TRANSPORT AND WORKS ACT 1992

TRANSPORT AND WORKS (INQUIRIES PROCEDURE) RULES 2004

THE NETWORK RAIL (OLD OAK COMMON GREAT WESTERN MAINLINE TRACK ACCESS) ORDER

PROOF OF EVIDENCE – ALTERNATIVES CONSIDERED AND SELECTON OF PREFERRED OPTION

STATEMENT OF CHRIS FORD

13 OCTOBER 2023

1. INTRODUCTION

1.1 I, Chris Ford *MEng CEng MICE MPWI*, am a Project Delivery Engineering Manager at Network Rail Infrastructure Limited (**Network Rail**). My role at Network Rail as Project Delivery Engineering Manager began in May 2022 and consists of leading all engineering activities undertaken by HS2 On Network Works at Old Oak Common (**OOC**). Prior to this role I undertook the role of Designated Project Engineer which consisted of leading the engineering assurance team in development and acceptance of the railway systems design of Old Oak Common.

1.2 I am a Chartered Engineer with the Institution of Civil Engineers (CEng MICE) registered with the Engineering Council and a Member of the Permanent Way Institution (MPWI). I have a master's degree in civil engineering from the University of Nottingham. I have worked within the rail infrastructure industry since 2011, and with Network Rail since 2012. Between 2012 and 2014 I worked within maintenance and asset management teams. Since 2014 I have worked on rail systems projects in both delivery and development. Predominantly London Bridge Station rail systems and OOC rail systems.

2. INVOLVEMENT WITH THE PROJECT AND STRUCTURE OF THIS STATEMENT

2.1 Network Rail proposes the construction of a temporary road rail vehicle (**RRV**) access on to the Great Western Main Line (**GWML**) railway to enable delivery of the OOC Station. It also proposes the construction of a permanent RRV access to allow future maintenance of the GWML. These works together comprise the **Project** in respect of which the above named order (**Order**) is promoted.

2.2 The OOC Station itself will be delivered by HS2 Limited. However, before the OOC Station enters into operation, Network Rail needs to modify the existing GWML infrastructure to make sure that the OOC Station can be suitably accommodated. Works to be undertaken by Network Rail to enable this are collectively known as the **GWML Rail Systems Project**, which involves the modification of the existing four-track GWML to an eight-track railway, including related infrastructure updates, to accommodate the eight new conventional rail platforms at OOC Station.

2.3 I joined the GWML Rail Systems Project in March 2018 as Project Engineer (Track). I was responsible for assurance of Track engineering deliverables, assisting development of design, consultation with stakeholders (including maintenance) and development of construction plans. It was during this role that I identified the requirement for a new Road Rail Access Point (**RRAP**) on the Mains (South) side of the GWML in order to deliver the GWML Rail Systems Project, and to allow future maintenance of Network Rail infrastructure. I was promoted to Senior Project Engineer (Track) in February 2019 and my responsibilities remained as previously outlined.

From, roughly, October 2019 I informally began the role of Designated Project Engineer for GWML Rail Systems Project. This was formalised in February 2020. I then led all Network Rail engineering activities for GWML Rail Systems Project across all disciplines, including operations to develop the layout options and an outline design ensuring that the proposal could be constructed and maintained.

2.4 In May 2022 I was promoted to Project Delivery Engineering Manager leading all engineering activities in the Network Rail HS2 On Network Works programme at OOC. This includes several projects, of which GWML Rail Systems Project is one. The GWML Rail Systems Project is being delivered as an 'Alliance' so I am also accountable for engineering activities of the supply chain in design and construction. An Alliance is a non-traditional form of contract which promotes collaboration between supply chain partners and client organisations in order to promote swift decisions which are best for the GWML Rail Systems Project.

2.5 In this Statement I set out:

a. the strategic need for the RRAPs;

b. the requirements for the RRAPs and the associated compound;

c. the existing RRAPs that have been considered for the Project;

d. alternative locations considered for the Project; and

e. objections received in response to the Order application.

2.6 My evidence addresses the matters raised at Paragraph 2 of the Secretary of State's Statement of Matters dated 15 September 2023 (**Statement of Matters**). My evidence also partly deals with the matters raised at paragraph 4(a) of the Statement of Matters in demonstrating that alternative options considered by Network Rail cannot accommodate the Project; the Order Land (as well as Plot 1) are the only location which can viable accommodate the Project and, as such, the land and rights over land which Network Rail has applied for are necessary to implement the Project.

3. STRATEGIC NEED FOR THE RRAP

3.1 RRAPs provide a means of access and egress for RRVs and plant onto the Network Rail's infrastructure. The deployment of RRAPs at key locations play their part in ensuring the overall safety of the railway by providing a vital means of safe and easy access for RRVs.

3.2 Accessing the track with an RRV via a RRAP requires a possession of the related railway tracks and an isolation of the related electrified overhead lines (25kV). An isolation involves the overhead electrical equipment being turned off so that works can be undertaken without the hazard of electric shock or electrocution. A possession of the track involves the blocking of the railway tracks to signalled train movements, except for specific trains and machinery (i.e. for engineering trains to support works).

3.3 The possession of the track is normally taken either via a Relief (slow) side possession or a Main (fast) side possession, to ensure that at least one side remains operational and train services continue operating. The ultimate aim is to minimise any disruption to passengers, the Train Operating Companies (**TOCs**), and Freight Operating Companies (**FOCs**). The Reliefs are the northern pair of tracks on the GWML at this location, the Mains are the southern pair of tracks.

3.4 The majority of construction activities that have taken place in the area to date have only required possession and isolation of the Relief lines, which have been accessed by way of the existing RRAPs on the Northern, Relief line, side of the GWML. However, the GWML Rail Systems Project involves significant construction works, which require access to the track via the southern main line side. The existing Main line side RRAPs, which have been used to deliver limited works to date, are severely restricted in utility by the operations of North Pole Depot and Acton West Junction. As such, need for the RRAP access for the significant construction works required for the GWML Rail Systems Project, and also for future maintenance activities of Network Rail infrastructure, cannot be met by the existing RRAPs on the Main line side, as further described in this Proof of Evidence.

3.5 The GWML Rail Systems Project has multiple pieces of infrastructure that need to be installed and this installation can only be undertaken with access to the Up and Down Main lines. This includes, for example, provision of drainage that runs between the tracks and installation of overhead line equipment portals adjacent to the tracks. Furthermore, ongoing maintenance activities will be required to be undertaken on the Up and Down Mains whilst under possession. None of these works can be completed via a Reliefs possession as all the existing RRAPs on the Reliefs side sit within a live railway environment with operational passenger trains passing through. Any attempt to use these RRAPs for the GWML Rail Systems Project would result in a so called 'All Line Block possession' (a possession that closes both the mains and reliefs) which will last for a significant period of time. This is not acceptable to the TOCs due to the level of disruption it would cause to passenger services. Typically, such access (for anything over roughly 8 hours) is only granted on Christmas Day.

