial Road Closure



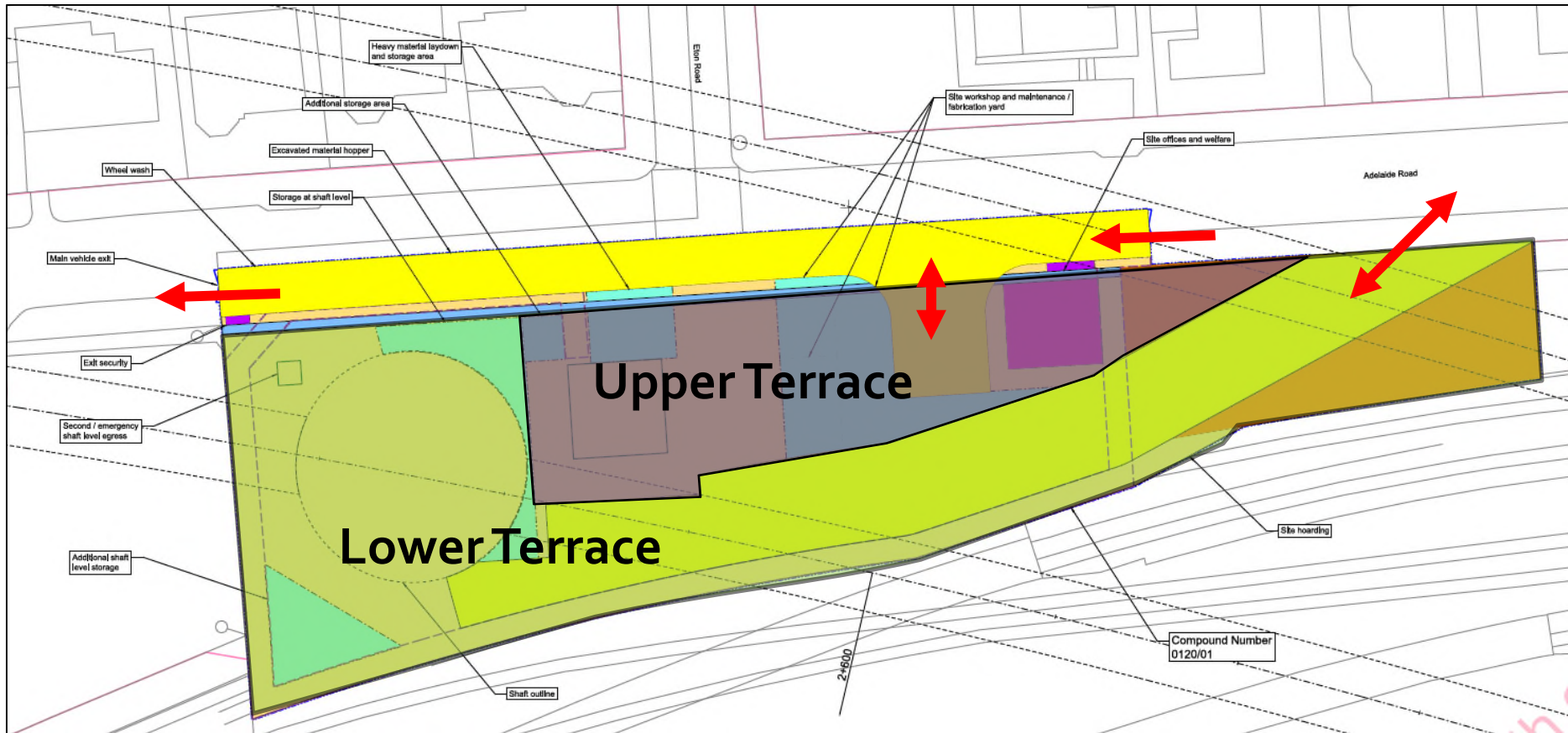
Adelaide Road Shaft Construction Sequence



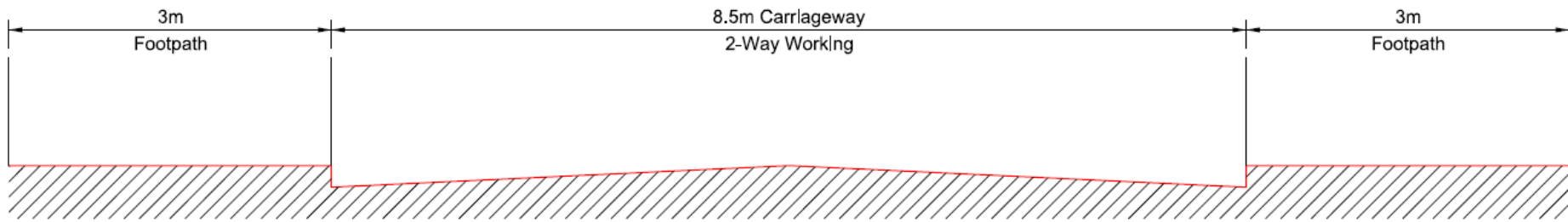
The envisaged construction sequence for Adelaide Road Shaft is:

