

# Heathrow Airport Ltd – Framework Capacity Statement

Framework Agreements for the allocation  
of rail infrastructure capacity

Date: 29th November 2024

Issued by: Paul Quilter

Rail Regulation Manager  
Heathrow Airport  
The Compass Centre, Nelson Road  
Hounslow, Middlesex, TW6 2GW  
Email: [rail@heathrow.com](mailto:rail@heathrow.com)

# Contents

Purpose .....	1
Glossary.....	2
1. Overview of the route .....	6
2. Railway undertakings .....	7
3. Engineering access .....	8
4. Restrictions .....	8
5. Capacity .....	8
6. HAL – Network Statement .....	9
7. Capacity allocation and conditions for access.....	10
8. Description of timetabling process .....	10
9. Managing conflicts.....	10
10. Reviewing framework capacity .....	10

## Purpose

This statement is published in conjunction with the Heathrow Airport Limited – Network Statement to meet the requirements of the European Commission Implementing Regulation (EU) 2016/545 of April 7<sup>th</sup> 2016 (the “EU Regulation”). The EU Regulation advises infrastructure managers on procedures and criteria concerning access agreements for the allocation of rail infrastructure and capacity known as “framework agreements”.

Although the United Kingdom has left the European Union, the EU Regulation has been incorporated into domestic law by way of the UK’s own withdrawal arrangements, and therefore remains a legal requirement. The third ‘recital’ prefacing the EU Regulation includes the following:

*“Potential applicants need transparency concerning the allocated framework capacity and the remaining indicative capacity on a line. With a view to avoiding administrative burden related to framework agreements, potential applicants should get a first impression of how likely it is that their application will be approved”.*

In particular, the EU Regulation requires infrastructure managers to produce a framework capacity statement in order to provide potential applicants with the required transparency.

There are four key requirements in the EU Regulation for infrastructure managers to fulfil in producing a framework capacity statement:

1. the framework capacity statement must indicate for every section of line per control period and, if applicable by type of service, the following information:
  - the framework capacity already allocated and the number of train paths;
  - the indicative capacity still available for concluding TACs on infrastructure for which TACs are already concluded; and
  - the maximum capacity available for TACs for every section of line, where applicable;
2. the framework capacity statement must respect commercial confidentiality;
3. in accordance with Regulation 21(13) of the Rail Regulations, infrastructure managers must include a framework capacity statement in their network statements or provide links in such network statements to a public website where that framework capacity statement is made available; and
4. infrastructure managers must update their framework capacity statements within three months following the conclusion of any TAC, a substantial amendment to any TAC, or the cancellation of any TAC. Any update of the framework capacity statement shall make information available in a way which respects commercial confidentiality.

## Glossary

Term	Definition	Role / Context
<b>Airport Junction</b>	means the Junction where the Heathrow Airport branch leaves the Great Western Mainline.	
<b>CCOS</b>	means the Crossrail Central Operation Section (from Westbourne Park Junction to Abbey Wood and Pudding Mill Lane Junction).	the central section of the Elizabeth Line between the eastern and western parts of the route
<b>CTA</b>	means the Central Terminal Area.	station serving Terminals 2 & 3
<b>EU Regulation</b>	means the European Commission Implementing Regulation (EU) 2016/545 of 7 April 2016 as amended from time to time.	incorporated into domestic law by way of the UK's withdrawal arrangements from the EU
<b>Framework Capacity</b>	means the infrastructure capacity allocated under a framework agreement.	capacity that is contracted for longer than one timetable period
<b>Framework Capacity Statement</b>	means the statement setting out the framework capacity allocated and an indication of available capacity.	to provide potential applicants with transparency of allocated framework capacity and remaining indicative capacity on the HAL infrastructure
<b>Great Western Railway</b>	means First Greater Western Limited.	railway undertaking, operating services on the Wider UK Rail Network (Great Western Mainline) and contracted by HEOC to operate Heathrow Express
<b>HAL</b>	means Heathrow Airport Limited.	infrastructure and facility owner of the HAL infrastructure and HAL stations
<b>HAL infrastructure</b>	means the rail infrastructure in respect of which HAL is the infrastructure and facility owner (including the HAL stations) and which is situated in England.	see section 1

