



Independent planning cost review

**Heathrow Expansion Programme covering
the period of 2018**

Report dated April 2020





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Executive summary

Background and context

In October 2016 the UK Government announced its decision to support a third runway at Heathrow Airport to expand the UK's air capacity. As the UK's specialist aviation regulator, the Civil Aviation Authority (CAA) has a role in overseeing the third runway's timely and cost efficient delivery, including the planning process which is currently underway. In support of the CAA's oversight role, Heathrow Airport Limited (HAL) is required to provide an annual statement (the 'Statement') in accordance with CAA policy documents CAP1513 and CAP1651. The Statement sets out the Category B costs (planning costs) HAL has incurred in the prior years with sufficient detail to allow for effective scrutiny.

CAA guidance CAP1651 includes the identification and definition of cost categories, which are set out in Table 1 and used throughout this report.

Table 1: Categorisation of costs

Category A costs	Category B costs	Category C costs
These costs are costs which were incurred by HAL during the Airports Commission process, or before Heathrow was named as the preferred location for new runway capacity on 25 October 2016. These costs are not generally recoverable.	Capacity expansion costs that are, in general, incurred by HAL after the Government policy announcement on its preferred location for new capacity on 25 October 2016 and are associated solely with seeking planning permission for the delivery of new runway capacity at Heathrow, as defined in CAP1513.	Those costs incurred by HAL in connection with implementation and construction of new capacity, up to entry-into-operation. The majority of these costs will typically be incurred after planning permission is granted.

Scope and purpose

PwC was engaged by the CAA under an Order Form dated 17 January 2019. The scope of this commission was to independently review the 2018 statement (the 'Statement') and assess the extent to which Category B costs were correctly incurred and apportioned in accordance with CAA guidance. In order to address this, the following two areas were assessed:

1. Are the costs presented in the Statement supported by appropriate evidence and correctly categorised as Category B?
2. Is there evidence to indicate that costs included within the Statement have been incurred in an efficient manner?

The statement

HAL provided the Statement on the 02 May 2019 and is included as Table 2 for reference:

Table 2: The Statement including comparison against 2018 budget

Functions	a	b	c = a - b	d = (c/a)*100
	Budget (£m)	Actual (£m)	Variance (£m)	Variance as a %age of the Budget
Colleague costs	19.400	19.272	0.128	1%
Programme Leadership	8.367	5.634	2.733	33%
Future Heathrow	5.987	5.763	0.224	4%
Airline Strategy	4.629	2.933	1.696	37%
Consents	12.505	11.437	1.067	9%
Future Heathrow – IT	3.721	1.025	2.696	72%
IDT	39.825	52.618	(12.793)	(32%)
Community and stakeholder	1.070	1.021	0.049	5%
Programme IT	5.661	1.781	3.88	68%
Ground Investigation	23.267	10.706	12.561	54%
Exec	1.645	1.244	0.401	24%
HR	0.270	-	0.270	100%
Finance	4.900	0.719	4.181	85%
Property – Land Referencing	-	2.256	(2.256)	-
Total CAPEX	131.247	116.410	14.837	11%
OPEX costs	-	2.162	-	-
Total	131.247	118.195	13.052	10%