1. Close southern lane of Adelaide Road and set up hoarding and site. It is anticipated that full closure of Adelaide Road will be required to install the initial sheet piles over the course of one weekend.
2. Construct sheet pile wall between site and Adelaide Road.
3. Construction of permanent piled retaining wall
4. Excavate northern area of site to approximately 4m below Adelaide Road level
5. Re-open Adelaide Road for two-way traffic
6. Backfill eastern section to create Upper Terrace and construct crane platform
7. Excavate Lower Terrace and construct shaft
8. Construct shaft headhouse to one storey above Adelaide Road level
9. Carry out landscape mitigation planting and ecological enhancements, install site fencing and remove site hoarding

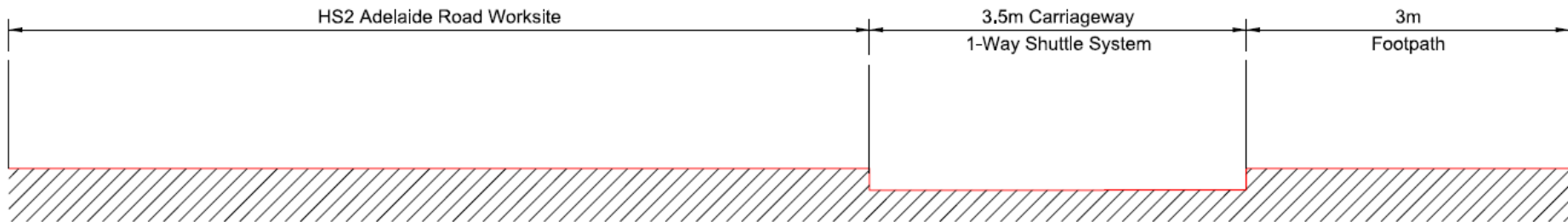
Adelaide Road – Terrace construction



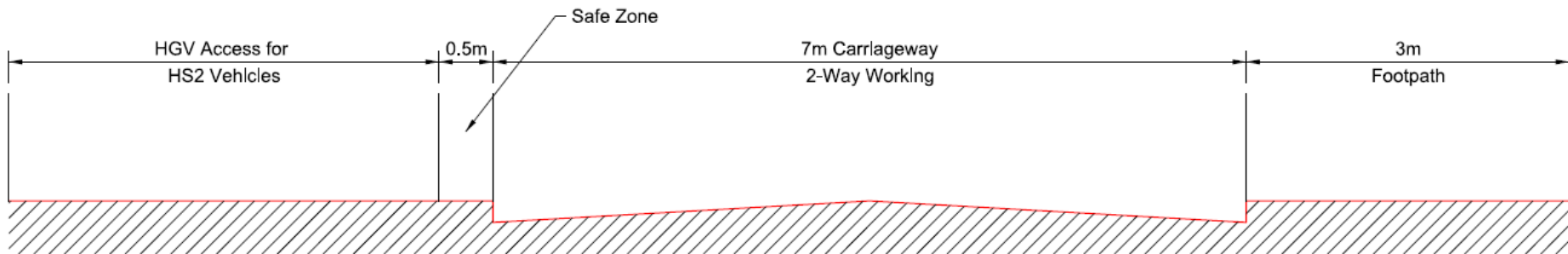
Adelaide Road – Cross-sections



Existing Adelaide Road Cross Section



Phase A: Adelaide Road Partial Closure (10-12 Months)



Phase B: Adelaide Road Two Way Running



Adelaide Road Shaft

Site Selection

Key criteria for shaft site selection

Key shaft site criteria:

- Available area
- Proximity to tunnels for operation and fire safety
- Location
 - Suitable access and road network
 - Nature of site and surroundings
- Environmental impact
- Risks and safety issues
- Cost and programme

Alternative Local Options

10 local alternative options were considered.

The Proposed Scheme was selected as it:

- Will be wholly outside the statutory designated Adelaide Local Nature Reserve.
- Avoids the use of land occupied by the MOT garage and its driveway.
- Is considered to be the preferred engineering solution.



