



A Second Runway for Gatwick

Appendix

A17

Capital Cost Forecast



Turner & Townsend

London Gatwick Airport Expansion

Airports Commission

Appendix – Capital Cost Forecast



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1 Executive Summary

The purpose of this report is to provide the detail behind the Capex forecast costs used by Gatwick Airport Ltd in the assessment of the Airport Commission (AC) selected option, to provide a second runway at Gatwick.

All figures are presented at a fourth quarter 2013 (4Q13) base date with no provision for inflation within the rates.

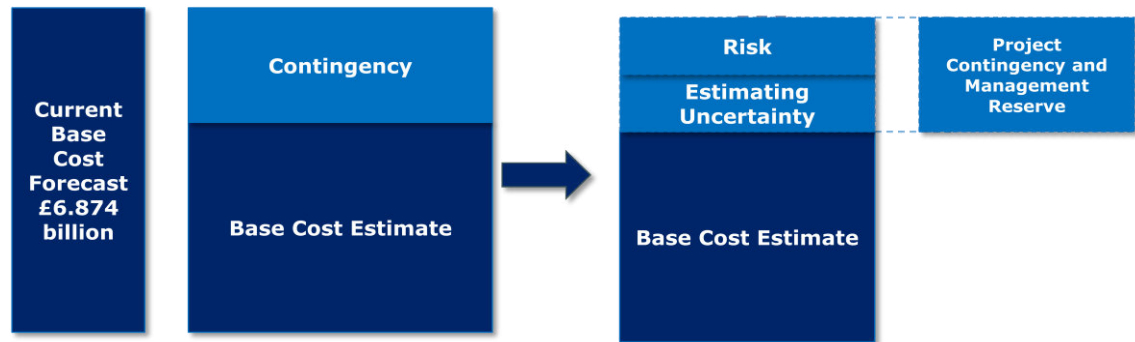
The compilation of the base cost forecast is for the updated scheme design for a second runway at Gatwick, as set out in the Operation Efficiency – Master Plan Appendix, and follows the GAL Central Estimating Group process for estimate production. The components of the base cost are then allocated to the relevant construction phase, with uplifts applied to reflect airside working where appropriate.

The level of estimate definition is aligned to Gatwick Class 4/5 (RIBA 1/2). Please see the table in section 4.2.3 for assessment of input definition.

In the initial project budget a ‘contingency’ sum was set at 25% of the base cost. This was used to test the initial business case (and options within it) and provides a reference against which a more detailed analysis of risk and uncertainty for the project can be assessed.

The overall risk profile for the project is built up by considering the inherent uncertainty within the cost estimate (Estimating Uncertainty) and identification of all potential threats (risks) that might impact upon the project.

The diagram below outlines this approach and illustrates how estimating uncertainty and risk are treated as discrete elements before being combined to provide an estimate of the overall contingency that the project might require.



Once identified both estimating uncertainty items and risks are quantified and modelled using statistical modelling tools that enable consideration of a range of confidence levels.

For full details on scope, assumptions and comments please see Appendix C of this document.

To achieve efficient employment of capital, the provision of built infrastructure and facilities are considered incrementally and aligned as appropriate to the forecast million passengers per annum (mppa), in outline these increments are:

2025 Runway Opening Enlarged airfield boundary, new code C Runway, 30 code C midfield stands, taxiway infrastructure to suit with link to existing airfield's pavement infrastructure, Remote Pier with all processing of passengers (PAX) within existing Terminals, river diversions and acoustic/visual screening, re-provision of existing facilities demolished to enable increment, surface access works from the M23 along the existing highway corridor to the North Terminal roundabout and partial diversion of the A23 to the South East of the airfield.

2030 Phase 1 part of Contact Pier and New Terminal, code C contact and remote stands to Contact Pier, associated taxiway/taxilane infrastructure, completion of surface access highway works including A23 and Balcombe Road diversions, landside automated people mover (APM) from North Terminal to New Terminal, including a new APM station under the South Terminal.

2035 Phase 2 completion of Contact Pier and associated aircraft stands, New Terminal fitout increased to envelope constructed in phase1, part of Remote Pier, associated taxiway/taxilane infrastructure.

2040 Phase 3 final expansion to New Terminal and Remote Pier, balance of midfield contact and remote stands, balance of taxiways/taxilane, airside APM from New Terminal and Remote Pier.

The following table summarises the capital cost forecast, including contingency, for each phase.

Increment	Cost Forecast £bn
2050 Base Cost Forecast (Master Plan)	6.874
2025 Runway Opening Phase	2.059
2030 Phase 1	2.624
2035 Phase 2	1.070
2040 Phase 3	2.020
Total Phased	7.773

Scheme Cost Drivers

Each of the expansion phases has distinct cost drivers. The following table summarises the key areas of capital spend by facility of the total cost plan.

Cost Plan Base is 4Q13	Base Cost Plan	Expansions Phases				
	No Phasing 2050	2025 Runway Opening Phase	2030 Phase 1	2035 Phase 2	2040 Phase 3	Total
TOTAL COST PLAN VALUE (excluding Risk)	81.3%	81.3%	82.3%	80.2%	80.2%	81.2%
A Programme and Delivery Management	4.5%	3.2%	4.9%	5.2%	5.2%	4.6%
A1 Capital Programme and Delivery Management	4.5%	3.2%	4.9%	5.2%	5.2%	4.6%
B Design	5.0%	3.6%	5.5%	5.9%	5.9%	5.1%
B1 Design consultants	5.0%	3.6%	5.5%	5.9%	5.9%	5.1%
C Base Construction Costs	55.0%	36.0%	61.3%	65.1%	65.1%	56.1%
C1 Enabling works	1.2%	2.9%	0.7%	0.1%	0.0%	1.0%
C2 Airfield Pavements comprising Runways, RET's, RAT's, Taxiways, Aprons and Stands	9.3%	10.5%	4.7%	14.5%	11.9%	9.5%
C3 Airside facilities (APM, ATC, Hangars, Cargo, Surface Water)	5.2%	3.4%	3.8%	4.7%	8.3%	5.0%
C4 Terminal and Piers	27.0%	4.4%	32.5%	42.3%	43.8%	29.4%
C5 Surface Access including; Car Parks, Landside APM, Highway Works and Station Upgrade	11.4%	12.8%	18.6%	2.3%	0.3%	10.1%
C6 Utilities	0.6%	1.1%	0.6%	-	-	0.5%
C7 Operational commissioning	0.2%	0.6%	0.3%	0.7%	0.5%	0.5%
C8 Operational handover	0.1%	0.2%	0.2%	0.5%	0.2%	0.3%
D Project Specifics	15.7%	37.4%	9.3%	2.9%	2.9%	14.2%
D1.1 Land Purchase	11.7%	30.6%	6.7%	-	-	10.3%
D1.2 Compensation and Blight	0.4%	1.2%	-	-	-	0.3%
D1.3 Levies and LA agreements	0.7%	0.4%	0.8%	0.9%	0.9%	0.8%
D1.4 Airside equipment	0.1%	0.4%	-	-	-	0.1%
D1.5 Water course diversions	0.8%	2.5%	-	-	-	0.7%
D1.6 Obstacle clearance	0.3%	0.8%	-	-	-	0.2%
D1.7 Archaeology/ Ecology / Heritage	0.1%	0.3%	-	-	-	0.1%
D1.8 Construction Logistics	1.7%	1.2%	1.8%	2.0%	2.0%	1.7%
D1.9 Motorway diversion	-	-	-	-	-	-
D1.10 Landfill removal and remediation	-	-	-	-	-	-
D1.11 Water treatment works - reprovision	-	-	-	-	-	-
E General / other Project costs	1.1%	1.2%	1.1%	1.1%	1.1%	1.1%
E1.1 Insurances	1.1%	1.2%	1.1%	1.1%	1.1%	1.1%
F Risk	18.7%	18.7%	17.7%	19.8%	19.8%	18.8%
F1 Project risks	18.7%	18.7%	17.7%	19.8%	19.8%	18.8%
TOTAL COST PLAN VALUE (including Risk)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Confidence in point estimate

There are four principle areas of cost basis: Market Tested, Benchmarks, Sums, and Provisional Sums. The cost plan's basis utilises over 80%, by value of the work breakdown structure (WBS) level 1 'C Base Construction Costs', of data from benchmarks. This level of benchmark information provides a high level of support and cost surety.

Cost Basis	Description	% of Base Construction £3.778bn
Market Tested	A current rate that can be practically used and adjusted according to the application.	4%
Benchmarks	An accurate pricing basis based on existing data from similar schemes and applications.	82%
Sums	A cost set against an item where an accurate measure cannot be undertaken, where an approximate unit rate may be used.	11%
Provisional Sums	A nominal allowance for an item where the scope is currently undefined.	3%
Total		100%

In addition to the above, our risk provision has been validated the design, programme and delivery management allowances compared with other major asset owner's delivery programmes.

2 Methodology

Gatwick Airport Ltd commissioned Turner & Townsend to produce cost plans for expanding Gatwick Airport. The expansion entails a second runway to the South of the existing runway, with a 1,045m separation, New Terminal and Piers along with associated stands, taxiways/taxilanes and airport facilities.

All figures are presented at a 4Q13 base date. Derived from the base cost plan are four cost forecasts for expansion phases, these consider expansion of the airport's facilities and infrastructure in alignment with the forecast demand mppa, for the periods of: 2025 Runway Opening, 2030 Phase 1, 2035 Phase 2 and 2040 Phase 3.

In order to determine a base cost plan and expansion phase forecasts, Turner & Townsend follow a procedure which is highlighted over the following sections.



Scope. Understand the scope fully and accurately within the cost plan, and engage with stakeholder; Gatwick Airport Commission teams, and ARUP (Master Plan designer) to determine individual phase scope.

Quantification. The scope of the scheme is represented by utilising the methods in order of precedence:

- Master plan information supported with Schedule of Facilities (SoF) quantities

ARUP were appointed by Gatwick Airport to provide master plan support, this entailed the development of airport master plans supported with quantities for the key facilities in the format of an SoF.

Quantities provided and utilised within the cost plan include: airfield pavements (new runway and shoulders, extending existing runway, taxiways, taxilanes, stands); Remote Pier; Contact Pier; New Terminal; landside APM; airside APM; car parking; highway works; cargo expansion; hangar expansion; bulk earthworks volumes, including river diversion channels.

- Measurement from master plans using specialist measurement software

Items of scope identified on the master plan but not included within the SoF quantities were measured from the plan utilising specialist measurement software calibrated to the plan scale.

Quantities determined utilising software measurement include: wavy noise wall; earth bunds; perimeter fence; perimeter security road; pond surface areas and also a check measure of the aircraft pavements and landscaping areas.

- Measurement of existing Gatwick assets including property, structures and service routes

Items of scope identified as current Gatwick assets have been measured from the as built drawings or as provided within the asset information.

- Measurement by satellite images

Items of scope not identified by the ARUP master plan, but identified by comparing existing ground plans with the master plan, have been measure from satellite images. These items are generally for clearance of existing features and facilities, whether airport owned or off airfield.

Quantities determined by satellite measurement include: demolition and re-provision of Gatwick owned properties (various builds, electrical substations and pumping stations); residential, industrial and commercial building off airfield (as identified within Land Valuation Appendix); removal of hardened surfaces (car parks and roads); infilling watercourses made redundant following diversion of the River Mole and Crawter's Brook; removal of woodland.

- Measurement of items not covered by the above

Items that are identified as a requirement, either from scheme documentation, workshops, meetings or email communication but without definition are therefore of an ambiguous nature and require further clarification and development. Such items are noted generally as sum or provisional sum items and are provided with high level description.

Items identified by this method include: demolition of existing river gates; power diversions during substation demolition; service disconnections for demolition of buildings; APM sub-surface maintenance facility; water quality monitoring station; South Terminal reconfiguration; South Terminal baggage upgrade; Energy Centre, Anaerobic Digester and pipe route to/from new facilities; Railway Station Optimisation; local highways accommodation works/junction modifications; utility services to New Terminal; operation readiness; operational handover; land purchase, compensation and support schemes; pre-works surveys; and general management, risk and insurance.

Pricing. The quantified scope has been priced using: benchmarks for similar airport infrastructure, facilities and surfaces access costs; bottom up estimating with market tested rates for scope items where benchmarks have not been applicable, for example earth bunds and river diversion valleys; market norms for percentage based allowances.

The phased programme utilises the base cost forecast rates and where necessary have an uplift allowance added to provided and enhanced rate for airside working, interfacing with existing, multiple workfronts and operational impact. The following table provides an overview of the areas of enhanced rate.

Ref.	CBS	2025 Runway Opening	2030 Phase 1	2035 Phase 2	2040 Phase 3
A	Programme and Delivery Management				
A1	GAL Management	-	-	-	-
B	Design				
B1	Design Consultants	-	-	-	-
C	Base Cost				
C1	Enabling Works	-	20%	-	-
C2	Airfield	-	20, 40%	20, 40%	20, 40%
C3	Airside Support Facilities	-	20%	20%	20%
C4	Terminal and Piers	-	20%	20, 30%	20, 30%
C5	Surface Access	-	-	-	-
C6	Utilities	-	-	-	-
C7	Operational Commissioning	-	-	-	-
C8	Operational Handover	-	-	-	-
D	Project Specifics				
D1.1	Land Purchase	-	-	-	-
D1.2	Compensation/Blight	-	-	-	-
D1.3	Levies & Agreements	-	-	-	-
D1.4	Equipment	-	-	-	-
D1.5	Water Courses	-	-	-	-
D1.6	Obstacle Clearances	-	-	-	-
D1.7	Archaeology, Ecology and Heritage	-	-	-	-
D1.8	Construction Logistics	-	-	-	-
D1.9	Motorway diversion	n/a	n/a	n/a	n/a
D1.10	Landfill removal and remediation	n/a	n/a	n/a	n/a
D1.11	Water treatment works - reprovision	n/a	n/a	n/a	n/a
E	General/Other Project Costs				
E1	Insurances	-	-	-	-
F	Risk				
F1	Project Risk	-	-	-	-

The rate enhancement percentages allow for:

Percentage	Enhancement Coverage
0%	The base cost plan rate considers the nature of the activity and delivery constraints. The base situation is mainly a greenfield site with no operation impacts other than height restrictions imposed by the airfield's Obstacle Limitation Surfaces (OLS).
20%	Enhancement on base rate for normal daytime working within an airside environment. The percentage considers the effect of passing through landside/airside security, restricted zone working, reduced production outputs, additional measures to control dust and Foreign Object Damage (FOD), interfacing with adjacent existing facilities, night working.
30%	Enhancement on base rate for working within an airside environment adjacent to or in operational facilities. The percentage considers the effect of passing through landside/airside security, restricted zone working, reduced production outputs, additional measures to control dust and FOD, interfacing with adjacent existing facilities, including public areas and associated protection, night working.
40%	Enhancement on base rate for restricted night time working within an airside environment. The percentage considers the effects of passing through landside/airside security, restricted zone working, reduced production outputs, additional measures to control dust and FOD, working during limited night shift periods (i.e. during runway possession), temporary works including lighting, coned traffic routes and delethalisation of surfaces within proximity of operational pavements and the runway clear and graded area.

Benchmarking. Over 80%, by value, of the base cost plan has been compared to industry completed project benchmarks and market tested rates. All Aprons, Terminal and Piers have been benchmarked against recent national completed accounted final project costs rather than estimates or as awarded costs to ensure a level of accuracy commensurate to the level of information available at this stage of estimating.

3 Estimate Scope

3.1 Overview

Expansion phasing of the Airport builds out in an aligned manner to the forecast demand, from the base point of 45mppa to 95mppa in 2050. Each expansion phase either has stand-alone or phased items of scope, depending on when part of the infrastructure or facilities are required for the PAX demand, for instance 2030 delivers the initial New Terminal and Pier space.

The following table elaborates on the principle scope for the base cost plan and each of the expansion phases.

Ref.	CBS	2025 Runway Opening	2030 Phase 1	2035 Phase 2	2040 Phase 3
A	Programme and Delivery Management				
A1	GAL Management	✓	✓	✓	✓
B	Design				
B1	Design Consultants	✓	✓	✓	✓
C	Base Cost				
C1	Enabling Works	✓	✓	✗	✗
C2	Airfield	✓	✓	✓	✓
C3	Airside Support Facilities	✓	✓	✓	✓
C4	Terminal and Piers	✓	✓	✓	✓
C5	Surface Access	✓	✓	✗	✗
C6	Utilities	✓	✓	✗	✗
C7	Operational Commissioning	✓	✓	✓	✓
C8	Operational Handover	✓	✓	✓	✓
D	Project Specifics				
D1.1	Land Purchase	✓	✓	✗	✗
D1.2	Compensation/Blight	✓	✓	✗	✗
D1.3	Levies & Agreements	✓	✓	✓	✓
D1.4	Equipment	✓	✗	✗	✗
D1.5	Water Courses	✓	✗	✗	✗
D1.6	Obstacle Clearances	✓	✗	✗	✗
D1.7	Archaeology, Ecology and Heritage	✓	✗	✗	✗
D1.8	Construction Logistics	✓	✓	✓	✓
D1.9	Motorway diversion	n/a	n/a	n/a	n/a
D1.10	Landfill removal and remediation	n/a	n/a	n/a	n/a
D1.11	Water treatment works - reprovision	n/a	n/a	n/a	n/a
E	General/Other Project Costs				
E1	Insurances	✓	✓	✓	✓
F	Risk				
F1	Project Risk	✓	✓	✓	✓

4 Quantification

4.1 Information Received

4.1.1 Reports

Information used in the compilation of the capital cost forecast is included within the following Appendices:

- Operational Efficiency – Master Plan
- Surface Access,
- Water and Flood Risk,
- Land Valuation,
- Construction Programme and Risk Profile,
- Fuel Strategy,
- Waste,
- Energy.