<b>Term</b>	<b>Definition</b>	<b>Role / Context</b>
<b>HAL infrastructure boundary</b>	has the meaning given to it in paragraph 4 of section 1 below.	the point at which the HAL infrastructure adjoins the Wider UK Rail Network
<b>HAL Network Code</b>	means the rules by that name incorporated by reference into all TACs.	governs the rules, among other things, for timetabling services, performance monitoring, vehicle and network change and continuing use
<b>HAL stations</b>	means the rail stations of which HAL is the infrastructure and facility owner and which are located on the HAL infrastructure.	CTA, Terminal 4 and Terminal 5
<b>Heathrow Express</b>	means the branded train service for fast services to / from Heathrow Airport and London Paddington, operated by First Greater Western Limited, (trading as Great Western Railway) on behalf of HEOC.	
<b>Heathrow Tunnel Junction</b>	means the crossovers right next to the boundary between Network Rail and HAL infrastructure. The actual boundary is at the tunnel portal entrances.	
<b>HEOC</b>	means Heathrow Express Operating Company.	railway undertaking
<b>infrastructure manager</b>	has the meaning given to it in regulation 3 of the Rail Regulations.	the body responsible for the management and maintenance of railway infrastructure, including traffic management, control command and signalling
<b>MTR</b>	means MTR Corporation (Crossrail) Limited, trading as MTREL.	the concession operator appointed by Transport for London to run Elizabeth Line services (with services from Abbey Wood and Shenfield to London Paddington, all HAL stations and Reading)

<b>Term</b>	<b>Definition</b>	<b>Role / Context</b>
<b>MTREL</b>	means MTR Elizabeth Line, the branded train service for stopping services to / from Heathrow Airport and London Paddington and beyond, operated by MTR.	the branded Elizabeth Line train service
<b>NR</b>	means Network Rail Infrastructure Limited.	infrastructure owner of the Wider UK Rail Network, contracted by HAL to be the infrastructure manager of the HAL infrastructure
<b>ORR</b>	means the Office of Rail and Road.	regulatory body
<b>Rail Regulations</b>	means the Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016, as amended from time to time.	regulations that set out entitlements and obligations in respect of access and governance for railway undertakings (as well as service providers and infrastructure managers)
<b>railway undertaking</b>	means any public or private undertaking licensed according to the Railway (Licensing of Railway Undertakings) Regulations 2005, the principal business of which is to provide services for the transport of goods and/or passengers by rail with a requirement that the undertaking ensure traction; this also includes undertakings which provide traction only.	in relation to the HAL infrastructure, currently Heathrow Express and MTREL
<b>ROGS</b>	means the Railways and Other Guided Transport Systems (Safety) Regulations 2006 as amended from time to time.	provide a common framework for safety and establish the law on safety critical work
<b>SODS</b>	means the junction on the HAL infrastructure known as the 'Single Outside Double Slip'.	critical rail infrastructure
<b>TAC</b>	means a track access contract entered into between HAL and a railway undertaking in respect of framework capacity on the HAL infrastructure.	
<b>Terminal 4</b>	means the HAL station servicing Terminal 4 at Heathrow airport.	station serving Terminal 4

<b>Term</b>	<b>Definition</b>	<b>Role / Context</b>
<b>Terminal 5</b>	means the HAL station servicing Terminal 5 at Heathrow airport.	station serving Terminal 5
<b>tph</b>	means trains per hour.	the number of trains passing over a section of the HAL infrastructure per hour
<b>Transport for London</b>	means the local government body responsible for most of the transport network in London	appointed MTR to operate Elizabeth Line services and owns the CCOS
<b>Wider UK Rail Network</b>	means the network owned and operated by Network Rail to which the HAL infrastructure connects.	

## 1. Overview of the route

Whilst HAL own the HAL infrastructure, for the purposes of the Rail Regulation, NR are the infrastructure manager for the entire route between London Paddington and Terminal 4 and Terminal 5. HAL has appointed NR under contract to carry out the operational asset manager obligations under the Rail Regulations in respect of the HAL infrastructure including those obligations set out in ROGS.

The HAL infrastructure consists of a twin-bored tunnel between the tunnel portal and the CTA and Terminal 5, as well as a single-bored tunnel which connects Terminal 4 to the network south of the CTA at SODS. All HAL stations have two platforms, although Terminal 5 does have passive provision for capacity to be increased to four platforms if required.

The maximum line speed on the HAL infrastructure is 80mph.

NR refers to the route on the HAL infrastructure as “GW180 Heathrow Airport Junction to Heathrow Terminal 4 and Heathrow Terminal 5” with the actual boundary between the two infrastructure managers at the entrance to the tunnel portals, further details can be found in the Great Western Sectional Appendix available via the Network Rail website ([National Electronic Sectional Appendix - Network Rail](#)). The point at which the HAL infrastructure adjoins the Wider UK Rail Network is located approximately KM 19.913 from London Paddington (the “HAL infrastructure boundary”), and is more particularly denoted as the Tunnel Portal in Diagram 1 below.

