LOW EMISSION STRATEGY

PARRS YARD, OLD BATH ROAD

WORKBYHERE

FEBRUARY 2026

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1 INTRODUCTION

Anderson Acoustics Ltd was commissioned by WorkBy Here to produce a Low Emission Strategy to discharge planning condition 4 of the decision notice (ref: 8425/APP/2023/3454) for use of land at Parrs Yard, Old Bath Road, London, UB7 0EF, for an express park and ride service to Heathrow Terminal 5 (T5).

The planning condition states:
"*Within 6 months of the date of this permission, a low emission strategy (LES) and accompanying delivery plan (DP) shall be submitted to and approved in writing by the Local Planning Authority. The LES&DP shall specify ways to reduce air pollution emissions to the maximum possible extent to conform with the LBH Local Action Plan. The measures are to include, but not be restricted to:*
1) Installation of EV fast charging points to promote the use of zero emission vehicles.
2) Give priority to Euro 6/ VI and zero emission vehicles
3) Charge more for parking for non-zero emissions vehicles
4) Develop anti-idling behaviours rules and associated implementation
The plan shall have a clear set of actions defined, associated with clear time frames for each action, a person responsible for its delivery and measure the results in a tangible way. Thereafter, the agreed scheme shall be implemented and maintained for the lifetime of the development."

The purpose of the planning condition and LES is to reduce air pollution emissions and to conform with the London Borough of Hillingdon (LBH) Air Quality Action Plan, for the lifetime of the development.

The objectives of the LES are discussed in Section 2 of this report. The methodology of the LES is presented in Section 3. The measures are presented in Section 4. The Delivery Plan is presented in Section 5.

2 LOW EMISSION STRATEGY OBJECTIVES

2.1 Acceleration of Zero and Low Emission Vehicle Uptake

The aim of the Low Emission Strategy is to accelerate the uptake of zero-emission vehicles (ZEVs) among customers and staff in order to minimise exhaust emissions of NOx and particulate matter within the Air Quality Management Area and to support the objectives of the London Borough of Hillingdon Air Quality Action Plan. This will be achieved through a combination of physical infrastructure and behavioural pricing measures. The development will provide on-site fast EV charging points, with additional passive provision through cabling to enable future expansion as demand increases. This ensures that ZEV users can conveniently charge while parked. The vehicles can be moved to non-EV charging bays once the vehicles are charged, depending on return date and weather conditions, such as cold weather, which can deplete the charge.

To reinforce this shift to ZEVS, a differential parking tariff structure will be implemented, offering discounted rates for ZEVs and higher charges for vehicles with zero emissions, based on the Euro class emissions, thereby creating a clear financial incentive to choose cleaner vehicles. Vehicle emissions banding will be integrated into the booking and check-in process to transparently apply these charges and monitor uptake. Together, the provision of reliable charging infrastructure and targeted pricing mechanisms will encourage a measurable increase in ZEV and LEV usage by customers throughout the development lifecycle.

2.2 Minimise Emissions from Shuttle Operations

The aim of the Low Emission Strategy for shuttle operations is to minimise emissions arising from the transfer service between the site and Heathrow Terminal 5, thereby minimising NOx and particulate matter emissions within the Air Quality Management Area and aligning with local and London Plan air quality policy. This will be achieved by requiring that all shuttle buses operating from the site meet a minimum of Euro VI emissions standards at all times, including any replacement or temporary vehicles, secured through fleet management controls and contractual obligations. Fleet compliance will be monitored and recorded to ensure continuous adherence to this standard. In parallel, the operator will actively review opportunities to transition the shuttle service to ZEVs, such as battery electric buses, as technology availability, charging infrastructure capacity and operational viability allow. This will include periodic feasibility assessments and forward planning for on-site or nearby charging infrastructure to support a future transition. Together, maintaining a Euro VI minimum standard and committing to a phased transition to zero-emission shuttle operations will deliver progressive, measurable reductions in transport-related emissions over the development's lifetime.

