



SSRO

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SSRO Determination

Determination on matters relating to the
Adour Availability Contract

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1. Executive summary

- 1.1 Rolls-Royce has sought a determination from the SSRO on two matters relating to its qualifying defence contract (QDC) to deliver in service support for Mk151-01, Mk151-02 and Mk951 Adour engine availability.
- 1.2 Following receipt of a referral for a determination on 11 December 2015, the SSRO acknowledged the request and formally accepted the referral on 23 December 2015, having conducted due diligence in line with its guidance. The SSRO appointed a Referrals Committee, a sub-committee of the SSRO Board comprising two non-executive members of the Board and an independent member who is not a member or employee of the SSRO, to consider the referral.
- 1.3 The SSRO has considered all information and evidence submitted by both Rolls-Royce and the MOD, conducted a site visit to Rolls-Royce's Bristol facility, and held informal meetings and hearings with both parties. This document sets out the SSRO's determination on the matters referred.
- 1.4 The Adour Availability Contract (the Contract) was signed on 1 December 2015 on the contractual provision that Rolls-Royce would seek a determination on two referral matters. On 18 December 2015, Rolls-Royce confirmed the two matters that are the subject of the referral:
- the extent to which sales and marketing costs provided in the Contract are Allowable Costs within the meaning of Section 20(2) of the Defence Reform Act (the Act); and
 - whether the appropriate amount of cost risk adjustment has been agreed under step 2 of Section 17(2) of the Act and Regulation 11 of the Single Source Cost Regulations 2014 when determining the Contract profit rate.
- 1.5 The questions posed in this referral relate only to those items defined in the table below:

In scope of referral	Amount for a Determination (£m)
Sales and marketing costs	0.452 including baseline profit
Cost risk adjustment	0.813
Total on which SSRO has been asked for a Determination	1.265

- 1.6 The progress of the determination has been slowed by the need to query at several points the value of various elements of the Contract, including the overall Contract price, the profit rate, the sales and marketing costs, capital servicing allowances (which were first included but then removed from the scope) and the incentive adjustment.
- 1.7 The SSRO is unable to express the overall Contract price or profit due to the outstanding compliance issues. These matters will be addressed separately under the SSRO's compliance regime with both Rolls-Royce and the MOD.

Sales and marketing costs

- 1.8 The first matter for consideration related to sales and marketing. The SSRO's determination is that the sales and marketing costs under dispute, included in the commercial and administrative cost pool, are not Allowable Costs on the basis that Rolls-Royce has not provided sufficient evidence to demonstrate that the costs are appropriate, attributable to the Contract and reasonable in the circumstances (the AAR test).
- 1.9 While the Single Source Cost Standards¹ do not require sales and marketing costs to be directly attributed to a contract to enable them to be Allowable Costs, they must have a demonstrable link to the QDC in question. Furthermore, the burden of proof rests with the contractor to demonstrate such links and any such evidence should reflect the benefits to the Contract from the successful sales and marketing efforts.
- 1.10 In this instance Rolls-Royce has failed to provide sufficient evidence to the SSRO on what these costs relate to, what sales may derive from them and how they drive a reduction in the cost base of the QDC. Therefore the determination of the SSRO is that these costs are not Allowable and the Contract should be amended to reflect this.
- 1.11 The SSRO also considers that direct bid and proposal costs, which were incurred for the Contract, may be Allowable Costs. However, following investigation and based on the evidence provided, Rolls-Royce has failed to demonstrate that these costs meet the AAR test. Therefore, the determination of the SSRO is that these costs are not Allowable and the Contract should not be amended to include them².

Cost risk adjustment

- 1.12 The second matter for consideration related to the cost risk adjustment to the baseline profit rate. Rolls-Royce made the argument that the Contract should attract a plus 25 per cent cost risk adjustment.
- 1.13 The SSRO has considered the appropriate cost risk adjustment having regard to step 2 and the principles in its statutory guidance. After the effect of mitigations through Allowable Costs, the Contract's provisions and opportunities for positive risk, the SSRO considers there is no more than average risk of Rolls-Royce's actual Allowable Costs differing from its estimated Allowable Costs. Therefore the SSRO's determination is that the cost risk adjustment should be zero per cent, on the basis that Rolls-Royce has not evidenced that the Contract is a high risk contract that attracts a plus 25 per cent cost risk adjustment, and that the Contract should be amended to reflect this.

Overall impact

- 1.14 Following analysis of the information and evidence submitted, the SSRO provides this determination setting out the facts and assessments on the referral.
- 1.15 The price impact of the SSRO's determination on the Contract is set out in the table below.

Description	Impact (£m)
Sales and marketing costs not Allowable (including baseline profit)	0.452
Cost risk adjustment reduced from 12.5% to 0%*	0.813
Price reduction	1.265

* Based on Rolls-Royce's assumption that the MOD applies a £1:€1.33 exchange rate to the Turbomeca subcontract costs, contracted for in Euros

1 Single Source Cost Standards: Statutory Guidance on Allowable Costs issued 26 January 2015.

2 These costs are currently part of the overall sales and marketing cost pool, a percentage of which is included in the Contract price.

- 1.16 The figures in the table above are subject to confirmation by both parties following resolution of outstanding compliance issues in regard to the final Contract price and its components.

Costs and Publication

- 1.17 When making its determination, the SSRO may require the payment of such costs as the SSRO considers appropriate (Section 35(4) of the Act). The SSRO does not require such a payment.
- 1.18 The determination is published in full to the contracting parties. A redacted version is published on the SSRO website, and will be included in the SSRO's annual Compliance Report.

2. Introduction

Background to the Contract

- 2.1 Rolls-Royce has sought the SSRO's determination on two matters relating to the QDC for three variants of the Adour engine. The Contract was signed on 1 December 2015 on the express provision that Rolls-Royce would seek a determination on the two referral matters. It is an in service support contract for the Mk151-01, Mk151-02 and Mk951 Adour engines between Rolls-Royce and the MOD, for the period 1 December 2015 to 31 March 2020 (four years and four months).
- 2.2 Rolls-Royce is contracted to programme manage four main activities of the maintenance service, including:
- engine availability;
 - a forward spares service;
 - a technical support function; and
 - an inventory management service.
- 2.3 All these activities ultimately result in engine availability for which Rolls-Royce is required to achieve measurable key performance indicators. The Contract stipulates that, should additional services be required to deliver engine availability over and above that described in the Contract, these may be agreed on an ad hoc basis and may be subject to a contract variation.
- 2.4 The Contract is valued at approximately £70.2 million³ and uses a combination of firm and fixed price methods.

Referral

- 2.5 In its letter dated 11 December 2015, Rolls-Royce referred matters to the SSRO for a determination in respect of the Contract.
- 2.6 The referral submitted on 11 December 2015 was subject to a request for clarification by the SSRO, which was received from Rolls-Royce on 18 December 2015, confirming that the matters it was referring related to the following:
- the extent to which sales and marketing costs provided in the Contract were Allowable Costs within the meaning of Section 20(2) of the Act; and
 - whether the appropriate amount of cost risk adjustment had been agreed under step 2 of Section 17(2) of the Act and Regulation 11 of the Single Source Cost Regulations 2014 when determining the Contract profit rate.
- 2.7 Other questions within the referral submission, including reference to a third area not agreed by the parties, were confirmed as being contextual by Rolls-Royce and not matters for determination.

