



***EASTERLY ALTERNATION
INFRASTRUCTURE PROJECT
DESIGN AND ACCESS STATEMENT
OCTOBER 2024***



Heathrow

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1. INTRODUCTION

1.1 Purpose of Document

- 1.1.1 The purpose of this document is to explain the approach to the design of the easterly alternation infrastructure proposed by Heathrow Airport Limited.
- 1.1.2 The proposed development responds to a decision by the Government that Heathrow should alternate the use of its northern and southern runways when the airport is on easterly operations (the wind is blowing from the east), as it does when the airport is on westerly operations. Alternation provides respite for communities from otherwise continuous overflying.
- 1.1.3 A previous proposal for similar infrastructure was the subject of a planning application in 2013, which was approved by Secretaries of State in 2017.
- 1.1.4 As the proposed development involves no changes to how passengers will arrive and depart the airport or how passengers will board and disembark aircraft, there are no access-related issues requiring consideration or assessment.

1.2 Key Elements

- 1.2.1 The Easterly Alternation Infrastructure project is split into two main elements:
- **Northern Runway**

Proposed taxiway infrastructure located in the north-west corner of the existing airfield. The main purpose of this infrastructure is to provide additional capacity to allow departing aircraft to access the existing Northern Runway. Approached from the west – for instance landings from the west or take-off departures to the east - the northern runway is known as Runway 09L.

The proposed infrastructure for this element is detailed further within Section 2 of this document.
 - **Noise Barrier**

Proposed noise barrier located north-west of the existing airfield. The main purpose of the proposed noise barrier is to provide mitigation against ground noise from the airport to residents in Longford Village.

The proposed noise barrier is detailed further within Section 3 of this document.
- 1.2.2 **Figure 1-1** below shows a location plan of the two main elements.

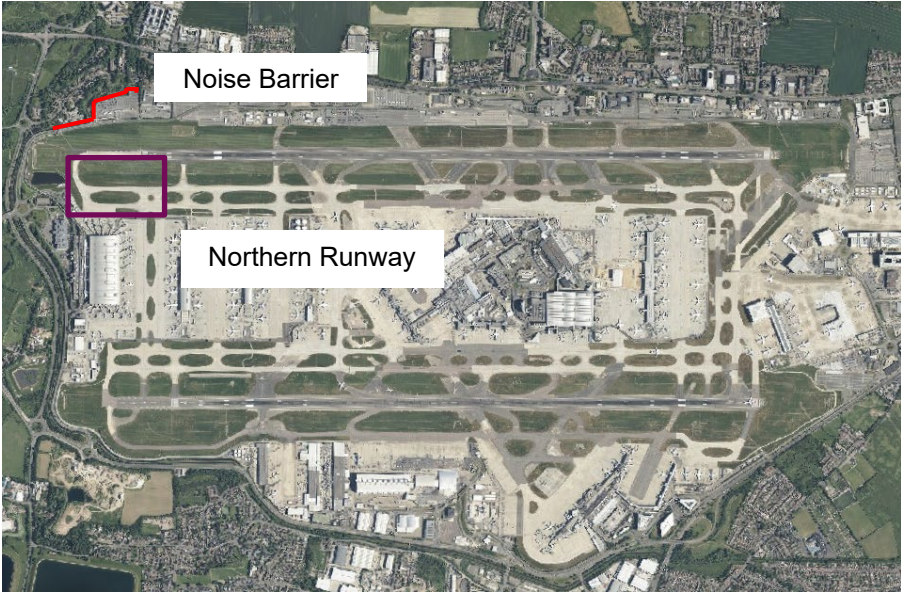


Figure 1-1 Location Plan

2. NORTHERN RUNWAY

2.1 Existing Operation and 09L Runway Hold Area (RHA) Layout

2.1.1 **Figure 2-1** below is an extract of the Heathrow airfield map and an aerial photograph of the existing taxiway network around the 09L RHA.