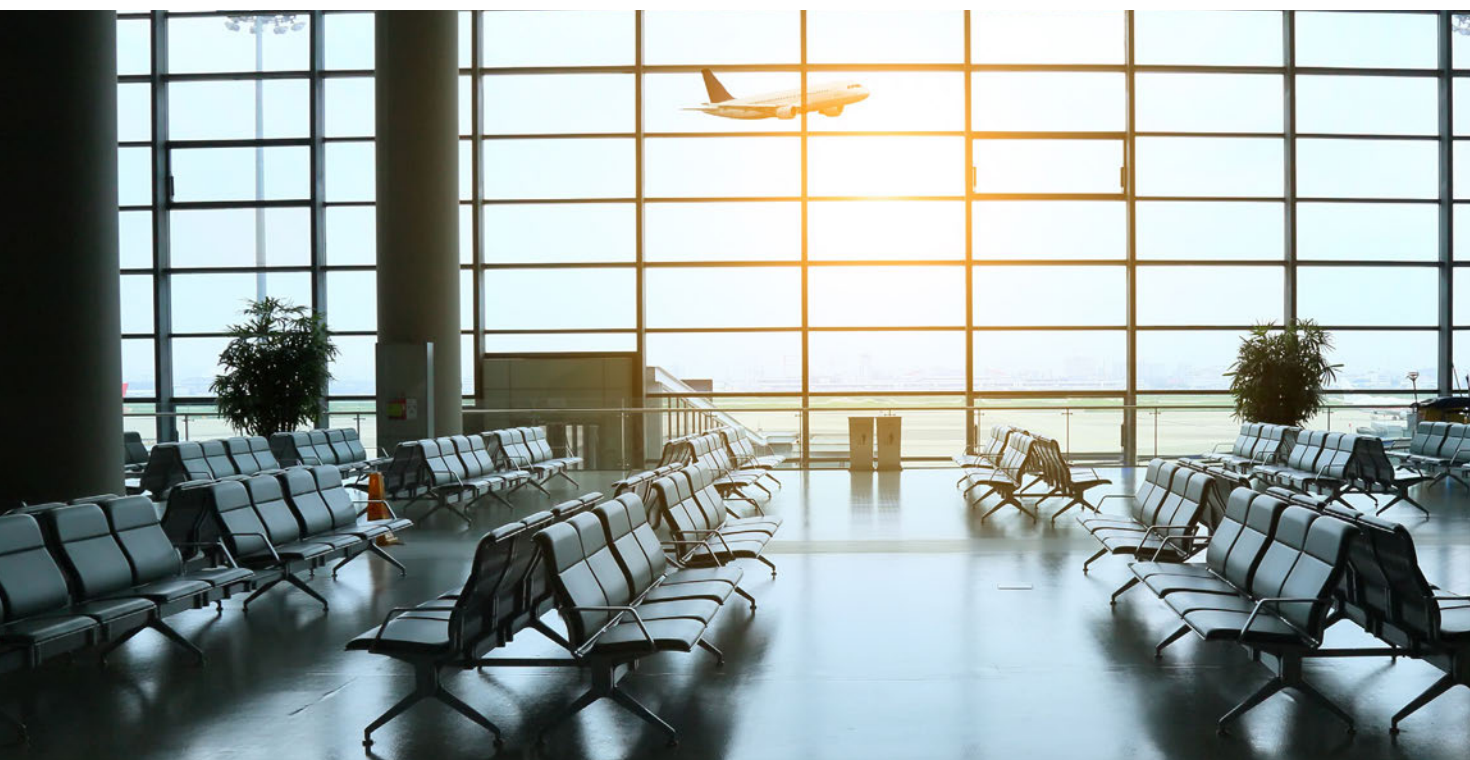
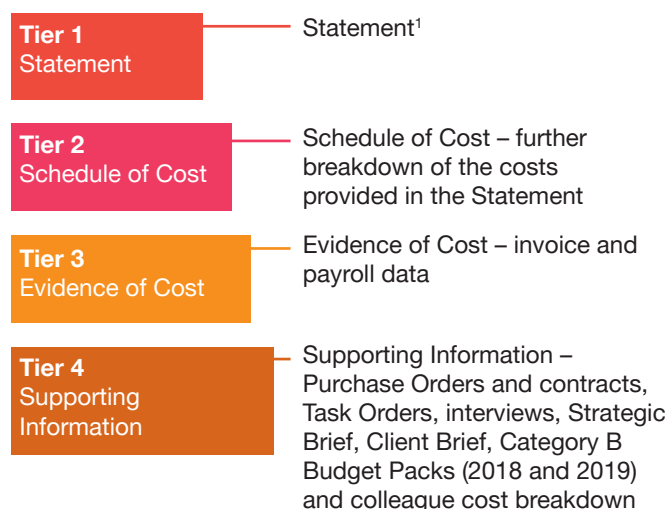
Approach

Our approach was to establish an overview of the Expansion Programme through a review of the Statement and the supporting schedule which details all invoices and accruals, referred to as Schedule of Cost, and through initial interviews with individuals from various functions within the Expansion Programme. The Schedule of Cost provided a comprehensive and fully detailed set of supporting information that reconciled to the Statement and enabled six areas of cost to be selected and agreed with the CAA as key areas for further investigation. The areas agreed with the CAA were based on their materiality to the Statement, variance from the 2018 budget and prior knowledge of the functional areas; these included:

1. Colleague costs
2. IDT
3. Programme Leadership
4. Future Heathrow
5. Information Technology (IT)
6. Ground Investigations.

For the detailed analysis phase additional documentation was requested including a sample of invoices, and payroll data, referred to as Evidence of Cost. Further Supporting Information was requested which included Purchase Orders, Contracts, Task Orders, interviews, documents that define Expansion Programme requirements and other relevant breakdowns of information. Figure 1 sets out the document hierarchy and tiers of information provided and referenced throughout this report.

Figure 1: Document hierarchy and tiers of information



Key findings

Our key findings for the two areas of focus of our review are provided below.