³ Rolls-Royce Contract Pricing Statement submission dated 11 March 2016, subject to compliance review.

Accepting the referral

- 2.8 The SSRO established that it had jurisdiction to deal with the two matters referred, and also considered there to be sufficient information to commence its determination, on the basis that further evidence was required and would be forthcoming from Rolls-Royce. The SSRO formally accepted Rolls-Royce's referral on 23 December 2015.

Approach

- 2.9 The SSRO issued a provisional determination to the parties on 24 March 2016 and the final determination takes into account further representations received.
- 2.10 Underlying its assessment is the SSRO's general obligation under Section 13 of the Act, which is to aim to ensure:
- "that good value for money is obtained in government expenditure on qualifying defence contracts"; and
 - "that persons (other than the Secretary of State) who are parties to qualifying defence contracts are paid a fair and reasonable price under those contracts".

3. Determination Question 1: Sales and Marketing

Matter referred for determination

- 3.1 The first matter for determination was confirmed by Rolls-Royce to be:
- the extent to which sales and marketing costs provided in the Contract were Allowable Costs within the meaning of Section 20(2) of the Act.
- 3.2 The SSRO may determine this question pursuant to Section 20(5) of the Act and, in consequence, may determine that the price payable under the Contract is to be adjusted by a specified amount, having regard to the extent to which the sales and marketing costs were treated as an Allowable Cost when the price payable under the Contract was agreed (Section 20(6) of the Act). In making the determination, the SSRO has had regard to relevant material as set out below. The matters required by the Single Source Cost Regulations 2014 have been considered, including:
- the information that was available to each party at the time of the agreement, as disclosed to the SSRO by each party;
 - the statutory guidance in place at the time of agreement and the extent to which it has been followed;
 - whether the parties disclosed, in a timely manner, the facts and assumptions they used to determine the Allowable Costs or the Contract profit rate; and
 - representations made by the parties to the Contract.

Statutory test and SSRO guidance

- 3.3 In order for the sales and marketing costs to form part of the Contract price, they should be Allowable Costs. This means that the costs should satisfy the test set out in Section 20(2) of the Act, which requires that they are:
- *appropriate;*
 - *attributable to the contract; and*
 - *reasonable in the circumstances (the AAR test).*
- 3.4 On 26 January 2015, the SSRO issued the Single Source Cost Standards pursuant to Section 20(1) of the Act, which remained the current guidance at the time the Contract was entered into on 1 December 2015. The parties to the Contract were required by Section 20(3) of the Act to have regard to that guidance in determining the extent to which the sales and marketing costs are Allowable Costs. The SSRO is bound by Regulation 19(2) of the Single Source Cost Regulations 2014 to have regard to that Statutory Guidance as well as other matters. In relation to sales and marketing costs the guidance provides as follows:
- “Marketing and sales costs can only be considered Allowable, if they are demonstrably linked to a qualifying defence contract or qualifying subcontract. Marketing and sales costs may include such items as salary costs and related staff expenses (travel and subsistence), sales and marketing campaigns and other related commercial activities.”*

3.5 The Statutory Guidance also states:

“Section 20(4) of the Act places the onus upon the primary contractor of a qualifying defence contract to demonstrate to the Secretary of State (if required) that costs meet those requirements set out in this guidance as being Allowable. The burden of proof rests with the contractor and it is essential that the MOD operates as an intelligent client and has the ability to verify, challenge and agree the costings that are submitted as being Allowable.”

3.6 This reflects the legislative position that the Secretary of State or an authorised person may at any time require a primary contractor to show that the requirements of the AAR test are met (Section 20(4) of the Act). It is clear that both primary contractor and the Secretary of State (or an authorised person) should be satisfied that costs satisfy the AAR test, but there is an onus on the contractor to evidence this, to which the Statutory Guidance refers.

3.7 It is clear that sales and marketing costs may be Allowable if they can be demonstrably linked to a qualifying defence contract and meet all three elements of the AAR test. In particular, the SSRO would expect to see what effect sales and marketing costs have had and evidence of clear benefits to the Contract in question.

Rolls-Royce's case on sales and marketing

3.8 Rolls-Royce asserts that the MOD significantly benefits from Rolls-Royce's sales and marketing efforts across all of its contracts, both civil and military, and that such costs should therefore be treated as Allowable. It has stated that the costs generate additional business for Rolls-Royce, consequently reducing overheads and costs for the MOD.

3.9 The sales and marketing costs under dispute total £4.4 million. These are included in a commercial and administrative cost pool from which a proportion is allocated to the Contract via a commercial and administrative overhead rate. Rolls-Royce stated in its referral that the pool should be revised to £2.7 million and that this is a more realistic projection of costs based on revised actual campaign activity. The pool of £4.4 million resulted in an amount of £0.409 million being included in the Contract. If the pool was reduced to £2.7 million, as Rolls-Royce proposes, then £0.300 million would be included in the Contract.

3.10 Rolls-Royce asserts that it will win business over the Contract length, increasing volumes for its supply chain and allowing the MOD to share in reduced prices and higher volumes of work over which overheads are spread more broadly, as a result reducing the allocation to the MOD and supporting sustainability of the supply chain. It also states that the overhead rates applied to the Contract already reflect this benefit.

3.11 Therefore, Rolls-Royce argues that the commercial and administrative rate applied to the Contract is reduced due to its sales projections, the cost of which is enabled by the disputed sales and marketing spend. Sales projections are partly built on an existing order book, but largely upon speculative sales in the later years of the Contract. No evidence has been provided to the SSRO to support the success of these ventures, as they are in the future, nor what effect they would have upon overheads.

3.12 Rolls-Royce quantifies the benefits to the MOD to be £12.19 million, but has not produced sufficient evidence to the SSRO to support this figure.

3.13 Rolls-Royce's breakdown of sales and marketing costs to support its case is at Appendix A.

The MOD's case on sales and marketing

- 3.14 The MOD accepts the SSRO's guidance that sales and marketing costs may be Allowable Costs if there is a demonstrable link to the Contract. However, the MOD's position is that:
- Rolls-Royce stated that sales and marketing costs for its defence business were £4.4 million during Contract negotiations but subsequently revised this to £2.7 million on 11 December 2015.
 - There are items in Rolls-Royce's breakdown of the £2.7 million of sales and marketing costs that seem clearly unrelated to the Adour engine. The MOD states that this breakdown has only been available to the MOD during this determination.
 - Despite making several requests of Rolls-Royce, the MOD has not been provided with an explanation or evidence that demonstrates the benefits to the Contract resulting from any of the sales and marketing items set out in the Rolls-Royce spreadsheet.
 - It does not accept Rolls-Royce's argument regarding forward sales, on the basis that directly linking this to the delivery of benefit to QDCs has not been possible based on the evidence available.
- 3.15 The MOD states that Rolls-Royce has provided limited information to the MOD on the £4.4 million sales and marketing costs, describing the costs merely to be £0.4 million of support for EJ200 marketing and sales campaigns and £4.1 million of non-project specific labour costs to support campaigns to win business⁴.
- 3.16 The MOD has maintained its position throughout the process despite additional information provided by Rolls-Royce.

