

Trigger Definition Sheet		
Programme	Asset Replacement	
Q6 Business Case	B131	
Project	Tunnels Refurbishment Project	
Trigger description	Main Tunnel Life Safety Systems	
Trigger Date	30 th June 2016	

P50 Capital Investment Value @ G4	£ 20,518,000 (2011/12 prices)	Monthly Rebate	£91,400
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Trigger Definition
Introduction – Overall Business Case The Main Tunnel is a 630m twin bore road tunnel with two lanes per bore and two additional single lane side bores. It is the primary entrance into the Heathrow Airport CTA, serving Terminals 1, 2 and 3. The Cargo Tunnel is a 830m bi –directional airside road tunnel and provides a critical operational link between Terminal 4 / cargo area and the CTA. Since construction in the 1950s (Main Tunnel) and 1960s (Cargo Tunnel), they have received limited attention. In addition to life-expired infrastructure, the industry's understanding of tunnel fire engineering has dramatically improved. Both tunnels now require major works in order to reduce operational risks. The primary project objective is to mitigate existing life safety risks by reducing the risks to “as low as reasonably practicable” (ALARP). Secondary objectives are business risk reduction and the replacement of key life expired assets. Trigger Objective To incentivise timely completion of the life safety system enhancement of the Main Tunnel enabling the timely reduction of operational life safety risks. Achievement Criteria Provide the contractor or the operation with the means to remotely monitor the operation of the critical life safety systems. The critical life safety systems are: • Ventilation • Fixed Fire Suppression • Fire Detection & Alarms • Fire Doors, Emergency Signage & Telephones • Emergency Points & Smoke Control Panels • CCTV & Automatic Fire & Incident Detection (AID) • Comms. Systems (Radio, Radio re-broadcast, PA/VA) • Traffic Management Control System (TMCS) The Trigger date detailed above will include all commissioning and testing of the critical life safety systems, such that the operation have the means to remotely monitor these systems on or before the trigger date. Achievement will only be accepted by the airline community after such commissioning and testing. The transition from the construction team to operations will utilise Heathrow's “Bringing Into Use” process.

Agreed Parameters

Normal tunnel closure for construction works are 22:30 to 05:30. There will always be one lane inbound and one lane outbound maintained during construction working hours, this can be achieved by closing one lane in each bore or by closing one bore and operating a contraflow system in the other bore.

During periods of exceptional operational disruption and during peak operational periods such as Christmas, Easter and school holiday dates, amended times for works closure of the tunnel bore may be required. Tunnel availability will be assessed with the operation, in accordance with established operational protocols.

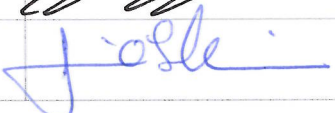
It has been agreed that no tunnel closures will take place on the night before the opening of Terminal 2 and, if deemed necessary, for each subsequent airline move into Terminal 2.

Payment of Rebate

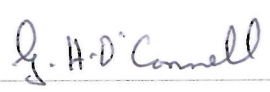
The trigger calculation has been based on the CAA settlement price control licence condition (Jan 14).

The monthly rebate for late delivery of the triggered project is as detailed above. The payment of the rebate will be for complete calendar months following the target date and will continue until the end of the month following the fulfilment of the triggered project as specified above.

Endorsement and approvals

Title	Name	Signature	Date
HAL Programme Director	Gareth Vest		24 / 3 / 14
HAL Exec Sponsor	Jim O'Sullivan		26 / 3 / 14

Stakeholder Programme Board endorsement	Endorsed at Triggers - Q6 Portfolio Sub Group 07 th February, 2014
Capital Transitions Group endorsement	Endorsed at Triggers - Q6 Portfolio Sub Group 07 th February, 2014

Title	Name	Signature	Date
HAL CTG Representative	Phil Wilbraham		27/3/14
Airline CTG Representative	Gerry O'Connell		27/3/14