Are the costs presented in the Statement supported by appropriate evidence and correctly categorised as Category B?

Reconciliation of the Statement to Schedule of Cost

HAL provided a Schedule of Cost which reconciled for all functions. This included:

- an anonymised and itemised list of direct employee costs including bonuses
- an itemised breakdown of all invoices for suppliers split according to functions.

Reconciliation of the Schedule of Cost to Evidence of Cost

The Schedule of Cost reconciled with the Evidence of Cost for the sample reviewed, which represented 12% of total costs incurred during 2018. In total we reviewed a sample of 111 invoices, 13 payslips and 6 bonuses and did not note any exceptions.

Review of Supporting Information

In total we requested a sample of 55 Purchase Orders to enable a review of the supporting information for the total Statement costs. HAL advised that the selected Purchase Orders included a very limited scope description, and instead provided the corresponding contracts and Task Orders linked to the Purchase Orders which HAL advised included a more comprehensive scope description. This sample accounted for 57% of the total Statement costs as referenced in Table 3.

From the sample of Supporting Information reviewed the majority of documents included clear references to Expansion Programme scope. By exception we noted:

1. six examples where the sampled contracts and Task Orders included references to scope for Heathrow Regulatory Period 7 (H7). HAL has subsequently advised that any references to non-Expansion Programme scope have been de-scoped or the work was not carried out. Examples are included in Section 2 of this Report.
2. nine examples where the sampled contracts and Task Orders included references to scope where it was initially unclear whether the scope and costs were Category B or Category C. HAL has subsequently clarified the rationale for scope and the associated costs being classified as Category B. Examples are included in Section 2 of this Report.

Table 3: Summary of Evidence of Cost and Supporting Information sample reviewed per function

Function Name	2018 Total Spend (£m)	No. of invoices/ payslips (Evidence of Cost) sampled	% of 2018 spend sampled	No. of Contracts/ Task Orders Sampled ²	% of 2018 spend sampled through contracts/Task Orders
Colleague Costs	19.272	19 ³	4%	N/A	N/A
IDT	52.618	20	11%	16	98%
Non- IDT					
Programme Leadership	5.634	16	15%	9	71%
Future Heathrow	5.763	12	15%	6	37%
IT	2.806	21	23%	9	40%
Ground Investigation	10.706	19	12%	7	48%
Other: (Consents, Community and Stakeholder, Regulation Strategy, Property and Finance)	19.611	23	21%	8	11%
Total	116.408	130	12%	55	57%

2 HAL provided contracts and Task Orders to evidence the scope of the Purchase Orders. Where the contracts provided did not reference the PO number, HAL provided a spreadsheet that linked the POs with the contract numbers.

3 including 13 payslips and 6 bonuses

Opportunities as the Expansion Programme matures

The Expansion Programme was rapidly mobilised in October 2016 following the government announcement. 2018 was the second full year for the Expansion Programme since the government announcement and as it matures there are opportunities to further clarify cost categorisation in accordance with CAA guidance.

1. HAL could implement a timesheet system to clarify time spent on the Expansion Programme and whether costs are Category B or Category C.
2. Some Purchase Orders, contracts and Task Orders may exist as a legacy from when the Expansion Programme had to rapidly mobilise, and as a consequence cover scope for both the Expansion Programme and other HAL activities. How HAL delineates the scope of work required for the Expansion Programme and other 'business as usual' activities is not documented in a comprehensive integrated baseline, as further detailed in Section 3 of this report.

Is there evidence to indicate that costs included within the Statement have been incurred in an efficient manner?

From our previous review that covered the period 2016 and 2017, we identified a number of thematic opportunities for HAL to operate in a more efficient manner. Following our review covering the period of 2018, a number of these thematic issues remain.

Some major milestones were achieved during 2018, such as completion of extensive stakeholder consultation following the National Policy Statement designation in June 2018, to develop a single emerging Masterplan to be taken for public consultation⁴. Following achievement of these milestones the Expansion Programme has reached the point where it can clearly establish the foundations for operating in an efficient manner. The key issues relating to efficiency from our review covering the period of 2018 are set out below.

Establishing a single baseline: Our review last year identified that HAL did not have a clear and singular integrated baseline plan through to approval of the DCO that aligns requirements and scope with the associated time, cost and risk. This remains the situation from our review of 2018: HAL has provided evidence of some isolated examples of integrating scope, schedule and/ or cost, but nothing that provides a singular baseline plan through to DCO that aligns all components.