4.1.2 Gatwick Team

Information and advice from the Gatwick Airports Commission team has been incorporated within the ARUP SoF and is taken as the control document for the Airport's facilities and airfield infrastructure for the base estimate. The SoF also provides the control document for the expansion phasing for the airport's facilities and airfield infrastructure.

The 2025 Runway Opening is based on the Gatwick Airport Commission team's advice and business case, whereby the provision of a 3.4km code C runway, at 60m wide, and airfield infrastructure to sufficient to service upto 30 remote stands within the new midfield area. The new infrastructure is connected to the existing airfield via a link crossing the existing runway, with all PAX processing undertaken within existing Terminals prior to bussing to a Remote Pier adjacent to the new remote midfield stands.

Hangar re-provision has been allowed for on a like-for-like basis for hangar 6, which is the effected hangar to the South area of the airfield. Passive provision will be provided for future expansion as per the ARUP area schedule at 2040 for additional hangar construction in the North apron utilising the existing North West zone apron/maintenance taxiway.

Cargo expansion will be provided for on the same basis as hangar expansion, this is passive provision in accordance with the SoF area.

Land purchase fees have been calculated by Deloitte under instruction from Gatwick property and these are currently in line with the drawn master plan boundary line. These include:

- Land Purchase
- Business Relocation Compensation
- Home owners Support Scheme
- Property Market Support Bond
- Disturbance Compensation

Surface access requirements are based on the information provided by ARUP.

4.2 Methodology

4.2.1 Principle Quantities

Gross floor areas for the Terminal and Pier buildings have been provided by ARUP, based on benchmarking the scale of similar facilities

Areas for new airfield pavements have been provided by ARUP from the CAD model and cross checked by re-measuring using specialist software.

Areas and volumes of cut and fill of the site to balance site levels for the new airfield have been provided by ARUP.

The landside and airside APM's are in accordance with the information provided from the APM workshop material issued by ARUP.

Car parking areas and space numbers have been provided by ARUP

4.2.2 Measurement Assumptions

The cut and cover airside APM structure width and depth has been based on an assumed a cross sectional area of 10m x 6m, in line with recent sub surface schemes, with the assumption being sense tested with ARUP.

Elevated structures for the landside APM are in accordance with ARUP's assumptions whereby the connection into existing system is via realignment of five spans of the existing decking and at the New Terminal by 500m of new structure of a similar construction to the existing elevated APM. The existing elevated APM structure is a steel composite deck on concrete piers on an assumed piled foundation.

Facilities to be re-provided are based on the measure of the same buildings at the demolition, as the remit is to re-provide like for like, at this stage.

River diversion valleys have been measured from the reference plan provided by ARUP. The river valley profiles are based on the CH2M Hill sections contained within the ARUP Operational Efficiency – Master Plan Appendix, typically these have a valley floor of 35m for Crawter’s Brook and 50m for the River Mole. River channels, within the valley floor, have a common top of bank to top of bank of 10m and a depth to invert of 2.5m.

The existing River Mole crosses the airfield in a box culvert and inverted syphon, the watercourse is diverted around the perimeter and the redundant section of surface watercourse is assumed to be infilled with site won excavated spoil.

No infilling or removal of the syphon structure or culvert has been assumed other than infilling the vertical syphon shafts with excavated spoil and blocking off the culvert ends.

Acoustic/visual screening is based on two types; reinforced concrete 6m high wavy wall on piled foundation to the West of the railway line in the South East corner of the airfield, and 10m high reinforced earth retained airfield facing bund sloping back to grade over an average width of 50m to the South West corner of the airfield.

Expansion of hangar and cargo facilities are based on providing a serviced island only for the commercial operator to undertake the site development.

Surface access highways are in accordance with the information as provided by ARUP, except minor amendments for cycle and footways which have been verified with ARUP.

The table below provides a list of principle quantities for each expansion phase.

Principle Quantities	2025 Runway Opening	2030 Phase 1	2035 Phase 2	2040 Phase 3
Runways, including shoulders	247,326 m2	-	-	7,919 m2
Taxiways	299,117 m2	78,800 m2	207,400 m2	260,752 m2
Taxi lanes	48,000 m2	98,777 m2	87,000 m2	178,479 m2
Code C stands (aircraft colour)	-	115,000 m2	52,494 m2	-
Code E stands (aircraft colour)	80,000 m2	-	65,000 m2	143,360 m2
Temporary Departures Lounge	15,000 m2	-	-	-
New Terminal	-	126,000 m2	-	102,385 m2
Piers	-	37,362 m2	63,963 m2	68,008 m2
APM - landside (surface)	-	1,900 m	-	-
APM - airside (cut and cover tunnel)	-	350 m	1,505 m	-
Car parking - Surface	64,650 spaces	2,126 spaces	4,674 spaces	-
Car parking - Multi storey	-	3,053 spaces	447 spaces	-

4.2.3 Maturity of Inputs

The following table indicates the level of reference information used in preparing the cost data in this report, broadly equivalent to RIBA stage 1 and 2. The table also shows the percentage that each element represents within the cost plan.

WBS	Description	% of Base Cost Plan	MATURITY OF INPUTS				
			RIBA Stage 1	RIBA Stage 2	RIBA Stage 3	RIBA Stage 4	RIBA Stage 5
A	Programme and Delivery Management	4.5%					
A1	Capital Programme and Delivery Management	4.5%	n/a				
B	Design	5.0%					
B1	Design consultants	5.0%	n/a				
C	Base Construction Costs	55.0%					
C1	Enabling works	1.2%					
C2	Airfield Pavements	9.3%					
C3	Airside facilities	5.2%					
C4	Terminal and Piers	27.0%					
C5	Surface Access	11.4%					
C6	Utilities	0.6%					
C7	Operational commissioning	0.2%					
C8	Operational handover	0.1%					
D	Project Specifics	15.7%					
D1.1	Land Purchase	11.7%	n/a				
D1.2	Compensation and Blight	0.4%	n/a				
D1.3	Levies and LA agreements	0.7%	n/a				
D1.4	Airside equipment	0.1%					
D1.5	Water course diversions	0.8%					
D1.6	Obstacle clearance	0.3%					
D1.7	Archaeology/ Ecology / Heritage	0.1%					
D1.8	Construction Logistics	1.7%					
D1.9	Motorway diversion	n/a	n/a				
D1.10	Landfill removal and remediation	n/a	n/a				
D1.11	Water treatment works - reprovision	n/a	n/a				
E	General / other Project costs	1.1%					
E1.1	Insurances	1.1%	n/a				
F	Risk	18.7%					
F1	Project risks	18.7%	n/a				
TOTAL COST PLAN VALUE (including Risk)		100.0%					

5 Pricing

5.1 Estimating

All pricing is in GBP Pounds at the base date of 4Q13. The following table presents the full expansion phase cost forecasts:

Cost Plan Base is 4Q13, Values in £bn	Base Cost Plan	Expansions Phases				
	No Phasing 2050	2025 Runway Opening Phase	2030 Phase 1	2035 Phase 2	2040 Phase 3	Total
TOTAL COST PLAN VALUE (excluding Risk)	£ 5.590	£ 1.674	£ 2.158	£ 0.858	£ 1.620	£ 6.310
A Programme and Delivery Management	£ 0.308	£ 0.065	£ 0.129	£ 0.056	£ 0.105	£ 0.355
A1 Capital Programme and Delivery Management	£ 0.308	£ 0.065	£ 0.129	£ 0.056	£ 0.105	£ 0.355
B Design	£ 0.347	£ 0.074	£ 0.145	£ 0.063	£ 0.118	£ 0.400
B1 Design consultants	£ 0.347	£ 0.074	£ 0.145	£ 0.063	£ 0.118	£ 0.400
C Base Construction Costs	£ 3.778	£ 0.742	£ 1.610	£ 0.697	£ 1.316	£ 4.364
C1 Enabling works	£ 0.080	£ 0.059	£ 0.019	£ 0.002	£ 0.000	£ 0.079
C2 Airfield Pavements comprising Runways, RET's, RAT's, Taxiways, Aprons and Stands	£ 0.642	£ 0.216	£ 0.123	£ 0.156	£ 0.241	£ 0.736
C3 Airside facilities (APM, ATC, Hangars, Cargo, Surface Water)	£ 0.358	£ 0.071	£ 0.099	£ 0.050	£ 0.168	£ 0.388
C4 Terminal and Piers	£ 1.854	£ 0.091	£ 0.852	£ 0.452	£ 0.886	£ 2.282
C5 Surface Access including; Car Parks, Landside APM, Highway Works and Station Upgrade	£ 0.782	£ 0.264	£ 0.488	£ 0.024	£ 0.006	£ 0.782
C6 Utilities	£ 0.039	£ 0.023	£ 0.017	£ -	£ -	£ 0.039
C7 Operational commissioning	£ 0.013	£ 0.013	£ 0.008	£ 0.008	£ 0.010	£ 0.038
C8 Operational handover	£ 0.010	£ 0.005	£ 0.005	£ 0.005	£ 0.005	£ 0.020
D Project Specifics	£ 1.078	£ 0.770	£ 0.245	£ 0.031	£ 0.058	£ 1.104
D1.1 Land Purchase	£ 0.804	£ 0.629	£ 0.175	£ -	£ -	£ 0.804
D1.2 Compensation and Blight	£ 0.024	£ 0.024	£ -	£ -	£ -	£ 0.024
D1.3 Levies and LA agreements	£ 0.050	£ 0.008	£ 0.022	£ 0.010	£ 0.018	£ 0.058
D1.4 Airside equipment	£ 0.009	£ 0.009	£ -	£ -	£ -	£ 0.009
D1.5 Water course diversions	£ 0.052	£ 0.052	£ -	£ -	£ -	£ 0.052
D1.6 Obstacle clearance	£ 0.017	£ 0.017	£ -	£ -	£ -	£ 0.017
D1.7 Archaeology/ Ecology / Heritage	£ 0.006	£ 0.006	£ -	£ -	£ -	£ 0.006
D1.8 Construction Logistics	£ 0.116	£ 0.025	£ 0.048	£ 0.021	£ 0.039	£ 0.133
D1.9 Motorway diversion	£ -	£ -	£ -	£ -	£ -	£ -
D1.10 Landfill removal and remediation	£ -	£ -	£ -	£ -	£ -	£ -
D1.11 Water treatment works - reprovison	£ -	£ -	£ -	£ -	£ -	£ -
E General / other Project costs	£ 0.078	£ 0.024	£ 0.030	£ 0.012	£ 0.022	£ 0.088
E1.1 Insurances	£ 0.078	£ 0.024	£ 0.030	£ 0.012	£ 0.022	£ 0.088
F Risk	£ 1.284	£ 0.384	£ 0.466	£ 0.212	£ 0.400	£ 1.462
F1 Project risks	£ 1.284	£ 0.384	£ 0.466	£ 0.212	£ 0.400	£ 1.462
TOTAL COST PLAN VALUE (including Risk)	£ 6.874	£ 2.059	£ 2.624	£ 1.070	£ 2.020	£ 7.773

The phased cost is greater than the base cost plan as rate enhancements have been utilised to reflect the impacts of airside working, interfacing with existing, multiple workfronts and operational impact.

5.2 Estimating Basis

A. Capital Programme and Delivery Management

Percentage based. The calculated percentages against pre planning, post planning, construction phase management and support functions, and is based on similar projects in the United Kingdom

B. Design

Percentage based. The calculated percentages are based on similar projects estimated at this stage in the United Kingdom and is applied to the base construction and project specific works costs.

C. Base Construction

C1 Enabling works: Stripping and demolition costs are derived from current market rates calculated into sums based on approximate gross floor areas (GFA) for the buildings and areas listed in the back up for the cost plan. Demolition has been based on an allowance for the dismantling of the existing buildings, in line with similar demolition schemes currently in progress.

Topsoil strip within 2030 phase 1 has been enhanced in line with working within an airside environment, effects of which passing through security, dust and FOD prevention, reduction in outputs due to limits on work areas.

C2 Airfield Pavements: Runway, taxiways, taxilanes and stands have been priced using relevant benchmarked rates that have been derived from current similar UK Airport schemes. They are all in rates and include ground lighting, lane markings and sub surface utilities. Rates have been adjusted for the new midfield area to reflect the construction process in a greenfield site.

Rate enhancements have been applied to 2030 phase 1, 2035 phase 2 and 2040 phase 3 at varying levels based on:

- 5% End around taxiways (EAT's). Airside working and minor interfacing with existing operational aircraft pavements. Enhancement of 20% has been factored to reflect the proximity of existing operational pavement and consideration of establishing a landside working site.
- 20% Earthworks cut to fill, stabilisation and landscaping. Airside working environments interfacing with existing airfield facilities and features, reduced production outputs, access constraints, additional operational airport protection measures.

- 20% Taxiways, taxilanes, stands. Airside working environments interfacing with facilities, reduced production outputs, access constraints, additional operational airport protection measures.
- 40% Rapid exit taxiways (RET's), rapid access taxiways (RAT's), runway crossings and navigational instrumentation. Restricted working within operational runway areas involving limited hours night time possession of the runway, or to airfield instrumentation, additional operational airport protection measure, increased temporary works requirements.

C3 Airfield Infrastructure: Re-provision of airside facilities has been based on the demolished buildings GFA and has assumed at this stage only to re-provide at the same. Upgrading existing intake sub station BF has been estimated by UK Power Networks (UKPN). The estimates do have an allowance for associated builders work. Re-provision of distribution sub stations and Pumping stations has been priced with a nominal allowance at this stage.

Rates used for the hangar, cargo and other airside facilities are based on recent airport schemes and vary according to the building function. Airfield instrumentation has been priced using rates that have been derived from current similar UK airport schemes.

Substructure and tunnels (cut & cover) have been derived from current benchmarking of similar UK Airport schemes. Earth balancing (cut & fill) has been priced using current validated rates for earthworks (market tested).

An allowance has been made for the new Air Traffic Control (ATC) tower based on recent Turner & Townsend benchmarks of recent schemes assumed to be of a similar construction. This cost excludes National Air Traffic Services (NATS) facilities.

Rates for the APM have been derived from current Turner & Townsend benchmarking of similar UK schemes. Balancing ponds and underground attenuation has been priced using current earthworks rates, and cost information from recent schemes (market tested).

Rate enhancements have been applied to 2030 phase 1, 2035 phase 2 and 2040 phase 3 at varying levels based on:

- 20% Surface water drainage and perimeter security road. Airside working environments interfacing with existing airfield facilities and features, reduced production outputs, access constraints, additional operational airport protection measures.
- 20% Airside APM. Airside working environments interfacing with existing facilities, reduced production outputs, access constraints, additional operational airport protection measures.

C4 Terminal and Piers: All in benchmarked rates have been employed for the construction of the New Terminal and Piers, and have been derived from current Turner & Townsend data for

similar UK airport schemes. The rate reflects a reasonable standard of finish as opposed to low cost, in accordance with the Gatwick expectations for level of finishes. The rate excludes baggage as this has been allowed for separately. Rates have been adjusted where required to reflect a construction process in a greenfield site.

Energy Centre, Anaerobic Digester Plant and District Heating Pipelines are based on Turner & Townsend's data for similar UK airport schemes.

Rate enhancements have been applied to 2030 phase 1, 2035 phase 2, 2040 phase 3 at varying levels based on:

- 20% Terminal and Piers. Airside working environments interfacing with existing airfield facilities including public areas, reduced production outputs, access constraints.
- 30% Terminal and Piers. Airside working environments interfacing with existing airfield facilities including public areas, reduced production outputs, increased access constraints, additional operational airport protection measures, night working.

C5 Surface Access: The costs for upgrading existing intake sub stations AF and BF has been provided by UKPN.

Surface access costs have been based on benchmarking of similar UK schemes with works scope as advised by ARUP.

Car parks have been priced using current Turner & Townsend benchmarking.

Railway station optimisation has been included in the surface access costs as advised by Gatwick.

C6 Utilities: Utility diversions and temporary connections / disconnections are priced as allowances only.

The utility networks are outside the existing airport boundary but within the safeguarded future development boundary. The cost plan assumes that minimal utility networks exist. The light industrial areas assume disconnection of local networks only.

C7 Operational Commissioning: Provisional sum items. Operational commissioning has been identified as a requirement, however no specific detail is available from the airport or third parties at this stage and therefore provisional sums allowances have been.

C8 Operational Handover: Provisional sum item. Operational handover has been identified as a requirement, however no specific detail is available from the airport or third parties at this stage and therefore a provisional sum allowance has been made.

D. Project Specifics

D1.1 Land Purchase: have been included as identified within the Land Valuation Appendix produced by Deloitte.

D1.2 Compensations and Blight: have been included as identified within the Land Valuation Appendix produced by Deloitte.

D1.3 Local authority compliances: (Section 60, Building Regulations etc.) are currently allowed as percentages based on the building cost forecast. The percentages are based on benchmark rates for UK building schemes.

D1.4 Airfield Equipment: (Fire engines, snow clearing equipment) prices are based on recent airport infrastructure upgrade scheme elements.

D1.5 Watercourse Diversions: have been priced using current earthworks rates to the profiles provided by CH2M Hill.