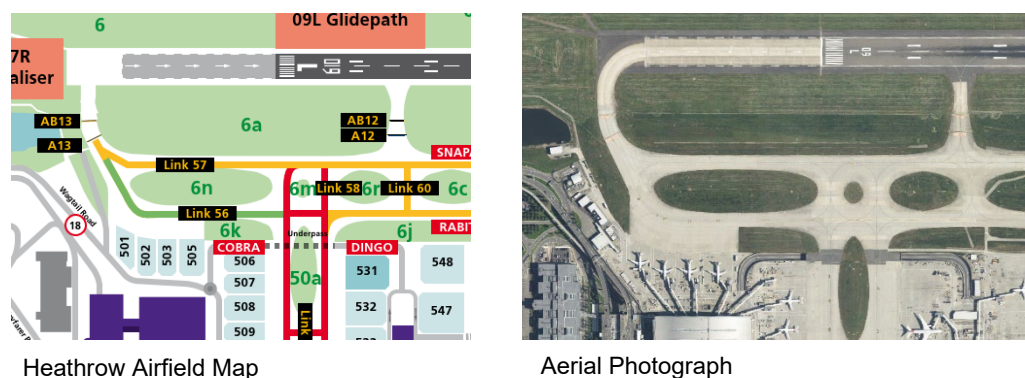


Figure 2-1 Existing 09L Runway Hold Area

- 2.1.2 The configuration of taxiways and hold areas at Heathrow is virtually imperceptible from public vantage points within and outside the airport. Where it can be seen it is characteristic of the wider airport operation. It has no meaningful visual impact but effective and resilient infrastructure with sufficient capacity is critically important for efficient airfield operations.
- 2.1.3 Currently Runway 09L has one main Runway Access Taxiway (RAT), which is located at the western end of the runway. There is a second RAT approximately 550m east, however accessing the runway via this route results in a shorter runway length available and does not provide the same operational performance.
- 2.1.4 When compared to the other three runway ends on Heathrow's airfield, 09L has less infrastructure, including less taxiway routes onto the runway. This can be seen within **Figure 1-1**. There are a minimum of three RATs provided on each of the other runway ends, whereas 09L currently only has a single main RAT. This is a legacy of Runway 09L not being routinely used for take-offs to the east.
- 2.1.5 The 09L RHA includes two parallel taxiways, providing taxiway routes onto the runway via the existing RAT. The most southern taxiway is adjacent to four aircraft stands which are located north of Terminal 5a. The four stands are pier served (i.e. not remote stands) dedicated for domestic flights and have a high usage and turn around rate. As a result, the most southern taxiway is utilised for push back manoeuvres, and the taxiways within the 09L RHA provide ingress and egress routes to and from the stands.
- 2.1.6 All the other three runway ends on Heathrow's airfield are accessible via two or more non-disrupted taxiway routes within the RHAs, i.e. taxiway routes that are not adjacent to aircraft stands and need to provide additional capacity for stand access and push back manoeuvres. This can also be seen within **Figure 1-1**.

2.2 Use and Layout

2.2.1 The main purpose of providing additional taxiway infrastructure in the north-west corner of the airfield is to provide additional capacity to allow departing aircraft to access Runway 09L more easily. The additional infrastructure will form part of the 09L Runway Hold Area (RHA).

2.2.2 A key aim of the proposed layout is to provide comparable performance for the 09L RHA compared to Heathrow's other runway ends, including providing an efficient and reliable taxiway network with adequate resilience and no single points of failure. This includes providing additional routes onto the runway via new RATs, and developing a taxiway layout that accommodates the ingress and egress routes onto the stands located on the north face of Terminal 5a.

2.2.3 **Figure 2-2** below shows the proposed layout for the 09L Runway Hold Area.