Whilst HAL does have multiple documents that relate to scope, time, cost and risk, the alignment and dependencies between these documents remains unclear and they do not establish a robust

baseline position from which to measure and manage performance and control delivery. Further areas for development remain for the following baseline components:

- **Deliverables to DCO approval:** HAL has not provided evidence which definitively sets out the baseline scope and deliverables required for 2018 or up to DCO approval. Whilst HAL has provided a number of documents containing varying levels of scope detail, these do not establish a robust baseline of scope from which to direct and manage the delivery of the programme.
- **Integrated schedule:** HAL has developed a number of schedule documents to record and monitor activities, from Level 0 (high level programme) to a detailed P6 Schedule (~3000 activities). The various schedules are not systematically linked, and it remains unclear how high level management information is updated to reflect appropriate changes in lower level schedules. HAL has advised that a baseline schedule was established in September 2018 for activities through to DCO approval, which is consistently reported in the Monthly Status Reports dated September 2018 through to December 2018. As HAL develops their schedule management process there is an opportunity to improve systems and processes, which in turn will support efficiency.

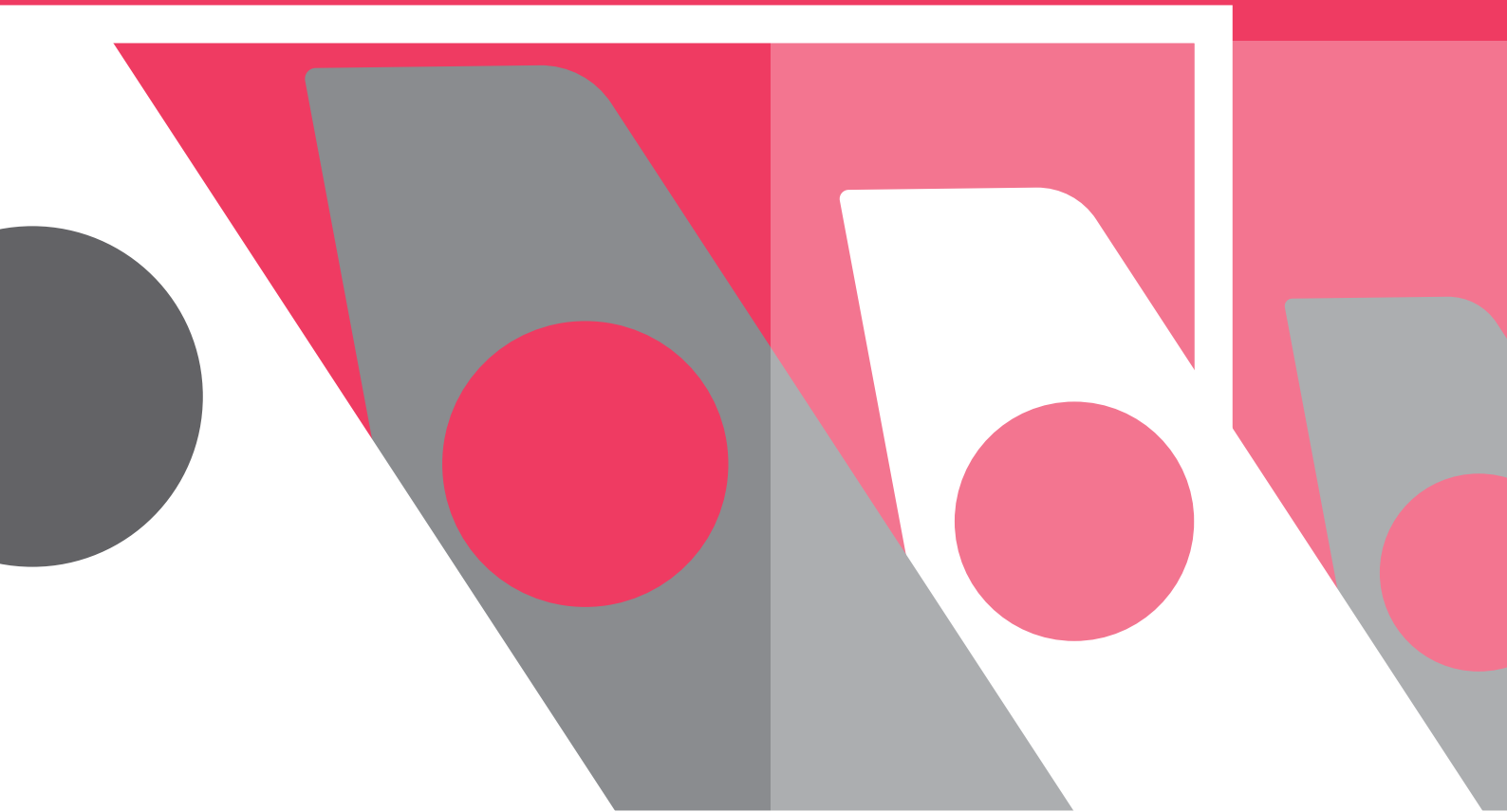
HAL has advised that a singular and integrated baseline has been developed during 2019 for the Expansion Programme, now that the NPS designation has been achieved and the masterplan has reached Milestone M3c⁵ (completion of extensive stakeholder consultation following NPS designation), although for clarity, given this relates to activities completed during 2019 this did not form part of our review.