3.6 In terms of the proposed permanent RRAP, as provided in the Statement of Case submitted by Network Rail together with their Order application, a lack of adequate RRAPs in the area has been identified previously and Network Rail has, in the past, deferred several track renewal works on the Mains side in the area due to the lack of RRAPs which would enable access to the Mains side. These works are critical to running a safe and reliable railway and have been deferred until a suitable Mains side RRAP can be provided. By way of another example, during planning for the Crossrail programme (2009 – 2018) works major development works had to be undertaken on the Mains side but without a RRAP in this location. At that time the occupier of the Order Land (that is, Plots 2-4 as shown on the Land Plan submitted with the Order) was approached with a view to gaining the necessary access to the railway via their site.

3.7 At the time of Crossrail programme development negotiations with the occupier of the Order Land were not concluded, as a workaround was developed for the existing RRAP at the station. The RRAP in question has since been removed as the development at the time included building over the footprint of the RRAP and its subsequent removal. Discussion on reinstatement of this RRAP is discussed later in this Proof of Evidence.

3.8 As such, it is crucial that the proposed temporary and permanent RRAPs are provided at this point to support delivery of the infrastructure necessary for construction of the OOC station, as well as adequate access to the Mains side in the future to enable future improvements and maintenance of the railway.

4. REQUIREMENTS FOR THE RRAP AND THE ASSOCIATED COMPOUND

4.1 The compound and RRAP requirements are outlined in the Old Oak Common Lineside Logistics Compound Strategy (1152270-NWR-STR-DEL-000001 P01 issue 20220720) **[CF1]**.

4.2 Best practice for the design of RRAPs is set out in the Best Practice Design Guide for Network Rail Infrastructure Access points (CS075481) (**Design Guide**) **[CF2]**.

4.3 The proposed permanent and temporary RRAPs consist of

a. RRV access;

b. minimum 6m vehicle access gate and fenced compound;

c. dedicated access for parking (cars/vans);

d. temporary accommodation;

e. material storage; and

f. turning area for HGVs and RRVs.

4.4 The security will be Level 2 (as defined in the Design Guide), which is an enhanced level of security including permanent switchable lighting of the compound areas.

4.5 Security Level 2 involves provision of 1.8m high palisade (or equivalent security rating) fencing and gate alongside permanent switchable lighting, to act as a deterrent.

4.6 Security Level 2 has been selected to prevent theft of materials and plant and to deter trespass. These are common occurrences on Network Rail infrastructure and trespass is known to occur on this line of route. Higher security levels are generally provided where operationally critical buildings and equipment are located or where High Voltage equipment is present, therefore security Level 3 is not required here.

4.7 The compound for the RRAPs also needs to accommodate welfare facilities for Network Rail's, and their supply chain's, workers who will be undertaking the works to deliver the GWML Rail Systems Project. The welfare facilities will provide shelters from adverse weather conditions, first aid provision, mess facilities and toilet facilities, alongside other requirements of the Construction, Design and Management Regulations 2015. The health and safety of workers is the primary concern for determining the location of any such welfare facilities. They should be positioned as close to the temporary RRAP as possible to ensure they can be reached in the minimum time possible. Due to the volume of works required in the delivery of the GWML Rail Systems Project these welfare facilities will be static, either via portable cabins or an existing warehouse building at the Order Land for the duration of these works. For the permanent RRAP the volume of work will significantly reduce, so that welfare would usually be provided by welfare vans.

4.8 Provision of welfare also reduces the risk of adverse impacts on residential amenity as it provides an enclosed space for eating, drinking and personal needs breaks.

4.9 Whilst ensuring safe operation, having welfare facilities in close proximity of the temporary RRAP also improves the efficiency of the work being delivered and reduces the number of shifts required, and therefore any disruption to the passengers. This is due to the reduction in time lost due to personal needs breaks for staff being close to the site of works rather than requiring taxis/minibuses to transfer staff to and from remote welfare through traffic in what might be a congested road network.

Geographical constraints

4.10 In addition to the above, there are a number of geographical constraints which have to be taken into account when establishing the best location for the Project. These are described in the

Statement of Aims submitted with Network Rail's application for the Order. The various locations identified in this section of my proof are identified in Figure 1, at the end of this subsection.

4.11 The GWML Rail Systems Project needs to be located in close proximity to the North Pole Depot rail entrance. This is due to the Limits of Deviation, laid out in the High Speed Rail (London – West Midlands) Act 2017, which fix the OOC station adjacent to North Pole Depot maintenance shed. Use of the depot rail entrance has to remain undisturbed however, given the number of trains that use it on a regular basis for maintenance purposes. As such, any permanent and temporary RRAPs have to be located to the west of the existing North Pole Depot entrance to ensure that there is minimum disruption to the existing access.

4.12 To the west of the proposed RRAPs are Acton Freight Yard and Acton West Junction, which are used by TOCs to maintain services when a Main Line possession is taken outside of agreed windows in the Engineering Access Statement (known as Rules of the Route possessions). To ensure that this position is not affected in any way, and the TOCs retain the ability to run a reliable service for passengers, the new RRAPs needs to be to the east of Acton West Junction.

4.13 More detailed assessment of the impact of possessions which encompass Acton West Junction and/or North Pole Depot entrance are described below.

4.14 Acton West Junction being blocked has an impact on 2-track operation (generally mid-year) and All Line Block operation (Generally Christmas blockades). In a 2-track possession the Mains would be blocked, and the Reliefs would be open to trains. The Mains possession would need to extend to Southall West as the next Relief to Mains crossover. This length of possession includes four intermediate Relief Line stations, which would have stopping trains restricting the timetable. This prevents the full specification of 2-track operation timetable being diverted via the Relief Lines. To prevent closure of Acton Main Line, Ealing Broadway, West Ealing and Hanwell stations the timetable would need to be reduced to between 10 and 12 trains per hour (in each direction) from currently proposed 14.5-15.5 trains per hour, to compensate for the time taken to make the additional station calls in the two-track section. Such significant reduction in frequency of services will result in unacceptable levels of capacity, causing overcrowded services, reducing safety and wellbeing of passengers, increasing disruptions to journeys and introducing a higher likelihood of delays and cancellations. Extending the possession to include Acton West Junction is therefore unacceptable to TOCs, due to immense passenger dissatisfaction, income loss, and reputation damage to TOCs and rest of railway industry.