2041 Photomontage of chosen option

Alternative sites considered

3 alternative sites have been considered for Adelaide Road Shaft:

- During Site Selection:
 1. Primrose Hill - not progressed as it is in a Site of Nature Conservation Importance, Metropolitan Open Land, adjacent to Conservation Area and in close proximity to a school.
 2. Oppidans Road - not progressed as it would require demolition of a bakery and would sit within a residential area, surrounded by 3 to 4 storey apartment blocks.
- Following HS1-HS2 Link removal:
 3. Juniper Crescent (review explained below)



Adelaide Road Shaft

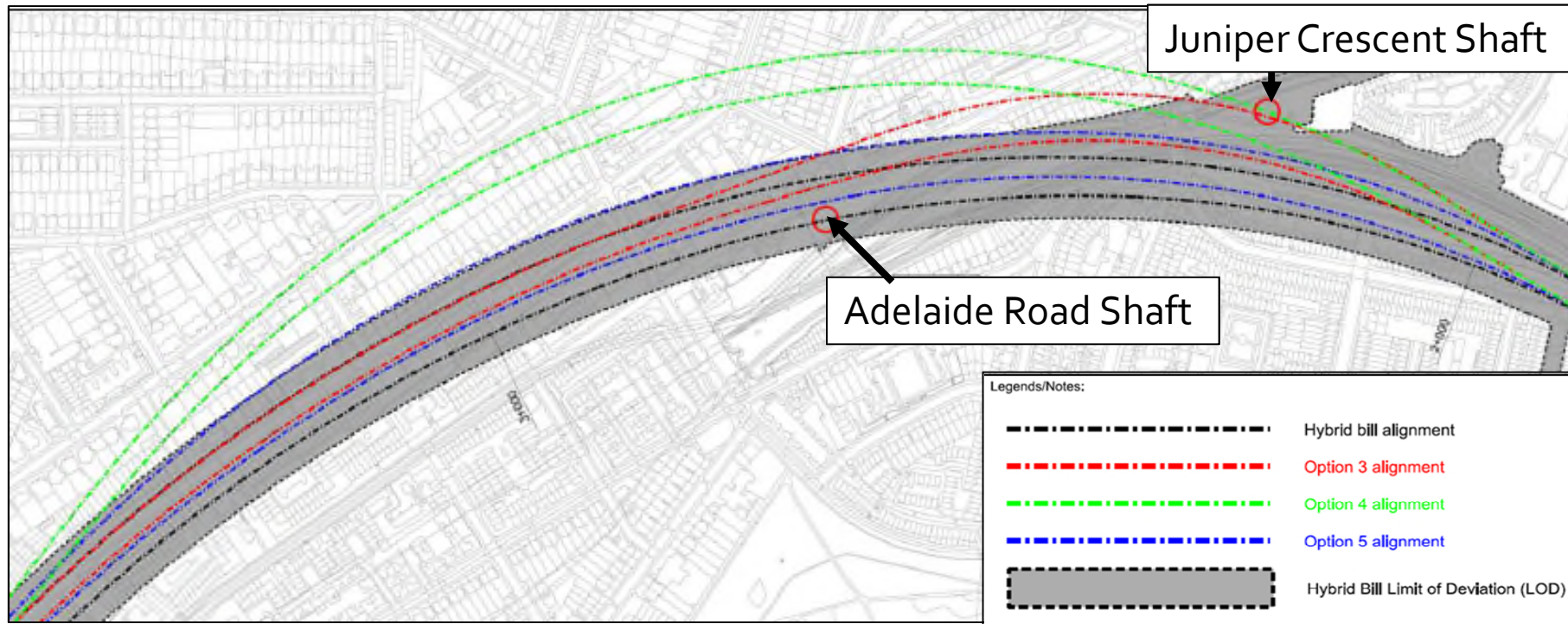
Review to relocate shaft to Juniper Crescent

Review to relocate Adelaide Road Shaft to Juniper Crescent

In response to petitions and the removal of the HS₁/HS₂ link tunnel portal at Juniper Crescent 5 Options were considered:

- **Option 1 and Option 2** remained within hybrid Bill LODs but were discarded early on since line speeds were significantly compromised.
Option 3 - Online shaft with running tunnels aligned horizontally to avoid clashing with the Kentish Town Cable Tunnel. Tunnels followed similar vertical alignment to Hybrid Bill scheme.
- **Option 4** - Online shaft with running tunnels aligned horizontally to minimise reductions in line speed, requiring the vertical alignment to be altered to avoid clashing with the Kentish Town Cable Tunnel.
- **Option 5** - Offline shaft with running tunnels aligned horizontally to pass close to the shaft. Vertical alignment is similar to the Hybrid Bill scheme.