D1.6 Obstacle Clearance: Woodland removal has been priced as a nominal allowance rate, and the re-provision of said woodland has been based on 2 times that removed.

D1.7 Archaeology, Ecology and Heritage: Allowance only items at this stage. RPS have produced desktop studies, these provide an overview of the potential areas of archaeological interest, ecological and heritage sites. It is noted that until detailed site investigation works are conducted the extent and programme are an area of potential risk. Therefore, time and cost delay implications are included within the independent quantitative cost risk model.

D1.8 Construction Logistics: Percentage based. The calculated percentage is based on similar projects estimated at this stage in the United Kingdom.

D1.9 Motorway Diversion: not required.

D1.10 Landfill Removal and Remediation: not required.

D1.11 Water Treatment Works - Reprovision: not required.

E. General, other Project costs

Gatwick insurances: on design and capital works have been as a percentage, in line with similar projects estimated at this stage in the United Kingdom.

F. Principle areas of cost

There are four principle areas of cost basis: Market Tested, Benchmarks, Sums, and Provisional Sums. The cost plan uses a high percentage of benchmarked rates thus offering costs accurate to within the expectations of this class of estimating.

Market Tested	A current rate that can be practically used and adjusted according to the application.
Benchmarks	An accurate pricing basis based on existing data from similar schemes and applications.
Sums	A cost set against an item where an accurate measure cannot be undertaken, where an approximate unit rate may be used.
Provisional Sums	A nominal allowance for an item where the scope is currently undefined.

5.3 Risk

The level of risk applied to the base cost forecast is in accordance with Gatwick's estimating process where the level of estimate is determined as a Class 4/5. The risk has been applied as a first pass basis of 25% on the total cost plan less railway station, levies and highway surface access, with the latter carrying the addition for risk in the allowance. The applied allowance is assumed to cover project delivery risks and cost plan uncertainty only.

An independent quantitative cost risk modelling exercise has been conducted as a second pass in order to capture the risks into a control document and to allow analysis of the data. This process provides the point ("P") number at which the level of risk applied to the project can be identified, and also provides a curve which identified the total risk allowance required at various P levels. The outputs from the exercise are covered under the separate quantitative cost risk report.

5.4 Assumptions

A – Programme and Delivery Management

Not applicable

B – Design

Not applicable

C – Base Cost

C1 - Enabling works

Material arising from the soft strip of agricultural land and greenfields will be re-used for landscaping.

Buildings demolished within the Gatwick boundary will be re-provided (unless otherwise advised by Gatwick Property team) on same size basis. Buildings demolished outside of the Gatwick boundary will not be re-provided. These are deemed to have been fully compensated.

Demolition and broken out materials will be re-used as hard-core with the exception of materials such as asphalt and recovered metals which will be removed to an approved off-site recycling facility, or disposed to a licenced facility.

There is currently no allowance for the removal of asbestos in the cost plan as it is assumed that if there is any removal required, that this will be done as a separate scheme in advance of the airport expansion.

Waste transfer/re-cycling facility on Larkins Road is retained as works associated with the maintenance hangars and cargo facilities do not affect the operation of the unit.

Electricity pylons and distribution cables adjacent to the motorway do not require relocation, the vertical and horizontal clearances have been checked by ARUP and confirmed clear of highway tolerances.

C2 - Airfield Pavements

Runways, taxiways, taxilanes and stands are assumed to include all service ducts, hydrants, drainage, ground power, stand lighting and markings within the rates. There are currently no allowances for alterations to existing sub service utilities other than the connection of new.

Cutting and filling of existing terrain will be required to rebalance the new airfield. Materials arising from excavations will be stored as spoil on site and re-used for earth balancing, making up levels and the earth bunding for airfield visual and acoustic screening. The current earthworks model indicates no import for general balancing fill, however there is a surplus of material resulting from the depths of existing arable topsoil which will be utilised in landscaping onsite.

There is currently no allowance for any works around the existing fuel network or fuel farm, whether on or off airfield, as this is assumed to be undertaken by the utility provider.

For existing runway reconfiguration, new airfield instrumentation will be required.

C3 – Airside Facilities

Facility areas for Snow Base, De-icing, Fire Station, Apron Control Centre and Airfield Operations, over and above re-provisions, have been assumed and are based on the same buildings at other UK airports. The existing hangar 6 will be re-provided at the same GFA as

demolished. Cargo expansion and additional aircraft maintenance facilities are as passive provision only for development by third party operators.

Cut and cover tunnel beneath the Contact and Remote Piers will be constructed to accommodate the security requirements of segregating arriving and departing passengers. The construction is assumed to be reinforced concrete structure with an adequate permanent drainage solution. Transit guideway system will comprise in-situ concrete track guideway, walkway platform, transit power and associated signalling.

Surface water drainage will be directed to new balancing ponds to the North West, and sub-surface attenuation to the East of the railway line.

Water showing signs of contamination will be sent to the Thames Water treatment plant facility via pond S, where once treated it will then be passed into the Gatwick stream. Clean water will be released directly into the River Mole.

South West visual and acoustic screening will comprise a 10m high reinforced earth retaining wall, facing the airfield, with a landscaped embankment on the outside face sloping back to grade over an average width of 50m.

West of the railway, and to the South East of the airfield, a 6m high reinforced concrete wavy wall on piled foundations will provide the visual and acoustic screening.

The aviation fuel farm is retained within the existing location and requires no on airfield enhancements to the pipelines.

C4 - Terminal and Piers

Works to develop the new Midfield area will be undertaken predominantly within a landside environment as a Greenfield site. Temporary airside/landside fencing being established for each expansion, there will be an element of live airfield working and an enhanced construction rate has been allowed for this and phasing of the works.

There is currently no allowance for decanting or relocating airline equipment and personnel to temporary locations in accordance with the phasing of the works.

Baggage handling systems will not extend out of the Terminal and baggage will be taken by tug and baggage trolleys to and from the Piers.

A new energy centre will be required, current indications are that this will be located landside close to the New Terminal or near to the existing South Terminal. The facility will comprise a structure of circa 2,000m² providing combined heat and power (CHP) to the New Terminal and Piers.

C5 – Surface Access

Surface access scheme has been provided by ARUPS with costs from Turner & Townsend's benchmarking database for similar recent UK schemes. This excludes additional Highways Agency committed or planned schemes to the M23 and M25.

Local highway diversions and re-provisions relative to the Balcombe Road and feeder roads within the footprint of the current schemes, have allowances in the cost plan accordingly. It is assumed that road underpasses will be required beneath the new A23 to access airport roads from the new long stay car parks.

C6 – Utilities

Main electrical intake sub stations AF and BF are to remain in their current location and be upgraded. Costs for the upgrade have been provided by UKPN. Off airport National Grid upgrades and primary distribution networks are not allowed for. It is assumed that this scope is funded and delivered by the respective energy provider and reflected in the unit charge rate.

Gas, potable water, foul water and telecommunication routes have been allowed for as provisional items due location and routing to the connection point is not defined at this stage.

C7 – Operational Commissioning

Not applicable

C8 – Operational Handover

Not applicable

D – Project Specifics

D1.1 – Land Purchase

Not applicable

D1.2 – Compensation and Blight

Not applicable

D1.3 – Levies and Local Authority Agreements

Not applicable

D1.4 – Airside Equipment

Not applicable

D1.5 – Watercourse Diversion

River Mole and Crawler's Brook watercourses will be diverted around the Southern and Western perimeter boundary, with tie-in to the existing River Mole channel to the North of the airfield. The diversion valley will include a lit cycle and footway to provide a linear park feature, general landscape planting of the valley is assumed along with a separate allowance habitat re-provision.

River diversion requirements are in accordance with the CH2M Hill sketches contained within the Operational Efficiency – Master Plan Appendix produced by ARUP.

The new airport footprint will sit on an existing floodplain. The current option allows for the funding of an existing Environment Agency scheme known as 'Ifield Lake project', along with balancing the earthworks to allow for a platform above the floodplain level and enhanced river diversion valleys. Balancing pond capacities have been advised by CH2M Hill for the NW Zone and Gatwick for the attenuation to the East of the railway line.

D1.6 – Obstacle Clearance

Woodland re-provision is allowed at 2 times that removed for all woodland.

D1.7 – Archaeology/Ecology and Heritage

Not applicable

D1.8 – Construction Logistics

Not applicable

D1.9 – Motorway Diversion

Not required, existing motorway alignment retained

D1.10 – Landfill Removal and Remediation

Not required

D1.11 – Water Treatment Works – Reprovision

Not required, Thames Water Utilities' existing facility is retained

E – Insurance

Not applicable

F – Risk

Not applicable

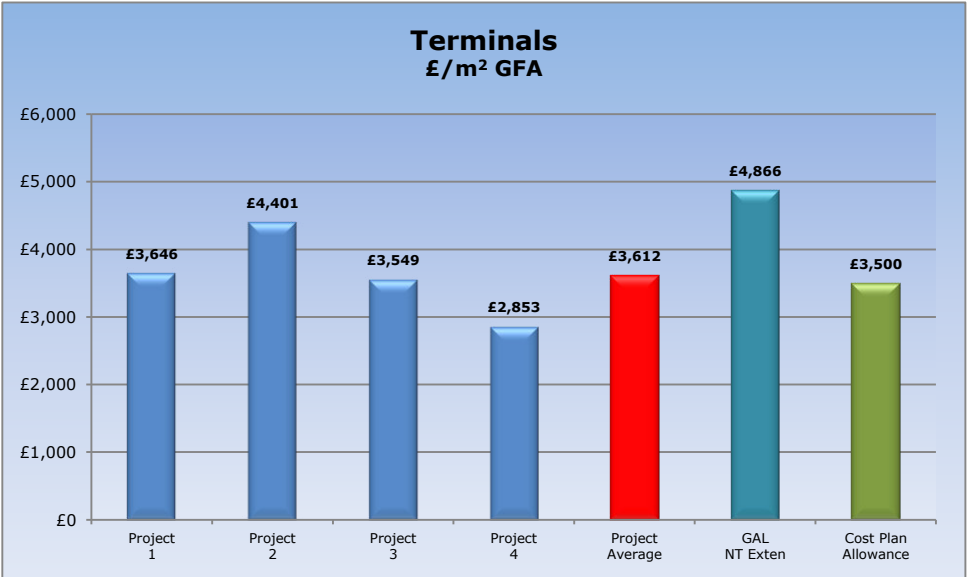
6 Benchmarking

Benchmarking has been undertaken against all the principle areas of the estimate, with outturn costs for the project source data from completed schemes within the last 10 years providing the benchmark basis. The key functions that have been benchmarked are:

- Terminal building
- Piers
- Taxiways and Taxilanes
- Stands
- Multi Storey Car Parks (MSCP)
- Surface Car Parks
- Air Traffic Control Tower
- Hangar
- APM Cut and Cover Tunnel
- APM Tunnel Guideway and Fitout
- APM Cars
- APM Systems Upgrade
- APM Station Fitout
- Fixed Links
- Nodes
- Passenger Boarding Bridges (PBB)

Benchmarking Basis has been conducted against similar UK airport projects, and aligned to the base date of 4Q13. The following benchmarks provide bar chart summary from project source data, a guide average calculated from the project source data, Gatwick reference benchmark (where available) and cost plan allowance. Under each heading an explanation is provided on how the benchmark was determined.

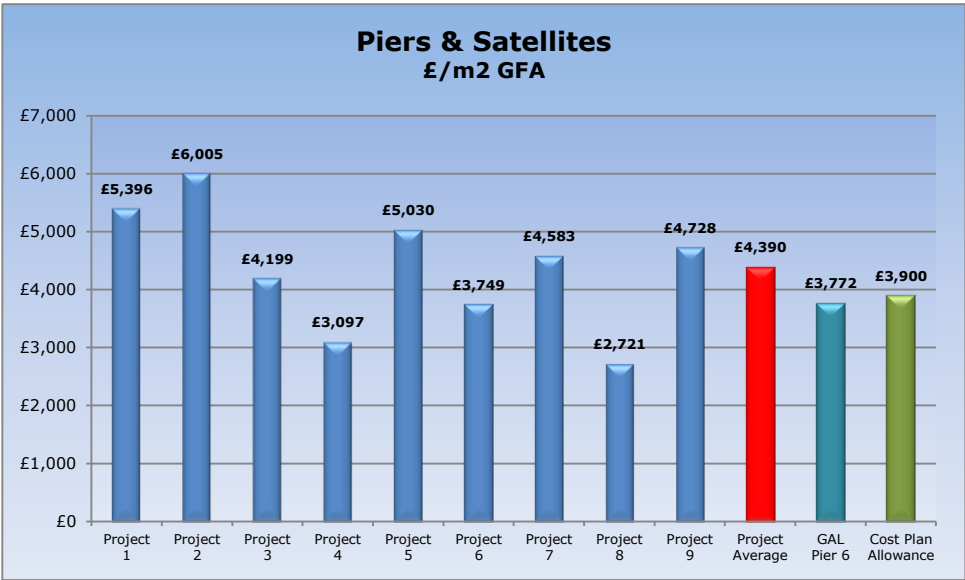
Terminal building facility will be initially constructed in a landside and greenfield environment with expansion being with an interface to an operational facility.



The benchmark graph indicates the range of project source data along with an average guide benchmark of £3,612 m², shown in addition is a Gatwick project and the rate utilised within the cost plan. Project 2 is for a premium specification Terminal, after discounting this project the average guide benchmark reduces to £3,349m². The level of service requirement is yet to be fully determined and aligned to airline operator’s requirement, so in order to determine an appropriate provision for the cost plan the benchmark was set at the mid point of £3,500m².

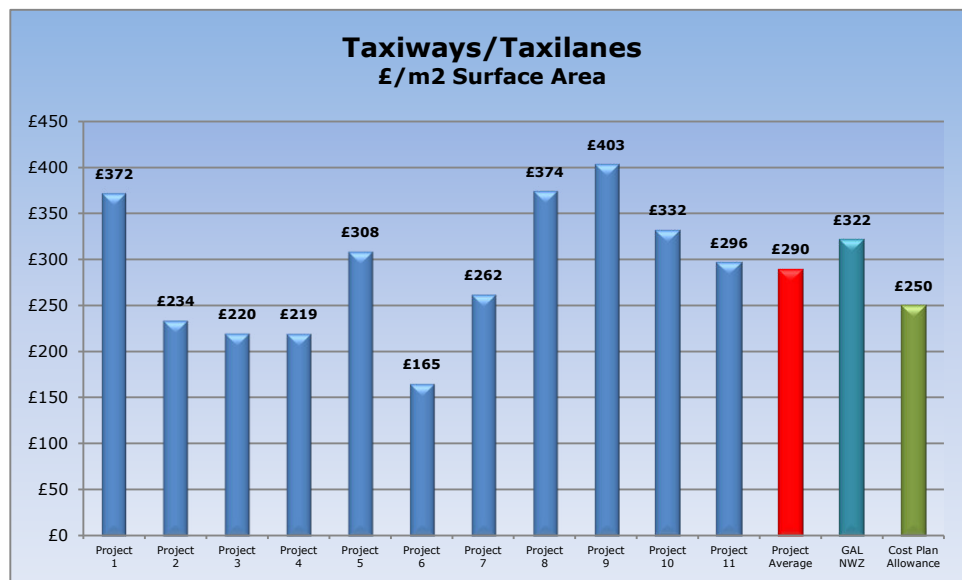
The Gatwick North Terminal Extension is for extending an existing operational Terminal and is included to indicate the differential between green field sites and operational facilities.

Piers facilities will initially be constructed in a landside and greenfield environment created by installing a restricted zone (airside/landside fence), followed by phased expansion interfacing with an operation facility and airfield.



The Piers and Satellite benchmark graph indicates a project average above the cost plan allowance, this is due to three projects (1, 2 and 5) that have a specification in excess of the Gatwick product. In order to determine a allowance aligned to the Gatwick model discounting these projects produced a project average of £3,846m², the benchmark on this basis was set to £3,900m²

Taxiways and Taxilanes initial airfield construction will be as an isolated landside site with a minor operational interface for tying into the existing airfield. Phased expansion will be achievable as the worksite will be in large isolatable pavement blocks with a minor interface with the operational airfield.

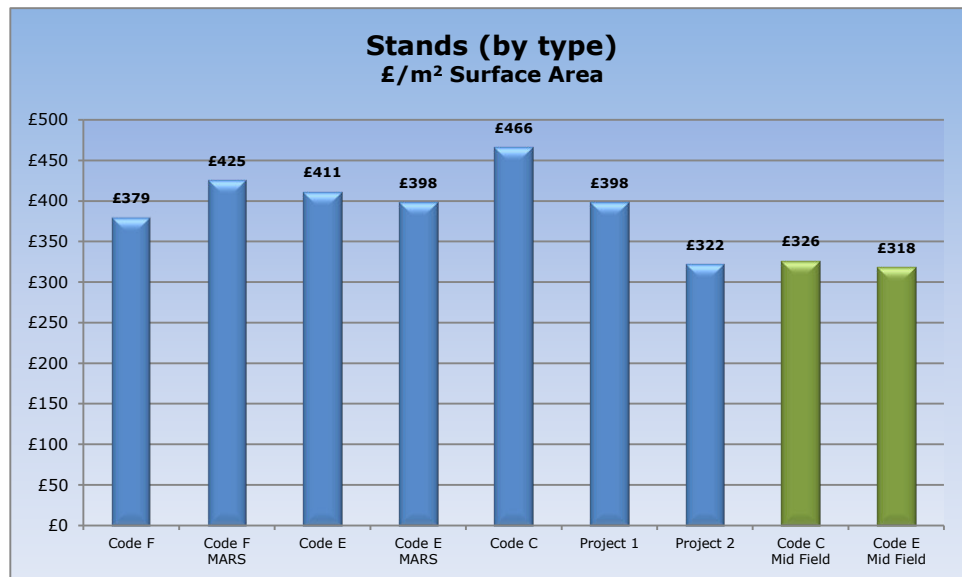


The Taxiways/Taxilanes benchmark graph indicates a project average above the cost plan allowance, this is due to four projects (1, 8, 9 and 10) that have a high level of enabling works, contractor preliminaries and external services. These factors are due to operational location constraints, for working in a live airfield and disruptive inefficient programme works for phased construction. The external services are for taxilanes which include an element of provision for aircraft stands and building services or replacement of large diameter storm water drainage effected by the project.