4.15 During an all-line blocks of the GWML to facilitate OOC Station construction, the London Paddington station will be inaccessible and hence Ealing Broadway is set to serve as a temporary terminus station, which will allow passengers travelling from the West of England and Wales to access central London by connecting to London Underground Transport for London services. This has been the basis of agreements with TOCs in order for them to agree to required blockades. If Acton West Junction is blocked, the services will not be able to terminate at Ealing Broadway, due to the location of facilities to turnback trains, leaving thousands of passengers in the West England and Wales cut off from London for up to 18 days at a time. As these all-line blocks happen over Christmas, during increased travel needs for UK residents and tourists alike, this would have cascading effects on UK tourism, the economy and the reputation of the railway industry. Therefore, TOCs will not accept possession limits extending to include Acton West Junction.

4.16 North Pole Depot entrance, at Ladbroke Grove, is the only access onto the GWML for Class 800/801/802 trains which make up the GWR High Speed Service. North Pole Depot is by far the largest maintenance depot for these trains for GWR. The contractual requirements require each train set to undergo a fitness to run examination every 36 hours (including safety

inspections, cleaning, refilling water supplies and emptying toilets). Blocking access to North Pole Depot would therefore restrict the ability to carry out this maintenance work and result in train sets being taken out of service with resultant cancellations of train services and detrimental impacts on passenger, income loss and reputation of the railway.

4.17 Note that additional disruption discussed in the above sections both highlight the loss of reputation of the railway. Railway transportation is a sustainable and low carbon travel method, loss of reputation drives passengers onto less sustainable and higher emission transport modes, such as driving private vehicles. Therefore, a reliable railway is key component to achieving net zero carbon emissions.

5. EXISTING RRAPS CONSIDERED

5.1 Several existing RRAPs in the area have been assessed by Network Rail with a view to utilising them for the Project. These are summarised in the table below and are further described in this section of my proof, together with reasons as to why these cannot accommodate the Project and, as such, are not acceptable in the circumstances:

Location	Comments
North Pole Depot existing RRAP	• The railway track, which the North Pole Depot RRAP is located on, is required for train stabling and maintenance and its closure for use by the Project would cause disruption to the train services operating in the region. • Due to the location of the North Pole Depot, the use of this RRAP would require multi-part possessions in order to mitigate some of the disruption. This would involve several changes to which railway tracks are under possession and which tracks have trains running on them during a work activity. This includes changes to overhead line isolation limits. These scenarios are known to cause confusion for construction staff and increase the risk of safety incidents. • Possession times for this RRAP have historically been shortened to comply with the TOC's requirements. As such, during a 29 hours' Sunday possession, this access is only available for the first 8 hours and last 5 hours. This is one of the impacts of the multi-part possession, which significantly impacts the ability to undertake work in the required 29 hours' possessions, resulting in delays to programme. No plant access is available during the remaining 16 hours of the possession, which in turn has the following impacts: increased risk of lost work and possession overruns – if a machine breaks down during a shift, there is no opportunity to remove it from the track and replace it with a functioning machine; this could result in lost work and delays to the programme. Additionally, it could risk overruns if works required to be completed within a possession to safely hand the track back cannot

	be completed, resulting in disruption to passenger services. o Reduction in efficiency of works – all plant needs to be on-track at the start of the possession and cannot leave until the very end of the possession. The order of plant on the tracks is therefore fixed throughout the whole shift. This prevents machines from being able to move freely during the possession, which increases the time it takes to complete works and, potentially, a requirement of additional possessions in later weeks. o Increased cost of plant hire – as all machines need to remain on track throughout the possession regardless of the time they are actually required for. • The RRAP is already used for maintenance by Network Rail and its use for the Project would result in multiple parties/RRVs accessing the track and/or being present at the track. This reduces the volume of works which can be undertaken during possession access, therefore requiring more disruption to passengers. • Given its location, use of this RRAP would increase RRVs transit time by roughly half an hour each way, resulting in insufficient time to carry out works and potentially increased disruption to train services and passengers.
Jacob's Ladder existing RRAP	• The Jacob's Ladder RRAP is located approximately 3.5 miles from the proposed location of the GWML Rail Systems Project works, which equates to roughly 30 minutes of additional transit time, resulting in insufficient time to carry out works and potentially increasing disruption to train services and passengers. • This RRAP is located west of Acton West Junction, a critical junction for train operations. RRVs travelling through Acton West Junction would result in increased disruption to passengers and train services. • Due to the location of Aston West Junction, the use of this RRAP would require multi-part possessions in order to mitigate some of the disruption. This is where there are several changes to which railway tracks are under possession and which tracks have trains running on them during a work activity. This includes changes to overhead line isolation limits. These scenarios are known to cause confusion for construction staff and increase the risk of safety incidents.

	• Possession times for this RRAP have historically been shortened to comply with the TOC's requirements. As such, during a 29 hours mains possession, this access is only available for the first 8 hours and last 5 hours. This is one of the impacts of the multi-part possession, which significantly impacts the ability to undertake work in the required 29 hours' possessions, resulting in delays to programme. No plant access is available during the remaining 16 hours of the possession, which in turn has the following impacts: o Increased risk of lost work and possession overruns – if a machine breaks down during a shift, there is no opportunity to remove it from the track and replace it with a functioning machine; this could result in lost work and delays to the programme. Additionally, it could risk overruns if works required to be completed within a possession to safely hand the track back, cannot be completed, resulting in disruption to passenger services. o Reduction in efficiency of works – all plant needs to be on-track at the start of the possession and cannot leave until the very end of the possession. The order of plant on the tracks is therefore fixed throughout the whole shift. This will prevent machines from being able to move freely during the possession, which increases the time it takes to complete works and potentially a requirement of additional possessions in later weeks. o Increased cost of plant hire – as all machines need to remain on track throughout the possession regardless of the time they are actually required for. • There is insufficient space for the storage of plant and/or material in order to carry out the Project. • The layout of Jacob's Ladder RRAP and compound does not allow the use of PKR 750 RRV cranes. Allowing use of PKR 750 cranes is part of the RRAP compound requirements as they are required for delivery of the overhead line equipment works required to support the GWML Rail Systems Project.
Southall existing RRAP	• This RRAP is located approximately 4.5 miles away from the GWML Rail Systems Project works, which equates to roughly 45 minutes of transit time. This would result in insufficient time to carry out works, resulting in increased disruption to passengers and train services.