HAL owns the HAL infrastructure on which rail services are operated, which includes the HAL infrastructure from Terminal 5 (KM 26.285) and Terminal 4 (KM 26.520), through the CTA (KM 23.550) and as far as the HAL infrastructure boundary (all measurements as taken from London Paddington station). NR owns the rail infrastructure beyond the HAL infrastructure boundary to London Paddington station. Transport for London owns the rail infrastructure comprising the CCOS, including Paddington Low Level.

Trains operate from the stations beneath Heathrow Airport to London Paddington station and beyond. Within the tunnel section there are three HAL stations: the CTA (serving Terminals 2 and 3), Terminal 4 and Terminal 5.

All trains travel to / from the HAL infrastructure, passing over the HAL infrastructure boundary and continuing over Stockley Flyover to Airport Junction, which joins the Great Western Main Line:

- Heathrow Express trains travelling between Terminal 5 and London Paddington, via the CTA; and
- MTREL trains travelling between Terminal 4 and Terminal 5, and Paddington Low Level, via the CTA, and then onwards to Abbey Wood via Canary Wharf from Terminal 4, or Shenfield via Stratford from Terminal 5 both via Central London.



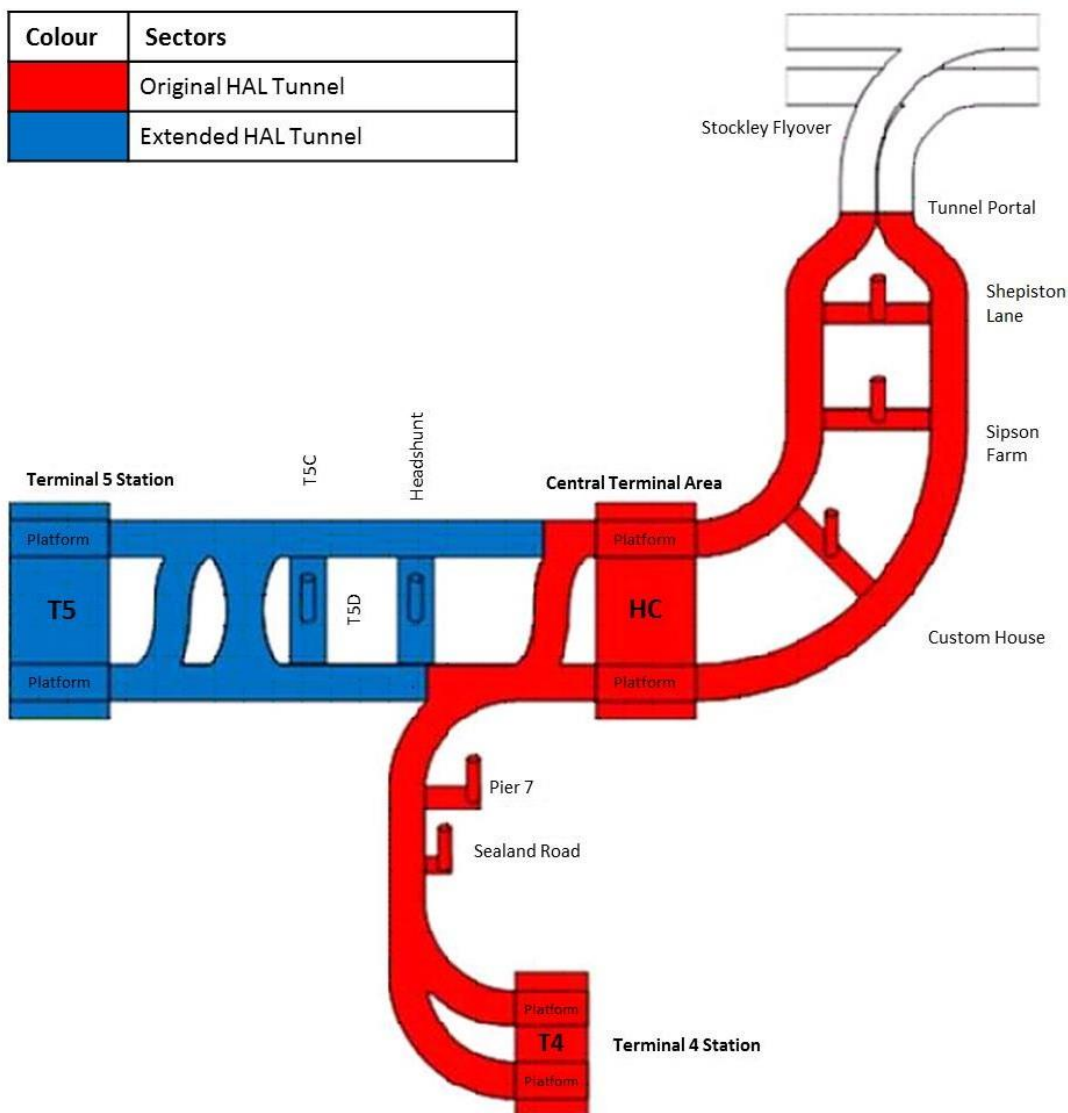


Diagram 1 – details how the HAL rail infrastructure is constructed

## 2. Railway undertakings

Currently two railway undertakings operate over the HAL infrastructure. HAL allocates framework capacity for both Heathrow Express and MTREL.

- **Heathrow Express** – provided jointly by HEOC and Great Western Railway, a non-stopping service between Terminal 5 via the CTA and London Paddington. Heathrow Express is an open access railway undertaking and not subject to franchising. The service runs every fifteen minutes throughout the day.
- **MTREL** – provided by MTR under a concession granted by Transport for London. MTR operate trains from both Terminal 4 and Terminal 5 via the CTA to Paddington Low Level and then onwards to Abbey Wood (from Terminal 4) or Shenfield (from Terminal 5) via Central London.

HAL has a separate TAC with each of HEOC in relation to Heathrow Express, and MTR until 2028 in relation to MTREL.

In the May 2024 timetable, there were 10 tph operating on the HAL infrastructure in each direction. Heathrow Express operated 4 tph between London Paddington, the CTA and

Terminal 5, operating for 19 hours daily between approximately 05:06 and 00:20. MTREL operated 6 tph between London Paddington and the CTA, with 2 tph to Terminal 5 and 4 tph to Terminal 4. With the exception of early morning and late evening MTREL operate from Paddington Low Level instead of London Paddington. The start and end of service times for the May 2024 timetable are shown in Table 1.