Core controls: During our review of cost we identified a number of core programme controls processes that were not in place, and are consistent with our review findings of the prior year, including:

- **Change control:** HAL did not operate a programme level change process for the Expansion Programme to manage the baseline scope, cost, schedule and risk in 2018. HAL has subsequently advised that a Programme level change control process has been introduced in 2019 to manage changes to the baseline, although for clarity this could not be validated as part of our review of 2018 costs.
- **Timesheet system:** HAL did not have a timesheet system that records internal staff time on the Expansion Programme. Whilst this system will support the overall allocation of time to the programme, it will also enable analysis of planned time versus actual time to indicate deliverability of key activities. HAL has advised that a timesheet system was considered for the Expansion Programme during 2019, but for clarity this could not be validated as part of our review of 2018 costs.

4 Milestone M3c

5



Section 1

Introduction, context and approach



1.1 Introduction

The purpose of this section is to provide an introduction and context to the review. It will provide an overview of the Statement and describe the approach adopted and outline the subsequent sections of the report.

1.2 Background and context

In October 2016 the UK Government announced its decision to support a third runway at Heathrow Airport to expand the UK's air capacity. As the UK's specialist aviation regulator, the Civil Aviation Authority (CAA) has a role in overseeing the third runway's timely and cost efficient delivery, including the planning process which is currently underway. In support of the CAA's oversight role, Heathrow Airport Limited (HAL) is required to provide an annual statement (the "Statement") in accordance with CAA policy documents CAP1513 and CAP1651. The Statement sets out the Category B costs (planning costs) HAL has incurred in the prior years with sufficient detail to allow for effective scrutiny.

CAA guidance CAP 1651 includes the identification and definition of cost categories, which are set out in Table 4 and used throughout this report.

Table 4: Categorisation of costs

Category A costs	Category B costs	Category C costs
These costs are costs which were incurred by HAL during the Airports Commission process, or before Heathrow was named as the preferred location for new runway capacity on 25 October 2016. These costs are not generally recoverable.	Capacity expansion costs that are, in general, incurred by HAL after the Government policy announcement on its preferred location for new capacity on 25 October 2016 and are associated solely with seeking planning permission for the delivery of new runway capacity at Heathrow, as defined in CAP1513.	Those costs incurred by HAL in connection with implementation and construction of new capacity, up to entry-into-operation. The majority of these costs will typically be incurred after planning permission is granted.

1.3 Scope and purpose

PwC was engaged by the CAA under an Order Form dated 17 January 2019. The scope of this commission was to independently review the 2018 statement (the "Statement") and assess the extent to which Category B costs were correctly incurred and apportioned in accordance with CAA guidance. In order to address this, the following two areas were assessed:

1. Are the costs presented in the Statement supported by appropriate evidence and correctly categorised as Category B?
2. Is there evidence to indicate that costs included within the Statement have been incurred in an efficient manner?

1.4 Information provided

The Statement

HAL provided the total Category B costs incurred up to and including 2018, and the forecast costs through to approval of the Development Consent Order (DCO) in 2021, which is included in Table 5 for reference⁶.

Table 5: Total Category B cost estimate

Year	Spend type	a	b	c	d	e = (a/c)*100	f	g = (f/c)*100
		In year total spend (£m)	Cumulative spend (£m)	Projected outturn costs (£m)	In Year spend as a %age of outturn costs	Cumulative spend %age of outturn costs	Remaining costs to go (£m)	Remaining spend as a %age of outturn costs
2016	Actual	11	11	£529 ⁷	2%	2%	287	96%
2017	Actual	78	89		15%	17%	328	81%
2018	Actual	118	207		22%	39%	322	61%
2019 ⁸	Projected	198	405		38%	77%	124	23%
2020	Projected	80	485		15%	92%	44	8%
2021	Projected	39	524 ⁹		7%	99%	6	1%

HAL provided the Statement on the 02 May 2019 including a comprehensive supporting schedule of costs and associated invoices and an overview of the scope delivered in 2018 and comparison to budget¹⁰. This was in contrast to the review¹¹ conducted during 2018 (which reviewed costs incurred in 2016 and 2017) where key supporting documents were not available.