	• Due to the distance of Southall RRAP from the site of works, a larger section of the railway would need to be closed for the entire possession. This would not be accepted by the TOCs as the proposed closure would prevent them from operating an acceptable level of passenger service. • This RRAP is located west of Acton West Junction, a critical junction for train operations. RRVs travelling through Acton West Junction would result in increased disruption to passengers and train services. • Due to the location of Aston West Junction the use of this RRAP would require multi-part possession in order to mitigate some of the disruption. This is where there are several changes to which railway tracks are under possession and which tracks have trains running on them during a work activity. This includes changes to overhead line isolation limits. These scenarios are known to cause confusion for construction staff and increase the risk of safety incidents. • Possession times for this RRAP have historically been shortened to comply with the TOC's requirements. As such, during a 29 hours' Sunday mains possession, this access is only available for the first 8 hours and last 5 hours. This is one of the impacts of the multi-part possession, which significantly impacts the ability to undertake work in the required 29 hours' possessions, resulting in delays to programme. No plant access is available during the remaining 16 hours of the possession, which in turn has the following impacts: o Increased risk of lost work and possession overruns – if a machine breaks down during a shift, there is no opportunity to remove it from the track and replace it with a functioning machine; this could result in lost work and delays to the programme. Additionally, it could risk overruns if works required to be completed within a possession to safely hand the track back cannot be completed, resulting in disruption to passenger services. o Reduction in efficiency of works – all plant needs to be on-track at the start of the possession and cannot leave until the very end of the possession. The order of plant on the tracks is therefore fixed throughout the whole shift. This will prevent machines from being able to move freely during the possession, which increases the time it takes

	to complete works and potentially a requirement of additional possessions in later weeks. • Increased cost of plant hire – as all machines need to remain on track throughout the possession regardless of the time they are actually required for.
Acton Main Line Station RRAP	This RRAP was removed by Crossrail and no alternative has been provided. Reinstatement of this RRAP is considered in Section 6 of this Proof of Evidence.

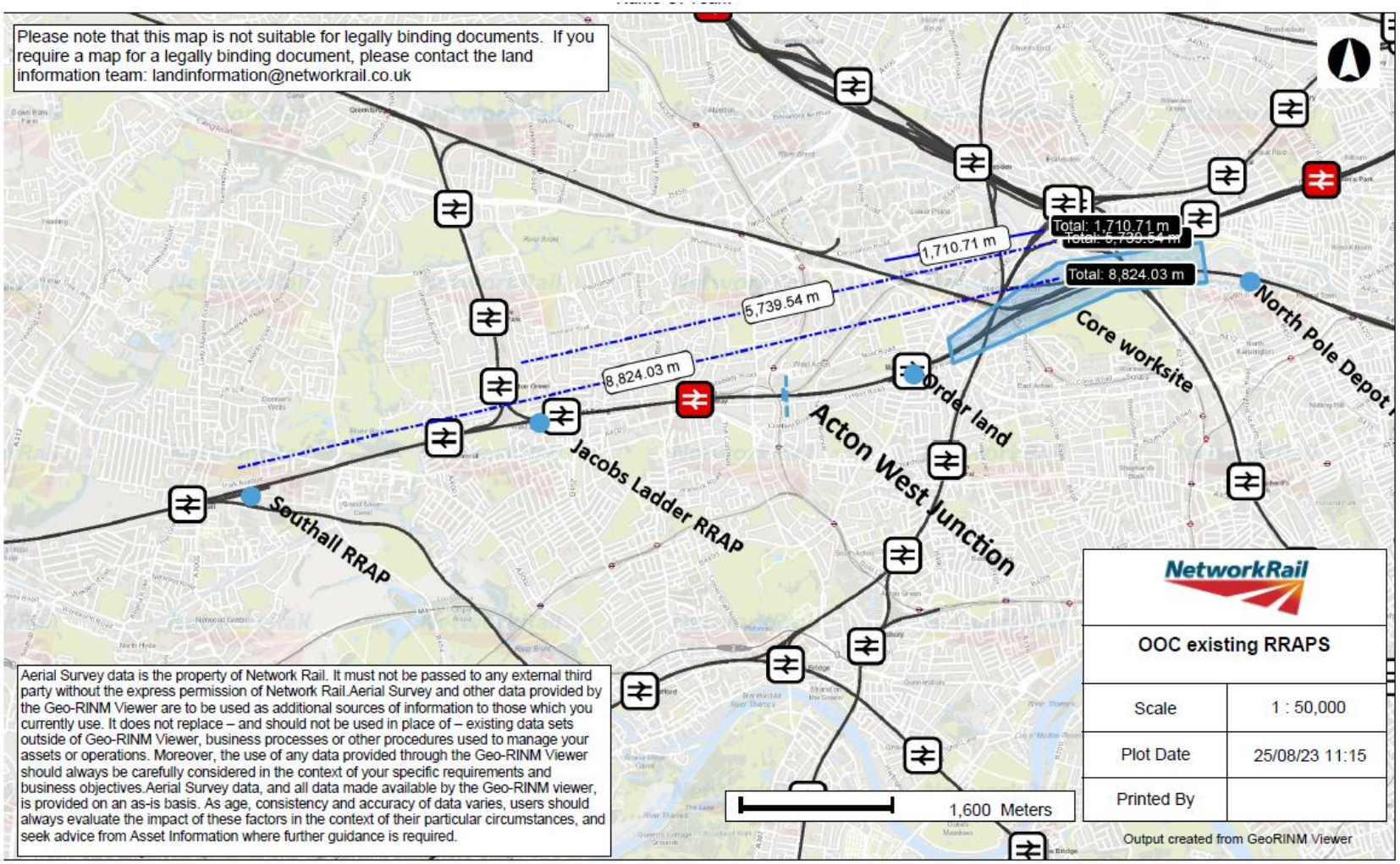


Figure 1 - Locations of existing RRAPs and linear distances to centre of core worksite

6. ALTERNATIVE LOCATIONS CONSIDERED

6.1 A number of alternative locations have also been considered by Network Rail for the provision of the temporary RRAP and the permanent RRAP. These are summarised in the table below and further information in respect of each, including why it cannot accommodate the Project is provided in this section 6. All the various locations are identified in Figure 2 below this table.