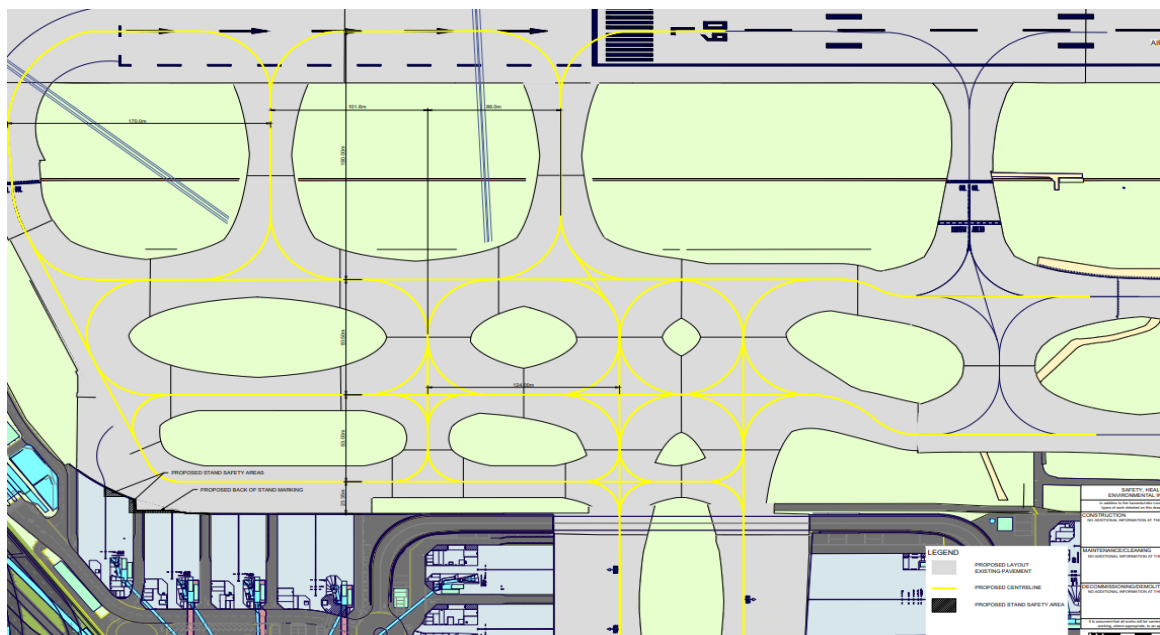


Figure 2-2 Proposed 09L Runway Hold Area

2.2.4 The proposed layout consists of the following elements:

- Three parallel taxiways, parallel to the runway centreline. The two most northern parallel taxiways will primarily be used as part of the runway hold area. The third, most southern parallel taxiway will primarily be used to provide access and egress from the existing aircraft stands on the north side of the T5a terminal.
- A taxiway link connecting the three parallel taxiways.
- Two new Runway Access Taxiways (RATs), which will provide a taxiway route for aircraft departing from Runway 09L. Note these RATs will be used in parallel with the existing RAT at the western most end of the northern runway.

2.2.5 The layout of the new taxiways is in accordance with minimum clearances as required by CAA standards.

- 2.2.6 To accommodate the elements listed above, the existing two parallel taxiways within the 09L RHA will be removed.
- 2.2.7 The main purpose of the runway hold area is to queue and re-sequence aircraft prior to them departing from Runway 09L.
- 2.2.8 The area will be operated by air traffic controllers who will utilise the network of parallel taxiways, taxiway links and RATs, to provide the most efficient and safest sequence for the departing aircraft at the same time as providing access to and from the T5a stands.

2.3 Design Development

- 2.3.1 The proposed layout, described in the section above, was developed through an optioneering and evaluation process.
- 2.3.2 Airfield modelling and input from operational subject matter experts was used to identify operational viable layouts which were then evaluated. The evaluation process assessed the layouts against set criteria from five discipline areas, which collectively capture all of the important characteristics of the infrastructure:
- Airfield Operations
 - Delivery
 - Environment, Sustainability and Community
 - Business Case
 - Planning
- 2.3.3 The outcome of the evaluation process was a single preferred layout. The selection of the proposed option is discussed in further detail below.
- 2.3.4 Six different airfield layout options were considered for evaluation, all of which have proposed new taxiway infrastructure within the 09L Runway Hold Area (RHA). Key components varied between the six options to enable the following questions to be tested:
- Should one or two new RATs be constructed?
 - Should the RAT be in the east or west position?
 - Should a link (referred to as Link 70) be provided between the parallel taxiways?

2.3.5 The six options are represented schematically in **Table 2.1**.







Option No.	Link 70	RAT-W	RAT-E	Schematic
01	✓	✓	✓	
02	✓	✓	✗	
03	✓	✗	✓	
04	✗	✓	✓	
05	✗	✓	✗	
06	✗	✗	✓	

Table 2.1 Airfield layout options considered for evaluation.

2.3.6 All options performed better than a Do-Nothing scenario. However, the evaluation of the options demonstrated a strong operational preference for the comprehensive “do maximum” infrastructure of Option 1.

2.3.7 Option 1 scored best for flexibility, resilience and for shortest taxi time / least overall delay. It is also the most comparable to other runway end infrastructure, enabling performance to come closest to equivalence with Runway 09R. Option 03 performed second best in terms of the majority of analysed metrics, outperforming Option 02. Section 3.6 of the **Environmental Statement** explains how Option 1 was also preferred for environmental reasons, with its efficiency creating carbon and air quality benefits and its taxiway configuration enabling ground noise to be limited in Longford whilst allowing a long enough take-off runway for aircraft to be relatively high over Cranford, thereby bring noise benefits compared with other options.