2.3 Reduce Emissions from Customer Vehicles On-Site

The aim of the Low Emission Strategy with respect to customer vehicles on-site is to reduce emissions associated with arrival, circulation, queuing and parking activity, recognising that even short periods of engine operation in confined areas can contribute disproportionately to localised pollutant concentrations. The strategy, therefore, focuses on operational efficiency as well as emissions reduction measures through vehicle technology discussed in Section 2.1. Arrival procedures will be designed to minimise waiting times at the entrance and camera tunnel by pre-booking verification, efficient check-in processes, and clear advance signage, preventing hesitation or unnecessary stops on the highway. Internal circulation routes will be clearly marked and logically arranged to reduce vehicle manoeuvring, prevent conflict points and avoid repeated movements within the site. Queue management protocols will be implemented during peak periods to prevent engine operation during stationary periods, supported by staff oversight and enforced anti-idling controls, as discussed in section 2.4. Parking layout and allocation procedures will direct drivers promptly to available bays, limiting circulation time and ensuring smooth turnover. Together, these operational controls will reduce dwell time, eliminate unnecessary engine running and minimise low-speed stop-start conditions, thereby delivering tangible reductions in on-site emissions over the lifetime of the development.

2.4 Eliminate Unnecessary Idling On-site

The aim of the Low Emission Strategy for idling is to eliminate unnecessary engine running across all on-site activities. Stationary vehicles emit concentrated emissions of NOx and particulate matter without any transport

benefit. The strategy will be implemented through a clear, enforceable anti-idling policy that applies to shuttle buses, customer vehicles, staff vehicles, and servicing activities. A formal “engines off when stationary” rule will be adopted, with limited exemptions only where required for safety or operational necessity. Prominent signage will be installed at entry points, pick-up and drop-off areas, queue locations and staff zones to reinforce the requirement. Staff will be trained to proactively remind drivers to switch off engines where safe to do so, and operational procedures will be structured to minimise stationary dwell time, particularly during peak periods. Compliance will be monitored through routine observational checks and incident logging, enabling the tracking of trends and the taking of corrective actions where required. By embedding anti-idling controls into site management and day-to-day operations, the development will eliminate avoidable emissions and deliver measurable air quality benefits over its lifetime.

2.5 Monitoring and Review of the LES

Monitoring and review of the LES ensure that emission-reduction measures remain effective, transparent, and responsive throughout the development's lifetime. A structured monitoring framework will be implemented to collect tangible performance data, including EV charger usage and uptime, vehicle emissions band distribution from booking records, shuttle fleet compliance with Euro VI or better standards, recorded idling observations, and any air quality-related complaints. These metrics will be compiled into a monthly internal dashboard and reviewed by the appointed LES Lead to identify trends, areas for improvement and opportunities for further emission reductions. An annual formal review will assess performance against baseline conditions and policy objectives, confirm continued compliance with fleet and operational standards, and set out any enhancement measures where practicable. This cyclical process of monitoring, reporting, and refinement will ensure the strategy remains active rather than static, delivering ongoing, measurable air quality benefits in accordance with local and London Plan policy requirements.

3 METHODOLOGY & CONTEXT

3.1 Operational Baseline

The operational baseline for the Low Emission Strategy is derived from the approved Transport Statement and defines the scale and characteristics of the development against which emission reduction measures will be assessed. The site operates as a 24-hour airport park-and-ride facility, providing up to 200 parking spaces, with customer activity distributed throughout the day in line with flight schedules. The associated shuttle service to Heathrow Terminal 5 operates at approximately 15-minute intervals, resulting in a robust assessment scenario of up to 68 bus movements per day, supplemented by customer vehicle arrivals and departures estimated at approximately 100 light-vehicle movements per day. The shuttle fleet comprises modern low-emission buses meeting at least Euro VI standards. This baseline establishes the vehicle types, movement frequency, and operating hours that serve as the reference point for monitoring emissions performance and measuring the effectiveness of the Low Emission Strategy over time.