Location	Comments
Westcott Park Community Garden	• Level difference (roughly 5.5m above the track) would not allow a RRAP to be installed here in accordance with the RRAP requirements. Any RRAP installed in this location would likely require significant alteration and/or demolition of Perry Avenue, Fergusen Road and associated properties in order to provide earthworks and structures to allow a safe gradient to access track and associated turning circles for RRVs to access and egress the railway. • The requirement to provide a logistics compound may also necessitate further demolition of properties on Perry Avenue. • Deliveries of plant and material (via HGV) would be through narrow residential roads resulting in long term disruption to residents in an otherwise purely residential area. • Due to the nature of the residential roads relatively tight bends/junctions and the use of on-street parking, deliveries of plants and materials may not be viable. • The demolition of the community gardens would remove a valuable amenity space for the local community.
Old Oak Common Lane (Hitachi Depot)	• Currently in use by a third-party stakeholder (Hitachi) as an operational depot which would need to be crossed to allow access to the GWML. As such, any use of an RRAP here would require interaction between OOC Station delivery/Network Rail maintenance and Hitachi train maintenance. This would result in: increased safety risk for both organisations from moving plant, vehicles and trains from different organisations, restricted storage as train maintenance facilities and operations would prevent large storage or advanced delivery of plant and increased disruption to Network Rail's activities as all deliveries and RRVs will need to cross rail tracks within the depots which may be prohibited due to train movements within the depot. Historically, Network Rail's maintenance access through the depot has been

	prohibited due to these challenges impacting train maintenance operations; • Other HS2 contractors are currently occupying the surrounding land undertaking critical disruptive works, which directly conflict with the space required for the access point. As such, it would not be made available in time to support delivery of the OOC Station; • With the current access road layout, plant and materials cannot be delivered to the RRAP directly from Old Oak Common Lane. The Project would either require a road closure on Old Oak Common Lane or delivery via Mitre Way creating a significant operational conflict with the train maintenance depot impeding both Network Rail's and the train maintainer's ability to maintain an adequate train service for the passengers; • There is insufficient space to support compound requirements.
Westway Estate	• This location would require relocation/shortening of the two headshunts (track provided to release locomotives at terminal platforms, or to allow shunting to take place clear of main lines) which form part of North Pole Depot. Consultation with depot operators has identified that these cannot be sufficiently shortened without enhancement of a train maintenance facility elsewhere on the route. The programme to deliver these works would not allow a RRAP to be delivered into operational service in time to support the programme to deliver HS2. • The road would struggle to accommodate HGVs due to the layout of the road and parking of vehicles on the road. • The drop in level of the land would require significant enabling works • Requirement for compulsory purchase and/or right of way agreements with multiple owners/leaseholders of the commercial properties compared to a single leaseholder at the order land. • The final track layout has 'switches and crossings' where the proposed RRAP would be. These cannot be co-located and the proposed 'switches and crossing' would have to be redesigned to a less safe/reliable location. The relocation would also create a performance impact to future train services to increased running time between OOC and Friars Mains Junction.

Acton Mainline Station	In order to install a suitable RRAP at this location the works done to Acton Mainline Station to deliver the Elizabeth Line (Crossrail) would have to be demolished and extensive reconfiguration of the station, with associated disruption and possibly additional land purchase, would be required. It may be that no feasible access can be created here whilst retaining the station construction. This option is not deemed reasonably practicable due to cost, programme and disruption required.
Land on the GWML boundary between the Order Land and Acton West Junction	• The GWML is located in a cutting with residential properties adjoining the railway boundary. In order to create a new RRAP and compound in this area extensive civil engineering work would need to be undertaken to facilitate level track access due to the height difference between the railway and adjacent land. Residential properties would need to be demolished. HGV moves and deliveries would be required into an exclusively residential road (Lynton Road and Oakley Avenue). • Additional constraints would include locating the RRAP east of the limits of overhead line isolation.
Bloomsbury Close	• Would require demolition of residential garages, resulting in significant disruption to residents. • Significant difficulties expected in plant and material delivery. Access to the area by the residents' vehicles would likely need to be maintained, with them parking outside of the garages and on the side of the road. This would significantly hamper (or preclude) the ability to deliver plant and materials to any RRAP compound
Land to the east of the North Pole storage depot where there is a private access into North Pole depot from Mitre Way and the A219.	Access at this location would be through Hitachi Depot (north Pole Depot) across operational depot tracks. This faces all the constraints outlined in *Old Oak Common Lane (Hitachi Depot)* above but is worsened as access to the GWML would be across a busier section of the depot creating worse disruption to delivery of works or depot operations.
Access at the north end of the Big Yellow Storage Box.	Access at this location would be through Hitachi Depot (north Pole Depot) across operational depot tracks. This faces all the constraints outlined in *Old Oak Common Lane (Hitachi Depot)* above but is worsened as access to the GWML would be across a busier section of the depot creating worse disruption to delivery of works or depot operations.
Access off Old Oak Common Lane at the west end of the freight siding.	• See *Old Oak Common Lane (Hitachi Depot)* above

Land to the west of Dean Court, 1 Friary Road.	There is a significant level difference at this location between the public highway and the railway. As such any provision of a RRAP and compound would necessitate significant civil engineering works, possible closure or single-laning of Friary Road, purchase of the car park associated with Dean Court and possibly demolition of Dean Court itself. All of this would be required in order to create a ramp to track level of suitable gradient, sufficient space adjacent to railway to on-track machines with turning circles, sufficient space at road level for material storage, welfare, office space etc.
Access through the car wash builders' yard to the west of 239 Horn Lane	The car wash is not adjacent to the railway, as such this doesn't provide for the direct access for RRVs and materials to trackside. If the car wash site was available it would not remove the requirement for a significant space requirement in the Order Land. Network Rail would still require space for vehicle access, turning circles, material laydown, all suitable segregated from any builders merchants operations.