- 2.3.8 The existing airfield layout is described in Section 2.1 above. The proposed 09L RHA site is restricted to the north by the northern runway, restricted to the east by tie-in points with the existing taxiway network, including the taxiways required to access Terminal 5a and 5b aircraft stands, restricted to the south by Terminal 5a and the northern pier served stands and restricted to the west by the existing airfield boundary and adjacent landside infrastructure. To safely operate, the proposed layout needs to comply with minimum clearances dictated within design guidance (referenced within Section 2.8), consequently there is a limit on what infrastructure can physically fit within the 09L RHA.
- 2.3.9 Since the previous 2013 planning application, changes in airfield design standards, specifically a reduction in the minimum clearance required between a taxiway and runway, has meant it is viable to provide three parallel taxiways within the 09L RHA. This has the significant advantage that a taxiway can provide access to and egress from the aircraft stands on the north side of T5a separate to the runway hold taxiways. Airfield modelling undertaken during the design development demonstrated that options with three parallel taxiways were more operationally efficient compared to options with only two parallel taxiways. Therefore, the proposed layout was developed with three parallel taxiways as this provided operational benefits, including reduced aircraft queuing times and aircraft interactions. This subsequently meant the operational environmental impacts associated with queuing aircraft, such as noise and air quality, were reduced and safety was improved.
- 2.3.10 As part of the design development the number and position of new RATS was reviewed. Due to the constraints identified above alongside operational considerations the maximum number of new RATS considered viable was two, and the evaluation process reviewed layouts with one and two new RATS. The proposed option includes two new RATS, the benefit of which being that alternative routes for aircraft entering the runway are available, resulting in some of the aircraft movements being further away from noise and air quality receptors in Longford Village.
- 2.3.11 Throughout the design, including post evaluation, design development has continued to further limit the environmental impact of the proposed scheme and identify mitigation measures. This includes the following measures:
- Construction of a noise barrier to provide noise mitigation to properties within Longford Village. The infrastructure and design development associated with this is detailed within Section 3 of this document.
 - Removal of existing impermeable pavement on the airfield and reinstating as grass areas to ensure there is no overall net increase in impermeable pavement area.
 - Reviewing operational procedures and controls, for example refining the position of hold points on the taxiway network to identify opportunities to improve the efficiency of the runway hold area. A more efficient runway hold can potentially limit aircraft queueing and the associated environmental impacts including noise and air quality.
- 2.3.12 A separate **Circular Economy Statement (CES)** outlines further design measures taken to optimise the use of materials, recycle materials where practical and limit the environmental impact of the proposed scheme.

2.4 Access

- 2.4.1 The changes to the Northern Runway / 09L Runway Hold Area impact changes to aircraft taxiway routes only. There will be no changes to the provision of aircraft stands and consequently no changes to how passengers will arrive and depart the airport or how passengers will board and disembark aircraft.

2.5 Amount and Scale

- 2.5.1 A total length of 4,235m of new taxiway centrelines will be provided.
- 2.5.2 A total area of 35,000m² new taxiway pavement will be constructed.
- 2.5.3 To offset the increase in new taxiway pavement area, 38,800m² of redundant airfield pavement will be removed and reinstated as grass area. Out of the 38,800m² of redundant pavement to be removed, 13,650m² will be within the footprint of the 09L RHA and 25,150m² will be outside of the 09L RHA. This additional area is located near the southern runway, on the airfield, and is shown in **Figure 2-2** below. Note all redundant pavement removed will be within the same surface water drainage catchment area.

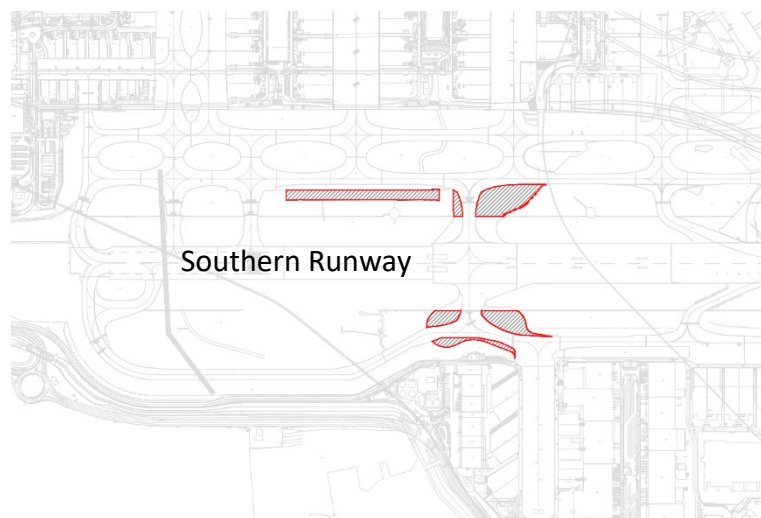


Figure 2-3 Redundant Pavement Areas outside 09L RHA

- 2.5.4 The new taxiways will vary in width, to accommodate required fillets around taxiway junctions. However, the typical minimum width of the taxiway will be 23m. This is in line with the existing airfield infrastructure on Heathrow's airfield today and in accordance with CAA standards. Fillets are required on the inside of curved taxiways to ensure minimum wheel clearances to the pavement edge are maintained. Minimum wheel clearances are specified to enable safe taxiing operations.

2.6 Appearance and Lighting

- 2.6.1 The majority of the new airfield pavement will be constructed from Pavement Quality Concrete (PQC).

- 2.6.2 RAT pavement within the runway strip, which is defined as 105m from the runway centreline, will be constructed from composite pavement. Composite pavement is constructed from a concrete base and overlaid with asphalt. Therefore, areas of composite pavement will be asphalt at the finished ground level. This is consistent with new RATs built on Heathrow's airfield today.
- 2.6.3 Where redundant airfield pavement is removed, it will be reinstated to grass areas. The grass will be a specific seed mix to reduce any bird attraction. The appearance of the grass will be comparable with grass areas on Heathrow's airfield today. Areas of grass which will be exposed to aircraft blast will have blast treatment.
- 2.6.4 Aeronautical Ground Lighting (AGL) will be installed along the centreline and stop bar positions of the new taxiways. The spacing of the centreline lights is typically 60m along straight sections of taxiways and 30m around curved sections and junctions. The AGL will be illuminated during periods of low visibility and non-daylight operational hours. The presence and use of AGLs is consistent with the airfield today.
- 2.6.5 There will be no additional floodlight or airport perimeter lighting provided as part of the proposed scheme.