The Statement does not include any separate contingency or risk allowance for Category B costs. HAL has advised that a separate allowance for risk and contingency does exist, but that the allowance is for the entire Expansion Programme and is maintained separately. For clarity this did not form part of our review.

- 6 [REDACTED]
- 7 The current projected outturn position as at the time of budget setting in 2017. We note that the Outturn costs for Category B costs have increased from £298m (at 2014 prices)
- 8 [REDACTED]
- 9 The total cumulative spend of £524m referenced in the Statement (column b of Table 5) is based on the projected spend from 2019 onwards and is lower than the overall outturn costs of £529m by £5m. This is because at the time of reporting the Statement, an additional £5m were expected to be actualised in 2018. However, the 2018 actual costs were lower than anticipated by £5m.
- 10 [REDACTED]
- 11 Independent Planning Cost Review Heathrow Expansion Programme Covering the period 2016 and 2017 Report dated November 2018

Table 6 shows a breakdown of the Statement provided by HAL including actual costs and a comparison against the 2018 budget.

Table 6: The Statement including comparison against 2018 budget

	a	b	c = a - b	d = (c/a)*100
	Budget (£m)	Actual (£m)	Variance (£m)	Variance as % of the budget
Colleague costs	19.400	19.272	0.128	1%
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Property – Land referencing	-	2.256	(2.256)	-
Total CAPEX	131.247	116.410	14.837	11%
OPEX for 2018	-	2.162	-	-
Total	131.247	118.195	13.052	10%

Key documents

The key documents provided by HAL are included in Table 7 and are referenced throughout this report.

Table 7: Key documents provided by HAL

Document name	Type	Content
[REDACTED]	PDF	Description of scope and costs incurred during 2018
[REDACTED]	Excel	The 2018 Statement provided by HAL
[REDACTED]	Excel	Schedules of source data for 2018 costs
Invoices	PDF	A sample of requested invoices
Purchase Orders (POs) and Contracts	PDF	A sample of Purchase Orders and Contracts
Task Orders	PDF	A selection of requested Task Orders
[REDACTED]	PDF	Narrative of 2018 and 2019 Cat B Budget
[REDACTED]	Excel	Average rates per salary grade bandings
Strategic Brief	PDF	Narrative to explain the experience of future Heathrow for stakeholders and what expansion can enable and facilitate both locally and nationally
Client Brief	PDF	Narrative that defines the client requirements and translates the Strategic Brief into specific strategic business objectives and requirements
Interviews with HAL individuals	N/A	10 individuals from various functions
[REDACTED]	PDF	Organisational charts detailing FTEs for each function

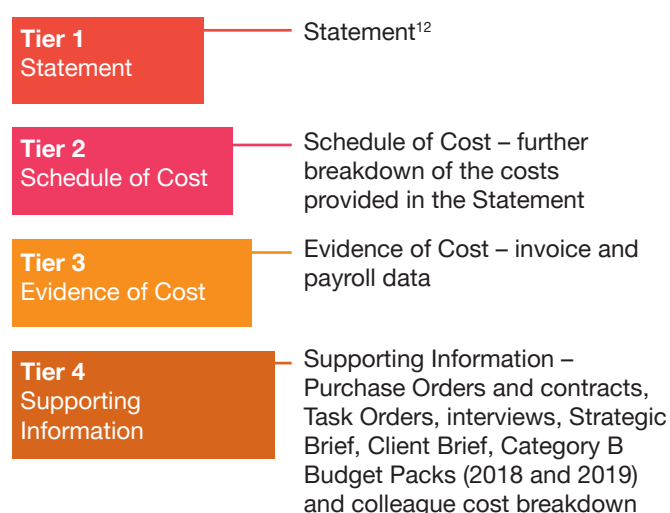
1.5 Approach

Our approach was to establish an overview of the Expansion Programme through a review of the Statement and the supporting schedule which details all invoices and accruals, referred to as Schedule of Cost, and through initial interviews with individuals from various functions within the Expansion Programme. The Schedule of Cost provided a comprehensive and fully detailed set of supporting information that reconciled to the Statement and enabled a sample to be selected and agreed with the CAA for further detailed analysis. The functions agreed with the CAA for further detailed analysis were:

1. Colleague costs
2. IDT
3. Programme leadership
4. Future Heathrow
5. Information technology (IT)
6. Ground investigations

For the detailed analysis phase additional documentation was requested including a sample of invoices, and payroll data, referred to as Evidence of Cost. Further supporting information was requested which included Purchase Orders, contracts, Task Orders, interviews, documents that define Expansion Programme requirements and other relevant breakdowns of information. Figure 2 sets out the document hierarchy and tiers of information provided and referenced throughout this report.