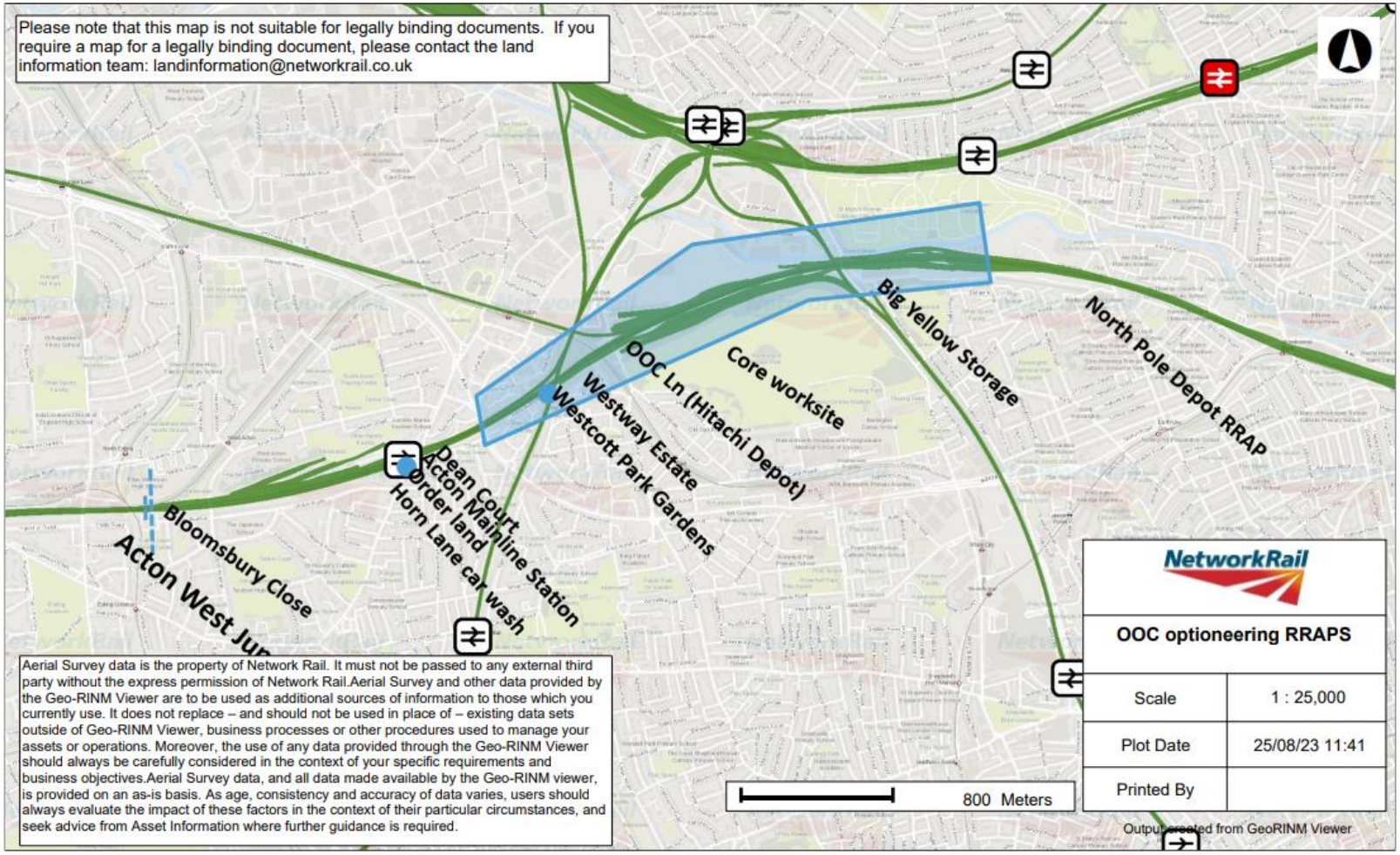


Figure 2 - Investigated options for alternative new RRAPs

7. ORDER LAND

7.1 Taking into account the above, Network Rail has concluded that the Order Land (together with Plot 1) is the most appropriate location to accommodate the Project. The Order Land was historically a railway yard and, as a result, satisfies a number of requirements:

a. location of the land means that it will provide an adequate access to the Mains side of the track;

b. the access will not be affected by any limitations imposed by the requirements of the TOCs;

c. the land provides a level access to the railway, which complies with the Network Rail standards for the approach to a RRAP;

d. the land provides enough storage space for plant and materials, as well as welfare facilities and an off-street parking; and

e. location of the land means that the temporary construction compound can be located in close proximity to the temporary RRAP required for the delivery of the OOC station.

7.2 In addition to the above, the land benefits from a direct access from the public adopted highway and, as such, will enable safe delivery of materials, plant and staff to the railway with minimum disruption to third parties and/or residential areas. The location is already the site of a builder's merchants and so it is assumed that local residents are accustomed to a degree of HGV deliveries and vehicle movements into and out of the site.

8. OBJECTIONS

8.1 Of eight letters of objection received in relation to the application for the Order, two objections comment on the Project, its requirements and options and alternatives considered (suggesting that there are reasonable alternative means by which Network Rail could secure access to the GWML and land for a temporary construction compound in connection with the Project). These objections are summarised below together with my response on behalf of Network Rail.

<u>Bellaview</u>

8.2 The objection letter submitted on behalf of Bellaview Properties Limited (**Bellaview**) provides that *"NR has not provided any material evidence that no other land adjacent to or within the vicinity of the GWML railway is suitable, including by way of private rent, for the purposes of the project (including a temporary construction compound)".* Bellaview further provide in their objection that *"office space, storage space and/or space of welfare facilities is readily available for rent on commercial terms within the vicinity of the Property at Horn Lane".* Examples of the reasonable alternatives referred to by Bellaview include Acton Goods Yard to the north of the Property and the GWML railway, as well as the Crown Land (illustrated as Plot 1 on the Land Plan submitted with the Order). In relation to these, Bellaview states as follows:

"a. Acton Goods Yard has a similar location to the Property, and arguably represents a more suitable location for a temporary construction compound. It has not been shown that NR has fully explored the opportunities which Acton Goods Yard presents, specifically leasing a portion of Acton Goods Yard by private treaty, thereby negating the need for the exercise of statutory powers in relation to the Property. Acton Goods Yard could provide for NR's office, storage,

welfare and parking requirements even if access to the GWML was still required from the Property.

b. The Triangle Site [Plot 1] *represents another or additional site suitable for the purpose of providing (among other things) a temporary construction compound in connection with the project as well as temporary RRAP. Like the Property, the Triangle Site* [Plot 1] *is located immediately adjacent to the GWML railway and includes adequate space for car parking, as well as temporary office and other accommodation (if such elements can be demonstrated as necessary). Given the Triangle Site* [Plot 1] *is presently unoccupied and held by the Crown Estate bona vacantia, it has not been shown that NR has fully explored temporary use of the Triangle Site* [Plot 1], *and from BPL's perspective there are no apparent barriers which would prevent NR from ultimately securing that land for the purposes of the Project."*

8.3 My response to Belleview is split into the following three points*:*

a. Regarding the use of Acton Good Yard, this is currently being investigated to be used to support construction of the GWML Rail Systems Project. However, irrespective of whether this site was to be used, both Plot 1 and the Order Land would be required because Acton Good Yard is on the North of the railway, adjacent to the Relief lines. Whereas land for the RRAPs is required to the South of the railway, adjacent to the Main lines. This is because possession access is typically given to either Relief lines or Main lines, necessitating an access and logistics area to both North and South of the railway.

b. Regarding the Triangle site (Plot 1), this has several constraints which mean that additional land will be required in any case:

   i. The available space in the Triangle site is insufficient to deliver the scale of works required to deliver the OOC station. Quite simply, it would not support the volume of plants and materials required.

   ii. Access to the Triangle site would be through the Order Land, integration would be required with the owners to ensure sufficient provisions are made for Network Rail, and supply chain, vehicles. Whilst not insurmountable this would add further complexity to the use of the Triangle site in isolation.

   iii. The temporary RRAP location must be to the east of the Triangle site due to the limits of isolation and safe access to the track whilst Ealing Broadway station is acting as a turnback to and from the West, utilising Acton West Junction. The overhead line sectioning in this area during extended Christmas possessions would preclude the safe use of a RRAP in the triangle land.