The Gatwick benchmark project is similarly an apron which entailed the provision of a taxilane and six fully services remote stands. This benchmark project was undertaken in a greenfield site and included the provision of a storm water attenuation system, large insitu reinforced concrete manholes, pumping chamber and pond.

In order to determine a benchmark the four projects identified above were discounted, this produced a project average of £243m², the cost plan allowance on this basis was set to £250m²

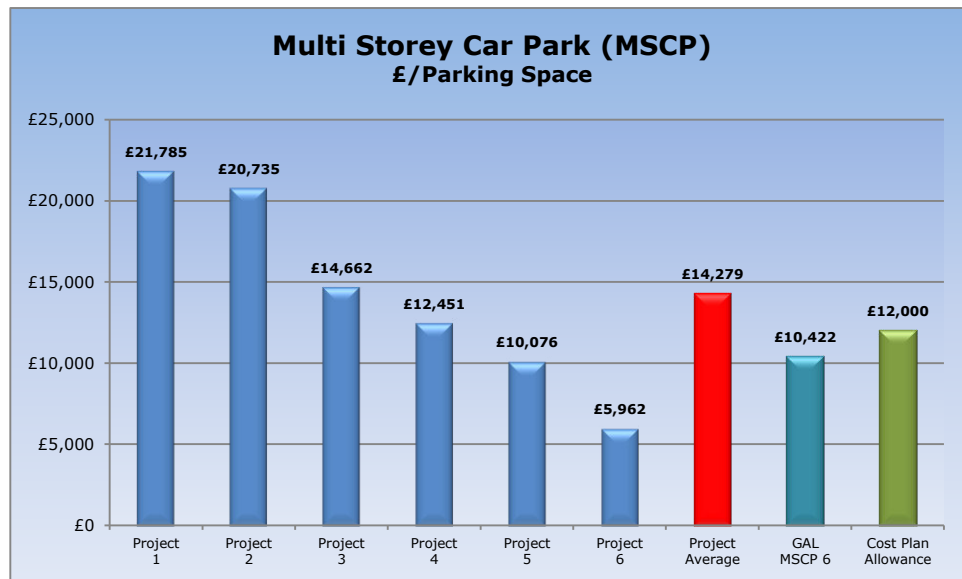
Stands initial airfield construction will be as an isolated landside site with a minor operation interface for tying into the existing airfield. Phased expansion will be achievable as the worksite will be in large isolatable pavement blocks with a minor interface with the operation airfield.



The Stands benchmark graph considers generic stands for Code C, E, E MARS (Multi Aircraft Receiving Stand), F and F MARS and project source data for two operational airfield projects.

The scheme's development will be within a greenfield site which will provide cost savings due the works not having the normally expected levels of operation airfield constraints and logistic issues. A validation exercise of bottom up estimating was undertaken, this indicated that there will be saving on the airfield benchmarking and the conclusion was to set the allowance at £326m² for Code C and £318m² for Code E stands.

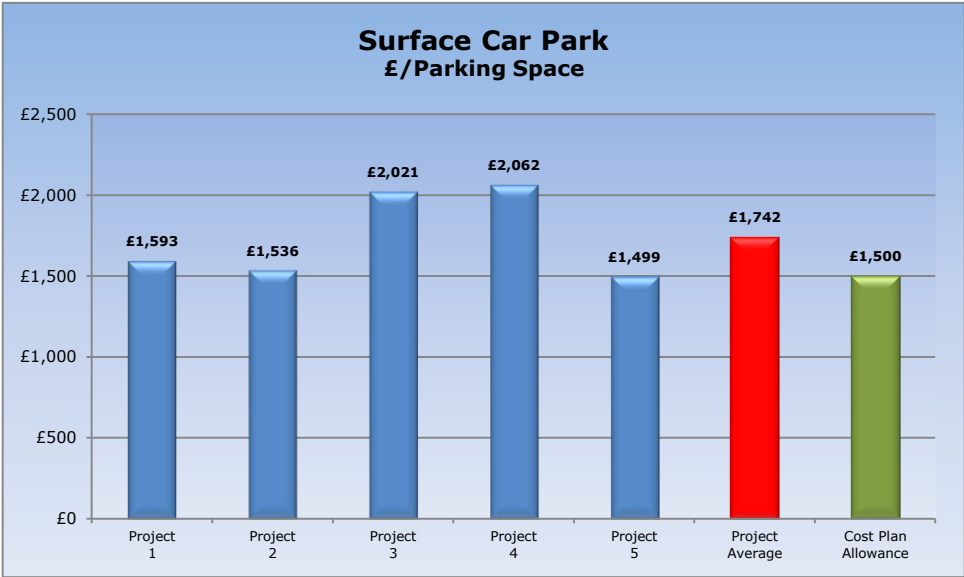
Multi Storey Car Parks (MSCP) facilities will, regardless of phase, be constructed in a landside environment. The worksite will initially be within a larger construction site isolated from the operational airfield and public. Later phases will required a safe working site to be established by utilising contractor's perimeter hoardings and will entail a minor interface to tie-in with live public area.



The MSCP benchmark graph indicates a project average above the cost plan allowance, this is due to two projects (1, and 2) these have a product specification in excess of the Gatwick model, as demonstrated by the Gatwick benchmark value. In order to determine a benchmark aligned to the Gatwick model discounting these projects produced a project average of £10,788/space. Additionally project 6 has a low specification and is discounted as the projected average is being skewed downwards, the calculated guide benchmark produced is then £12,396/space.

The Gatwick benchmark project is below the level of the guide benchmark at £10,422/space, the benchmark was determined by calculating the mid point of the reduced benchmark and the Gatwick project and rounded up to whole thousands, the allowance on this basis was set to £12,000/space.

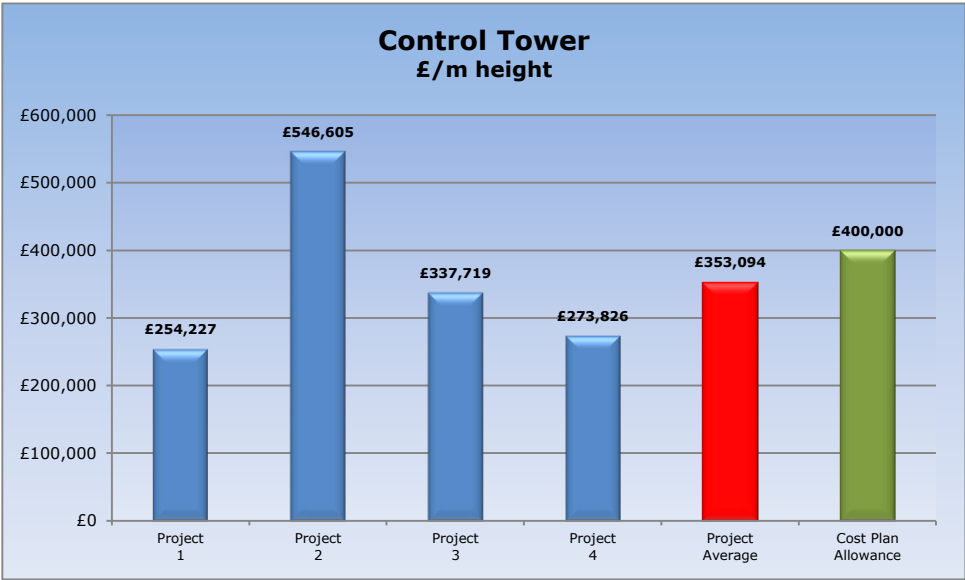
Surface Car Parks facilities will, regardless of phase, be constructed in a landside environment to the East of the Railway line. There are two type of usage for surface car parks, staff with circa 12,000 spaces and Long Stay Car Parking (LSCP) circa 59,000 spaces, both with a similar construction and lighting provision.



The Surface Car Park benchmark graph indicates a project average above the cost plan allowance, the project source data is for schemes with a limited number of spaces of less than 1,300 and some minor differences in the levels of access, CCTV and fencing provisions.

The scale of the car parking works will be delivered in phases, each being of a considerable size and as such would provide some cost efficiencies. In order to determine the benchmark the lower value was taken and rounded to nearest hundred, the allowance on this basis was set to £1,500/space.

Air Traffic Control (ATC) Tower facility will be constructed in an isolated landside environment within the Midfield. The facility is based on providing office facilities, for NATS.

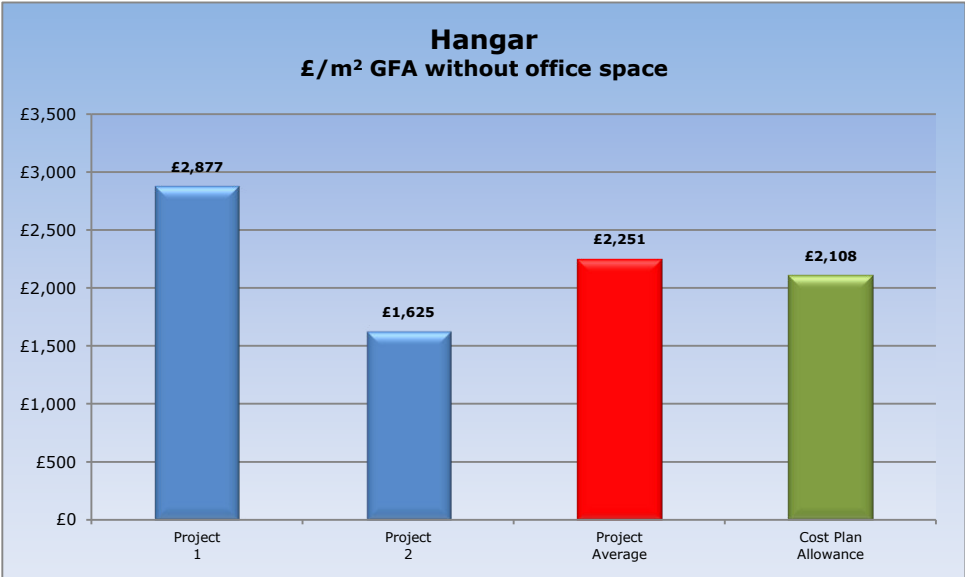


A key driver to the cost of the ATC Tower will be the ground conditions which will dictate the design of the foundations required to provide vertical stability, along with the construction and height of the tower to provide rigidity of the structure. These factors will have a significant effect on the benchmarking cost of the ATC Tower, and is indicated within the graph by the large variances exhibited by the project source data.

The location of the proposed ATC Tower will be in an area which, from the Operational Efficiency – Master Plan produced by ARUP, will require piling due to the indicative ground conditions.

The basis of the ATC Tower benchmark was to take the project average and round up to the whole hundred thousand in order to provide a robust allowance in the region between projects 2 and 3.

Hangar facility, re-provision will be within the landside environment adjacent to the existing maintenance taxiway within the North Field.



The existing hangar 6 facility is occupied by British Airways and is of a fairly old construction and specification, a replacement facility will be to latest building specifications and regulations but sized on a like for like basis.

The hangar benchmark graph indicates a project average above the cost plan allowance, the basis of the hangar benchmark was to reflect a product specification similar to project 1 but without the tenant fitout, the allowance on this basis was set to £2,108m²

APM Cut and Cover Tunnel for providing PAX movement airside between the New Terminal and Remote Pier. The tunnel is a constant width of 10m and 6m internally, construction is based on diaphragm outer wall construction and insitu reinforced concrete cover (roof) and base slabs.

The allowance is based on the outturn costs for a recent similar UK cut and tunnel scheme, this is £24,500m of tunnel.

APM Tunnel Fitout for the cut and cover box construction is identified separately as this allows for a discreet allowance within the cost plan.

The allowance is based on the outturn costs for a recent similar UK cut and tunnel scheme, this is £34,000m of tunnel.

APM Cars there are two APM routes one landside providing connectivity from the North through the South to the New Terminal, the other airside to allow PAX movement to/from the New Terminal and Remote Pier. Both systems are pinched loops, this allows an increased number of

4 car trains to function instead of a 2 train shuttle system. The total number of cars required is 60, 32 airside and 28 landside.

The allowance is based on the outturn costs for the recent APM upgrade at Gatwick, this is £1,600,000 per car for 6 cars. It is considered that due to the number of cars required a reduced rate can be achieved, the allowance on this basis was set to £1,500,000 per car.

APM Systems Upgrade of the existing route between the North and South Terminals, due to extending the route through to the New Terminal.

The allowance is based on the outturn costs for the recent APM upgrade at Gatwick, this is £11,000m of route.

APM Station Fitout will be required for four new station, two on each system. The fitout includes the station systems, lighting, ventilation, fire mains, etc. but does not cater for any structural costs as these are within the benchmark rate for the tunnel structure.

The allowance is based on the outturn costs for recent UK APM schemes, this is £4,872m² of GFA.

Fixed Links the base strategy for passenger movement between the Piers and aircraft is utilising a fixed link crossing over the head of stand road to a node and passenger boarding bridges. Vertical circulation of the passengers is currently undertaken within the Piers. Each contact stand requires a single fixed link, regardless of whether a Code C, E or E MARS stand.

The allowance is based on the costs for a recent UK scheme that entails a 2m wide link with a steel structure and glazed to one side with a length of 19m between building face and node, this is £350,000 each.

Nodes are required to allow passenger movement to/from aircraft on contact stands. The basis of the provision is matched to the fixed links requirement.

The allowance is based on the costs for a recent UK scheme that entails a plan of 10m x 8m steel framed and clad building with ground and one floor, internal steel staircase and a lift, this is £695,812 each.

Passenger Boarding Bridges (PBB) are required to allow passenger movement to/from aircraft on contact stands. The basis of the provision is 1no per Code C, 1no per Code E and 2no per Code E MARS stands.

The allowance excludes Fixed Electric Ground Power (FEGP), as this is provided separately as part of the stand equipment, and is based on the costs for a recent UK scheme that entailed a multiple number of PBB's, this is £500,000 each.

7 Cost Plan Review

As the cost plan has been developed it has undergone a series of reviews in line with ISO9001 and Gatwick's internal procedures. The key reviews are listed below:

- Turner & Townsend internal review, 25th October 2013 – to validate scope assumptions, benchmarks and cost breakdown structure.
- Gatwick Central Estimating Group (CEG) initial review, 1st November 2013 – to review scope, cost basis and cost breakdown structure. Outputs from the review were incorporated into the cost plan in advance of the final CEG review of the 29th November 2013.

The final cost plan as incorporated within this document was then peer reviewed by Bechtel during the week commencing 21st April 2014.

The cost plan will be further refined and reviewed as the design develops to concept stage.