2.7 *Landscaping*

- 2.7.1 The new taxiway infrastructure will be limited to gradients of 1.5% and below, and therefore will appear 'flat'.
- 2.7.2 The new taxiways will tie-into the existing taxiway network at the existing levels.
- 2.7.3 Any excessive fill generated from the construction of new taxiways will be, where possible, re-used within the proposed grass areas.
- 2.7.4 New grass areas will be created and these will be planted in some locations adjacent to the new taxiways, blast screen infrastructure may be installed to protect adjacent facilities from taxiing aircraft jet blast. The blast screens will be consistent with infrastructure used on the airfield today, which is typically 3m high louvered structure located adjacent to facilities on the airfield including equipment areas and airside roads. The blast screens will be a similar height and lower than adjacent buildings on the airfield. There will be no additional blast screens directly adjacent to the airside boundary as a result of this scheme.
- 2.7.5 The surrounding areas and buildings, including the existing Terminal 5 stands and airside perimeter fence will remaining as existing.

2.8 *Design Standards*

- 2.8.1 The design complies with all relevant design standards, including:
- CAA Aerodromes UK Regulation (EU) No. 139/2014.
 - EASA Certification Specifications and Guidance Material for Aerodromes Design, EASA CS-ADR-DSN Issue 6.

- CAP 168 Licensing of Aerodromes Edition 12, UK Civil Aviation Authority, Safety and Airspace Regulation Group.

2.8.2 In addition to the above, the proposed design also complies with the relevant Heathrow Standards including the Airfield Planning Asset Standard, the Airside Engineering Design Performance Standard and the Aircraft Pavement Asset Standard.

3. NOISE BARRIER

3.1 Existing Layout

3.1.1 **Figure 3-1** below shows the existing layout where the proposed noise barrier will be located. On the same alignment there is currently an existing fence.

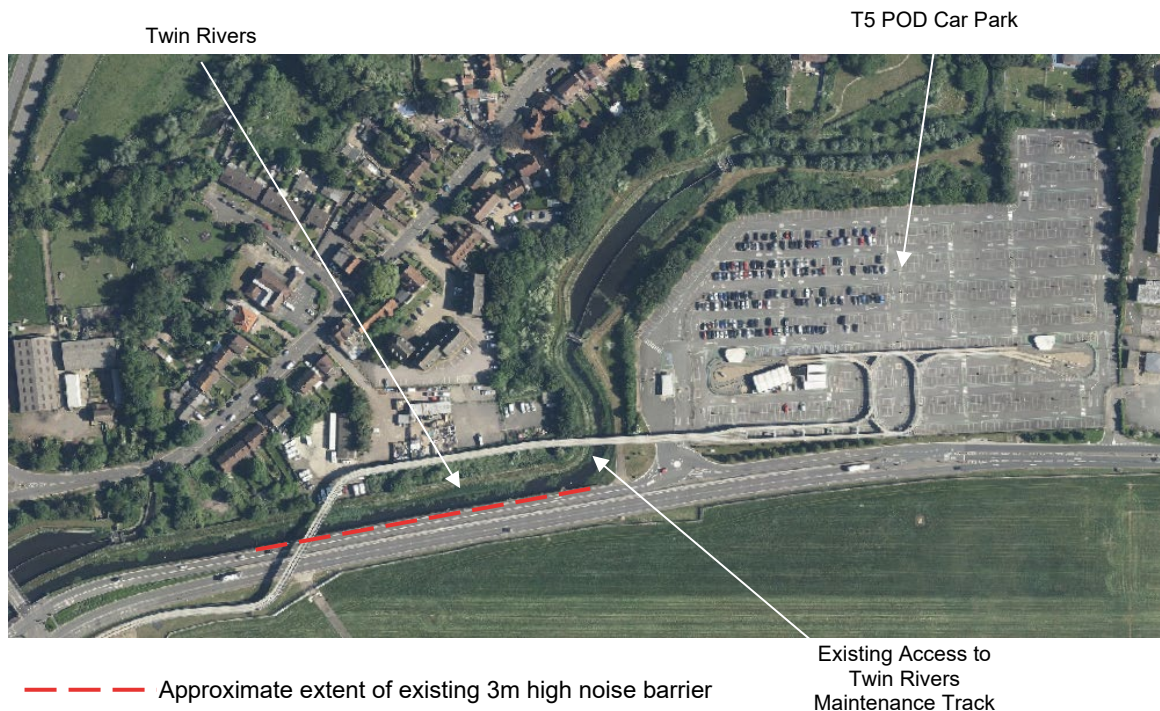


Figure 3-1 Noise Barrier - Existing Site Layout

3.1.2 Currently there is an existing wooden noise barrier, approximately 3.0m in height, that runs parallel to Wright Way, the Western Perimeter Road and the Twin Rivers. The noise barrier finishes west of the T5 Pod Car Park where there is a gate access point to the Twin Rivers maintenance track. The access gate is a palisade fence type construction with no noise barrier properties. The majority of the boundary around the T5 POD car park is fenced, with sections of both wooden and wire mesh fence construction approximately 3.0m in height. Outside of the T5 POD car park boundary, adjacent to the fence on the non-car park side is areas of vegetation including trees.