3.2 Air Quality Context

The site is located within the London Borough of Hillingdon and lies within an Air Quality Management Area, for nitrogen dioxide (NO_2), and particulate matter is also a pollutant of concern. The Air Quality Assessment identifies that background pollutant concentrations in the vicinity are within the national air quality objectives and that the predicted impact of the development is classified as negligible and not significant. The closest identified sensitive receptor is Moorbridge Bungalow, located approximately 35 metres south of the site boundary, with other residential receptors located at greater distances. Given the separation distances, the limited scale of vehicle movements, and the shuttle fleet's compliance with modern emissions standards, the assessment concludes that the development will not result in unacceptable air quality impacts. This context informs the Low Emission Strategy by ensuring that mitigation measures are proportionate, targeted, and focused on maintaining compliance while securing further reductions in local emissions throughout the development's lifetime.

3.3 Compliance with Requirements

The Low Emission Strategy has been structured to align directly with the specific requirements of the planning condition, ensuring clarity, compliance, and enforceability. Each measure, namely, the installation of EV fast-charging points, prioritisation of Euro 6/VI and zero-emission vehicles, differential charging for non-zero-emission vehicles, and the development and implementation of anti-idling rules, has been translated into defined operational commitments with clear delivery mechanisms. For each heading, the Strategy identifies the physical interventions (such as charging infrastructure and signage), management controls (such as fleet standards, booking-system emissions banding, and tariff structures), and behavioural measures (such as staff training and enforcement protocols) necessary to give effect to the requirement. To ensure that these measures are not merely aspirational, a monitoring and governance framework has been embedded within the Strategy, including named responsible roles, defined timeframes, measurable performance indicators and periodic review procedures. This structured approach ensures compliance can be demonstrated in tangible terms and that the agreed measures are maintained and refined throughout the development lifecycle.

3.4 Delivery Plan

A comprehensive Delivery Plan has been prepared to ensure that each element of the Low Emission Strategy is clearly actionable, time-bound and accountable. The Plan translates strategic commitments into specific tasks with defined implementation periods, ranging from immediate post-permission actions through to ongoing operational controls. Each action is assigned to a named responsible role within the site management or operational structure, such as the LES Lead, Transport Manager, Facilities Manager, or Site Manager, to establish clear lines of accountability. For every measure, tangible Key Performance Indicators (KPIs) have been

identified, including infrastructure installation milestones, fleet compliance rates, emissions band distribution data, charger usage statistics and recorded anti-idling compliance. The Delivery Plan also includes a monitoring and review cycle to confirm that measures remain operational and effective, with provision for periodic performance assessments and refinements. This structured governance framework ensures that the Low Emission Strategy is not static but is actively implemented, monitored, and maintained for the duration of the development, in accordance with the planning condition.

4 LOW EMISSION STRATEGY MEASURES

4.1 Operational Summary

The development comprises a 24-hour airport park-and-ride facility serving Heathrow Terminal 5, with up to 200 managed parking spaces. The site includes associated operational infrastructure comprising a shuttle bus shelter, camera tunnel for vehicle check-in and security processing, and two portacabins to support staff and operational management functions. The facility is designed to operate on a pre-booked, managed basis to ensure orderly vehicle movements and efficient processing on arrival and departure.

The associated shuttle service operates every 15 minutes, with an average journey time of around five minutes to Terminal 5. The service is registered with Transport for London (TfL) and utilises the dedicated bus-only link from the Bath Road/Stanwell Moor Road roundabout, ensuring direct, efficient access while limiting unnecessary congestion on the wider highway network.

The Air Quality Assessment confirms that the site lies within the London Borough of Hillingdon Air Quality Management Area; however, modelled baseline nitrogen dioxide (NO_2) concentrations in the vicinity are below the relevant air quality objective. The assessment concludes that the operational impact of the development is classified as Not Significant, with effects assessed as Negligible. The closest identified sensitive receptor is Moorbridge Bungalow, located approximately 35 metres to the south of the site boundary. This operational and environmental context establishes a proportionate baseline against which the Low Emission Strategy measures are framed and assessed.