Consideration of the evidence

- 3.17 Rolls-Royce has sought to apply indirect sales and marketing costs to the Contract through a system of apportionment, which may be summarised as follows:
- there is a pool of sales and marketing costs (whether £4.4 million or £2.7 million), which forms part of Rolls-Royce's overall defence aerospace commercial and administrative (DACA) overhead;
 - a DACA overhead rate is calculated by taking the defence aerospace commercial and administrative overhead costs as a percentage of the overall cost of sales (excluding some non-value added trading spares) of the defence aerospace business unit; and

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⁴ MOD response to Adour referral dated 22 January 2016 (Page 2, paragraph 5).

- 3.18 Based on the above process the Contract costs include a component for sales and marketing of £0.409 million if the pool is £4.4 million. This would reduce to £0.300 million if the pool is £2.7 million as Rolls-Royce proposed for the purposes of the determination. The table below summarises the SSRO's understanding of how the sales and marketing costs have been allocated to the Contract.



Bid costs

- 3.19 The SSRO notes that the projected overhead uplift includes £0.166 million for direct bid and proposal costs relating to the Contract. Bid costs that relate directly to a contract may be Allowable if they meet the AAR test and should be charged directly to the Contract to which they relate, rather than being apportioned as indirect costs. This means that the £0.166 million bid costs should not form part of the £4.4 million of sales and marketing costs that Rolls-Royce has sought to apportion to the Contract.
- 3.20 In order to determine whether the £0.166 million bid costs satisfy the AAR test, the SSRO requested evidence from Rolls-Royce. This was required to understand the actual costs incurred, whether they have been recovered by other means and if they have been subjected to a CAAS audit. Despite having been provided with a number of written submissions by Rolls-Royce, the SSRO has not been presented with anything that shows the bid costs were in support of the Contract, nor has it been provided with material demonstrating that they were reasonable in the circumstances.
- 3.21 Following this investigation our determination is that, while bid costs may be Allowable, the evidence presented in this case is not sufficient to show that the bid costs included in the £4.4 million pool meet the AAR test. In particular, it has not been demonstrated that the bid costs are reasonable in the circumstances. The bid costs are therefore determined as not being Allowable Costs.

Sales and marketing costs comprising £2.7 million

- 3.22 The sales and marketing costs included in the Contract total £0.409 million, and are allocated from a £4.4 million cost pool of Rolls-Royce's defence aerospace business sales and marketing costs. Rolls-Royce has proposed that the cost pool be reduced to £2.7 million and that the Contract receives an allocation of £0.300 million, based on a reforecast of the annual sales and marketing expenditure at quarter 3 of the financial year 2015/16.

- 3.23 To the extent that Rolls-Royce has changed its claim in respect of sales and marketing costs on referral, reducing it from £4.4 million to £2.7 million, this must necessarily result in an adjustment to the Contract price, as the Contract currently includes an amount for sales and marketing apportioned from £4.4 million. No case has been presented to demonstrate that £1.7 million of the original £4.4 million of sales and marketing costs satisfied the AAR test and the SSRO determines that the £1.7 million of sales and marketing costs that Rolls-Royce has conceded are not Allowable.
- 3.24 In order to determine whether the remaining amount included in the Contract for sales and marketing is an Allowable Cost, it is necessary to establish whether the remainder of the pool of sales and marketing costs included in the commercial and administrative pool of costs used to calculate the relevant overhead rate satisfies the AAR test. This is an amount of £2.7 million, in respect of which Rolls-Royce provided a breakdown⁶.
- 3.25 In this regard the SSRO considers that Rolls-Royce's breakdown of sales and marketing costs fails to evidence sufficiently its claim that these costs are AAR, and in particular that it fails to:
- articulate the costs to a sufficient level of detail to enable them to be properly understood;
 - provide evidence and demonstrate what assumptions are applied to these costs;
 - indicate how the costs will deliver benefits for the Contract; and
 - describe why this level of sales and marketing expenditure is appropriate to include in the estimated rates every year of the Contract.
- 3.26 To illustrate the point, set out below is a typical example from Rolls-Royce's submitted material.
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- 3.27 It appears from this description that the sales and marketing costs involve the EJ200 engine (a different engine to the Adour engines) [REDACTED]. However, this leaves a range of unknown information, including the following:
- what the sales and marketing activity comprises;
 - whether the activity resulted in actual sales of the EJ200 engine and, if so, to what value; and
 - how sales of the EJ200 engine reduce the overheads for an availability contract for the Adour engine (a different engine from the EJ200 and used in a different aircraft)⁷.
- 3.28 The same or similar comments may be made in relation to each item in Appendix A as costs are simply described by engine type and the market in which Rolls-Royce is bidding for work. In the absence of further evidence, the SSRO is left with an assertion by Rolls-Royce that the sales and marketing has resulted in overheads being reduced on the Contract, but insufficient material to support the assertion⁸.
- 3.29 The SSRO has insufficient evidence to establish if the costs are appropriate, attributable to the Contract and reasonable in the circumstances. Therefore, the SSRO's determination is that the £0.409 million of sales and marketing costs do not satisfy the AAR test and are not Allowable Costs.

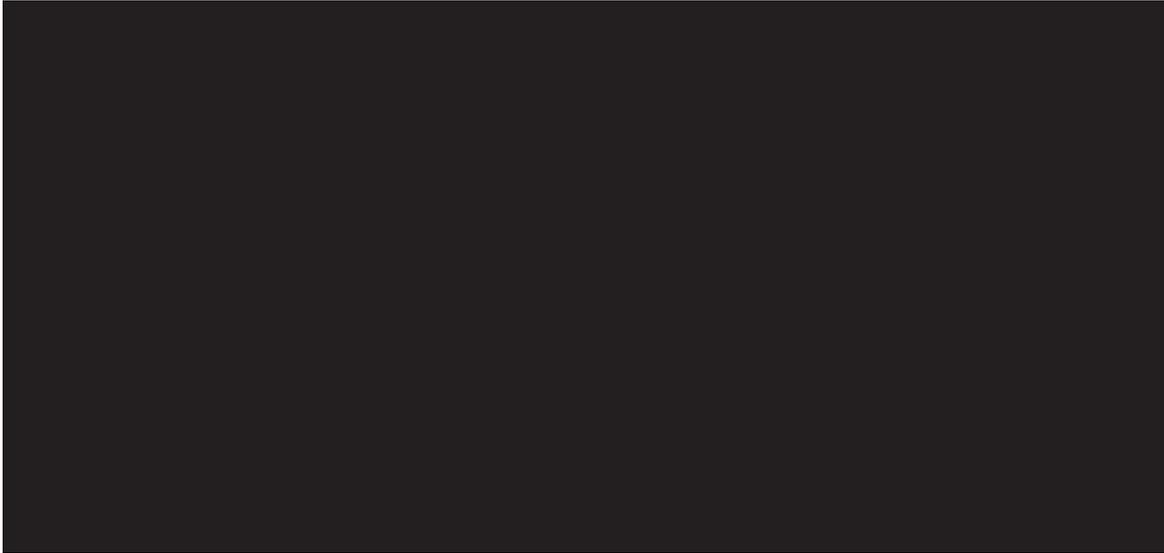
⁶ Rolls-Royce's referral submission dated 11 December 2015 and later submission dated 26 February 2016.