May 2024 timetable	Start of service – Monday to Friday	End of Service – Monday to Friday	Start of service – Saturday	End of Service – Saturday	Start of service – Sunday	End of Service – Sunday
Heathrow Express	05:14	00:04	05:14	00:03	05:14	00:03
MTREL	05:00	00:12	05:01	00:12	05:38	00:12

Table 1 (Times departures from Heathrow Central station serving Terminals 2 & 3).

Heathrow Express operate a regular interval clock face timetable of 4 tph. This means that they maintain a frequency of a train every 15 minutes. It also means there is always a stationary train at London Paddington and Terminal 5 for passengers to board. The service is designed to benefit airline passengers, who will often have luggage to stow on the train, by allowing them to immediately board a waiting train.

MTREL operate a metro-style timetable, a mostly stopping service (services from Terminal 4 call at all stops to London Paddington and from Terminal 5 operate semi-fast to London Paddington) and then all stops across the remainder of the Elizabeth Line route. MTREL operate commuter rolling stock with open gangways between carriages.

The frequency of tph operated in the May (also December 2024) 2024 timetable is shown in Table 2.

May 2024 timetable	Frequency of trains per hour (includes both directions)		
	CTA	Terminal 4	Terminal 5
Heathrow Express	8	0	8
MTREL	12	8	4
<b>Total</b>	<b>20</b>	<b>8</b>	<b>12</b>

Table 2

### 3. Engineering access

Planned engineering work is carried out daily between 00:20 - 04:40 (Monday to Friday). Whilst there are no routine planned engineering works on Friday and Saturday nights, these can occasionally be planned by exception.

### 4. Restrictions

Diesel hauled trains and freight trains (other than pre-planned engineering trains for scheduled maintenance and operating during the hours of 00:20 - 04:40 Monday to Saturday, and 00:30 to 04:45 Sunday) are not allowed to operate on the HAL infrastructure. This means that No diesel operations can occur when passenger services are operating and whilst the HAL stations are open.

### 5. Capacity

Maximum capacity on the HAL infrastructure is calculated by using signalling headways. The

headway is based on the capability of the signalling equipment and defines the minimum spacing between trains.

Table 3 shows the published headways for each section of route. This means that the maximum theoretical capacity can be estimated.