Figure 2: Document hierarchy and tiers of information

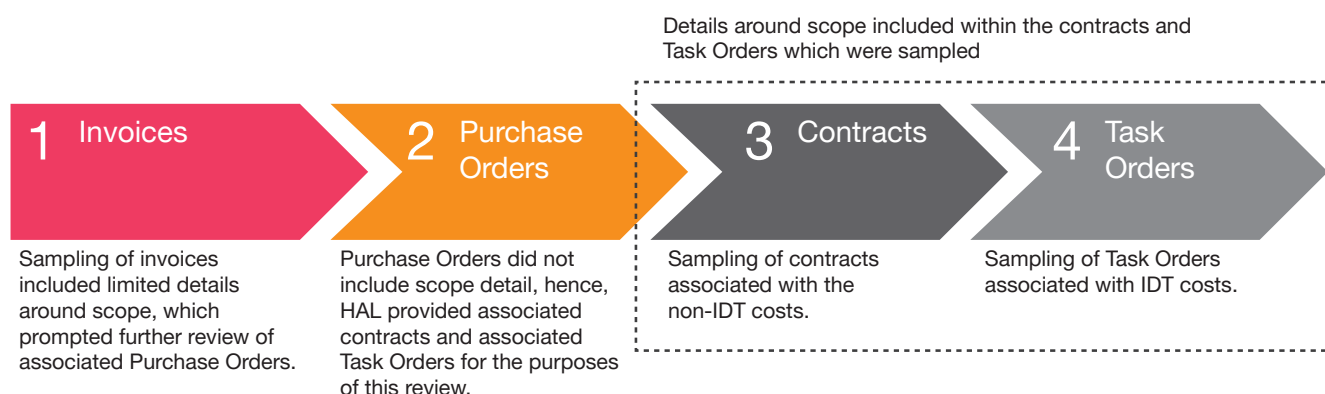


Are the costs presented in the Statement supported by appropriate evidence and correctly categorised as Category B?

In order to assess whether the costs included in the Statement as Category B were (i) incurred by HAL after the Government announcement on 26 October 2016, and (ii) solely associated with seeking planning permission for the delivery of new runway capacity at Heathrow we:

- Established an overview of the Expansion Programme scope and associated costs through an initial review of documentation provided by HAL and through initial interviews, prior to agreeing areas for detailed analysis with the CAA.
- Sought to reconcile the Statement to a Schedule of Cost, and verify that costs within the Schedule of Cost were supported by appropriate Evidence of Cost by way of invoices and payroll data. In order to do this we agreed six areas for detailed analysis with the CAA. For the six areas we:
 - Requested a sample set of Evidence of Cost (invoices and payroll data) based on the value (£), nature of the scope and when the work was undertaken.
- Sought to supplement our review of the sampled invoices, given the limited narrative included in the sampled invoices, by reviewing additional Supporting Information. For the Supporting Information provided we identified whether a clear reference to the Expansion Programme was included and that scope and costs were clearly attributed to the Expansion Programme. In order to verify this we:
 - Selected a sample of Purchase Orders which HAL advised included a very limited scope description. Instead HAL provided the corresponding contracts and Task Orders which HAL advised included a more comprehensive scope description. Figure 3 sets out the sequence in which we reviewed the Supporting Information.
 - Interviewed 10 individuals from the Expansion Programme from various functions. The interviews covered, where applicable, the work undertaken in 2018 and how this related to the Statement, the Schedule of Cost and other key documentation provided by HAL.

Figure 3 Approach to sampling



Is there evidence to indicate that costs included within the Statement have been incurred in an efficient manner?

In order to make an assessment as to whether the work undertaken has been delivered in an efficient manner, we reviewed and analysed key documentation, and interviewed relevant individuals relating to the following three areas:

- **Baseline:** Is there a clear and consistent baseline that sets out the scope, cost, schedule and risk up to approval of the Development Consent Order (DCO)?
- **Baseline Governance:** Is there an established and appropriate governance process in place to manage the baseline and/or any changes?
- **Progress and performance:** Is progress and performance clearly and consistently reported, including the consequential impact of delay?