4.2 EV Charging Provision

The EV charging strategy reflects the operational characteristics of the development as a long-stay airport park-and-ride facility, where vehicles are typically parked for extended periods rather than short dwell times. In accordance with the London Plan (2021), a minimum of 20% of parking spaces (40 bays) will be equipped with active EV charging infrastructure from first use, with passive provision incorporated for the remaining spaces to enable straightforward future expansion as EV uptake increases.

Given the extended parking durations associated with airport use, the active charging provision will primarily comprise fast (7–22kW) charging points, which are better suited and more energy-efficient for overnight and multi-day stays. This approach enables vehicles to recharge steadily over the duration of parking without placing unnecessary demand on the local electricity network, while maximising the number of users that can be served. No rapid chargers are proposed.

The site's electrical infrastructure will be designed with sufficient capacity, distribution boards and ducting routes to allow additional bays to be activated in response to monitored demand. Charger utilisation rates will be reviewed regularly, and where sustained demand is demonstrated, additional passive bays will be converted to active charging.

By delivering policy-compliant 20% active provision from the outset, adopting charger types suited to long-stay use, and embedding scalable infrastructure for future expansion, the development will provide a proportionate, efficient and future-proofed EV charging network that supports the continued growth of zero-emission vehicles over the lifetime of the scheme.

4.3 Euro VI and Zero Emission Fleet

The strategy for minimising operational emissions places a clear priority on using the cleanest practicable vehicles for the development. The shuttle service will operate using modern Euro 6/VI compliant buses (Optare MetroCity), as confirmed within the supporting Transport Statement. This standard will be maintained as a minimum requirement for all shuttle operations serving the site.

A “clean vehicle priority” principle will apply across all operational activities. This will include the core shuttle fleet, any substitute or relief vehicles used during maintenance or breakdown periods, and all on-site service vehicles and contracted transport providers. The objective is to ensure that vehicles regularly accessing or operating at the site meet the lowest feasible emission standards, thereby reducing NOx and particulate matter emissions within the Air Quality Management Area.

As a minimum delivery commitment, all shuttle buses operating from the site will meet Euro VI emissions standards at all times. In the event of vehicle replacement, breakdown or short-term substitution, any alternative vehicle must also meet Euro VI or better. In addition, procurement and service contracts will include clauses requiring that any contracted transport serving the site be Euro VI (HDV) or Euro 6 (LDV)- compliant, or zero-emission, where such vehicles are reasonably available and operationally viable.

Compliance will be monitored through the maintenance of a fleet compliance log that records vehicle registrations, emissions standards, and dates in service. A monthly exceptions report will be prepared where applicable, documenting any temporary use of non-compliant vehicles, the reason for substitution, the duration of use and the corrective action taken. This structured approach ensures ongoing accountability and measurable compliance with the Low Emission Strategy throughout the development lifecycle.

4.4 Differential Pricing for Non-Zero Emission Vehicles

The strategy for differential pricing is to use transparent financial signals to encourage the use of cleaner vehicles and discourage higher-emitting vehicles from accessing the site. This approach does not restrict lawful access but applies a proportionate emissions-based hierarchy within the parking tariff structure. Pricing will therefore act as a behavioural lever, reinforcing the Low Emission Strategy's broader objectives by making lower-emission choices more financially attractive over time.

Implementation will integrate with the existing online booking and check-in system, which will capture vehicle registration details and apply an emissions classification based on recognised emissions banding data. This will enable automated allocation of the relevant tariff at the point of booking, ensuring consistency and transparency.

As a minimum delivery commitment, the operator will introduce a tiered pricing structure comprising:

Band A – Zero Emission Vehicles (0 g/km CO_2 / electric vehicles): lowest tariff or applied discount;

Band B – Euro 6 compliant vehicles (or equivalent petrol standard): standard tariff;

Band C – Pre-Euro 6 or higher-emitting vehicles: surcharge applied, representing the highest tariff.

