Title: Updating the licence modification process for the en-route air traffic licence **IA No:** DfT00368 **RPC Reference No:** RPC-3550(1)-DFT **Lead department or agency:** Department for Transport **Other departments or agencies:** Civil Aviation Authority	**Impact Assessment (IA)** **Date:** 03/11/2016 **Stage:** Final (Validation) **Source of intervention:** Domestic **Type of measure:** Primary legislation **Contact for enquiries:** Shafiq Pandor (shafiq.pandor@dft.gsi.gov.uk)
Summary: Intervention and Options	**RPC Opinion:** EANDCB Validated

Cost of Preferred (or more likely) Option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANDCB in 2014 prices)	**One-In, Three-Out**	**Business Impact Target Status**
-£0.28m	-£0.63m	<£0.1m (QRP) <£0.1m NQRP	In scope	Qualifying provision

What is the problem under consideration? Why is government intervention necessary?

NERL is currently the sole provider of en-route air traffic control services over the UK, operating under an economic licence issued by the Civil Aviation Authority (CAA). As NERL operates as a statutory monopoly, it is regulated through conditions in the licence to ensure that it is consistently acting in the interests of consumers. The current regime for modifying licence conditions is unnecessarily time-consuming and distorts the CAA's incentives when seeking licence changes. Proposed licence modifications require the consent of the licence-holder, or, a positive determination from the Competition and Markets Authority (CMA). This encourages the CAA to compromise on regulatory changes to make them acceptable to licence-holders, regardless of the interests of consumers.

What are the policy objectives and the intended effects?

The policy objective is to ensure the CAA is best able to fulfil its statutory duties in relation to en-route air traffic control services, by giving them greater flexibility in modifying conditions of the en-route licence.

The intended effect of the proposal is to ensure that the CAA always acting solely in accordance with their duties, whilst still ensuring that the licence-holder has access to effective safeguards against regulatory overreach (via appeal rights). This in turn will ensure en-route air traffic control services remain safe, efficient, and sustainably run.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Three options had previously been considered during consultation:

Do nothing (discarded option)

Direct licence modification with one-sided appeal rights (discarded option)
Under this option, the CAA will be able to directly make changes to licence conditions without the consent of the licence-holder. The modification will be appealable through an 'on merits' regime, where only the licence-holder having the right to appeal.

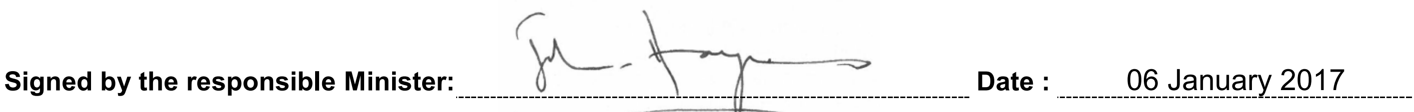
Policy option 1 – Direct licence modification with symmetric appeal rights (chosen option)
Under this option also, the CAA will be able to directly make changes to licence conditions without the consent of the licence-holder. However, under this option, both the licence-holder and any affected customer (i.e. airlines) are able to appeal a decision.

It is proposed that Policy option 1 be taken forward into legislation. Symmetric appeals ensure that the CAA does not have an incentive to water down regulatory changes against the interests of consumers, as a way of making them more acceptable to the licence-holder.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: January/2023

Does implementation go beyond minimum EU requirements?		N/A		
Are any of these organisations in scope?	**Micro** No	**Small** No	**Medium** No	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)		**Traded:** N/A		**Non-traded:** N/A

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.