1.6 Structure of this report

The remainder of this report is structured as referenced in Table 8:

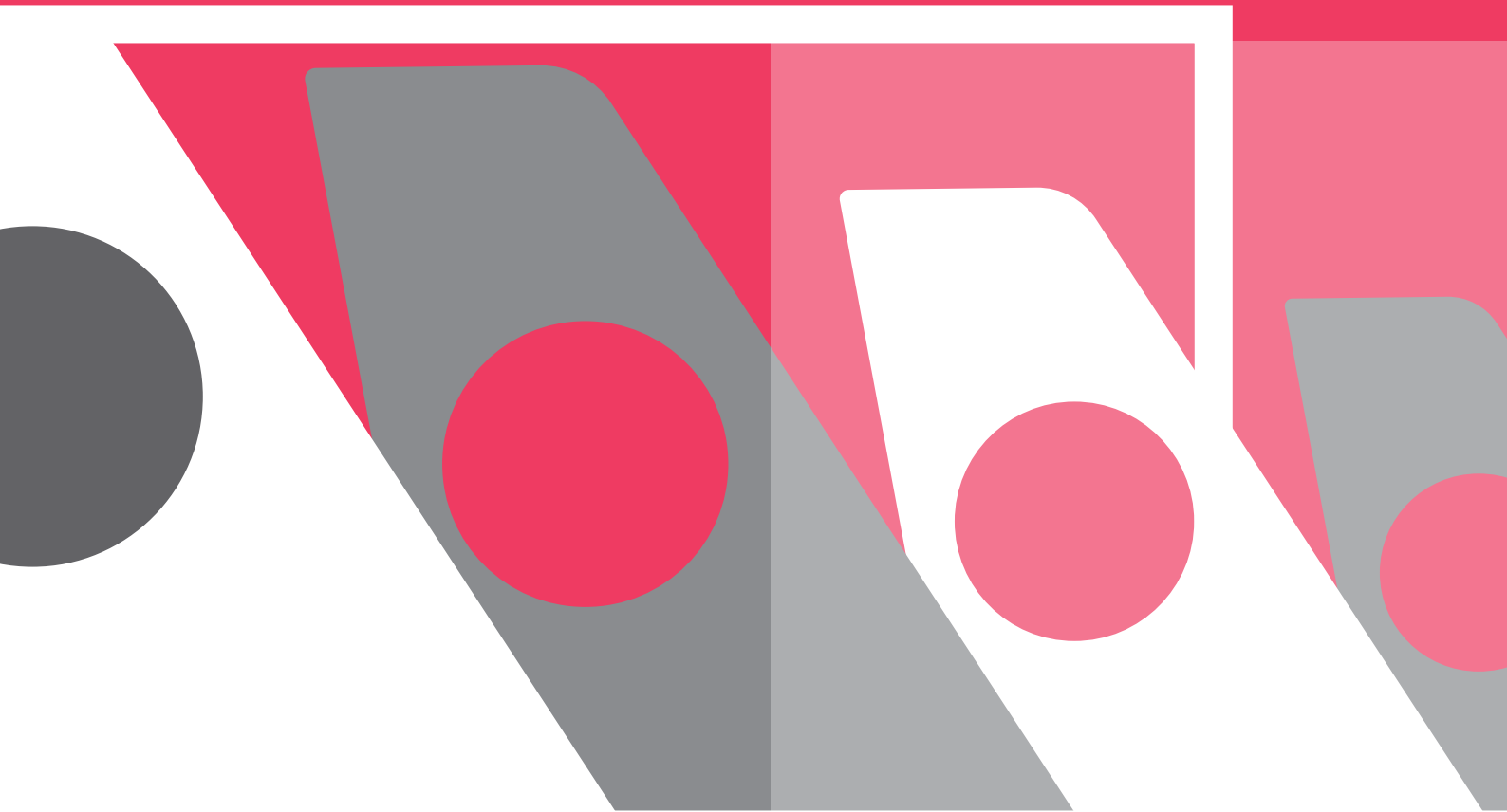
Table 8: Report structure

Section	Area of Focus	Sub-sections
Section 2	Are the costs presented in the Statement supported by appropriate evidence and correctly categorised as Category B?	• Colleague Costs • IDT Costs • Non-IDT Supplier Costs • Other
Section 3	Is there evidence to indicate that costs included within the Statement have been incurred in an efficient manner?	• Baseline • Governance • Progress and Performance

1.7 Notes

In this report, where costs or cost types are referred to, they relate to Category B costs unless otherwise stated

- All figures in this report are in £m unless otherwise stated.
- All tables in this report include values to £m to 3 decimal places unless otherwise stated.
- All information within this report was received by us between 02 May 2019 through 02 August 2019. Any information provided subsequent to the 02 August 2019 was reviewed on an exception basis only.



Section 2

Are the costs presented in the Statement supported by appropriate evidence and correctly categorised as Category B?