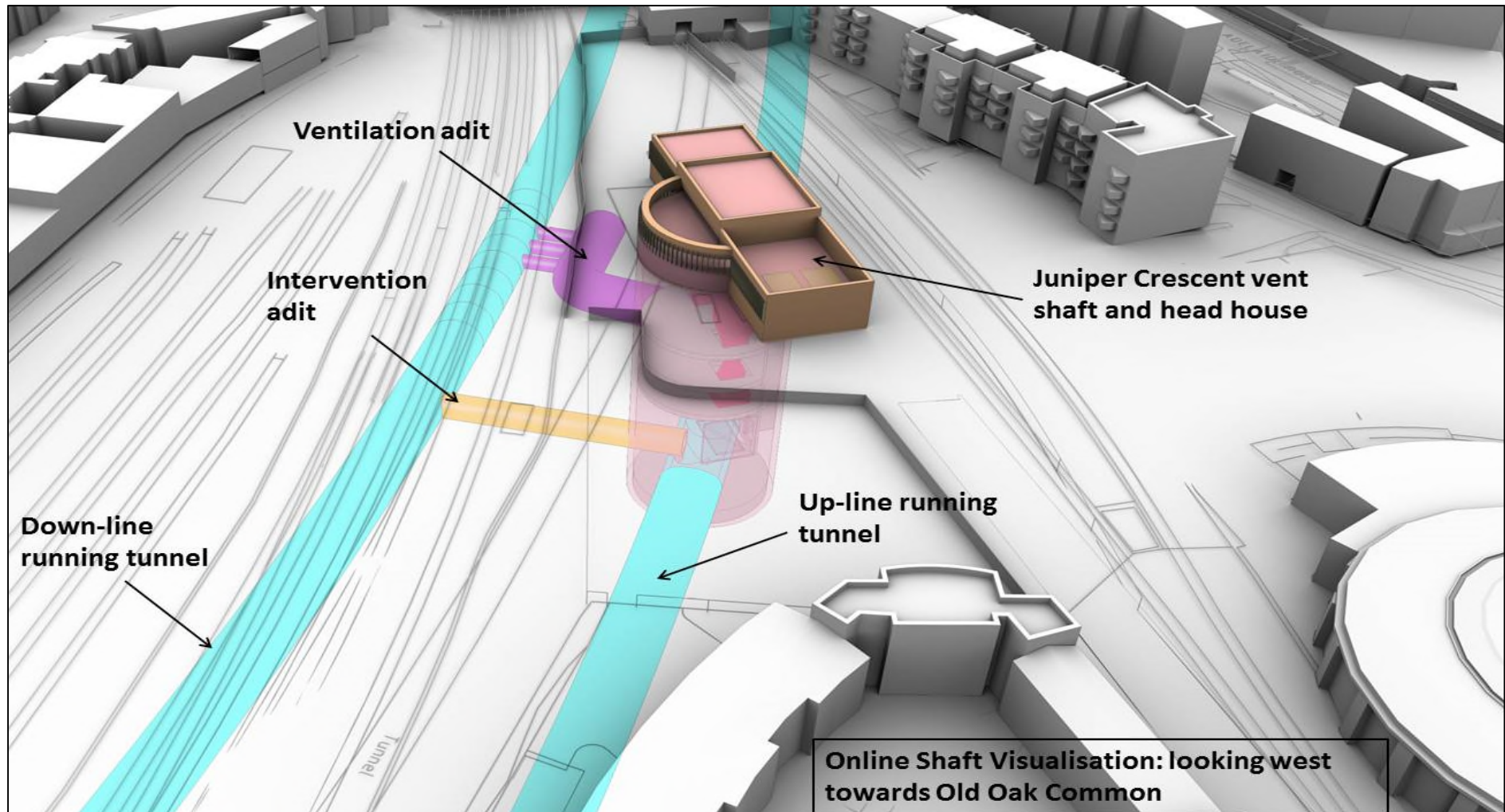
Alignment Options



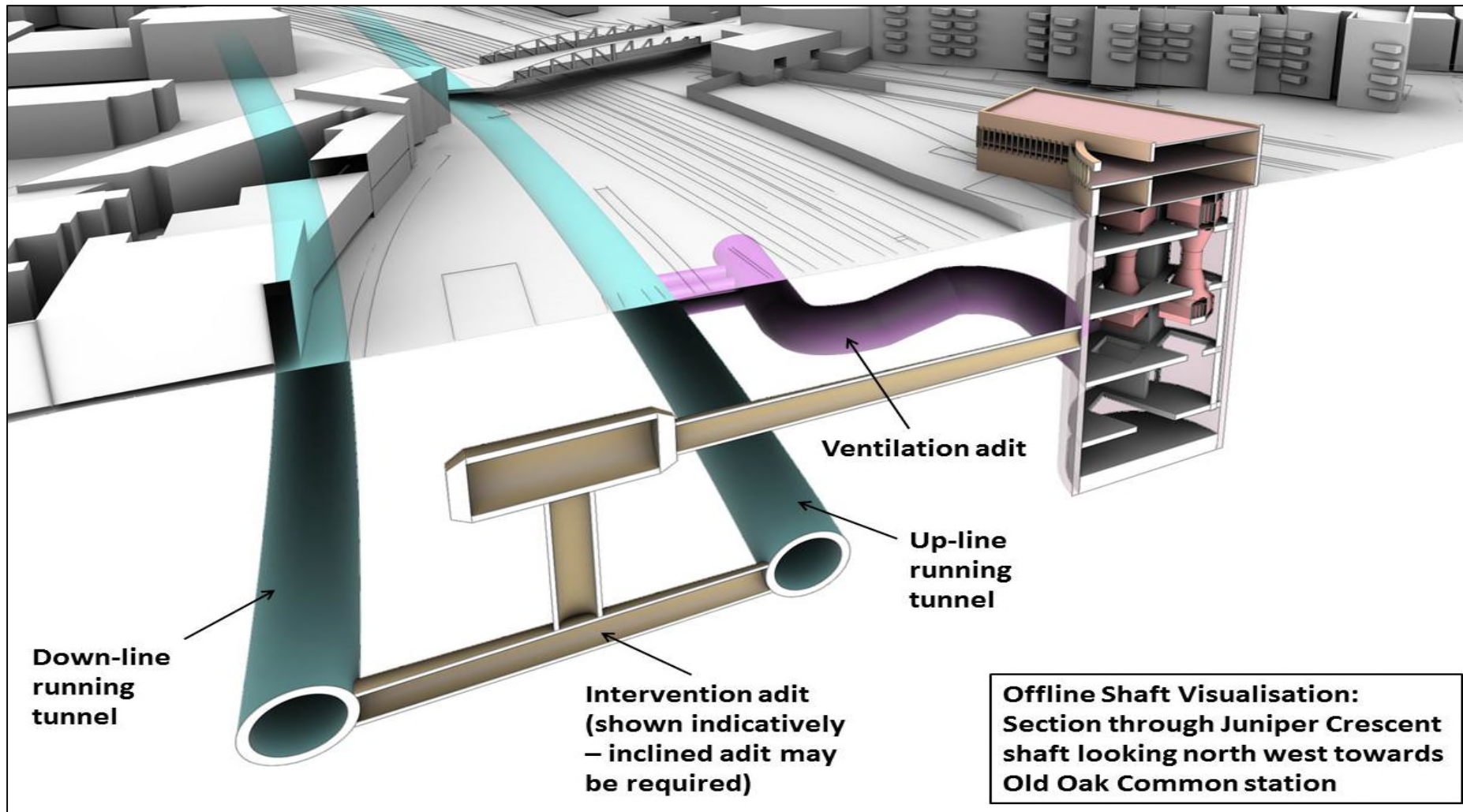
| | Euston | 1+000 | 2+000 | 3+000 | 4+000 | 5+000 | 6+000 | 7+000 |
|--------------------------|--------|-------|-------|-------|-------|-------|--------------|--------------|
| Hybrid Bill chainage (m) | | | 350 | 885 | | 400 | | 50 |
| Line Speed (kph) | | 145 | | 160 | 180 | | 230 | 200 |
| Option 3 chainage (m) | | | 950 | 630 | | 920 | 600 (tie in) | 50 |
| Line Speed (kph) | | 145 | | 120 | 180 | | 230 | 200 |
| Option 4 chainage (m) | | | | 210 | 375 | | 560 | 175 |
| Line Speed (kph) | | 145 | | 160 | 180 | | 230 | 200 (tie in) |
| Option 5 chainage (m) | | | | 630 | 165 | | 945 | 600 (tie-in) |
| Line Speed (kph) | | 145 | | 170 | 200 | | 230 | 200 |

Speeds continue as per Hybrid Bill to Old Oak Common

Online Shaft – Option 3 & 4



Offline Shaft – Option 5



Summary of Review

Benefit of moving shaft from Adelaide Road to Juniper Crescent:

- A. Removes impact from 4 month road closure
- B. Enables construction on flat site

Dis-benefit of moving shaft from Adelaide Road to Juniper Crescent

1. Increased cost of £6-£19million
2. Increased journey time by 6 to 20 seconds which also causes 3 minute timetable planning rule to be exceeded
3. Alignment with tighter curves and increased track gradients likely to increase wear and tear on track
4. Option 5 has longer tunnel connections increasing fire safety intervention distance and risk