Appendix A – Base Cost Plan with Expansion Phases

Gatwick Airport R2 - Cost Forecast Summary

Date: 16 Apr '14

			PHASED CONSTRUCTION				
			2025 Runway Opening	2030 Phase 1	2035 Phase 2	2040 Phase 3	Phased Total
TOTAL ESTIMATE VALUE AT 4Q13 (excluding Risk)			£ 1,674,443,484	£ 2,158,258,080	£ 857,847,323	£ 1,619,939,033	£ 6,310,487,921
A GAL Management			£ 65,342,925	£ 128,761,295	£ 55,755,321	£ 105,271,823	£ 355,131,365
A1	GAL Capital Programme Management	£ 308,290,926	£ 65,342,925	£ 128,761,295	£ 55,755,321	£ 105,271,823	£ 355,131,365
B Design			£ 73,510,791	£ 144,856,457	£ 62,724,736	£ 118,430,800	£ 399,522,785
B1	Design consultants to DfSS Tollgate TG3,	£ 346,827,292	£ 73,510,791	£ 144,856,457	£ 62,724,736	£ 118,430,800	£ 399,522,785
C Base Construction Costs			£ 741,590,019	£ 1,609,516,193	£ 696,941,514	£ 1,315,897,783	£ 4,363,945,510
C1	Enabling works	£ 80,084,255	£ 58,870,700	£ 18,689,455	£ 1,570,000	£ 30,000	£ 79,160,155
C2	Airfield Pavements comprising Runways, RET's, RAT's, Taxiways, Aprons and Stands	£ 642,124,803	£ 216,161,979	£ 122,834,288	£ 155,637,987	£ 240,925,185	£ 735,559,439
C3	Airside support facilities (APM, ATC, Hangars, Cargo, Surface Water)	£ 357,790,672	£ 70,907,340	£ 98,743,770	£ 50,169,109	£ 168,172,040	£ 387,992,258
C4	Terminal and Piers	£ 1,853,953,040	£ 91,250,000	£ 852,296,424	£ 452,429,418	£ 885,770,558	£ 2,281,746,400
C5	Surface Access including; Car Parks, Landside APM, Highway Works and Station Upgrade	£ 782,287,257	£ 264,200,000	£ 487,952,257	£ 24,135,000	£ 6,000,000	£ 782,287,257
C6	Utilities	£ 39,200,000	£ 22,700,000	£ 16,500,000	£ -	£ -	£ 39,200,000
C7	Operational commissioning	£ 13,000,000	£ 12,500,000	£ 7,500,000	£ 8,000,000	£ 10,000,000	£ 38,000,000
C8	Operational handover	£ 10,000,000	£ 5,000,000	£ 5,000,000	£ 5,000,000	£ 5,000,000	£ 20,000,000
D Project Specifics			£ 770,219,937	£ 245,131,571	£ 30,572,175	£ 57,954,382	£ 1,103,878,066
D1.1	Land Purchase	£ 804,204,496	£ 629,204,496	£ 175,000,000	£ -	£ -	£ 804,204,496
D1.2	Compensation and Blight	£ 24,201,680	£ 24,201,680	£ -	£ -	£ -	£ 24,201,680
D1.3	Levies and LA agreements	£ 50,338,727	£ 8,313,616	£ 21,846,085	£ 9,663,930	£ 18,477,449	£ 58,301,080
D1.4	Airside equipment	£ 8,800,000	£ 8,800,000	£ -	£ -	£ -	£ 8,800,000
D1.5	Water course diversions	£ 52,300,298	£ 52,300,298	£ -	£ -	£ -	£ 52,300,298
D1.6	Obstacle clearance	£ 17,396,250	£ 17,396,250	£ -	£ -	£ -	£ 17,396,250
D1.7	Archaeology/ Ecology / Heritage	£ 5,500,000	£ 5,500,000	£ -	£ -	£ -	£ 5,500,000
D1.8	Construction Logistics	£ 115,609,097	£ 24,503,597	£ 48,285,486	£ 20,908,245	£ 39,476,933	£ 133,174,262
D1.9	Motorway diversion	£ -	£ -	£ -	£ -	£ -	£ -
D1.10	Landfill removal and remediation	£ -	£ -	£ -	£ -	£ -	£ -
D1.11	Water treatment works - reprovison	£ -	£ -	£ -	£ -	£ -	£ -
E General / other Project costs			£ 23,779,811	£ 29,992,563	£ 11,853,576	£ 22,384,244	£ 88,010,195
E1.1	Insurances	£ 78,054,268	£ 23,779,811	£ 29,992,563	£ 11,853,576	£ 22,384,244	£ 88,010,195
F Risk			£ 384,282,467	£ 465,602,999	£ 212,045,848	£ 400,365,396	£ 1,462,296,710
F1	Project risks	£ 1,284,156,084	£ 384,282,467	£ 465,602,999	£ 212,045,848	£ 400,365,396	£ 1,462,296,710
TOTAL ESTIMATE VALUE AT 4Q13 (including Risk)			£ 2,058,725,951	£ 2,623,861,079	£ 1,069,893,172	£ 2,020,304,429	£ 7,772,784,631

Turner & Townsend		Date: 16 Apr '14 Revision 2				2025 Runway Opening				2030 Phase 1				2035 Phase 2				2040 Phase 3								
Ref	FACILITY	Base Cost Forecast, to SoF Delivery, to 2050				Comment	Construction at 2025				Construction at 2030				Construction 2035				Construction 2040							
		Quantity	UoM	Rate (£)	Total (£)		Quantity (at 2025)	Rate Phasing %	Rate (Base + Phase %)	Total at 2025	Quantity (at 2030)	Rate Phasing %	Rate (Base + Phase %)	Total 2025 - 2030	Total at 2030	Quantity (at 2035)	Rate Phasing %	Rate (Base + Phase %)	Total 2030 - 2035	Total at 2035	Quantity (at 2040)	Rate Phasing %	Rate (Base + Phase %)	Total 2035 - 2040	Total at 2040	
A	Client Management				£308,290,926				£65,342,925				£128,761,295	£194,104,221				£55,755,321	£249,859,542				£105,271,823	£355,131,365		
A1	GAL Management (Staffing and commercial)				£308,290,926				£65,342,925				£128,761,295	£194,104,221				£55,755,321	£249,859,542				£105,271,823	£355,131,365		
1.1	GAL Programme Management and associated Consultants				£192,681,829				£40,839,328				£80,475,810	£121,315,138				£34,847,076	£156,162,214				£65,794,889	£221,957,103		
1.2	GAL Management - Support Functions and associated consultants				£115,609,097		0%		£24,503,597		0%		£48,285,486	£72,789,083		0%		£20,908,245	£93,697,328		0%		£39,476,933	£133,174,262		
B	Design				£346,827,292				£73,510,791				£144,856,457	£218,367,248				£62,724,736	£281,091,985				£118,430,800	£399,522,785		
B1	Design Consultants				£346,827,292				£73,510,791				£144,856,457	£218,367,248				£62,724,736	£281,091,985				£118,430,800	£399,522,785		
1.1	Design from RIBA work Stage 1 to Completion				£346,827,292		0%		£73,510,791		0%		£144,856,457	£218,367,248		0%		£62,724,736	£281,091,985		0%		£118,430,800	£399,522,785		
C	Base Construction Costs				£3,778,440,027				£741,590,019				£1,609,516,193	£2,486,863,469				£696,941,514	£3,048,047,726				£1,315,897,783	£4,363,945,510		
C1	Enabling works				£80,084,255				£58,870,708				£18,689,455	£77,560,155				£1,570,000	£79,130,155				£30,000	£79,160,155		
1.1	Site preparation comprising topsoil strip and breaking out existing landside roads and parking areas				£43,011,505				£35,294,950				£8,042,455	£43,337,405				£0	£43,337,405				£0	£43,337,405		
	Site strip of soft ground and remove to spoil for reuse	6,518,000	m2	£3	£16,295,000	140226 - updated measure	5,866,200	0%	£3	£14,665,500	651,800	20%	£3	£1,955,400	£16,620,900	20%	£3	£0	£16,620,900	20%	£3	£0	£16,620,900	20%	£3	£0
	Break up and disposal Staff car parks X, V, Z overflow, R G W J	40,611	m2	£20	£791,905		40,611	0%	£20	£791,905		0%	£20	£0	£791,905	0%	£20	£0	£791,905	0%	£20	£0	£791,905	0%	£20	£0
	Break up and disposal Public car parks; Long stay zones A-G & U-Z, Holiday, Courtlands & Summer special, Coach park, Valet south, including access roads	577,000	m2	£20	£11,251,500		577,000	0%	£20	£11,251,500		0%	£20	£0	£11,251,500	0%	£20	£0	£11,251,500	0%	£20	£0	£11,251,500	0%	£20	£0
	Break up and disposal of paved areas in City Place Area	155,170	m2	£20	£3,025,815			0%	£20	£0	155,170	0%	£20	£3,025,815	£3,025,815	0%	£20	£0	£3,025,815	0%	£20	£0	£3,025,815	0%	£20	£0
	Break up and disposal of paved areas in Lowfield Heath Place Area	102,102	m2	£20	£1,990,989		102,102	0%	£20	£1,990,989		0%	£20	£0	£1,990,989	0%	£20	£0	£1,990,989	0%	£20	£0	£1,990,989	0%	£20	£0
	Break up and disposal of paved areas in Gatwick Manor Place Area	8,580	m2	£20	£167,310		8,580	0%	£20	£167,310		0%	£20	£0	£167,310	0%	£20	£0	£167,310	0%	£20	£0	£167,310	0%	£20	£0
	Break up and disposal of paved areas in BCP Airparks Area at west end - approx. 350mx125m	43,750	m2	£20	£853,125		43,750	0%	£20	£853,125		0%	£20	£0	£853,125	0%	£20	£0	£853,125	0%	£20	£0	£853,125	0%	£20	£0
	Break up and disposal of paved areas in Gatwick Road North Area	26,100	m2	£20	£508,950		26,100	0%	£20	£508,950		0%	£20	£0	£508,950	0%	£20	£0	£508,950	0%	£20	£0	£508,950	0%	£20	£0
	Break-out and dispose of existing A23 including all associated infrastructure, 3.6km	108,000	m2	£20	£2,106,000		54,000	0%	£20	£1,053,000	54,000	0%	£20	£1,053,000	£2,106,000	20%	£23	£0	£2,106,000	0%	£20	£0	£2,106,000	0%	£20	£0
	Break-out and dispose of existing Charlwood Road, 950m	5,700	m2	£20	£111,150	140226 - updated measure	5,700	0%	£20	£111,150		0%	£20	£0	£111,150	0%	£20	£0	£111,150	0%	£20	£0	£111,150	0%	£20	£0
	Strip Balcombe Road from Radford Road to M23 spur road - Assumption - Allowance: 1800m	10,800	m2	£20	£210,600	140226 - updated measure		0%	£20	£0	10,800	0%	£20	£210,600	£210,600	0%	£20	£0	£210,600	0%	£20	£0	£210,600	0%	£20	£0
	Strip Steers Lane - 600m	3,720	m2	£20	£72,540			0%	£20	£0	3,720	0%	£20	£72,540	£72,540	0%	£20	£0	£72,540	0%	£20	£0	£72,540	0%	£20	£0
	Strip Antlands Lane - 550m	4,400	m2	£20	£88,000			0%	£20	£0	4,400	0%	£20	£88,000	£88,000	0%	£20	£0	£88,000	0%	£20	£0	£88,000	0%	£20	£0
	Strip Peeks Brook Lane - 1200m	7,200	m2	£20	£140,400			0%	£20	£0	7,200	0%	£20	£140,400	£140,400	0%	£20	£0	£140,400	0%	£20	£0	£140,400	0%	£20	£0
	Strip Church Lane - 250m	1,500	m2	£20	£29,250			0%	£20	£0	1,500	0%	£20	£29,250	£29,250	0%	£20	£0	£29,250	0%	£20	£0	£29,250	0%	£20	£0
	Strip Fernhill Road - 700m	4,200	m2	£20	£81,900			0%	£20	£0	4,200	0%	£20	£81,900	£81,900	0%	£20	£0	£81,900	0%	£20	£0	£81,900	0%	£20	£0
	Strip Donkey Lane - 200m	206	m2	£20	£4,017			0%	£20	£0	206	0%	£20	£4,017	£4,017	0%	£20	£0	£4,017	0%	£20	£0	£4,017	0%	£20	£0
	Strip Bonnets Lane - 1200m	12,000	m2	£20	£234,000		12,000	0%	£20	£234,000		0%	£20	£0	£234,000	0%	£20	£0	£234,000	0%	£20	£0	£234,000	0%	£20	£0
	Strip out existing utilities beneath redundant road surfaces	15,736	m	£50	£786,797		6,674	0%	£50	£333,707	9,062	0%	£50	£453,090	£786,797	0%	£50	£0	£786,797	0%	£50	£0	£786,797	0%	£50	£0
	Strip out existing Aprons including sub-surface services		m2	£35	£0	140117 - deleted, no longer in scope				£0																
	Allowance for disposal of contaminated material off site comprising asphalt surfaces at 33% of the road thickness	100,796	m3	£42	£4,264,457	140226 - updated measure	78,799	0%	£42	£3,333,814	21,997	0%	£42	£930,642	£4,264,457	20%	£51	£0	£4,264,457	0%		£42	£0	£4,264,457		
1.2	Demolitions - within GAL boundary				£11,621,750				£7,374,750				£2,937,000	£10,311,750				£30,000	£10,341,750				£30,000	£10,371,750		
	20335 Stokers House		sum	£148,500	£0	131115 - deleted, no longer in scope																				
	20333 Timberham House		sum	£76,500	£0	131115 - deleted, no longer in scope																				
	22018 NT LSCP Admin Building	1	sum	£27,000	£27,000			0%	£27,000	£0	1	0%	£27,000	£27,000	£27,000	0%		£27,000	£0	£27,000	0%		£27,000	£0	£27,000	
	20603 NT LSCP Block Park Admin Building	1	sum	£13,500	£13,500			0%	£13,500	£0	1	0%	£13,500	£13,500	£13,500	0%		£13,500	£0	£13,500	0%		£13,500	£0	£13,500	
	22085 Summer Special Admin Building	1	sum	£18,000	£18,000			0%	£18,000	£0	1	0%	£18,000	£18,000	£18,000	0%		£18,000	£0	£18,000	0%		£18,000	£0	£18,000	
	22169 Tower Gate Security Control Post		sum	£9,000	£0	140117 - deleted, no longer in scope																				
	20730 Central Area Recycling Enclosure		sum	£112,500	£0	140117 - deleted, no longer in scope																				
	20312 MT Base		sum	£135,000	£0	140117 - deleted, no longer in scope																				
	20777 Snowbase		sum	£45,000	£0	140117 - deleted, no longer in scope																				
	41209 Viking House	1	sum	£247,500	£247,500		1	0%	£247,500	£247,500		0%	£247,500	£0	£247,500	0%		£247,500	£0	£247,500	0%		£247,500	£0	£247,500	
	20020 Building 583A	1	sum	£18,000	£18,000		1	0%	£18,000	£18,000		0%	£18,000	£0	£18,000	0%		£18,000	£0	£18,000	0%		£18,000	£0	£18,000	
	20021 Building 583B	1	sum	£27,000	£27,000		1	0%	£27,000	£27,000		0%	£27,000	£0	£27,000	0%		£27,000	£0	£27,000	0%		£27,000	£0	£27,000	
	20023 Building 583C	1	sum	£13,500	£13,500		1	0%	£13,500	£13,500		0%	£13,500	£0	£13,500	0%		£13,500	£0	£13,500	0%		£13,500	£0	£13,500	
	20025 Building 583D	1	sum	£22,500	£22,500		1	0%	£22,500	£22,500		0%	£22,500	£0	£22,500	0%		£22,500	£0	£22,500	0%		£22,500	£0	£22,500	
	20534 Bomb Defusing Building	1	sum	£2,250	£2,250		1	0%	£2,250	£2,250		0%	£2,250	£0	£2,250	0%		£2,250	£0	£2,250	0%		£2,250	£0	£2,250	
	41208 Tinsley House	1	sum	£166,500	£166,500		1	0%	£166,500	£166,500		0%	£166,500	£0	£166,500	0%		£166,500	£0	£166,500	0%		£166,500	£0	£166,500	
	20063 New Engineering Stores	1	sum	£90,000	£90,000		1	0%	£90,000	£90,000		0%	£90,000	£0	£90,000	0%		£90,000	£0	£90,000	0%		£90,000	£0	£90,000	
	20238 & 20062 Marco Workshop & Admin Building	1	sum	£22,500	£22,500		1	0%	£22,500	£22,500		0%	£22,500	£0	£22,500	0%		£22,500	£0	£22,500	0%		£22,500	£0	£22,500	
	20720 Jubilee House		sum	£225,000	£0	140226 - deleted , no longer in scope																				
	20705 Coached Departures Building	1	sum	£234,000	£234,000			0%	£234,000	£0	1	0%	£234,000	£234,000	£234,000	0%		£234,000	£0	£234,000	0%		£234,000	£0	£234,000	
	20213 Services Control Centre		sum	£49,500	£0	131115 - deleted, no longer in scope																				
	20222 ST Sanitation Block	1	sum	£4,500	£4,500			0%	£4,500	£0	1	0%	£4,500	£4,500	£4,500	0%		£4,500	£0	£4,500	0%		£4,500	£0	£4,500	
	Sub-station AF - Alterations to existing		sum	£100,000	£0	131115 - moved to section C6																				
	Sub-station BF - Alterations to existing		sum	£100,000	£0	131115 - moved to section C6																				
	20334 Sub-station U1		sum																							