⁷ The additional argument regarding this engine presented by Rolls-Royce at the oral hearing (minutes 3.22 and 3.35) was not sufficiently linked to the Contract to assist in this regard.

⁸ This applies equally to the Adour-specific costs extracted from the wider breakdown by Rolls-Royce in its submission of 26 February 2016.

Forward sales and marketing

- 3.30 In order to support its contention that the pool of sales and marketing costs is Allowable, Rolls-Royce asserted that its level of overheads is dependent on forward sales being achieved, which it stated may only be achieved by reason of the spending on sales and marketing. This is one way in which Rolls-Royce sought to demonstrate a link between the pool of sales and marketing costs and the Contract.
- 3.31 Rolls-Royce provided the SSRO with a sales projection chart (below), which is intended to demonstrate the impact of anticipated sales on Rolls-Royce's overheads.



- 3.32 The chart does not assist in establishing a link between the sales and marketing costs and the Contract, as Rolls-Royce has not demonstrated the following:
- the basis of its sales forecast and of underlying assumptions driving that calculation, and how it has determined the level of speculative sales;
 - the evidence to support the soundness of those sales assumptions;
 - the impact on cost for the defence business, or the link between sales forecasts and indirect costs; and
 - the impact on the direct and indirect costs of the Contract.
- 3.33 In the absence of such material, the SSRO considers that the information provided on forecast sales does not contribute to demonstrating that the sales and marketing costs meet the AAR test.

Benefits to the Contract

- 3.34 Rolls-Royce has asserted that the benefits to the Contract total £12.19 million. Representations were made by Rolls-Royce that the £12.19 million would be benefits lost to the MOD if it does not take a share of the sales and marketing costs. Rolls-Royce has not, however, provided the SSRO with calculations, supporting explanations or evidence that sufficiently supports this assertion.
- 3.35 The SSRO understands that the figure of £12.19 million is the same as the "circa £12 million" figure, which is referred to in the chart above as representing the benefit of forecast sales. For the reasons given in paragraph 3.32 above, the SSRO considers that the chart does not assist to demonstrate that the pool of sales and marketing costs satisfies the AAR test.

3.36 Rolls-Royce proposed that, if it was not permitted to apportion its sales and marketing costs to the Contract, it might ring-fence MOD activity from Rolls-Royce's civil work⁹ with a consequent increase in overheads in subsequent contracts¹⁰. This potential ring-fencing has neither been evidenced nor demonstrated to the SSRO by Rolls-Royce and, to the extent that it concerns future activity and future contracts, is not clearly relevant to the referral. The SSRO does not propose to comment on whether such ring-fencing would lead to costs that satisfy the AAR test.

Conclusions

3.37 Having reviewed the referral with regard to sales and marketing, supplementary submissions and information presented at both the informal hearing and the oral hearing, the SSRO's determination is that Rolls-Royce has not sufficiently substantiated the basis for meeting the AAR test, and the costs should therefore not be Allowable.

3.38 Rolls-Royce based its overheads for the Contract on assumed future sales and argued that future sales and marketing will have a positive effect on this Contract's overheads. However, the SSRO was not satisfied that the material submitted demonstrated a sufficient link between the identified costs and a benefit to the Contract to satisfy the AAR test. It should be noted that Rolls-Royce's previous expenditure on sales and marketing, which has affected the overheads of this Contract, has already been recovered¹¹. Sales and marketing costs may be considered Allowable as and when they are shown to have reduced the cost of future overheads.

3.39 Rolls-Royce has not satisfactorily demonstrated that sales and marketing activity assumed during the life of this Contract has a benefit to this Contract sufficient to satisfy the AAR test. In particular, evidence has not been provided to the SSRO in the following areas:

- articulation of exactly what activities the sales and marketing costs relates to, in which case they cannot be treated as either attributable or appropriate; and
- how the sales and marketing expenditure relates demonstrably to any benefits to the MOD under the Contract, in which case they are not reasonable in the circumstances, including:
 - a. the basis of and supporting evidence for forecast sales assumptions;
 - b. details on what costs (direct costs and overheads in the Contract) are affected by the forecast sales and how; and
 - c. the calculation and supporting evidence for the assumed benefit to the MOD.

3.40 The SSRO also notes that Rolls-Royce has argued that its export sales contribute to levy payments to the government. The SSRO does not consider this to be a relevant argument as the payments do not benefit this Contract, and therefore do not support the sales and marketing costs meeting the AAR test.

3.41 In relation to the direct bid costs of £0.166 million, the SSRO determines that:

- these should be dealt with as direct costs rather than being included in the pool of sales and marketing that Rolls-Royce has sought to apportion to the Contract; and
- no evidence has been presented to demonstrate that the bid costs satisfy the AAR test and, consequently, the SSRO cannot determine that these are Allowable Costs.

⁹ Rolls-Royce submissions of 5 February 2016.

¹⁰ Rolls-Royce explained this argument in different ways in its submissions of 5 February 2016, 26 February 2016 and 11 March 2016 as well as in the oral hearing held on 2 March 2016.

¹¹ Oral hearing minutes, paragraph 3.26, regarding sales and marketing costs for 2013/14.

- 3.42 It is the SSRO's determination that insufficient evidence has been provided to demonstrate that any of the £4.4 million pool of sales and marketing costs meet the AAR test in relation to the Contract. The whole of the amount included in the Contract for sales and marketing is therefore determined as not being an Allowable Cost.
- 3.43 The SSRO determines, pursuant to Section 20(6) of the Act, that the price payable under the Contract is to be adjusted by removing from the Allowable Costs of the Contract the entirety of the amount attributable to the £4.4 million sales and marketing costs, with a consequential reduction in the profit payable under the Contract. The SSRO calculates that this will result in a total reduction in the Contract price of £0.452 million made up as follows:

	£m
Costs reduction	£0.409
Profit (at baseline profit rate)	£0.043
Total	£0.452

- 3.44 The SSRO's determination does not preclude contractors, including Rolls-Royce, from including sales and marketing in their costs, but does reiterate the need for evidence to be provided to the MOD, and made available to the SSRO for compliance and referral purposes. This should clearly articulate and demonstrate that the costs are linked to, and benefit, the QDC in question and that they meet the AAR test.
- 3.45 The SSRO does not prescribe upon what basis costs are linked to a contract, only that the supporting evidence and narrative should be provided on which a judgement can be made. The SSRO observes that any evidence provided to demonstrate a link between sales and marketing expenditure should be based on retrospective sales as evidence of the costs reducing over time and therefore founded in actuals rather than subjective forecasts and concomitant benefits.