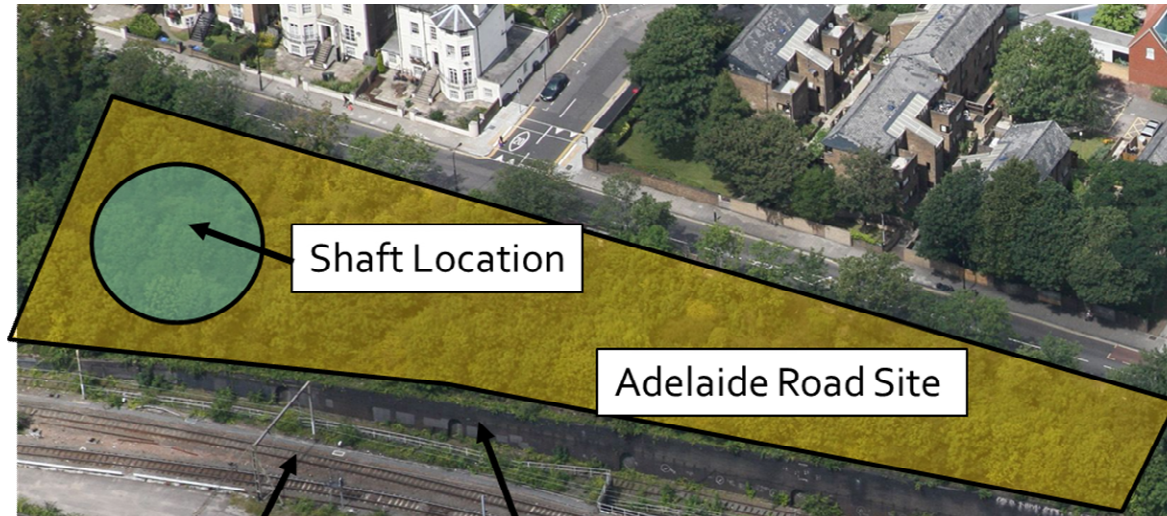
Adelaide Road Shaft

Potential to move material by rail

Adelaide Road Shaft

- Potential to move material by rail

- Significant infrastructure would need to be constructed in order to import or remove material by rail from Adelaide Road shaft.
- This is likely to require additional land neighbouring the site and within the busy rail corridor and introduce additional visual and noise impacts.
- The scale and impact of this work is considered to be disproportionate to the benefit gained for moving relatively small amounts of material by rail.

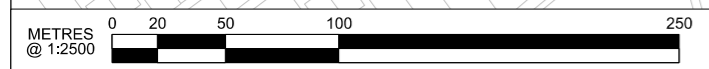
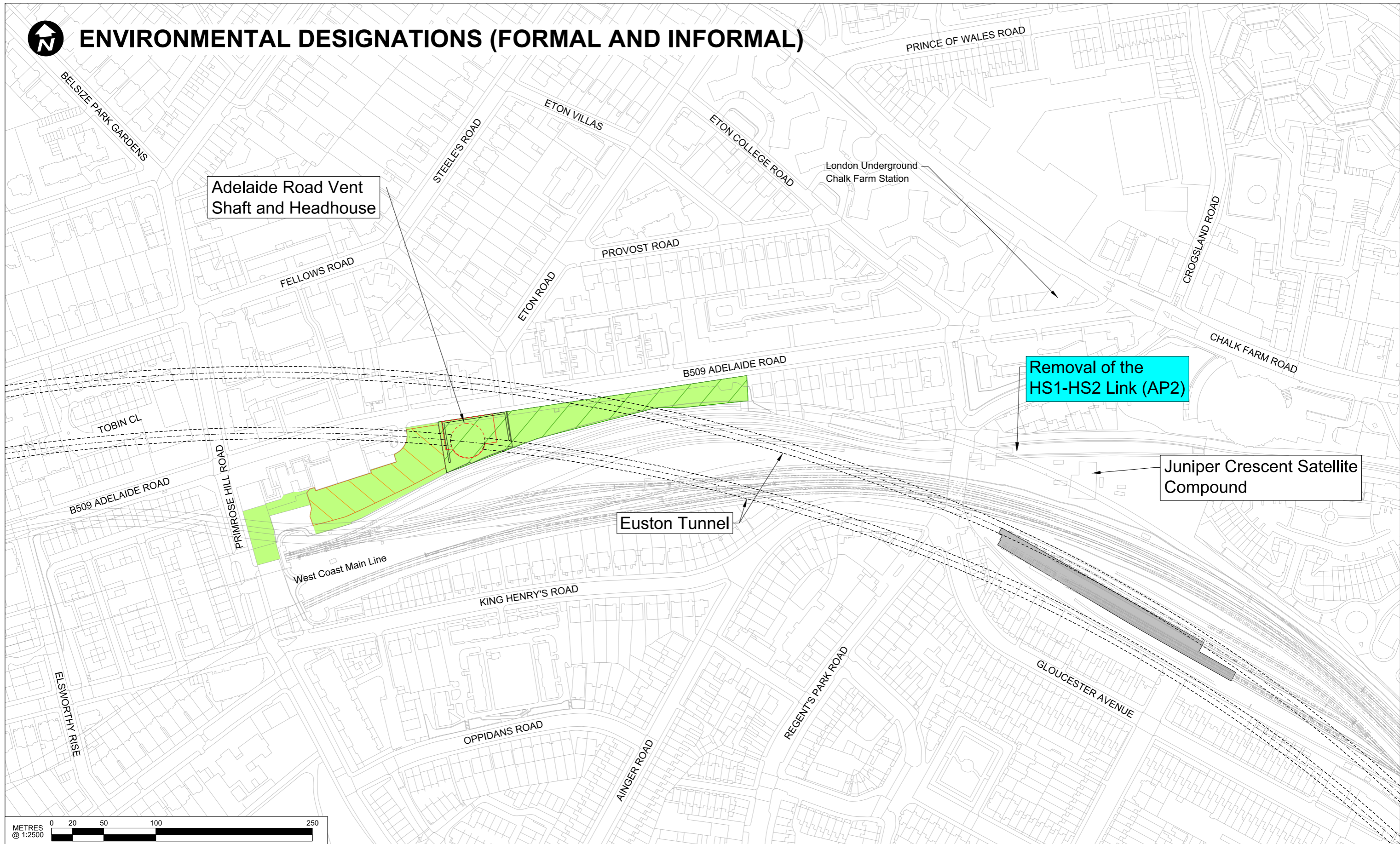