3.1.3 The existing noise barrier is proposed to be replaced by the proposed enhanced barrier, the details of which are set out below.

3.2 Use and Layout

3.2.1 The layout and extent of the proposed noise barrier is shown in **Figure 3-2** below.

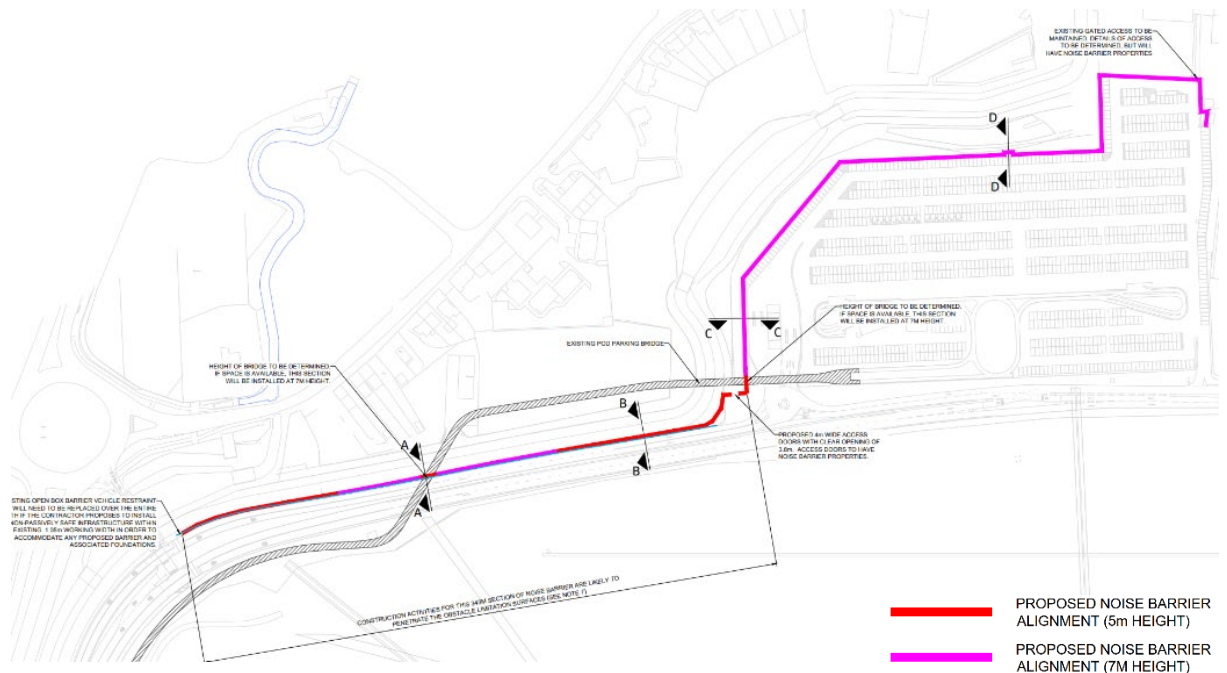


Figure 3-2 Noise Barrier General Arrangement

The proposed barrier would extend parallel to Wright Way and the Western Perimeter Road, and around the West and North boundary of the T5 Business Car Park (T5 POD Parking).

- 3.2.2 The primary function of the noise barrier is to provide noise mitigation to properties within Longford village against ground noise at the 09L runway end. The barrier would be constructed before other works and would limit noise in Longford from construction works on the airfield.
- 3.2.3 In addition to providing noise mitigation, the noise barrier will also act as a security boundary to the Twin Rivers and T5 POD parking. The noise barrier will replace existing fencing adjacent to the Twin Rivers.
- 3.2.4 An access gate will be provided within the noise barrier to provide maintenance access to the Twin Rivers site. The access gate will be secured and only accessible to authorised users. The gate will be located on the existing maintenance access track, and therefore maintenance access to the Twin Rivers site will be maintained.