4. Determination Question 2: Cost Risk Adjustment

Matter referred for determination

4.1 Rolls-Royce additionally asked:

- whether the appropriate amount of cost risk adjustment had been agreed under step 2 of Section 17(2) of the Act and Regulation 11 of the Single Source Cost Regulations 2014.

4.2 The SSRO may determine this question pursuant to Regulation 18(2) of the Single Source Cost Regulations. If the SSRO determines that the amount of the agreed cost risk adjustment is not appropriate, then it may determine that the Contract price is to be adjusted by a specified amount.

4.3 In making the determination, the SSRO has had regard to relevant material as set out below. The matters required by the Single Source Cost Regulations 2014 have been considered, including:

- the information that was available to each party at the time of the agreement, as disclosed to the SSRO by each party;
- the statutory guidance in place at the time of agreement and the extent to which it has been followed;
- the terms of the Contract;
- relevant previous decisions of the SSRO; and
- representations made by the parties to the Contract.

The Statutory Cost Risk Adjustment and SSRO guidance

4.4 The Act (Section 17(2)) and the Single Source Contract Regulations 2014 (Regulation 11(3)) set out the requirement for the cost risk adjustment:

“Adjust the baseline profit rate by an agreed amount which is within a range of plus or minus 25% of the baseline profit rate, so as to reflect the risk of the primary contractor’s actual Allowable Costs under the contract differing from its estimated Allowable Costs”.

4.5 Regulation 18 of the Single Source Contract Regulations 2014 sets out that:

“18(1) This regulation applies to any adjustment that has been agreed under step 2, 3 or 6 in regulation 11 (including an adjustment agreed on a group basis under regulation 13).

(2) The SSRO may, on an application by the Secretary of State or the primary contractor made within two years after the contract completion date, determine whether the amount of the adjustment is appropriate.

(3) In making a determination, the SSRO must have regard to -

- (a) the information that was available to each party, and*
- (b) the statutory guidance in place, at the time of agreement.*

(4) In making a determination that relates to the amount of an adjustment agreed under step 2 (cost risk adjustment), the SSRO must have regard to the terms of the contract.

(5) If the SSRO determines that the amount of the adjustment was not appropriate, it may determine that the contract price is to be adjusted by a specified amount.”

4.6 The SSRO's Statutory Guidance on Adjustments to the Baseline Profit Rate issued in March 2015 was current at the time that the Contract was entered into and applied to the Contract. Rolls-Royce relied on a consultation draft of 20 February 2015, but that was never guidance issued by the SSRO. The applicable guidance sets out that the cost risk adjustment guidance is principles, rather than rules, based. In summary, and relevant to the Contract, the Statutory Guidance provides that:

- a contract priced according to the firm or fixed pricing methods may attract a cost risk adjustment up to 25 per cent;
- less than a 25 per cent adjustment, including a negative adjustment, may be applied if a contract is routine in nature or low risk; and
- when determining the cost risk adjustment, ten principles are to be taken into account, which are set out in more detail below.

4.7 The ten principles specified in the guidance are:

- a. only consider uncertainties that impact on Allowable Costs;
- b. be based upon an assessment of how actual Allowable Costs may differ from estimated Allowable Costs;
- c. be entirely consistent with the contract requirement;
- d. be consistent with the overall project approach to risk, such as risk allocation, management, and risk registers;
- e. take into account the extent to which the cost risk has been mitigated, for example through good business practices or insurance;
- f. take into account any cost risk exposure which has been mitigated through contract terms and conditions;
- g. take into account any contractual terms that pass on some or all of the cost risks onto a party other than the contractor;
- h. take into account any allowance for contingency that may have been included in particular elements of the Allowable Costs;
- i. not take into account uncertainty resulting from force majeure for example an unforeseeable natural phenomenon; and
- j. be based on reasonable documented assumptions.

4.8 As the statutory guidance is principles-based, it does not specify circumstances in which a particular level of cost risk adjustment is made. Each contract should be considered by its parties in respect of its unique terms and conditions and in the context of the principles set out above when establishing an appropriate and compliant cost risk adjustment. The SSRO has applied the principles as appropriate to this Contract, having regard to the evidence provided.

The agreed adjustment

- 4.9 The parties agreed a compromise of plus 12.5 per cent cost risk adjustment in order to sign the Contract on 1 December 2015, on “*the agreement that the contractor will seek a determination from the SSRO on the level of cost risk adjustment*” and that the Contract price would be retrospectively adjusted to reflect the outcome of the determination¹².

Rolls-Royce’s case

- 4.10 Rolls-Royce asserts that the Contract is not ‘routine’ or ‘low risk’ in nature, and therefore that the Contract attracts a plus 25 per cent cost risk adjustment. This view is based on the following arguments put by Rolls-Royce:
- it has assumed very high levels of risk that are not normally assumed by contractors and that are not fully or adequately reflected in the Contract cost base;
 - these risks are addressed by a profit additive instead of an adjustment to the Contract cost base;
 - the risk in the cost base was specifically negotiated on the assumption that Rolls-Royce would receive a fair and proportionate adjustment to the profit rate (the full 25 per cent profit additive); and
 - there is no double counting of the risks between the cost base and the profit uplift.
- 4.11 It is Rolls-Royce’s view that availability contracts are inherently risky as there is a degree of uncertainty about the maintenance and replacement work that will be required of Rolls-Royce in ensuring daily engine availability¹³. Rolls-Royce believes that, by having responsibility for the whole engine availability programme, it has assumed a high degree of risk compared to assuming responsibility for discrete sections of an engine’s maintenance programme (for instance, spares provision).
- 4.12 Rolls-Royce considers the key performance indicators that it has to meet are challenging and uses two separate arguments to support its claim:
- Firstly that the Mk151 fleet is ageing and in its last five years of service, making it difficult to manage the supply chain. It believes that it has a challenging target set by the MOD relating to a Return to Produce (RTP) programme whereby redundant engines are cannibalised for parts, to mitigate the maintenance of the reducing fleet, or whole major assemblies are returned as A2¹⁴ stock.
 - Secondly that it describes service provision for the Mk951 engine to be high risk because it has not been flown enough under the previous contract to have been through a full maintenance lifecycle. Rolls-Royce therefore considers that Rolls-Royce is still in the early learning curve on maintenance risks on this particular mark of engine, which it is overhauling for the first time during the Contract. It believes that the overhaul process is challenging under the current key performance indicators.
- 4.13 Rolls-Royce presented a risk register to substantiate its claim that the Contract is high risk (Appendix B). The risk register contains 15 separate risks with an explanation of each, an assessment of its likelihood and a statement of the associated costs.