Pricing bands and their basis will be clearly displayed within the online booking platform and at appropriate on-site signage to ensure transparency for customers prior to arrival.

Monitoring will be conducted through monthly reporting of customer vehicle distribution by emissions band (A, B, and C), enabling trend tracking and assessing behavioural change over time. The tariff structure will be designed to remain broadly revenue-neutral or revenue-positive overall, ensuring operational viability while progressively shifting the customer vehicle mix toward lower-emission categories. This structured, data-led approach ensures the measure is measurable, enforceable, and capable of delivering tangible emissions benefits throughout the development's lifetime.

4.5 Anti-Idling Rules and Implementation

The anti-idling strategy is to eliminate unnecessary engine running across all site activities, recognising that stationary vehicles can disproportionately contribute to localised emissions of nitrogen oxides and particulate matter without providing any operational benefit. The approach combines formal policy adoption, clear signage, staff training and active enforcement to ensure the measure is practical, visible and consistently applied. The objective is to address idling associated with shuttle buses, staff vehicles and customer vehicles during arrival, check-in and departure movements.

As a minimum delivery commitment, the operator will adopt a formal anti-idling rule requiring that engines be switched off when vehicles are stationary for more than one minute, except where engine operation is required for safety, vehicle systems or operational necessity. Prominent anti-idling signage will be installed at key locations, including the entrance camera tunnel and queue area, the shuttle bus loading and waiting area, and staff parking or operational zones. Site management procedures will be structured to minimise dwell time, particularly during peak periods, through effective queue management and efficient processing. All staff will receive anti-idling training as part of site induction, with periodic refresher briefings to reinforce compliance and support proactive engagement with drivers.

Monitoring will be undertaken through weekly observational spot checks, including defined observation periods during peak activity to record instances of non-compliance. Observations will be logged and reviewed as part of the site's environmental management records. Any complaints regarding vehicle emissions or idling will be recorded in a complaints log, with corrective actions documented and implemented as necessary. This structured and enforceable framework ensures that avoidable emissions from stationary vehicles are minimised and that compliance can be demonstrated throughout the development lifecycle.

4.6 Transition of Shuttle Fleet

In addition to maintaining a minimum Euro VI standard for all shuttle operations, the operator commits to an in-life transition strategy to transition to zero-emission shuttle vehicles when commercially available and operationally viable for the route's specific duty cycle. The shuttle service operates over a short-distance corridor with high frequency and predictable routing, characteristics which are well-suited to battery electric bus technology as it continues to mature.

The transition plan will include periodic market reviews (at least every two years) to assess the availability, range capability, charging requirements and whole-life cost of suitable zero-emission vehicles relative to the established operational profile. Infrastructure feasibility, including grid capacity and on-site charging provision, will be reviewed in parallel to ensure that the site can accommodate future fleet electrification without disruption to operations.

When replacement cycles arise within the existing fleet, zero-emission options will be prioritised where they can meet operational reliability, range and turnaround requirements. The intention is to progressively transition from Euro VI diesel buses to fully zero-emission shuttle vehicles over the development lifecycle, subject to commercial and technical feasibility. This staged and review-based approach ensures that the development does not remain static at Euro VI compliance but actively plans for and enables further emissions reductions as technology and infrastructure conditions evolve.

4.7 Green Infrastructure

The Low Emission Strategy is supported by the incorporation of green infrastructure within the site layout, contributing to local air quality enhancement and visual mitigation. The approved landscaping scheme includes the planting of 26 Betula pendula (Silver Birch) trees distributed across the site. Silver Birch is a suitable species for urban environments, offering good canopy permeability, seasonal leaf coverage and tolerance to roadside conditions. The introduction of these trees will help filter airborne particulates, intercept dust, and provide microclimatic benefits, while also contributing to biodiversity and overall environmental quality. Silver Birch are one of the most effective trees at removing particulate matter from the air.