3.3 Design Development

- 3.3.1 Similar to the 09L RHA design, the layout and extent of the noise barrier was selected via an evaluation process, against the same five disciplines:
 - Airfield Operations
 - Delivery
 - Environment, Sustainability and Community
 - Business Case

- Planning

- 3.3.2 The evaluation process assessed different noise barrier lengths and extents and selected a full length option as the proposed solution (i.e. the length shown in **Figure 3-2** above). This decision was primarily driven by noise modelling, that showed a full length barrier was most effective at providing noise mitigation to receptors within Longford Village when compared to shorter length options.
- 3.3.3 The noise barrier option assessed via the evaluation process was based on the previous 2013 planning application scheme, except the alignment adjacent to Twin Rivers maintenance track, directly west of the T5 POD car park access, is adjusted to allow the proposed scheme to sit outside of the Green Belt boundary.
- 3.3.4 Following the evaluation process, further community engagement was undertaken. Based on responses received, the engagement with the local community in Longford identified that the majority of residents supported the inclusion of a noise barrier as part of the scheme and preferred a 7m high noise barrier compared with a 5m high noise barrier.
- 3.3.5 Further detailed noise modelling identified the benefits of extending the noise barrier layout and it was extended both east and west to provide mitigation.
- 3.3.6 Since the previous 2013 planning application, there have been some minor changes to the safeguarding surfaces associated with the airport and, in particular, those at the location of the noise barrier have increased in height. As a result, it is now feasible to construct a higher noise barrier. Noise modelling was completed to assess the impact of a 7m high noise barrier compared to a 5m high noise barrier and the 7m barrier was found to be more effective. Above 7m in height, the noise modelling showed no significant additional benefit.
- 3.3.7 However, following the completion of an airport safeguarding assessment (please refer to the **Appendix 6 of the Planning Statement** for further detail), it was concluded that, due to safeguarding requirements, it is not viable to construct a section of the noise barrier (being the eastern section adjacent to Wrights Way) at 7m high. It is therefore proposed that this section should be adapted to a height consistent with the safeguarding.
- 3.3.8 A visual impact assessment was also completed. This recommended that the most western ~100m of the noise barrier should be 5m in height instead of 7m to limit the visual impact on local receptors.
- 3.3.9 As a result of all these considerations, the proposed noise barrier is made up of 5m and 7m sections as outlined within Section 3.5 below and shown in **Figure 3-2**.

3.4 Access

- 3.4.1 The noise barrier will replace an existing 3m high wooden noise barrier and security fence along its proposed extents. There will be no change to publicly accessible roads that run parallel or adjacent to the proposed noise barrier.
- 3.4.2 Access will be maintained to the existing Twin Rivers maintenance track within the new noise barrier.

3.5 *Amount and Scale*

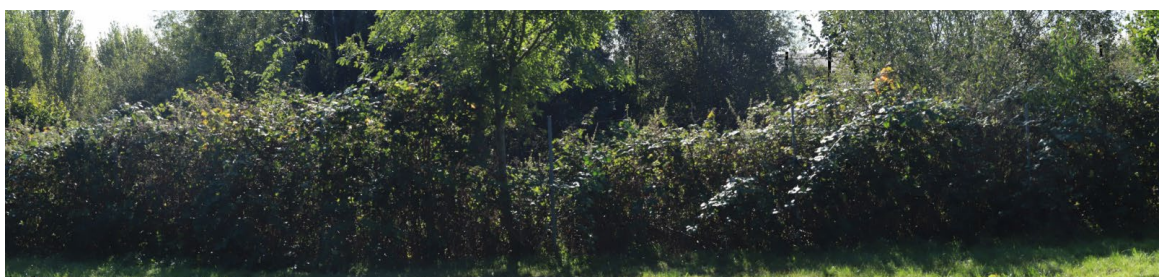
- 3.5.1 The noise barrier will be 781m in length.
- 3.5.2 The noise barrier will consist of sections 5m in height and sections of 7m in height. The extent of the different sections is shown within **Figure 3-1** above. In total 235m will be 5m high and 546m will be 7m high.

3.6 *Appearance and Lighting*

- 3.6.1 The noise barrier will be 5m and 7m in height, the top 2m and 4m respectively of the barrier will be constructed from transparent Perspex type material. The bottom 3m of barrier will be constructed from non-transparent material, with an external wooden finish.
- 3.6.2 The Perspex section of the noise barrier is proposed to reduce the visual impact of the new infrastructure. The bottom 3m wooden section is a similar height and look to the existing barrier located adjacent to Wrights Way and the sections of wooden fence around the T5 POD car parking. Posts will be constructed along the length of the barrier at centres of approximately 3.0m.
- 3.6.3 **Figure 3-3** below shows some visualisation of the proposed noise barrier.



(a) Visualisation from King's Bridge, Bath Road in Winter (top) and Summer



(b) Visualisation from Eastern Section from Longford Pocket Park in Winter (top) and Summer (bottom)

Figure 3-3 Noise Barrier Visualisation

3.6.4 At two locations the noise barrier will be constructed underneath the existing T5 POD parking structure. At these locations, anti-climb aids may be added to the noise barrier structure, such as barbed wire coil or anti-intruder spikes. The height of the noise barrier

will be reduced to less than 7.0m locally to facilitate construction underneath the T5 POD parking structure.