¹² Schedule 7 Clause 1.7 of the Contract.

¹³ Rolls-Royce has described the features of the Contract on 11 December 2015, 10 February 2016, 2 March 2016 and 11 March 2016.

¹⁴ A2 stock is refurbished major equipment which is usable.

The MOD's case

- 4.14 The MOD disagrees that sufficient evidence has been provided to demonstrate a high risk contract and deems the Contract to be of moderate risk, thereby attracting a zero per cent cost risk adjustment. The MOD stated that it has taken a similar approach for other availability contracts with other contractors.
- 4.15 The MOD counters Rolls-Royce's arguments and has stated, in evidence commenting on Rolls-Royce's submissions to the SSRO¹⁵ and at oral hearings¹⁶, that Rolls-Royce's view is incorrect because there are a number of items included in Allowable Costs that provide funding for risk. For example, Allowable Costs include estimating risk calculated using a Monte Carlo simulation, learner curve funding, risks regarding Return to Produce yield and higher than normal inflation rates on spares. The MOD also argued that provisions within the Contract also mitigate risks, such as the clauses dealing with over and under flying.
- 4.16 The MOD recognises that there are risks that are not funded in Allowable Costs, for instance supply chain risk, but considers that these are not difficult for Rolls-Royce to manage. In support of this, the MOD relies on the following: Rolls-Royce is an expert in its field; Rolls-Royce designed the engine and has been maintaining it since it came into service; Rolls-Royce has sophisticated risk models; and Rolls-Royce has consistently met its key performance indicators. Based on these considerations, the residual risk after funding and mitigations is considered moderate by the MOD.
- 4.17 Furthermore, the MOD disputes Rolls-Royce's assertion that the key performance indicators are challenging and add risk, and confirmed that these are in line with previous contracts where they were consistently met.

Consideration of the evidence

- 4.18 The Contract uses the firm and fixed pricing methods. This means that the costs used to determine the Contract price are estimated costs and there may be a risk that the contractor's actual costs will differ from them. For a contract of this kind, the Statutory Guidance makes clear that the cost risk adjustment is to be determined by reference to the principles and Step 2 states that this may be between minus 25 per cent and plus 25 per cent.
- 4.19 Rolls-Royce made claims at both the informal oral meeting and the oral hearing that the MOD had agreed in the negotiation that a profit rate additive should be applied to compensate for the result of the negotiations on costs. This has been contested by the MOD and the SSRO has yet to receive any evidence to support those claims.
- 4.20 Rolls-Royce states that the Contract is not routine¹⁷, and that a plus 25 per cent cost risk adjustment is applicable. This involves an incorrect interpretation of the Statutory Guidance summarised at paragraph 4.6 above. The Statutory Guidance makes clear that a routine contract may attract a negative cost risk adjustment. This does not mean that the defining question for whether a contract attracts a positive cost risk adjustment is whether it is routine or not. To the contrary, it is clear that the cost risk adjustment is to be determined having regard to the principles summarised at paragraph 4.7 above. The individual circumstances of each contract should be considered against the principles.
- 4.21 The SSRO considers that availability contracts potentially have a higher than average risk, but the cost risk adjustment must still be judged against the principles as summarised in paragraph 4.7 above. Having regard to those principles it is relevant to take into account the ways in which risk has been mitigated, either in the price or in the terms of the Contract (see principles (d), (f) and (h)).

15 MOD submissions of 23 February 2016 and 15 March 2016.

16 Oral hearing of 2 March 2016 and informal meetings of 10 February 2016.

17 Rolls-Royce's argument is set out more fully in paragraph 4.10 and is referred to in submissions dated 11 December 2015 and 11 March 2016.

Risk mitigated in the Contract price

4.22 The SSRO has considered the risk built into the cost base. Price risk such as that referred to in the SSRO's guidance, called 'estimating risk' by the contractor, is included within Allowable Costs, and agreed with the MOD, and has been based on a Monte Carlo simulation on costs relating to:

- labour costs for the Mk151 planned roll programme for engine maintenance and unplanned inductions for engine repair;
- spares costs for both engine marks;
- technical services labour for both engine marks;
- module arisings¹⁸ relating to the Mk951 engine; and
- United Technologies Aerospace Systems (subcontractor) accessory arisings for both engine marks.

4.23 The SSRO considers that the total of the managed risk modelled as described above, which has been accepted as price risk and allowed in the Contract deals with a substantial proportion (estimated at 59 per cent) of the Allowable Costs. It results in significant mitigation of risks which are in the control of Rolls-Royce.

Risk mitigated in the Contract provisions

4.24 The SSRO's guidance states that contractors should take into account the extent to which the cost risk has been mitigated, for instance, through good business practices and contract terms and conditions. The Contract provisions which mitigate risk include, but are not restricted to:

- over and under flying (Schedule 7 Annex C);
- cost of additional service (Schedule 7 Clause 6.1);
- force majeure (Main Contract Clause 29);
- stock write-off and obsolescence¹⁹ (Schedule 3 Clause 22); and
- legislative risk (Main Contract Clause 47).

4.25 As an example, the risk of stock write-off due to the customer under-flying the Mk151 engines demonstrates a risk that may be adequately compensated via the Contract. The Contract includes and compensates for any under-fly adjustments, for the customer flying as low as 70 per cent of the baseline assumptions, which aim to reimburse Rolls-Royce for its fixed costs. The Contract also compensates the contractor via Allowable Costs for resultant stock write-off and obsolescence²⁰.

Key performance indicators

4.26 Rolls-Royce also states that the challenging nature of the key performance indicators it has to meet demonstrates that the Contract is high risk.

4.27 Schedule 9 of the Contract requires Rolls-Royce to meet [REDACTED] key performance indicators ([REDACTED]), which respectively specify the number of each engine type (Mk151-01, Mk151-02 and Mk951) that must be available each business day at military bases. The Contract specifically rewards over-performance by providing for incentive payments to Rolls-Royce if it exceeds the number of engines required to be available. However, if Rolls-Royce does not make the required number of engines available, then the MOD is entitled to price deductions. [REDACTED]

¹⁸ Schedule 1 of the Contract.

¹⁹ Agreed by the MOD in its response to the Oral Hearing minutes paragraph 2.20.

²⁰ Agreed by the MOD in its response to the Oral Hearing minutes paragraph 2.20.