Date: 16 Apr '14 Revision 2					2025 Runway Opening				2030 Phase 1				2035 Phase 2					2040 Phase 3							
Ref	FACILITY	Base Cost Forecast, to SoF Delivery, to 2050				Construction at 2025				Construction at 2030				Construction 2035					Construction 2040						
		Quantity	UoM	Rate (£)	Total (£)	Comment	Quantity (at 2025)	Rate Phasing %	Rate (Base + Phase %)	Total at 2025	Quantity (at 2030)	Rate Phasing %	Rate (Base + Phase %)	Total 2025 - 2030	Total at 2030	Quantity (at 2035)	Rate Phasing %	Rate (Base + Phase %)	Total 2030 - 2035	Total at 2035	Quantity (at 2040)	Rate Phasing %	Rate (Base + Phase %)	Total 2035 - 2040	Total at 2040
	22148-Pumping-Station-34		sum	£30,000	£0	131115 - deleted, no longer in scope																			
	22205-Pumping-Station-38		sum	£30,000	£0	131115 - deleted, no longer in scope																			
	Allowance for power diversions during demolition, alterations and relocation of sub station	1	PS	£10,000,000	£10,000,000		0.63	0%	£10,000,000	£6,250,000	0.25	0%	£10,000,000	£2,500,000	£8,750,000	0%	£10,000,000	£0	£8,750,000	0%	£10,000,000	£0	£8,750,000	£0	
	Demolition of river gates	3	PS	£25,000	£75,000	140226 - new item as River Mole diverted	3	0%	£25,000	£75,000		0%	£25,000	£0	£75,000	0%	£25,000	£0	£75,000	0%	£25,000	£0	£75,000	£0	
	Demolition of steel structure over inverted syphon	2	PS	£10,000	£20,000	140226 - new item as River Mole diverted	2	0%	£10,000	£20,000		0%	£10,000	£0	£20,000	0%	£10,000	£0	£20,000	0%	£10,000	£0	£20,000	£0	
1.3	Demolitions - outside of GAL boundary				£25,451,000				£16,201,000				£7,710,000	£23,911,000				£1,540,000	£25,451,000				£0	£25,451,000	
	Domestic properties on Radford Road	44	nr	£20,000	£880,000			0%	£20,000	£0	44	0%	£20,000	£880,000	£880,000	0%	£20,000	£0	£880,000	0%	£20,000	£0	£880,000	£0	
	Domestic properties on Balcombe Road	43	nr	£20,000	£860,000			0%	£20,000	£0	43	0%	£20,000	£860,000	£860,000	0%	£20,000	£0	£860,000	0%	£20,000	£0	£860,000	£0	
	Industrial properties on Antlands Road	1	sum	£150,000	£150,000			0%	£150,000	£0	1	0%	£150,000	£150,000	£150,000	0%	£150,000	£0	£150,000	0%	£150,000	£0	£150,000	£0	
	Domestic properties on Peeks Brook Lane	28	nr	£20,000	£560,000			0%	£20,000	£0	28	0%	£20,000	£560,000	£560,000	0%	£20,000	£0	£560,000	0%	£20,000	£0	£560,000	£0	
	Industrial properties on Peeks Brook Lane	1	sum	£300,000	£300,000			0%	£300,000	£0	1	0%	£300,000	£300,000	£300,000	0%	£300,000	£0	£300,000	0%	£300,000	£0	£300,000	£0	
	Industrial properties on Balcombe Road	1	sum	£50,000	£50,000			0%	£50,000	£0	1	0%	£50,000	£50,000	£50,000	0%	£50,000	£0	£50,000	0%	£50,000	£0	£50,000	£0	
	Demolish existing APM structure from South Terminal to approximately 250m North	2,000	m2	£500	£1,000,000			0%	£500	£0		0%	£500	£0	£0	2,000	0%	£500	£1,000,000	£1,000,000	0%	£500	£0	£1,000,000	£0
	Demolish existing South Terminal APM transit station	3,000	m2	£150	£450,000			0%	£150	£0		0%	£150	£0	£0	3,000	0%	£150	£450,000	£450,000	0%	£150	£0	£450,000	£0
	Demolish existing South Terminal APM transit station walkway	600	m2	£150	£90,000			0%	£150	£0		0%	£150	£0	£0	600	0%	£150	£90,000	£90,000	0%	£150	£0	£90,000	£0
	Premier-Inn-Hotel-Adjacent-Car-Park-Y (4-levels)		sum	£450,000	£0	131115 - deleted, no longer in scope																			
	Demolition of waste-handling/processing facility					not required																			
	Demolition of petrol-filling station, including making safe fuel tanks, removal and site remediation					not required																			
	Office Buildings at City Place (Assume 4 levels)	1	sum	£3,600,000	£3,600,000			0%	£3,600,000	£0	1	0%	£3,600,000	£3,600,000	£3,600,000	0%	£3,600,000	£0	£3,600,000	0%	£3,600,000	£0	£3,600,000	£0	
	Industrial Buildings at City Place	1	sum	£540,000	£540,000			0%	£540,000	£0	1	0%	£540,000	£540,000	£540,000	0%	£540,000	£0	£540,000	0%	£540,000	£0	£540,000	£0	
	MSCP at City Place	1	sum	£270,000	£270,000			0%	£270,000	£0	1	0%	£270,000	£270,000	£270,000	0%	£270,000	£0	£270,000	0%	£270,000	£0	£270,000	£0	
	Industrial Buildings at Lowfield Heath	1	sum	£2,700,000	£2,700,000		1	0%	£2,700,000	£2,700,000		0%	£2,700,000	£0	£2,700,000	0%	£2,700,000	£0	£2,700,000	0%	£2,700,000	£0	£2,700,000	£0	
	Travel Lodge Hotel at Lowfield Heath	1	sum	£450,000	£450,000		1	0%	£450,000	£450,000		0%	£450,000	£0	£450,000	0%	£450,000	£0	£450,000	0%	£450,000	£0	£450,000	£0	
	BCP Airparks Buildings	1	sum	£36,000	£36,000		1	0%	£36,000	£36,000		0%	£36,000	£0	£36,000	0%	£36,000	£0	£36,000	0%	£36,000	£0	£36,000	£0	
	BCP Airparks MSCP	1	sum	£1,800,000	£1,800,000		1	0%	£1,800,000	£1,800,000		0%	£1,800,000	£0	£1,800,000	0%	£1,800,000	£0	£1,800,000	0%	£1,800,000	£0	£1,800,000	£0	
	Gatwick Manor Buildings and Premier Inn	1	sum	£360,000	£360,000		1	0%	£360,000	£360,000		0%	£360,000	£0	£360,000	0%	£360,000	£0	£360,000	0%	£360,000	£0	£360,000	£0	
	TUI building adjacent to Astral Towers	1	sum	£675,000	£675,000		1	0%	£675,000	£675,000		0%	£675,000	£0	£675,000	0%	£675,000	£0	£675,000	0%	£675,000	£0	£675,000	£0	
	Industrial Buildings Gatwick Road North	1	sum	£4,500,000	£4,500,000		1	0%	£4,500,000	£4,500,000		0%	£4,500,000	£0	£4,500,000	0%	£4,500,000	£0	£4,500,000	0%	£4,500,000	£0	£4,500,000	£0	
	Residential / Farm Properties	1	sum	£1,000,000	£1,000,000		1	0%	£1,000,000	£1,000,000		0%	£1,000,000	£0	£1,000,000	0%	£1,000,000	£0	£1,000,000	0%	£1,000,000	£0	£1,000,000	£0	
	Premier Inn in Balcombe Road	1	sum	£180,000	£180,000		1	0%	£180,000	£180,000		0%	£180,000	£0	£180,000	0%	£180,000	£0	£180,000	0%	£180,000	£0	£180,000	£0	
	Allowance for disconnections or temporary diversions in relation to demolished buildings	1	PS	£5,000,000	£5,000,000		1	0%	£5,000,000	£4,500,000	0.1	0%	£5,000,000	£500,000	£5,000,000	0%	£5,000,000	£0	£5,000,000	0%	£5,000,000	£0	£5,000,000	£0	
1.4	Working to distribution grids					not required, ARUP confirmed pylons and HV lines have sufficient clearance horizontally and vertically																			
	Relocation of Electricity pylon adjacent to the motorway																								
C2	AIRFIELD				£642,124,803				£216,161,979				£122,834,288	£338,996,267				£155,637,987	£494,634,254				£240,925,185	£735,559,439	
2.1	Runway				£48,746,934				£46,907,208				£0	£46,907,208				£0	£46,907,208				4		

Turner & Townsend		Date: 16 Apr '14 Revision 2				2025 Runway Opening				2030 Phase 1					2035 Phase 2					2040 Phase 3					
Ref	FACILITY	Quantity	UoM	Rate (£)	Total (£)	Comment	Quantity (at 2025)	Rate Phasing %	Rate (Base + Phase %)	Total at 2025	Quantity (at 2030)	Rate Phasing %	Rate (Base + Phase %)	Total 2025 - 2030	Total at 2030	Quantity (at 2035)	Rate Phasing %	Rate (Base + Phase %)	Total 2030 - 2035	Total at 2035	Quantity (at 2040)	Rate Phasing %	Rate (Base + Phase %)	Total 2035 - 2040	Total at 2040
	20720 Jubilee House		sum	£0,000,000	£0	140226 - deleted, no longer in scope																			
	20706 Coached Departures Building	1	sum	£9,360,000	£9,360,000			0%	£9,360,000	£0	1	0%	£9,360,000	£9,360,000	£9,360,000		0%	£9,360,000	£0	£9,360,000		0%	£9,360,000	£0	£9,360,000
	20213 Services Control Centre		sum	£4,980,000	£0	131115 - deleted, no longer in scope																			
	20222 ST Sanitation Block	1	PS	£1,000,000	£1,000,000			0%	£1,000,000	£0	1	0%	£1,000,000	£1,000,000	£1,000,000		0%	£1,000,000	£0	£1,000,000		0%	£1,000,000	£0	£1,000,000
	20334 Sub-station-U1		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	20387 Sub-station-U2		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	20424 Sub-station-AH		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	20202 Sub-station-A		sum	£150,000	£0	140117 - no longer in scope																			
	20515 Sub-station J	1	sum	£150,000	£150,000			0%	£150,000	£0	1	0%	£150,000	£150,000	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000
	20266 Sub-station L	1	sum	£1,150,000	£1,150,000	140305 - allowance increased as major AGI/NAVIADS substation		0%	£1,150,000	£0	1	0%	£1,150,000	£1,150,000	£1,150,000		0%	£1,150,000	£0	£1,150,000		0%	£1,150,000	£0	£1,150,000
	20331 Sub-station H	1	sum	£150,000	£150,000		1	0%	£150,000	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000
	20591 Sub-station AS	1	sum	£150,000	£150,000		1	0%	£150,000	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000
	20230 Sub-station G	1	sum	£1,150,000	£1,150,000	140305 - allowance increased as major AGI/NAVIADS substation	1	0%	£1,150,000	£1,150,000		0%	£1,150,000	£0	£1,150,000		0%	£1,150,000	£0	£1,150,000		0%	£1,150,000	£0	£1,150,000
	20228 Sub-station E	1	sum	£150,000	£150,000		1	0%	£150,000	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000
	22020 Sub-station BTF (BE)	1	sum	£150,000	£150,000		1	0%	£150,000	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000		0%	£150,000	£0	£150,000
	20227 Sub-station-B		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	20506 Sub-station-Link-T		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	20504 Sub-station-S		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	22188 Sub-station-Z		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	22187 Sub-station-Y		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	22186 Sub-station-X		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	20610 Sub-station-AH		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	20205 Sub-station-T		sum	£150,000	£0	131115 - deleted, no longer in scope																			
	20503 Sub-station-AE		sum	£150,000	£0	131115 - deleted, no longer in scope																			
3.3	Airside APM				£189,671,900					£0				£10,290,000	£10,290,000				£44,247,000	£54,537,000				£163,469,280	£218,006,280
3.3.1	Sub-surface APM New Terminal and Remote Pier				£189,671,900	201113 - APM Updated				£0				£10,290,000	£10,290,000				£44,247,000	£54,537,000				£163,469,280	£218,006,280
	Cut and cover tunnel, excluding fit out	1,855	m	£24,500	£45,447,500			0%	£24,500	£0	350	20%	£29,400	£10,290,000	£10,290,000	1,505	20%	£29,400	£44,247,000	£54,537,000		20%	£29,400	£0	£54,537,000
	Guideway system and fit out	1,855	m	£34,000	£63,020,000			0%	£34,000	£0		20%	£40,800	£0	£0		20%	£40,800	£0	£0	1,855	20%	£40,800	£75,684,000	£75,684,000
	Station fit out	2	nr	£6,577,200	£13,154,400			0%	£6,577,200	£0		20%	£7,892,640	£0	£0		20%	£7,892,640	£0	£0	2	20%	£7,892,640	£15,785,280	£15,785,280
	Sub-surface maintenance facility remote pier	1	PS	£20,000,000	£20,000,000			0%	£20,000,000	£0		20%	£24,000,000	£0	£0		20%	£24,000,000	£0	£0	1	20%	£24,000,000	£24,000,000	£24,000,000
	Rolling stock; 4 cars each per set	32	Cars	£1,500,000	£48,000,000			0%	£1,500,000	£0		0%	£1,500,000	£0	£0		0%	£1,500,000	£0	£0	32	0%	£1,500,000	£48,000,000	£48,000,000
3.3.2	Elevated TTS North Field				£0	201113 - APM Updated				£0					£0					£0				£0	£0
	New elevated APM guideway connecting new North Field Terminal to South Terminal and to re-join existing route to North Terminal		m	£27,786	£0	140117 - deleted, no longer in scope																			
	Guideway system and fit out		m	£31,500	£0	140117 - deleted, no longer in scope																			
	Station fit out		nr	£6,577,200	£0	140117 - deleted, no longer in scope																			
	Rolling stock; total 2nr transits of 4 cars each		Cars	£1,500,000	£0	140117 - deleted, no longer in scope																			
3.4	Roads				£13,905,000					£8,370,000				£4,253,786	£12,623,786				£1,848,214	£14,472,000				£0	£14,472,000
	Airside Roads - Hard Surface - allowance only as undefined on plans	5,000	m	£900	£4,500,000		2,000	0%	£900	£1,800,000	946	0%	£900	£851,786	£2,651,786	2,054	0%	£900	£1,848,214	£4,500,000		0%	£900	£0	£4,500,000
	Airside Roads - Perimeter Security Road	10,450	m	£900	£9,405,000	140226 - updated measure	7,300	0%	£900	£6,570,000	3,150	20%	£1,080	£3,402,000	£9,972,000		20%	£1,080		£9,972,000		20%	£1,080	£0	£9,972,000
3.5	Noise control				£16,842,287					£16,842,287					£0				£0	£16,842,287				£0	£16,842,287
	Concrete Noise Wall	308	m	£6,000	£1,848,000	140226 - updated measure	308	0%	£6,000	£1,848,000		0%	£6,000	£0	£1,848,000		0%	£6,000	£0	£1,848,000		0%	£6,000	£0	£1,848,000
	Earthbund	2,849	m	£5,263	£14,994,287	140226 - updated measure & rate	2,849	0%	£5,263	£14,994,287		0%	£5,263	£0	£14,994,287		0%	£5,263	£0	£14,994,287		0%	£5,263	£0	£14,994,287
3.6	Security				£5,365,830					£2,735,750				£2,630,080	£5,365,830				£0	£5,365,830				£0	£5,365,830
	Remove existing perimeter RZ fencing	5,190	m	£25	£129,750		5,190	0%	£25	£129,750	-	0%	£25	£0	£129,750		0%	£25	£0	£129,750		0%	£25	£0	£129,750
	New perimeter RZ fencing	10,164	m	£220	£2,236,080	140226 - updated measure	7,300	0%	£220	£1,606,000	2,864	0%	£220	£630,080	£2,236,080		0%	£220	£0	£2,236,080		0%	£220	£0	£2,236,080
	External Security gate / control point	3	nr	£1,000,000	£3,000,000		1	0%	£1,000,000	£1,000,000	2	0%	£1,000,000	£2,000,000	£3,000,000		0%	£1,000,000	£0	£3,000,000		0%	£1,000,000	£0	£3,000,000
3.7	Surface water				£30,876,655					£22,309,303				£3,245,904	£25,555,207				£2,788,894	£28,344,101				£3,832,760	£32,176,861
	Drainage	2,191,281	m2	£4	£8,765,124	140226 - SoF 14 updated Qty	674,443	0%	£4	£2,697,772	363,730	20%	£5	£1,745,904	£4,443,676	476,853	20%	£5	£2,288,894	£6,732,570	694,325	20%	£5	£3,332,760	£10,065,330
	Replacement of pumping stations	9	nr	£500,000	£4,500,000	140117 - quantity amended	4	0%	£500,000	£2,000,000	3	0%	£500,000	£1,500,000	£3,500,000		0%	£500,000	£500,000	£4,000,000		0%	£500,000	£500,000	£4,500,000
	NW Zone balancing ponds for clean and contaminated; 564,500m3 capacity	1	sum	£10,000,000	£10,000,000	140411 - updated sizing details	1	0%	£10,000,000	£10,000,000		0%	£10,000,000	£0	£10,000,000		0%	£10,000,000	£0	£10,000,000		0%	£10,000,000	£0	£10,000,000
	Gravity main connection connecting to network for Pond D and TWSTP	800	m	£120	£96,000		800	0%	£120	£96,000		0%	£120	£0	£96,000		0%	£120	£0	£96,000		0%	£120	£0	£96,000
	Balancing pond for non-contaminated; 190,000m3 capacity		sum	£3,847,531	£0	140411 - deleted, as within NZ Ponds item																			
	Underground attenuation at east side, 144,000m3 capacity	1	sum	£6,515,531	£6,515,531		1	0%	£6,515,531	£6,515,531		0%	£6,515,531	£0	£6,515,531		0%	£6,515,531	£0	£6,515,531		0%	£6,515,531	£0	£6,515,531
	Water quality monitoring station	1	PS	£1,000,000	£1,000,000		1	0%	£1,000,000	£1,000,000		0%	£1,000,000	£0	£1,000,000		0%	£1,000,000	£0	£1,000,000		0%	£1,000,000	£0	£1,000,000
3.8	Aviation fuel																								
	Upgrade A10 Import line					not required, existing has capacity																			
	Relocation of fuel, including extending/diverting import ASP and airfield hydrant main					not required, farm retained																			
	Provision of additional fuel tanks					not required																			
C4	TERMINALS AND PIERS				£1,853,953,040					£91,250,000				£852,296,424	£943,546,424				£452,429,418	£1,395,975,842				£885,770,558	£2,281,746,400
4.1	Terminals				£799,347,500					£66,250,000															