c. The availability of commercial premises in the location required are:

   i. Westway estate, which is discussed and discounted above; and

   ii. a newly constructed building, presumed office space, on the old euro storage site. In order to obtain the required footprint and access ramp the newly constructed building would likely require compulsory purchase and demolition and subsequent major civil engineering work to create the access. This is also likely to involve purchase and demolition of the residential gardens / properties of Perry Avenue

8.4 The Statement of Case submitted on behalf of Bellaview further provides as follows in relation to Acton Goods Yard:

"It is possible to construct a temporary RRAP that accesses the Relief Lines at Acton Goods yard. To the extent that works at the Old Oak Common site would require access to the Main Lines, then during blockades of all four main line tracks access could be achieved by the installation of temporary hardstanding across the Main Lines and the Relief Lines to allow the RRVs to use their road wheels to cross both sets of lines"

8.5 This is not correct. Both temporary and permanent RRAPs are required for possessions where only the two main lines (Up Main and Down Main) are blocked, for periods of up to 29 hours at a time. During these possessions there is no viable access from Acton Goods Yard across the Relief lines as this would require all lines to be blocked (Reliefs and Mains). This applies to both temporary and permanent RRAP provision.

8.6 Possessions which close both the Mains and the Reliefs for such a significant period of time are generally unacceptable to the TOCs outside of Christmas blockades, due to the level of disruption it would cause to passenger services. Whilst both Relief and Main lines are blocked there would be no, or severely restricted, passenger services to London from South Wales and the West of England. There would also be no Elizabeth line service between Reading and London. This would severely impact public transport provision and drive passengers to alternative, less sustainable, transport modes on a permanent basis as well as damaging the economy due to reduced activity from those deciding not to travel. I state 'generally' unavailable as the TOCs have been known to grant one 29Hr all line block mid-year, this is with very strong justification and, at one day a year, which is insufficient to deliver the Project or maintenance activities.

8.7 In relation to the Crown Land, the Statement of Case submitted on behalf of Bellaview provides as follows:

"Even if NR is able to show that it is too small to accommodate every requirement sought to be met by the Order, it could be used in conjunction with other land to meet NR's construction compound, parking, temporary office and welfare facility needs".

8.8 In this regard it is noted that the permanent RRAP is meant for future maintenance only. It will not and cannot be used for the delivery of major national infrastructure projects, such as HS2 (which is the case with the proposed temporary RRAP). Whilst the space provided by the Crown Land is sufficient for future maintenance provision there is insufficient space to accommodate delivery of OOC Station, which requires space for 10 machines, material storage, welfare and free space for vehicle turning circles. Access is also constrained by the narrow path through the Order Land along the side of the warehouse.

8.9 Regardless of the size of the compound, the Crown Land would require a programme of enabling works before it can be used as a RRAP. This means that this land cannot be viably utilised for construction of the GWML Rail Systems Project, which needs the RRAP to be operational by January 2025 at the very latest, in order to enable construction of the OOC HS2 Station by HS2.

8.10 In addition to the above, and critically, the Crown Land sits to the West of the overhead line isolation limit for works at OOC. This means that any RRAP on the Crown land would require an isolation which would need to be taken up to Southall to facilitate use of this RRAP. This would isolate Acton West Junction. This proposal would be unacceptable to the TOCs due to the level of disruption it would mean for passenger services during HS2 blockades when trains are required to turnback at Ealing Broadway.

8.11 As to the RRAP and compound requirements, Bellaview's objection provides as follows:

"Scope selection aside, the scope of the rights to be secured by the draft Order also go far beyond what is reasonably required by NR.

a. Even if NR is able to show that access to the operational GWML railway is required via the Property for the purpose of the temporary aspects of the Project, on the basis no other site is suitable then any associated floorspace required for office or welfare purposes etc. can still be secured elsewhere and without the need to acquire or to take possession of the whole of the Property for such purposes. There is no indication within NR's supporting material that this has been considered. Moreover, NR has not demonstrated that it is essential that all these facilities need to be co-located.

b. […] taking temporary possession of land to provide car parking spaces cannot be readily justified when the Property, as well as alternative sites within the locality, benefit from good transportation links, with easy access to rail services at Acton Station as well as bus links. Further, car parking spaces are available for commercial rent within the locality, thereby avoiding the need for compulsory powers of acquisition. […]

c. In terms of any rights of temporary access to facilitate the construction of the two RRAPs (but not land for a temporary construction compound), these access rights may be secured: (a) without the need for the more extensive powers of temporary possession proposed by the draft Order; and (b) without excluding BPL or its tenant from occupation of the warehouse building and associated space. […]

d. With regard to the proposed permanent RRAP, BPL contends that alternative means of permanent access have not been shown to be unavailable to NR. If it transpires that access to the permanent RRAP can only be achieved via part of the Property, then only limited rights over the Property (and any corresponding interference with BPL's legal rights) are required."

8.12 My response to Bellaview's objection is outlined below, on a point by point basis. In relation to Bellaview's comments on the proposed office, welfare, storage and parking facilities:

a. Network Rail is making use of remote office, welfare and storage facilities where appropriate. However, remote office, welfare and storage is not sufficient to deliver the works and provision is required on the Order Land due to the reasons outlined below.

   Welfare is required as close as reasonably practicable to the site of access to ensure efficient working time and enable staff wellbeing. Remote welfare is not practicable with possession led working and would lead to:

   i. additional disruption to trains due to less efficient working

   ii. increased risk of adverse impact on residential amenity due to lack of enclosed welfare for food, drink and personal needs breaks

   iii. Reduction in staff welfare due to pressure to not take breaks required in order to prioritise work, ultimately resulting in reduced safety to the workforce.

   An entirely remote storage area is not practicable as immediate access is required to deliver plant and material from its stored location to the railway corridor in order to deliver the works. Remote storage would reduce the efficiency of delivery, increasing disruption to trains and likely prolonging the HS2 programme and delaying the delivery into service

date. It would also result in an increase in vehicle moves and deliveries on the local road network 24hrs a day in order to facilitate 'just in time' delivery.

Remote office locations are used but a local office facility is required to sign staff in, provide staff briefings prior to work, store site documentation, complete paperwork required to manage the compound and site delivery.

b. Remote car parking will be used in addition to the car parking on this site. Public transport will also be used. There is still a need for car parking at the site due to two main reasons:

i. Suitable public transport is often not viable during railway working hours as it is frequently shut down for maintenance and construction activities whilst our work will be undertaken, such that private vehicles are required. Noting that a large proportion of staff will not live in London.

ii. Some car parking will be required for operational staff to quickly move between sites of work and access points during possessions.

iii. Mini-buses and vans will require parking on site to facilitate delivery of small tools and equipment as well as enabling the operation of a larger remote car park, accessed via mini-bus.

c. As demonstrated in this Proof of Evidence, as well as Mr Fleming's Proof of Evidence and Mr Sinclair's Proof of Evidence, full extent of powers applied for in the Order are necessary to ensure the most efficient and prompt delivery of the Project and the GWML Rail Systems Project.

d. As demonstrated in this Proof of Evidence, no reasonable alternative locations for a permanent RRAP are available. It is agreed that rights over part of the Order Land, for the permanent RRAP situation, are required to allow access and egress to suitable vehicles and at suitable times for operation.