- 4.28 It is clear that deductions may be made from the Contract price if Rolls-Royce fails to meet the key performance indicators. These deductions are taken from the Contract price and do not affect the Allowable Costs used to determine that price. Should Rolls-Royce fail to meet the key performance indicators there is a risk that it will be liable to price deductions; in this context, there is not a risk that the actual Allowable Costs will exceed the estimated Allowable Costs. Having regard to the content of step 2, which is set out at paragraph 4.4 above, and principles (a) and (b) at paragraph 4.7 above, the SSRO does not accept that a risk that Rolls-Royce will fail to achieve the key performance indicators is relevant for the purposes of supporting a cost risk adjustment.
- 4.29 Even if the risk of Rolls-Royce failing to meet the performance indicators was a relevant risk for the purposes of the cost risk adjustment, the SSRO is not satisfied that it would justify a positive cost risk adjustment by reason of the following:
- a significant proportion of the Contract cost is provided for via estimated and modelled price risk, as set out at paragraphs 4.22 and 4.23 above;
 - a number of other risks are provided for within the contractual provisions, described at 4.24 and 4.25 above;
 - evidence was provided at the oral hearing stating that Rolls-Royce “*historically achieved the key performance indicators*”²¹ which on the Contract revise downwards over the term (Schedule 17)²²; and
 - no evidence was provided to support that the key performance indicators agreed in the Contract are unreasonable or unachievable within the contracted costs, and this applies equally to projected costs for maintenance and overhauling referred to in paragraph 4.12.

The risk register

- 4.30 Rolls-Royce has sought to prove that there is a high risk of actual costs differing from estimated costs through its programme risk register²³. The SSRO notes that Rolls-Royce considers the programme risk register as evidence for a plus 25 per cent cost risk adjustment, as the quantum of all programme risks exceed the maximum possible cost risk adjustment. The SSRO does not agree that this demonstrates that the Contract is high risk for reasons set out more fully below.
- 4.31 As set out at paragraph 4.18 above, contracts should be considered in terms of where they sit across a risk spectrum, one end of which attracts a minus 25 per cent cost risk adjustment (low risk contracts) and the opposite end of which attracts a plus 25 per cent risk adjustment (high risk contracts). The appropriate cost risk adjustment is determined by application of step 2 (see paragraph 4.4 above), having regard to the principles set out at paragraphs 4.6 and 4.7 above.

21 Minutes of the oral hearing on 2 March 2016.

22 This was countered by Rolls-Royce in its response to the minutes of the oral hearing held on 2 March 2016, however a graph provided by Rolls-Royce on 17 February 2016 shows that it was historically largely compliant with its KPIs relating to the Mk151 engine.

23 Rolls-Royce put iterations of the programme risk register to the SSRO on three occasions on 11 December 2015, 26 February 2016 and 11 March 2016 and discussed the risk register at the oral hearing on 2 March 2016.

4.32 The SSRO notes that of the 15 risks presented in Rolls-Royce's risk register:

- eight were claimed as costs by Rolls-Royce, in the form of price risk, during negotiations with the MOD, but the Contract was entered into without agreement between the parties that these were Allowable Costs. Rolls-Royce has then subsequently moved these items to its programme risk register (this applies to items 1, 3, 7, 10, 11, 12, 13 and 15 in the register);
- two were voluntarily eliminated by Rolls-Royce²⁴ as an acknowledgement that it was already compensated for as part of price risk (this applies to items 6 and 8 in the register); and
- the remaining five are considered separately at paragraph 4.39.

Price risk

4.33 Risks that are within the control of the contractor, such as those in paragraph 4.22 above, may be priced into the Contract as price risks if they satisfy the AAR test. Such costs, or elements of them, should not be included in a programme risk register, which should only identify risks over which the contractor has no, or very limited, control.

4.34 The SSRO considers that price risks that the parties have not agreed to be Allowable Costs should not support a positive cost risk adjustment to the baseline profit rate. If the parties have not agreed that the price of particular risks controlled by the contractor are Allowable Costs, then this means there is no consensus that they are appropriate, attributable to the Contract and reasonable in the circumstances. No justification has been provided either for placing the rejected items in a programme risk register, nor to explain on what basis they might support a conclusion that actual Allowable Costs might differ from estimated Allowable Costs as required by step 2. The SSRO considers that none of the eight risk register items that have been treated in this way, and which are referred to at paragraph 4.32 above, support a positive cost risk adjustment.

4.35 By way of illustration the Contract price includes an amount for warranty costs which the parties agreed were Allowable Costs. During negotiations with the MOD, and audit by CAAS, only half of the warranty cost originally claimed by Rolls-Royce was agreed as a realistic and modelled risk and therefore an Allowable Cost.

4.36 Following negotiations, Rolls-Royce moved the remaining 50 per cent of warranty risk, which was deemed as not meeting the AAR test, to its risk register and claimed that it represents a programme risk. Rolls-Royce bases its approach on the premise that there is 50 per cent probability that warranty costs of ██████████ will arise.

4.37 Rolls-Royce has provided some data to demonstrate that historically warranty costs were ██████████. However the analysis provided appears skewed upwards, in particular by costs incurred in 2015, and does not provide explanation for why the costs were incurred historically. It also does not explain why Rolls-Royce assesses the risk to be ██████████ throughout the Contract nor why there are significant fluctuations in both the numerator and denominator of the analysis.

4.38 This evidence was produced on different equipment, whereas the evidence on the relevant Contract indicates that a ██████████ risk is appropriate and matches the fleet concerned. Rolls-Royce has already modelled for warranty costs, an element of which has been Allowed on presentation of the model. The remaining claim for risk does not transfer and qualify for cost risk adjustment.

²⁴ Rolls-Royce submission of 26 February 2016.

Remaining risk register items

4.39 Of the remaining five risks in the programme risk register:

- a. Rolls-Royce submission of 26 February 2016. two of the risks (items 2 and 9) are substantially within the control of the contractor to mitigate via management decisions. These should have been considered as price risk and included in the Allowable Costs if they satisfied the AAR test, but were not;
- b. one (item 4) includes elements that are subject to external factors outside the control of the contractor however the contractor is protected for several of these items via the Contract terms, those that are not covered by the Contract are deemed to be of limited programme risk; and
- c. two of the risks (items 5 and 14) may be considered as viable programme risk as there are key interdependencies of which the contractor does not have full control, however the basis for the contractor's risk estimate incorporates only a downside model with no upside balance²⁵.

4.40 On the evidence presented, the SSRO considers that the programme risk register demonstrates at best marginal risks, which do not support a positive cost risk adjustment.

Modelling the risk register

- 4.41 The SSRO has been informed by Rolls-Royce that the programme risk register was established using single point estimates, but has not been provided with supporting evidence as to the grounds upon which these single point estimates have been established nor the probability assessments to generate a weighted risk. The SSRO has observed that many of these risks were assessed in excess of 50 per cent probability, and in one instance at 85 per cent.
- 4.42 Explanations for the basis of the probability used and the price impact itself have not been provided either to the extent that it is required for the SSRO to understand each risk, or in accordance with best practice. While the SSRO does not prescribe how risk assessment is undertaken nor which tools and techniques are employed, it expects that contractors are able to provide robust explanations for the use of them.
- 4.43 In a previous referral the SSRO stated its opinion²⁶ that in some cases of large and complex projects, it may be appropriate to use more than one risk technique for the purposes of cross-validation. This was raised at the oral hearing, and Rolls-Royce commented that it had only used one technique, and then on a one point estimate. This one point estimate used by Rolls-Royce was ungrounded, with insufficient evidence, and is not in accordance with modelling standards on the use of Programme Evaluation and Review Techniques (PERT), which is recognised best practice²⁷.
- 4.44 Rolls-Royce did produce a Monte Carlo analysis on the programme risks following a request at the oral hearing. The inputs to a modelling programme are equally, if not more, important than the method of the model employed. Rolls-Royce provided little explanation for the inputs to this Monte Carlo analysis, including the assumptions for the minimum and maximum range and why a number of the 'most likely' inputs differed to numbers quoted in previous submissions of evidence. The SSRO finds that this new analysis, upon review, adds nothing to the argument.