The trees will be planted in accordance with best practice arboricultural standards to ensure healthy establishment, with appropriate soil volumes and long-term maintenance arrangements secured. Over time, the maturing canopy will provide incremental environmental benefits, helping to soften the operational character of the site and contributing positively to the local streetscape. While landscaping does not substitute for direct emission-reduction measures, integrating tree planting into the scheme is part of a layered mitigation approach that supports the overall objective of maintaining and improving air quality within the Air Quality Management Area over the development's lifetime.

5 DELIVERY PLAN

5.1 Operational Summary

The development comprises a 24-hour airport park and ride facility serving Heathrow Terminal 5, providing up to 200 managed parking spaces.

Table 5-1 Pre-commencement Measures

Ref	Measure	Requirement	Responsibility	Evidence of Compliance	Timing
PO1	EV Charging Provision	Minimum 20% active EV charging bays (40 spaces) installed and operational; passive provision (ducting, cable routing, electrical capacity) for remaining bays	Facilities Manager	Commissioning certificates, as-built drawings, photographs	Prior to first operation
PO2	Fleet Emissions Standard	All shuttle buses operating at first use to be Euro VI minimum (HDV); service/contract vehicles Euro 6 (LDV) or better	Transport Manager	Fleet compliance register (vehicle reg, Euro class)	Prior to first operation
PO3	Procurement Controls	Contractual clauses requiring Euro VI (HDV) / Euro 6 (LDV) or ZEV where available	Operations Director	Supplier contracts / procurement policy	Prior to first operation
PO4	Differential Pricing System	Emissions-based tariff structure (Band A ZEV / Band B Euro 6 / Band C higher emitting) embedded within booking platform	Commercial Manager	Booking system screenshots; tariff schedule	Prior to first operation
PO5	Transparent Pricing	Pricing bands clearly displayed at booking stage and via on-site signage	Commercial Manager	Published tariff; site photos	Prior to first operation
PO6	Anti-Idling Policy	Formal written policy adopted: “Engines off when stationary >1 minute” (except safety/operational necessity)	Site Manager	Signed policy document	Prior to first operation
PO7	Anti-Idling Signage	Signage installed at entrance camera tunnel/queue area, shuttle loading area, staff zones	Site Manager	Photographic record	Prior to first operation
PO8	Staff Training	Induction training delivered covering anti-idling and queue management	Site Manager	Training attendance records	Prior to first operation
PO9	LES Governance	Named LES Lead appointed; monitoring dashboard template established	Operations Director	Organisational chart; monitoring template	Prior to first operation

Table 5-2 Measures to be Rolled Out Post-Opening

Ref	Measure	Action	Responsibility	KPI / Measurable Output	Timeline
OP1	Initial Performance Review	Establish baseline metrics for charger use, fleet compliance, emissions band split, idling observations	LES Lead	Baseline dataset recorded	Within 3 months of opening
OP2	EV Usage Review	Review charger utilisation and activate additional passive bays where sustained demand justifies	Facilities Manager	% charger utilisation; additional bays activated if >70% sustained use	Within 6 months of opening and ongoing
OP3	Monthly Monitoring	Record EV usage, emissions band split (A/B/C), fleet compliance and idling observations	LES Lead	Monthly dashboard	Monthly
OP4	Exceptions Reporting	Record any temporary non-compliant vehicle substitution with reason and duration	Transport Manager	Monthly exceptions report	Monthly (if applicable)
OP5	Annual LES Review	Formal review of performance, tariff effectiveness, complaints log and potential enhancements	LES Lead	Annual LES summary report	Annually
OP6	Shuttle Fleet Transition Review	Review commercial and operational viability of zero-emission shuttle buses	Transport Manager	Written technology feasibility review	Every 2 years
OP7	Continuous Improvement	Update measures where practicable to further reduce emissions	Operations Director	Documented improvement actions	Ongoing for lifetime

Lifetime Maintenance Commitment

All measures listed above will be maintained and kept operational for the lifetime of the development. EV charging infrastructure will be repaired or replaced as required to maintain functionality; emissions-based pricing will remain embedded within the booking system; fleet compliance standards will remain contractual requirements; and anti-idling enforcement will continue as part of site management procedures.