Turner & Townsend		Date: 16 Apr '14 Revision 2				2025 Runway Opening				2030 Phase 1					2035 Phase 2					2040 Phase 3						
Ref	FACILITY	Quantity	UoM	Rate (£)	Total (£)	Comment	Quantity (at 2025)	Rate Phasing %	Rate (Base + Phase %)	Total at 2025	Quantity (at 2030)	Rate Phasing %	Rate (Base + Phase %)	Total 2025 - 2030	Total at 2030	Quantity (at 2035)	Rate Phasing %	Rate (Base + Phase %)	Total 2030 - 2035	Total at 2035	Quantity (at 2040)	Rate Phasing %	Rate (Base + Phase %)	Total 2035 - 2040	Total at 2040	
	Execution																									
	Miscellaneous																									
	Destinated coded vehicle system (DCV)																									
	End-sorter and Make-up area																									
4.3.3	South Terminal baggage capacity increase		PS	£25,000,000	£0	131115 - Runway Opening only	1	0%	£25,000,000	£25,000,000		0%	£25,000,000	£0	£25,000,000		0%	£25,000,000	£0	£25,000,000		0%	£25,000,000	£0	£25,000,000	
4.4	Energy Centre				£80,000,000					£0				£76,000,000	£76,000,000				£4,000,000	£80,000,000				£0	£80,000,000	
	New Energy Centre, 37MW	1	PS	£50,000,000	£50,000,000			0%	£50,000,000	£0	1	0%	£50,000,000	£50,000,000	£50,000,000		0%	£50,000,000	£0	£50,000,000		0%	£50,000,000	£0	£50,000,000	
	Anaerobic Digestion Plant	1	PS	£20,000,000	£20,000,000			0%	£20,000,000	£0	1	0%	£20,000,000	£20,000,000	£20,000,000		0%	£20,000,000	£0	£20,000,000		0%	£20,000,000	£0	£20,000,000	
	District Heating Pipework from Energy Centre to New Midfield Terminal and Satellite, including service tunnel below railway line	1	PS	£10,000,000	£10,000,000			0%	£10,000,000	£0	1	0%	£10,000,000	£6,000,000	£6,000,000	0.4	0%	£10,000,000	£4,000,000	£10,000,000		0%	£10,000,000	£0	£10,000,000	
C5	SURFACE ACCESS INCLUDING: CAR PARKS, LANDSIDE TTS, HIGHWAY WORKS AND STATION UPGRADE				£782,287,257					£264,200,000				£487,952,257	£887,909,514				£24,135,000	£776,287,257				£6,000,000	£782,287,257	
5.1	Landside APM - Continuous system from NT to MFT				£166,207,257					£0				£151,207,257	£286,964,514				£9,000,000	£160,207,257				£6,000,000	£166,207,257	
5.1.1	North Terminal to South Terminal				£15,450,000					£0				£15,450,000	£15,450,000				£0	£15,450,000				£0	£15,450,000	
	Extend existing NT Transit station to accommodate new train length	270	m2	£4,000	£1,080,000	140131 - updated ARUP APM details		0%	£4,000	£0	270	0%	£4,000	£1,080,000	£1,080,000		0%	£4,000	£0	£1,080,000		0%	£4,000	£0	£1,080,000	
	Extend existing ST Transit station to accommodate new train length		m2	£4,000	£0	140214 - item deleted as not required for continuous system																				
	Upgrade existing retained station systems	1	nr	£1,600,000	£1,600,000	140214 - new item		0%	£1,600,000	£0	1	0%	£1,600,000	£1,600,000	£1,600,000		0%	£1,600,000	£0	£1,600,000		0%	£1,600,000	£0	£1,600,000	
	Upgrade existing retained guidance system	1,070	m	£11,000	£11,770,000	140214 - item rate and quantity updated		0%	£11,000	£0	1,070	0%	£11,000	£11,770,000	£11,770,000		0%	£11,000	£0	£11,770,000		0%	£11,000	£0	£11,770,000	
	Breakout existing structure from realigned decks to ST station		m2	£250	£0	140411 - deleted, included within demolition																				
	New sub-structure supports	5	nr	£100,000	£500,000	140214 - new item		0%	£100,000	£0	5	0%	£100,000	£500,000	£500,000		0%	£100,000	£0	£500,000		0%	£100,000	£0	£500,000	
	Realign existing bridge deck units to new continuous APM alignment	1	sum	£500,000	£500,000	140214 - new item		0%	£500,000	£0	1	0%	£500,000	£500,000	£500,000		0%	£500,000	£0	£500,000		0%	£500,000	£0	£500,000	
	Rolling stock; 4 cars each per set		nr	£4,500,000	£0	140214 - item deleted as covered in ST to MFT rolling stock																				
5.1.1	South Terminal to Mid-field Terminal				£150,757,257	131120 - APM Updated				£0				£135,757,257	£271,514,514				£9,000,000	£144,757,257				£6,000,000	£150,757,257	
	New elevated APM guideway connecting new Terminal to South Terminal	500	m	£27,786	£13,892,857	140131 - updated ARUP APM details		0%	£27,786	£0	500	0%	£27,786	£13,892,857	£13,892,857		0%	£27,786	£0	£13,892,857		0%	£27,786	£0	£13,892,857	
	New at grade APM guideway connecting existing system North of ST to new Terminal	1,400	m	£6,400	£8,960,000	140214 - updated quantity		0%	£6,400	£0	1,400	0%	£6,400	£8,960,000	£8,960,000		0%	£6,400	£0	£8,960,000		0%	£6,400	£0	£8,960,000	
	Guideway system and fit out	1,900	m	£31,500	£59,850,000	140214 - updated quantity		0%	£31,500	£0	1,900	0%	£31,500	£59,850,000	£59,850,000		0%	£31,500	£0	£59,850,000		0%	£31,500	£0	£59,850,000	
	VCC ST Railway Station to APM ST Station: Lifts	6	nr	£250,000	£1,500,000	140214 - updated quantity		0%	£250,000	£0	6	0%	£250,000	£1,500,000	£1,500,000		0%	£250,000	£0	£1,500,000		0%	£250,000	£0	£1,500,000	
	VCC ST Railway Station to APM ST Station: Escalators	6	nr	£100,000	£600,000	140214 - updated quantity		0%	£100,000	£0	6	0%	£100,000	£600,000	£600,000		0%	£100,000	£0	£600,000		0%	£100,000	£0	£600,000	
	New APM Station, 75m x 18m = 1,350m2 each	2	nr	£5,400,000	£10,800,000	140131 - updated ARUP APM details		0%	£5,400,000	£0	2	0%	£5,400,000	£10,800,000	£10,800,000		0%	£5,400,000	£0	£10,800,000		0%	£5,400,000	£0	£10,800,000	
	Station fit out	2	nr	£6,577,200	£13,154,400	140124 - Rate & quantity updated		0%	£6,577,200	£0	2	0%	£6,577,200	£13,154,400	£13,154,400		0%	£6,577,200	£0	£13,154,400		0%	£6,577,200	£0	£13,154,400	
	Rolling stock; 4 cars each per set	28	nr	£1,500,000	£42,000,000	140214 - updated quantity		0%	£1,500,000	£0	18	0%	£1,500,000	£27,000,000	£27,000,000		6	0%	£1,500,000	£9,000,000	£36,000,000	4	0%	£1,500,000	£6,000,000	£42,000,000
5.2	Car parks				£151,935,000					£96,975,000				£39,825,000	£136,800,000				£15,135,000	£151,935,000				£0	£151,935,000	
	Car Park - Surface Parking	59,350	space	£1,500	£89,025,000	140131 - SoF quantity updated	53,350	0%	£1,500	£80,025,000	1,724	0%	£1,500	£2,586,000	£82,611,000		4,276	0%	£1,500	£6,414,000	£89,025,000		0%	£1,500	£0	£89,025,000
	Car Park - Surface Parking - EO for Decking	5,520	space	£500	£2,760,000	140226 - SoF 14 updated Qty		0%	£500	£0		0%	£500	£0	£0		5,520	0%	£500	£2,760,000	£2,760,000		0%	£500	£0	£2,760,000
	Car Park - subterranean					not required																				
	Multi Storey Car Park	3,500	space	£12,000	£42,000,000	140131 - SoF quantity updated		0%	£12,000	£0	3,053	0%	£12,000	£36,636,000	£36,636,000		447	0%	£12,000	£5,364,000	£42,000,000		0%	£12,000	£0	£42,000,000
5.3	Staff car parking - replacement of X, V, Z OVERFLOW, R, G, W, & J	12,100	space	£1,500	£18,150,000	140131 - SoF quantity updated	11,300	0%	£1,500	£16,950,000	402	0%	£1,500	£603,000	£17,553,000		398	0%	£1,500	£597,000	£18,150,000		0%	£1,500	£0	£18,150,000
	Highways and Surface Access (Highways Agency/DfT)				£424,125,000					£150,125,000				£274,000,000	£424,125,000				£0	£424,125,000				£0	£424,125,000	
5.3.1	Motorway Junction and Slip Roads																									
	Grade-separated motorway slip road; M23		m	£3,000	£0	131118 - deleted, included in surface access																				
	Allowance for grade-separated junction and bridge over M23 spur road to re-join spur road from airport road for M23		PS	£10,000,000	£0	131118 - deleted, included in surface access																				
	Standard motorway slip road		m	£1,800	£0	131118 - deleted, included in surface access																				
5.3.2	Other Highways																									
	Dual carriageway—2 lanes with hard strips and central reserve (27.3m wide)-A23		m	£3,000	£0	131118 - deleted, included in surface access																				
	Dual carriageway—2 lanes with hard strips and wide central reserve (29.3m wide)		m	£3,222	£0	131118 - deleted, included in surface access																				
	Single carriageway—1 lane each direction with hard strips (9.3m wide)		m	£1,800	£0	131118 - deleted, included in surface access																				
	Bridge carrying R1 carriageway over rail corridor (2 of—distance is total)		m	£121,500	£0	131118 - deleted, included in surface access																				
	Bridge carrying R2 carriageway over rail corridor (4 of—distance is total)		m	£130,500	£0	131118 - deleted, included in surface access																				
	Large signalised grade-separated junction		nr	£5,000,000	£0	131118 - deleted, included in surface access																				
	Standard signalised grade-separated junction		nr	£3,500,000	£0	131118 - deleted, included in surface access																				
	Roundabout (less than 100m IGD)		nr	£2,000,000	£0	131118 - deleted, included in surface access																				
	Reconfigure existing public access airport roads					not required																				
	Tunnel for public access roads					not required, access to new terminal is via bridge over railway line included within ARUP Surface Access scheme																				
	Surface access works as per ARUPS Report	1	sum	£353,000,000	£353,000,000	140328 - revised scheme	0.22	0%	£353,000,000	£79,000,000	0.78	0%	£353,000,000	£274,000,000	£353,000,000		0%	£353,000,000	£0	£353,000,000		0%	£353,000,000	£0	£353,000,000	
	Railway Station upgrade	1	sum	50,000,000	50,000,000		1.00	0%	50,000,000	50,000,000		0%	50,000,000	0	50,000,000		0%	50,000,000	0	50,000,000		0%	50,000,000	0	50,000,000	
	Local Highway accommodation works/Junction reconfigurations	1	PS	£10,000,000	£10,000,000		1	0%	£10,000,000	£10,000,000		0%	£10,000,000	£0	£10,000,000		0%	£10,000,000	£0	£10,000,000		0%	£10,000,000	£0	£10,000,000	
	Reconfigure / upgrade B2085 Balcombe road - Allowance only - from Steers Lane junction to M23, then parallel to M23 to junction 9, then back to existing Balcombe Road	3,500	m	£1,800	£6,300,000		3,500	0%	£1,800	£6,300,000		0%	£1,800	£0	£6,300,000		0%	£1,800	£0	£6,300,000		0%	£1,800	£0	£6,300,000	
	Charlwood Road Diversion	1,200	m	£1,800	£2,160,000	140305 - SoF 16 new item	1,200	0%	£1,800	£2,160,000		0%	£1,800	£0	£2,160,000		0%	£1,800	£0	£2,160,000		0%	£1,800	£0	£2,160,000	
	Allowance for new roundabout on A23 north of Steers Lane / Radford Road junction	1	nr	£2,000,000	£2,000,000		1	0%	£2,000,000	£2,000,000		0%	£2,000,000	£0	£2,000,000		0%	£2,000,000	£0	£2,000,000		0%	£2,000,000	£0	£2,000,000	
	Allowance for re-use of excavated material to Class 1a for fill to structures	19,000	m3	£35	£665,000		19,000	0%	£35	£665,000		0%	£35	£0	£66											

Turner & Townsend						Date: 16 Apr '14 Revision 2		2025 Runway Opening				2030 Phase 1				2035 Phase 2					2040 Phase 3				
Ref	FACILITY	Base Cost Forecast, to SoF Delivery, to 2050				Comment	Construction at 2025				Construction at 2030				Construction 2035					Construction 2040					
		Quantity	UoM	Rate (£)	Total (£)		Quantity (at 2025)	Rate Phasing %	Rate (Base + Phase %)	Total at 2025	Quantity (at 2030)	Rate Phasing %	Rate (Base + Phase %)	Total 2025 - 2030	Total at 2030	Quantity (at 2035)	Rate Phasing %	Rate (Base + Phase %)	Total 2030 - 2035	Total at 2035	Quantity (at 2040)	Rate Phasing %	Rate (Base + Phase %)	Total 2035 - 2040	Total at 2040
	Mechanical Comms Operations																								
7.2	Airfield	1	PS	£1,000,000	£1,000,000		1	0%	£1,000,000	£1,000,000	1	0%	£1,000,000	£1,000,000	£2,000,000	1	0%	£1,000,000	£1,000,000	£3,000,000	1	0%	£1,000,000	£1,000,000	£4,000,000
	Comprising:																								
	Runway																								
	Taxi ways																								
	Stands																								
7.3	Baggage	1	PS	£500,000	£500,000		1	0%	£500,000	£500,000	1	0%	£500,000	£500,000	£1,000,000	1	0%	£500,000	£500,000	£1,500,000	1	0%	£500,000	£500,000	£2,000,000
	Comprising:																								
	Automated BHS																								
	Operations	1	PS	£500,000	£500,000			0%	£500,000	£0		0%	£500,000	£0	£0	1	0%	£500,000	£500,000	£500,000	1	0%	£500,000	£500,000	£1,000,000
	Comprising:																								
	APM																								
	APM airside																								
	APM landside																								
7.5	Passenger flow and security	1	PS	£1,000,000	£1,000,000		1	0%	£1,000,000	£1,000,000	1	0%	£1,000,000	£1,000,000	£2,000,000	1	0%	£1,000,000	£1,000,000	£3,000,000	1	0%	£1,000,000	£500,000	£3,500,000
	Comprising:																								
	Terminal																								
	Piers																								
7.6	Flight systems	1	PS	£5,000,000	£5,000,000		1	0%	£5,000,000	£5,000,000		0%	£5,000,000	£0	£5,000,000		0%	£5,000,000	£0	£5,000,000	1	0%	£5,000,000	£5,000,000	£10,000,000
	Comprising:																								
	Network testing by GAL																								
	Third party ICS testing																								
C8	OPERATIONAL HANDOVER				£10,000,000		0.5	0%	£10,000,000	£5,000,000	0.5	0%	£10,000,000	£5,000,000	£10,000,000	0.50	0%	£10,000,000	£5,000,000	£15,000,000	0.50	0%	£10,000,000	£5,000,000	£20,000,000
	Comprising:																								
8.1	Proving trials by area																								
	BHS																								
	Terminals																								
	Piers																								
	Aprons																								
	Runway																								
8.2	Proving trials end to end																								
	From entering the airport to boarding gate																								
8.3	Adaptive works																								
	Alterations to layouts, partitions space allocation and usage etc																								
D	Project specifics				£1,078,350,549					£770,219,937				£245,131,571	£1,015,351,509				£30,572,175	£1,045,923,684				£57,954,382	£1,103,878,066
D1	Pre Construction				£1,078,350,549					£770,219,937				£245,131,571	£1,015,351,509				£30,572,175	£1,045,923,684				£57,954,382	£1,103,878,066
1.1	Land Purchase (assumed risk not included)				£804,204,496					£804,204,496				£175,000,000	£804,204,496				£0	£804,204,496				£0	£804,204,496
	PCE, as advised by Deloitte	1	sum	£804,204,496	£804,204,496	140313 - revised	0.78	0%	£804,204,496	£629,204,496	0.22	0%	£804,204,496	£175,000,000	£804,204,496		0%	£804,204,496	£0	£804,204,496		0%	£804,204,496	£0	£804,204,496
	Hangar 6, Book House Detention centre and commercial building North of Charlwood Road		sum	£81,700,000	£0	140217 - deleted as included in PCE																			
	Allowance for additional land take from new A23 to M23		PS	£50,000,000	£0	140313 - deleted as included in PCE																			
1.2	Compensation/Blight				£24,201,680					£24,201,680				£0	£24,201,680				£0	£24,201,680				£0	£24,201,680
	HoSs, as per Deloitte report	1	sum	£1,973,574	£1,973,574	140313 - revised	1	0%	£1,973,574	£1,973,574		0%	£1,973,574	£0	£1,973,574		0%	£1,973,574	£0	£1,973,574		0%	£1,973,574	£0	£1,973,574
	Allowance for Blight, Property Market Bond Scheme, etc.	1	sum	£22,228,106	£22,228,106	140313 - revised	1	0%	£22,228,106	£22,228,106		0%	£22,228,106	£0	£22,228,106		0%	£22,228,106	£0	£22,228,106		0%	£22,228,106	£0	£22,228,106
1.3	Levies & 106 Agreements				£50,338,727					£8,313,616				£21,846,085	£30,159,702				£9,663,930	£39,823,632				£18,477,449	£58,301,080
	Comprising:																								
	Section 106 & 278				£36,361,558					£6,425,193				£15,618,267	£22,043,461				£6,823,715	£28,867,176				£13,008,678	£41,875,854
	Section 60				£9,090,389					£1,606,298				£3,904,567	£5,510,865				£1,705,929	£7,216,794				£3,252,169	£10,468,963
	Building regulations and planning control				£4,886,780					£282,125				£2,323,251	£2,605,376				£1,134,286	£3,739,662				£2,216,601	£5,956,264
1.4	Equipment				£8,800,000					£8,800,000				£0	£8,800,000				£0	£8,800,000				£0	£8,800,000
	Snow clearing and de-icing plant	15	nr	£400,000	£6,000,000																				