²⁵ The arguments set out in paragraph 4.12 in reference to the Mk151 engine are covered by the SSRO's assessment of items 5, 14 and 12 on the programme risk register.

²⁶ SSRO Opinion 1 published on 30 November 2015: <https://www.gov.uk/government/publications/ssro-anonymised-summary-of-first-formal-opinion-on-a-qualifying-defence-contract>

²⁷ Evolution of Project Management (S Azzopardi).

Conclusions

- 4.45 The SSRO's determination is that the appropriate cost risk adjustment for the Contract is zero per cent. While a contract of this kind (contract which is a firm and fixed price and an availability contract) may attract a positive cost risk adjustment, the SSRO finds that there has been significant mitigation of the risk of Rolls-Royce's actual Allowable Costs differing from its estimated Allowable Costs. Substantial provision for risks has been priced into the Allowable Costs via "estimating risk" and risks have been further managed by contractual provisions.
- 4.46 In particular, with reference to the arguments put to the SSRO regarding the constancy of under-flying and over-flying, the SSRO is not persuaded by the evidence presented that any residual risk is sufficient in this case to justify a positive cost risk adjustment.
- 4.47 Rolls-Royce's programme risk register does not assist to demonstrate that a positive cost risk adjustment is appropriate for the following reasons:
- the items on the programme risk register that correspond to amounts removed from Allowable Costs during negotiations with the MOD should not be included in such a register and, in the absence of some proper justification, do not support a positive cost risk adjustment;
 - overall, based on the material provided, the items on the programme risk register are considered to be minimal risk; and
 - to the extent that risks are properly included on the programme risk register the SSRO considers they have not been properly modelled.
- 4.48 Taking into account the above matters, the SSRO considers there is an average risk that Rolls-Royce's actual Allowable Costs will differ from its estimated Allowable Costs and that the appropriate cost risk adjustment is zero.
- 4.49 Having regard to the determination that the appropriate cost risk adjustment is a zero per cent cost risk adjustment, the SSRO's further determination is that the Contract price is to be adjusted by re-calculating the Contract profit rate with a zero per cent cost risk adjustment rather than a positive 12.5 per cent cost risk adjustment as is currently applied in the Contract.

5. Costs and Publication

Costs

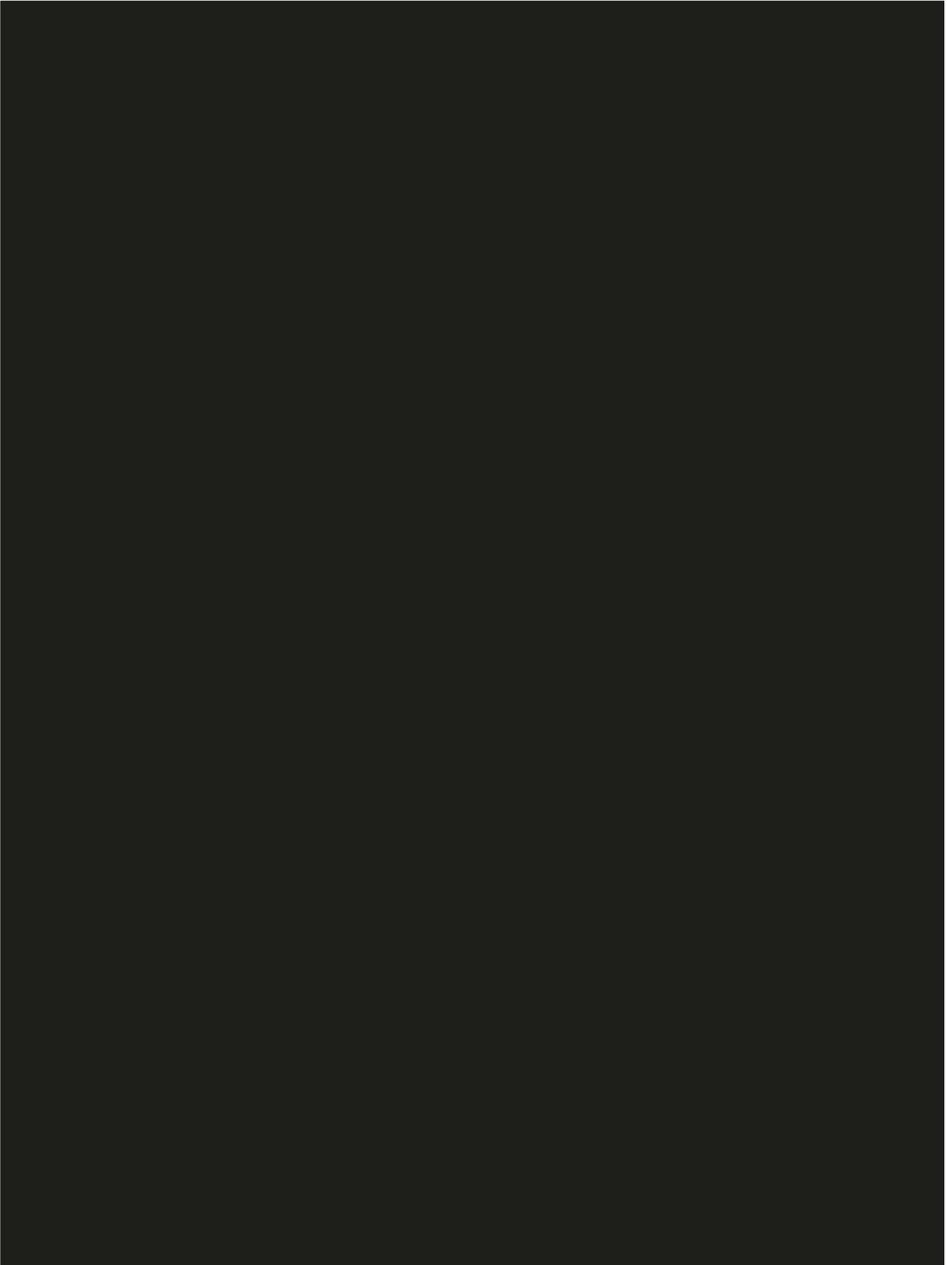
- 5.1 When making its determination, the SSRO may require the payment of such costs as the SSRO considers appropriate (Section 35(4) of the Act). The SSRO's view is that it does not require such a payment.

Publication

- 5.2 The determination is published in full to the contracting parties. A redacted version is published on the SSRO website, and will be included in the SSRO's annual Compliance Report.

Appendix A

Extract from referral submission from Rolls-Royce dated 11 December 2015:



Appendix B

Programme risk register