<b>GW180 HEATHROW AIRPORT JUNCTION TO HEATHROW TERMINALS 4 AND 5</b>			
<b>TIMING POINT</b>	<b>DOWN</b>	<b>UP</b>	<b>Maximum tph</b>
Airport Junction to Heathrow Tunnel Junction	2	2	30
Heathrow Tunnel Junction to Heathrow Terminals 2-3	2	2	30
Heathrow Terminals 2-3 to Heathrow Terminal 4	4	4	15
Heathrow Terminals 2-3 to Heathrow Terminal 5	2	2	30

Table 3

The figure quoted is the maximum theoretical tph for each direction, but the maximum tph actually achievable will depend on other constraining factors. These include:

- pathing limitations on the Wider UK Rail Network between London Paddington and Airport Junction;
- dwell times in platforms;
- the requirement for a security sweep of each train which arrives at the HAL stations;
- the ventilation systems in the HAL infrastructure mean that only one train is allowed in each signalling section and a maximum of five trains are allowed on the HAL infrastructure simultaneously;
- SODS is a critical and complex switch and crossing at the CTA; and
- the required minimum turnaround times at termini stations.

In addition to the pathing constraints listed above, the overall capacity is further reduced by the level of performance allowances applied to the timetable. This is a means of ensuring that unforeseen delays and occurrences can be mitigated. It also enables the train service to resume normal working as quickly as possible. Together, these factors typically mean that the maximum number of trains per hour quoted in Table 3 is not possible.

For these reasons, the HAL infrastructure currently accommodates 10 tph, but could realistically accommodate 12 tph in each direction.

## 6. HAL – Network Statement

This Framework Capacity Statement is to be read in conjunction with the HAL Network Statement – as published on the Heathrow website:

<https://www.heathrow.com/company/about-heathrow/rail-regulation>

This document describes how capacity is allocated and the process taken for such allocation, as referenced at section 4.7 of the HAL Network Statement, as follows:

*“HAL is responsible for the allocation of capacity for maintenance, renewals and enhancements and each instance of this work in a given timetable development period will be published annually as part of the relevant Engineering Access*

*Statement. The capacity requirement for such work will also be specified in the Engineering Access Statement and managed as part of the train planning process. Route maintenance is restricted to periods when there are no timetabled services running or as agreed by all parties.*

*In the event that any restriction on capacity as a result of maintenance, renewal or enhancements occurs in a period when a timetabled service is scheduled, HAL will allocate capacity in a fair and non-discriminatory manner and will apply the prioritisation criteria set out at Condition D4.2 of the HAL Network Code.'*

## **7. Capacity allocation and conditions for access**

The TACs incorporate by reference the terms set out in the HAL Network Code. Under the HAL Network Code, HAL is responsible for the allocation of capacity. HAL is responsible for all aspects of the allocation process, including confirming that the applicant complies with all relevant national technical, operational and safety requirements.

## **8. Description of timetabling process**

The timetabling process (governed by Part D of the HAL Network Code) is open to anyone who is a party to the HAL Network Code by virtue of having a TAC with HAL or anyone who proposes in good faith to enter into such a TAC and has agreed to be bound by Part D of the HAL Network Code.

Following an approach from a current or potential railway undertaking, HAL will advise on the likelihood of train paths being available on the HAL infrastructure. This will be based on the active timetable in operation at the time. If such train paths are available or are likely to become available, HAL will guide the railway undertaking through the timetabling process.

Access to the HAL infrastructure requires entry from the Wider UK Rail Network and therefore applicants for access must not only seek access rights from HAL but also from NR.

Requirements in relation to applying for a train path are detailed in the HAL Network Statement. This includes requirements in respect of railway undertakings wishing to exercise their contracted paths (firm rights), and make ad-hoc requests.

## **9. Managing conflicts**

Where conflicts occur between existing TACs and requests for new or modified TACs, or as between requests for new TACs, HAL will use reasonable endeavors to find the best possible matching of the conflicting requests.

The method and principles for the coordination procedure for path requests provided for by Regulation 23(4) and (5) of the Rail Regulations shall apply.

Where conflicts cannot be reconciled satisfactorily between HAL and the railway undertaking, HAL will attempt to resolve the conflict by modifying the proposal for a TAC or by rejecting it. The process for modifying a proposal for a TAC is to take a coordinated approach in an attempt to find the best possible matching of the conflicting requests. If the first coordination round fails, a second coordination round could follow. If the second coordination round fails, then HAL will be entitled to reject the request.

## **10. Reviewing framework capacity**

HAL will periodically review TACs with railway undertakings for the purpose of considering the framework capacity on the HAL infrastructure.

If a railway undertaking has no current or foreseeable reasonable on-going commercial need to use all, or part, of the framework capacity to which it has been allocated, they must notify HAL of their intention to surrender such framework capacity, which shall take effect 10 days from the date of such notification. Failure to do so would entitle HAL to require the railway undertaking to surrender all, or part of the framework capacity to which it has been allocated, unless such failure to use the capacity is due to non-economic reasons outside the control of such railway undertaking or is temporary in nature.