STARK

8.13 STARK's objection also mentions alternatives considered by Network Rail and provides as follows:

"The Objector's site lies to the west side of Acton Main Station thus the use of the Objector's land as a supply point will result in material and plant passing through the Acton Main Station platform area increasing congestion and heightening safety risk.

[…] The rejection by NR of the potential RRAPs is not accepted as being a fair or reasonable appraisal. It is asserted that if the assumption that the RRAP must be capable of satisfying the needs of track replacement/track alteration and the construction of OOCS simultaneously is dropped and the assumption is made that the work may be undertaken in phases, particularly that of track replacement, then a RRAP could be established on one of the alternative sites without extinguishing a business".

My response to STARK's objections is below.

8.14 Firstly, the claim that passing through the station platform area increases congestion and worsening safety risk. This is incorrect. The use of this RRAP will generally be when the Relief lines are open. As such a two-track corridor is provided for safe movement of staff and machines. This is the same as provided through the station platforms. As such, there is no

increase in congestion as there is no ‘bottle neck’ effect from the presence of platforms. All staff are to be equipped with proximity warning sensors (I.e. MyZone) for proximity to plant and one of Network Rail's strictest rules is around maintaining an exclusion zone between people and plant. As such the risk profile of injury due to platform presence is extremely low and rigorously controlled.

8.15 Secondly, the phasing of works does not reduce the requirement. Works are phased, where possible, to single disciplines in order to reduce cost and safety/performance risk. Network Rail has phased the activities as far as reasonably practicable. However, the requirement for the RRAP and compound remains. This is due to lack of feasible alternative as described elsewhere in this Proof of Evidence.

8.16 STARK further submits that the following points of access should be investigated further *"in the context of phased working and better use of the Willesden Junction logistics hub":*

a. Land to the east of the North Pole storage depot where there is a private access into North Pole depot from Mitre Way and the A219.

b. Access at the north end of the Big Yellow Storage Box.

c. Access off Old Oak Common Lane at the west end of the freight siding.

d. Land to the west of Dean Court, 1 Friary Road.

e. Access through the car wash builders' yard to the west of 239 Horn Lane.

8.17 Alternative locations suggested have been addressed already in the table provided earlier in this Proof of Evidence. I am not aware of what is meant by the term the ‘Willesden Junction Logistics hub’; however Willesden Junction is not located in proximity to the GWML and so is not a viable location for the Project.

8.18 STARK further submits that no evidence has been provided in support of the statement that *"any RRAP must be located to the west of the existing North Pole depot"* and/or in support of the assumption *"that an engineered solution to any disruption of the North Pole depot could not be achieved if the RRAP was introduced in or east of the North Pole depot".*

8.19 The RRAP must be located to the West of North Pole Depot. Ladbroke Grove Junction, specifically points 9001B and 8062B, is required for access and egress of GWR trains from the maintenance depot. At this junction, or East of it, the railway is required for train services during 29hr Sunday possessions and so cannot be used for the RRAP due to restrictions on use. It is also only available once every 4 weeks so would not be suitable for maintenance of Network Rail infrastructure, there is already a RRAP here which is insufficient for the delivery of the GWML Rail Systems Project and maintenance operations. Immediately adjacent to North Pole Depot any RRAP would require access through North Pole Depot, the reasons as to why this is not feasible are outlined above in the table on ‘Old Oak Common Lane (Hitachi depot)’

In terms of an engineered solution, there is little opportunity to separate depot operations and GWML Rail Systems Project / maintenance operations with the space available. The site is very constrained.

West of Old Oak Common Lane an engineered solution is not reasonably feasible. In order to separate operations works would require slewing of the headshunt lines south, requiring demolition of approximately 8 business in the Westway estate or creation of a raised railway viaduct. As such, this option is not reasonable due to cost and time.

East of Old Oak Common Lane the railway is immediately adjacent to the depot access road which is adjacent to the Rolling stock shed which is then adjacent to wormwood scrubs. Creation of an engineered solution to avoid disruption would therefore require land-take of Wormwood scrubs, creating loss of green space and bio-diversity.

East of Mitre way there is some vacant ground, located to the east of the abandoned Eurostar depot shed, which the project plans to take possession of for logistics purposes. However, in order to create an engineering solution to the operational conflicts complete separation would be required between any access road and the depot tracks. Even if this could be achieved (which I do not accept) it would require a combination of a road culvert under the depot tracks, elevating existing tracks over a new access road, and a slewing of the depot tracks south. All of these actions would result in significant disruption to the operations of the depot. It is also Network Rail's understanding that this land is part of the Kensal Canalside opportunity area (3,500 homes, 2,000 jobs), so would result in a permanent loss of opportunity for houses and redevelopment, as the changes would remain for the permanent RRAP. As such this option was deemed as worse than the proposed order land.

9. CONCLUSION

9.1 Having considered a number of alternative options, including utilising existing RRAPs and evaluating other potential locations for new RRAPs, Network Rail has concluded that the Order Land is the only real and obvious location for the Project. A number of factors have been taken into account to reach this conclusion and these include (but are not limited to):

a. the issue of topography;

b. the concern of the demolition of individual homes;

c. the use of non-suitable roads to access large plant and articulated vehicles and with the risk of these coming into contact with playing children;

d. the objections from the TOCs to extend the possession (circa around 5 miles) for no works;

e. plant delivery; and

f. cost.

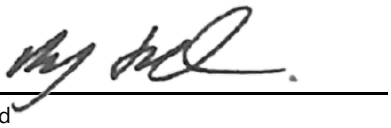
9.2 The delivery of the proposed RRAPs are critical for the efficient delivery of High Speed 2 and the ongoing safety and performance of the railway. I believe this is the only viable location to deliver these RRAPs and that without the Order Land the success of High Speed 2, as a project, would be at significant risk.

10. WITNESS DECLARATION

10.1 This proof of evidence includes all facts which I regard as being relevant to the opinions that I have expressed and that the Inquiry's attention has been drawn to any matter which would affect the validity of that opinion.

10.2 I believe that facts I have stated in this proof of evidence are true and that the opinions expressed are correct.

10.3 I understand my duty to the Inquiry to help with the matters within my expertise and I have complied with that duty.

X 

Chris Ford

Dated: 13 October 2023