- 3.6.5 No dedicated lighting will be provided as part of the noise barrier. However, the existing street lighting which runs parallel to the existing noise barrier may be removed and re-provided to facilitate construction. There may be an opportunity to mount the streetlight head assemblies directly onto the noise barrier structure, however the lighting will remain facing onto the road. The existing lighting level will not be increased.

3.7 *Landscaping*

- 3.7.1 Foundations will be required to construct the proposed noise barrier. These foundations will be at ground level and below, and the existing road and car park infrastructure reinstated around the foundations.
- 3.7.2 Ground levels of the areas surrounding the noise barrier will remain unchanged.
- 3.7.3 Around the T5 POD car park, the noise barrier follows the alignment of the existing fence. Therefore, the existing vegetation and trees beyond the barrier will be retained where possible. Where viable, the spacing and location of post foundations will be adjusted to avoid tree roots.

3.8 *Safeguarding*

- 3.8.1 A safeguarding check has been undertaken to ensure the proposed noise barrier does not infringe any of the airport's Obstacle Limitation Surface (OLS) and Instrument Flights Procedure (IFP) safeguarding surfaces in accordance with CAA requirements.
- 3.8.2 For further detail on the Airport Safeguarding refer to the Safeguarding Statement at **Appendix 6 of the Planning Statement.**

4. FIRE STRATEGY

4.1 Buildings

4.1.1 There are no proposed changes to any buildings, including terminal buildings, as part of the proposed scheme. Therefore, the existing fire strategy associated with these buildings will remain unchanged.

4.2 Airfield Fire Strategy – Northern Runway

4.2.1 Response to incidents, including fires on the airfield, is managed by Heathrow's Airport Fire and Rescue Service (AFRS).

4.2.2 The level of service that the AFRS is required to provide is outlined within ICAO Airport Service Manual Part 1 Rescue and Fire Fighting, Doc 9137 – AN/898.

4.2.3 The proposed scheme includes changes to the taxiway network around the 09L Runway Hold Area. The proposed layout has been reviewed to ensure it provides the same level of access that is required by the AFRS to be compliant with the requirements of the ICAO documentation. This includes the following:

- access to 1,000m from the runway threshold.
- recommended response time to the runway end of two minutes and not more than three minutes.

4.2.4 The proposed scheme does not change any of the existing airside road network, including the access track located at the west end of Runway 09L. It therefore does not change the current access to within 1,000m from the 09L Runway Threshold.

4.2.5 The proposed scheme provides additional taxiway routes onto runway 09L, which can be utilised by AFRS during an emergency response. Therefore, the ability to respond to the runway end within the recommended two minutes and required three minutes is unchanged as a result of the proposed scheme.

4.2.6 During the construction phase of the works, site boundaries will be managed to ensure that access routes onto the runway for AFRS operations are maintained.

4.2.7 As a result of the proposed scheme there are no other changes which will alter or impact the current AFRS operation, and the existing airfield fire strategy will remain unchanged.

4.3 Noise Barrier

4.3.1 As identified above, the proposed noise barrier will replace an existing wooden fence and security fence. Access to the Twin Rivers will be provided via a new gate located on the existing maintenance access track. Therefore, as a result of the proposed scheme there are no changes that will alter or impact fire access to facilities adjacent to the noise barrier.

5. SUPPORTING INFORMATION

5.1 Drawing List

19309-00-GA-193-000001	Location Plan
19309-00-GA-193-000002	Northern Runway - General Arrangement
19309-00-GA-193-000003	Northern Runway - Pavement Layout
19309-00-GA-193-000004	Northern Runway - Proposed Contours
19309-00-GA-193-000005	Northern Runway - Existing Contours
19309-00-GA-193-000006	Northern Runway - 09L Hold Area Site Plan
19309-00-GA-193-000007	Northern Runway - Redundant Pavement Site Plan
19219-00-GA-247-000001	Longford Noise Barrier - General Arrangement
19219-00-GA-247-000002	Longford Noise Barrier - Site Plan
19309-XX-GA-864-000004	EAI - Surface Water Catchment Plan
19219-XX-SE-247-000001	Longford Noise Barrier - Typical Sections 5m Barrier
19219-XX-SE-247-000002	Longford Noise Barrier - Typical Sections 7m Barrier

5.2 Acronyms

AFRS	Airport Fire and Rescue Service
AGL	Aeronautical Ground Lighting
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
EASA	European Union Aviation Safety Agency
ICAO	International Civil Aviation Organisation
IFP	Instrument Flight Procedure
OLS	Obstacle Limitation Surface
PQC	Pavement Quality Concrete
RAT	Runway Access Taxiway
RHA	Runway Hold Area