Appendix B – ARUP Schedule of Facilities

Airport Airside Facilities	Key Assumptions	Baseline	2025-2030 Transition	2030-2035 Phase 1	2035-2040 Phase 2	2040-2045 Phase 3a	2040-2050 Phase 3	Source
Terminal - Demand			60.3 mppa	69.2 mppa	77.5 mppa	82.5 mppa	86.7 mppa	
South Terminal (mppa)		22.5	37.8	22.5	22.5	21.0	21.0	Arup
North Terminal (mppa)		22.5	22.5	22.5	22.5	21.0	21.0	Arup
Midfield Terminal (mppa)		-	-	24.2	32.5	40.5	45.0	Arup
Midfield Terminal Design Capacity (mppa)		-	-	20.0	28.0	40.5	45.0	Arup
Terminals Envelope								
South Terminal		126,000	-	-	-	-	-	Arup
North Terminal		106,000	-	-	-	-	-	Arup
Midfield Terminal		-	-	126,000	126,000	228,385	228,385	Arup
Terminals Fitout								
South Terminal		126,000	-	-	-	-	-	Arup
North Terminal		106,000	-	-	-	-	-	Arup
Midfield Terminal		-	-	78,660	126,000	202,500	228,385	Arup
Satellites and Piers								
Northern Apron Satellite		-	-	-	-	-	-	Arup
Mid-field Apron Satellite		-	-	-	50,000	111,393	118,008	Arup
Mid-field terminal Pier		-	-	37,638	51,325	51,325	51,325	Arup
Remote Midfield Facility		-	15,000	15,000	15,000	-	-	
Stands								
Northern Apron								
Code C		45						Arup
Code E		56						Arup
Code F		6						Arup
Mid-field Apron								
Code C		-	30	74	66	66	66	Arup
Code E		-	-	-	18	30	38	Arup
Code F		-	-	-	-	-	-	Arup
Cargo								
Annual Cargo Throughput (tonnes)		100,700	449,705	594,064	736,800	849,100	961,400	SH&E
Cargo Terminal - standard automation (sqm)		27,100	49,400	62,323	75,100	83,800	92,500	Deloitte
Aircraft Maintenance								
Hangar Area (sqm)		16,500	55,000	55,000	55,000	55,000	55,000	GAL
No. of hangars		2	5	5	5	5	5	GAL
Industrial Supply								
Industrial Supply (sqm)		17,900	33,300	36,367	39,400	40,600	41,800	Deloitte
GSE Parking and Maintenance Areas								
Ground Services and Ancillary Airside (sqm) acres			25,000	41,241	57,300	60,600	63,900	Deloitte
Airport Landside Ancillary Facilities	Key Assumptions	Baseline	2025-2030 Transition	2030-2035 Phase 1	2035-2040 Phase 2	2040-2045 Phase 3a	2040-2050 Phase 3	
On Airport Car Parking			60.3 mppa	69.2 mppa	77.5 mppa	82.5 mppa	86.7 mppa	
Short Stay No. of MSCP		5	NOTE	8	9	9	9	Arup
Short Stay (spaces)		5,000	7,600	8,053	8,500	8,400	8,300	Arup
Long Stay (spaces)		28,850	51,150	55,474	59,750	58,650	57,550	Arup
Long Stay Decked (spaces)			-	-	5,520	4,368	3,320	Arup
Long Stay as Block parking (spaces)			20,460	22,190	23,900	23,460	23,020	Arup
Staff (spaces)		10,000	11,300	11,702	12,100	11,950	11,800	Arup
Commercial								
Airport Hotels (beds)	Hotel Rooms	3,483	5,217	6,004	6,783	7,174	7,565	Deloitte
Additional Hotels		4	7	8	9	9	9	Deloitte
Office supply (sqm)		34,485	37,500	40,618	43,700	44,800	45,900	Deloitte
Additional Office Buildings		6	4	4	5	5	5	Deloitte
Airport City								
Re-provision of non airport offices/buildings (sqm)			-	190,000-360,000	190,000-360,000	190,000-360,000	190,000-360,000	HOK Airport City Report

NOTE: As a part of the transition phase additional short stay car parking will be managed via a remote bussing operation form the eastern zone. This then allows for additional MSCPs to be phased with upgrades to surface access to the midfield area

Appendix C – Work Breakdown Structure, Scope, Assumptions and Comments

WBS	Description	Scope	Assumptions	Comments
A	Programme and Delivery Management			
A1	GAL Management			
A1.1	Programme Management	Pre-planning and construction management	Allowance item on base construction cost, watercourse diversion, obstacle clearance and pre-works surveys	
A1.2	Management-Support Functions	Internal and external support functions	Allowance item on base construction cost, watercourse diversion, obstacle clearance and pre-works surveys	
B	Design			
B1	Design Consultants			
B1.1	Design from RIBA Work Stage 1	RIBA 2 - Concept RIBA 3 - Developed RIBA 4 - Technical	Allowance item on base construction cost, watercourse diversion, obstacle clearance and pre-works surveys	
C	Base Cost			
C1	Enabling Works			
C1.1	Site preparation	Topsoil strip, breakout and removal of surface car parks and roads	<p>Surface areas based on satellite image measurement</p> <p>Assumed surface thickness of 250mm and clearance of local related LV and drainage services</p> <p>Existing service corridors and obstructions assumed in risk</p>	No allowances for breaking out and removal of buried obstructions or clearance and diversion of service corridors

WBS	Description	Scope	Assumptions	Comments
C1.2	Demolitions - within GAL Boundary	GAL properties, airfield sub-stations, airfield pumping stations and watercourse structures	<p>Building areas measured from satellite images.</p> <p>Sub-stations, pumping stations and watercourse structures are allowances only as limited information</p> <p>Allowance made for temporary power diversions for works to sub-stations</p>	Asbestos clearance in advance as part of Q6 activities
C1.3	Demolitions - outside GAL Boundary	Residential properties, offices, industrial, commercial buildings and landside APM structure & station	<p>Allowance only for residential properties, other buildings based on measurement from satellite images</p> <p>Allowance only made for service disconnections</p> <p>Waste handling/re-cycling facility is retained</p>	<p>Asbestos clearance in advance as part of Q6 activities</p> <p>No information on services, building structure, sub-structure, below ground obstructions and contamination</p>
C1.4	Works to distribution grids	Relocation of pylons and HV cables adjacent to the motorway	Not required	ARUP confirmed sufficient vertical and horizontal clearance
C2	Airfield			

WBS	Description	Scope	Assumptions	Comments
C2.1	Runway	Runway and shoulders, extend existing runway and shoulders	New runway in greenfield site, areas from ARUP SoF	<p>Bulk earthworks and drainage network allowed for separately</p> <p>No allowance for modifications/diversion of existing services</p> <p>No allowance within rates for establishing, maintaining and operating onsite concrete batching or asphalt coating plants</p>
C2.2	Aprons	RET's, RAT's, runway crossings, taxiways, taxilanes, head of stand roads and GSE parking	Allowances based on greenfield site working, except for interfaces with existing pavements, areas from ARUP SoF	<p>Bulk earthworks and drainage network allowed for separately</p> <p>No allowance for modifications/diversion of existing services</p> <p>No allowance within rates for establishing, maintaining and operating onsite concrete batching or asphalt coating plants</p>

WBS	Description	Scope	Assumptions	Comments
C2.3	Stands	Contact and remote stands	<p>Allowances based on greenfield site working, areas from ARUP SoF</p> <p>Allowance only for local pavement and stand services other than fuel hydrant main</p> <p>Fuel hydrant main costs assumed by GASHCo and recovered through fuel charges</p> <p>HV cabling assumed covered within RAGLAN agreement and not included within allowances</p> <p>SEGS, FEGP and protection posts within allowances</p>	<p>Fuel hydrant main and pots by GASHCo</p> <p>HV Cabling by UKPN</p>
C2.4	Airfield Instrumentation	Airfield NAVAIDS, approach lighting, IRVR, DME, DRDF, surface movement radar, ILS and VHF ariel	Runway NAVAIDS foundations, access tracks, LV power ducting by airport.	NATS costs by NATS
C2.5	Airfield Other	Bulk earthworks, ground stabilisation and landscaping	<p>Bulk earthworks to ARUP Earthwork report</p> <p>Ground stabilisation with 3% lime and 5% cement for 300mm depth below new pavement areas only</p> <p>Landscaping assumed topsoil from site stockpile and grass seeding</p>	No allowance for imported topsoil or grounds maintenance after 1st cut
C3	Airside Support Facilities			

WBS	Description	Scope	Assumptions	Comments
C3.1	Facilities	Air traffic control tower, de-icing, snow base, fire crash & rescue station, apron control centre, cargo, maintenance hangars and airfield operations building	<p>46m ATC Tower with NATS offices at base</p> <p>Facilities based on assumed areas, other than cargo and hangars</p> <p>Cargo/Hangars expansion based of ARUP SoF, and provision of services to an island.</p> <p>BA hangar re-provided as existing is within development area</p>	<p>NATS costs by NATS</p> <p>Cargo/Hangar expansion by commercial agreement with third parties</p>
C3.2	Re-provision of removed facilities	GAL properties, airfield sub-stations and airfield pumping stations	<p>Re-provision of facilities demolished for expansion, areas as per demolition</p> <p>Substations are allowance only</p>	Re-provision on a like-for-like basis
C3.3	Airside APM	APM structure and fitout, stations, rolling stock	APM cut and cover box based on 10m wide x 6m deep, walls formed using diaphragm walling and insitu reinforced concrete for cover and base slabs	APM box verified with Arup
C3.4	Roads	Airfield and perimeter security road	Allowance only for airside roads, perimeter security road measured from ARUP plan	

WBS	Description	Scope	Assumptions	Comments
C3.5	Noise Control	Wavy wall and earth bunds	Assumed reinforced concrete wavy wall, 1m thick and 6m high. Earth bunds to CH2M Hill cross section detail, 10m high airfield face using reinforced earth and earth fill 50m average with tapering to grade	Allowance for imported friction fill
C3.6	Security	Security fence and access control gates	Fencing measured from ARUP Plan, assumed	
C3.7	Surface Water	Drainage carrier network, attenuation ponds and water quality monitoring	SW attenuation pond to ARUP Earthworks report, allowance for SW carrier network, re-provision of pumping stations, allowance for attenuation east of railway	No allowance for bird netting, over pond structures or associated penstocks
C3.8	Aviation Fuel	ATP Upgrade, Fuel Farm relocation and enhancement, additional fuel tanks	ATP has sufficient capacity, works to fuel systems by GASHco/Shell	Fuel Farm and off airfield infrastructure owned and operated by Shell Airfield hydrant main has a commercial agreement with GASHco whereby costs recovered in fuel rates
C4	Terminal and Piers			

WBS	Description	Scope	Assumptions	Comments
C4.1	Terminal	New building and works to existing	<p>Substructure with piles and associated piles cap and ground slab, steel frame at 18m x 18m grid, reinforced lift cores, concrete floor plates, external cladding and M&E fitout.</p> <p>Baggage facility at ground level, no basement required</p> <p>Area as ARUP SoF</p>	<p>No allowance for end user IT equipment or office furniture.</p> <p>No allowance for fitting out commercial or airline space.</p>
C4.2	Piers	New buildings, fixed links, nodes and passenger boarding bridges	<p>Substructure with piles and associated piles cap and ground slab, steel frame at 18m x 18m grid, reinforced lift cores, concrete floor plates, external cladding and M&E fitout</p> <p>Single fixed link, node and passenger boarding bridge to each contact stand, except MARS stand where a second passenger boarding bridge is provided</p> <p>Node assumed 10m x 8m on plan, steel framed structure with one internal floor and stairway and a single lift</p> <p>Areas as ARUP SoF</p>	<p>No allowance for end user IT equipment or office furniture.</p> <p>No allowance for fitting out commercial or airline space.</p>
C4.3	Baggage Handling Systems	New baggage system and works to existing	<p>Baggage system at ground level within new terminal footprint, no external baggage facilities.</p> <p>Baggage delivered to HoS by tug and dolly.</p>	

WBS	Description	Scope	Assumptions	Comments
C4.4	Energy Centre	37MW CHP Plant, Anaerobic Digester and pipe work to New Terminal and Piers	<p>Allowance for biomass plant and anaerobic digester located adjacent to Thames Water facility to the east of the railway line. Outline as ARUP Energy Master Plan report.</p> <p>Assumed district heating single pipeline to new Terminal and piers and a return line to provide a loop.</p>	Route crosses under existing railway
C5	Surface Access			
C5.1	Landside APM	Extending existing APM from south to new terminal, new APM station at south and new terminal	<p>Re-alignment and extension of existing north to south terminal APM, as ARUP APM details.</p> <p>Existing APM system upgrade, new station at grade on old A23 and track along A23 then elevated into new terminal.</p>	Modifications to existing railway station for passenger vertical circulation
C5.2	Car Parks	Multi Storey, Long stay and staff surface car parks	<p>Car parking as ARUP SoF.</p> <p>Allowance made for peak demand and no reduction for reduction indicated within ARUP SoF.</p>	

WBS	Description	Scope	Assumptions	Comments
C5.3	Highways	Highway works from M23 Junction 9 through north terminal, re-alignment of A23, works to local road network and railway station upgrade	100% GAL Fund (no HA funding), to ARUP Plan and quantity schedule. Railway station upgrade allowance Allowances for Balcombe Road and Charlwood Road diversions and for minor highways scheme on existing network	Risk included within the surface access allowance, and as GAL funded no allowance for Optimism Bias No tunnelling works for landside surface access into terminal areas
C5.4	Airport Roads	Crossing of A23 and service vehicle access to new terminal	Allowance for two crossing for airport traffic below proposed A23 diversion. Allowance for service road to new terminal	Terminal road at grade No tunnelling works for landside to airside surface access into midfield area
C5.5	Facilities	Gatwick Gateway, Consolidated car rental, maintenance base, taxiway feeder and control posts	Allowance for 1,000 space MSCP for consolidated car rental. Gatwick Gateway at 12,500m2 Road layout for taxiway feeder, airside access control gates and a landside maintenance base	
C6	Utilities			
C6.1	Provision of new utilities	HV Intake works, foul water main for new terminal and piers, gas, telecom and water services to new terminal	HV Intake substation works as advised by UKPN Allowances for providing services to new terminal for gas, potable water and foul pumping main.	Minor building works to substations only, no major extension or re-building
C7	Operational Commissioning			

WBS	Description	Scope	Assumptions	Comments
C7.1	M&E Services	Commissioning of new M&E services	Limited information, allowance only.	
C7.2	Airfield	Commissioning of new runway, taxiways, taxilanes, RET's, RAT's, crossings and stands	Limited information, allowance only.	
C7.3	Baggage	Commissioning of baggage system	Limited information, allowance only.	
C7.4	APM	Commissioning of landside and airside APM's	Limited information, allowance only.	
C7.5	Passenger flow and security	Commissioning of passenger flow and security in new terminal and piers	Limited information, allowance only.	
C7.6	Flight Systems	Commissioning of flight systems by GAL and third party	Limited information, allowance only.	
C8	Operational Handover			
C8.1	Operational Handover	Proving trails for baggage, terminal, piers, stands and runway	Limited information, allowance only.	
D	Project Specifics			
D1	Pre Construction			
D1.1	Land Purchase	Land purchase costs	Costs as per Deloitte report	
D1.2	Compensation/Blight	Home owner support scheme (HoSS) and property market support bond (PMSB)	Costs as per Deloitte report	
D1.3	Levies & Agreements	Section 60, 106, 278 and building regulations and control	Allowance only	

WBS	Description	Scope	Assumptions	Comments
D1.4	Equipment	Snow clearing, de-icing and Fire crash rescue appliances		
D1.5	Water Courses	diversion of River Mole and Crawter's Brook, Ifield lake	<p>Diversion channels as per CH2M Hill typical cross section and ARUP earthworks quantities.</p> <p>Infilling redundant surface watercourses, shafts to mole syphon.</p> <p>Breakout river gates and stopping off mole culvert</p> <p>Allowance only for Ifield lake</p>	<p>No allowance for infilling redundant mole culvert or horizontal section of inverted syphon</p> <p>No requirement for infilling lakes or attenuation ponds</p>
D1.6	Obstacle Clearances	Topping trees encroaching OLS, woodland clearance and re-provision, dealing with listed buildings	<p>OLS Clearance has limited information, allowance only.</p> <p>Woodland clearance and re-provision allowance based on satellite image measurement and re-provision as RPS guidance</p>	Beehive retained
D1.7	Archaeology, Ecology and Heritage	Archaeology, Ecology and Heritage	Allowance only	
D1.8	Construction Logistics	Site logistics for construction phase	Allowance only	
D1.9	Motorway Diversion	n/a	Not required	Existing alignment retained
D1.10	Landfill removal and remediation	n/a	Not required	

WBS	Description	Scope	Assumptions	Comments
D1.11	Water treatment works reprovision	n/a	Not required	
E	General/Other Project Costs			
E1	Insurances			
E1.1	Insurances	Project insurances	Allowance only	
F	Risk			
F1	Project Risk			
F1.1	Un-modelled Risk	Un-modelled project risk	Allowance only item based on project forecast less highway works and railway station as risk covered with items	Independent quantitative exercise to verify risk values and identify point ("P") number