Live railway including overhead line equipment

2-5m high retaining wall separating site from railway



ENVIRONMENTAL DESIGNATIONS (FORMAL AND INFORMAL)



| | | | | | |
|-------|-------------|-------|---------|---------|---|
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| | Description | Drawn | Checked | Con App | HS2 App |

| | |
|----------------|---|
| Legends/Notes: | |
| | Depot, station, headhouse or portal building |
| | Tunnels external extent |
| | Rail alignment |
| | Chalk Farm Embankment & Adelaide Nature Reserve SBI |
| | Adelaide private nature reserve (This is the name given to this area by Adelaide Nature Reserve Association. It is managed by Network Rail) |
| | Adelaide Local Nature Reserve |

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Registration No. 06791686
Registered office:
One Canada Square,
London, E14 5AB

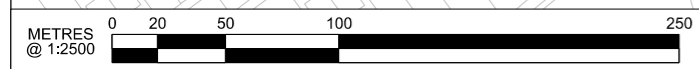
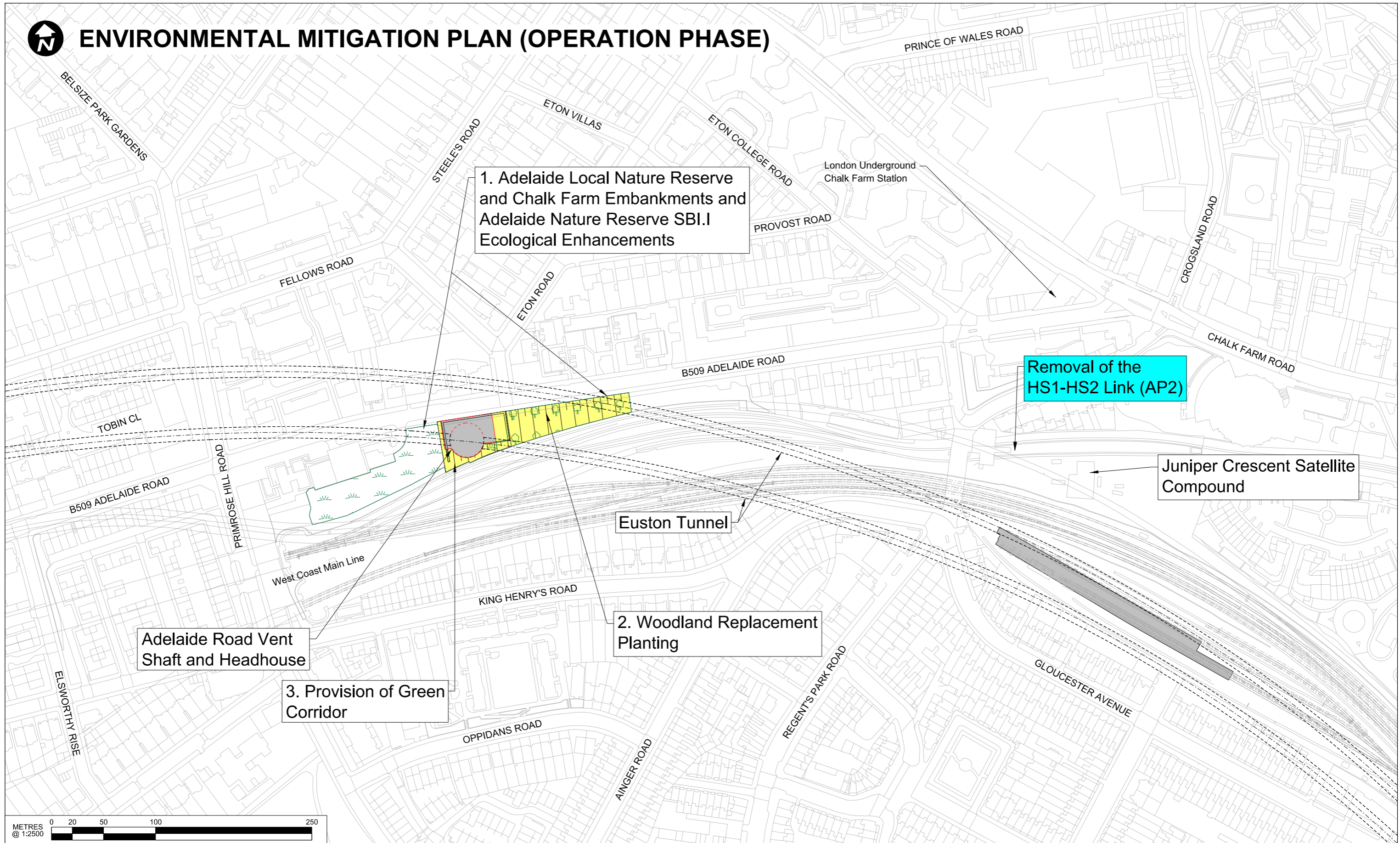
Creator/Originator
Mott MacDonald

| | |
|---------------|---|
| Zone | London Metropolitan |
| Design Stage | DESIGN-FOR-PETITION |
| Drawing Title | Adelaide Road Environmental Mitigation Designation Plan (Formal & Informal) |

| | | |
|---|-------------------|---------------|
| Project/Contract London Metropolitan Area Design | | |
| Discipline/Function Environmental | | |
| Drawn JQ | Checked | Approved |
| Date 23/11/2015 | Scale AS SHOWN | Size A3 |
| Drawing No. C221-MMD-EV-DPL-010-000004-PET000000 | | Rev. P00.1 |



ENVIRONMENTAL MITIGATION PLAN (OPERATION PHASE)



| | | | | | |
|-------|-------------|-------|---------|---------|---|
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| | Description | Drawn | Checked | Con App | HS2 App |

| | |
|----------------|--|
| Legends/Notes: | |
| | Depot, station, headhouse or portal building |
| | Engineering earthworks |
| | Woodland habitat creation |
| | Grassland habitat creation |
| | Rail alignment formation |
| | Tunnels external extent |
| | Rail alignment |
| | Existing public right of way (PRoW) |
| | New, diverted or realigned PRoW |
| | Main utility works |

Registered in England
Registration No. 06791686
Registered office:
One Canada Square,
London, E14 5AB

Creator/Originator
Mott MacDonald

| | |
|---------------|--|
| Zone | London Metropolitan |
| Design Stage | DESIGN-FOR-PETITION |
| Drawing Title | Adelaide Road Environmental Mitigation Plan |

| | | |
|---|-------------------|---------------|
| Project/Contract London Metropolitan Area Design | | |
| Discipline/Function Environmental | | |
| Drawn JQ | Checked | Approved |
| Date 20/11/2015 | Scale AS SHOWN | Size A3 |
| Drawing No. C221-MMD-EV-DPL-010-000003-PET000000 | | Rev. P00.1 |

Adelaide Road: Environmental Mitigation

| ID | Mitigation Type/Feature | Description | Primary Mitigation Function |
|----|---|---|---|
| 1 | Enhancement of Adelaide LNR and the retained area of Chalk Farm Embankment and Adelaide Nature Reserve SBI.I. | Proposed management measures include the enhancement of existing habitats and the provision of additional features for species, including terrestrial invertebrates. | Mitigation and compensation for the loss of habitat at Chalk Farm Embankment and Adelaide Nature Reserve SBI.I. |
| 2 | Woodland replacement planting. | Reinstatement of approximately 0.2ha of native broad-leaved woodland to the east of the vent shaft, and management until it becomes established. The woodland will be enhanced with the creation of a native shrub understorey and wildflower grassland field layer. Additional features will be included to enhance the biodiversity of the reinstated woodland such as log piles, bat and bird boxes. | Mitigation for the loss of 0.33ha of secondary woodland and loss of habitat for terrestrial invertebrates. |
| 3 | Provision of a green corridor. | Creation of a green corridor to the south of the headhouse building to maintain ecological connectivity between the LNR and the woodland habitat to the east. | Maintain ecological connectivity. |