Signed by the responsible Minister: ______________ **Date :** 06 January 2017

Summary: Analysis & Evidence

Policy Option 1

Description: Direct licence modification with symmetric appeal rights

FULL ECONOMIC ASSESSMENT

Price Base Year: 2016	PV Base Year: 2018	Time Period Years: 20	Net Benefit (Present Value (PV)) (£m)		
			Low: -10.27	**High:** 12.68	**Best Estimate:** -0.28

COSTS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Cost** (Present Value)
Low	0.0	0	0.0	**0.4**
High	0.0		0.7	**10.3**
Best Estimate	0.0		0.2	**2.9**

Description and scale of key monetised costs by 'main affected groups'

The main costs are those of launching an appeal, hearing an appeal and engaging with an appeal, which will be borne by the appellate body, the CAA (as the 'defender' of the appeal), the appellate and any intervener. The scale of the costs are dependent on the likelihood of appeals (which is highly uncertain), and the complexity of the case. However, the proposed 'on-merits' appeal right is more efficient and less-costly than the regime it replaces – an investigation CMA determination.

Other key non-monetised costs by 'main affected groups'

There have been no non-monetised costs identified

BENEFITS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Benefit** (Present Value)
Low	0.0	0	0.0	**0.0**
High	0.0		0.9	**12.7**
Best Estimate	0.0		0.2	**2.7**

Description and scale of key monetised benefits by 'main affected groups'

The main benefit is the avoided costs of CMA determinations, which benefit the CMA (as the appellate body), the CAA (as the regulator), and the NERL (the licence-holder). The scale of the benefits are dependent on the complexity of the cases that would have been heard under the counterfactual. Though, as CMA determinations take an investigative approach, they are more costly than the regime that replaces it.

Other key non-monetised benefits by 'main affected groups'

The key benefit of the proposal is to improve the CAA's decision making, allowing them to better fulfil their statutory duties. There are non-monetised benefits to airlines and airports, who have new appeal rights designed to ensure the CAA is fulfilling its statutory duties to act in their best interests (as consumers), in addition to the interests of passengers and cargo owners. The symmetric appeal rights and the additional layer of transparent scrutiny from the CMA, should also improve decision making and reduce regulatory uncertainty.

Key assumptions/sensitivities/risks — **Discount rate (%)** 3.5%

The monetized net benefit is highly uncertain, as reflected in the wide ranges used in the high and low scenarios. This is because the costs and benefits are highly dependent on the assumed number of appeals, both under the counterfactual and policy option 1. The extension of appeal rights means it should be expected that more appeals are launched, which is reflected in the analysis. However, the scale of the increase is highly uncertain. Similarly, the likely complexity (and therefore cost) of cases is also unknown. This uncertainty is reflected in the wide ranges used in the high and low scenarios.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			**Score for Business Impact Target (qualifying provisions only) £m:** 0.0
Costs: 0.1	Benefits: 0.1	Net: 0.0	

Evidence Base

1 Introduction

1.1 Background

NATS Holdings Ltd (formerly National Air Traffic Services) provides en-route air traffic control services in the UK and Eastern North Atlantic Airspace and control tower services in the UK and abroad. It is split into two businesses which provide distinct services:

- **NATS En-Route plc (NERL)** – the economically regulated part of the business which provides en-route air traffic management services to aircraft within the UK and Eastern North Atlantic airspace; and
- **NATS Services Ltd (NSL)** – the unregulated part of the business which provides air traffic control services at some of the UK's major airports and Gibraltar, as well as consulting services.

NATS operates NERL as a statutory monopoly under a licence granted by the Secretary of State on 28 March 2001. The Transport Act 2000 confers on the Civil Aviation Authority (CAA), as the UK's specialist aviation regulator, the role of economic regulator of NERL.

The CAA is responsible for monitoring and enforcing NERL's compliance with the conditions of the licence and with its duties under the Transport Act 2000. It also has powers to modify conditions in the licence, subject to a number of statutory responsibilities. Its primary duty is to maintain a high standard of safety in the provision of air traffic services, whilst its secondary duties are:

- To further the interests of operators and owners of aircraft, owners and managers of aerodromes, persons travelling in aircraft and persons with rights in property carried in them;
- To promote efficiency and economy on the part of licence holders;
- To secure that licence holders will not find it unduly difficult to finance activities authorised by their licences;
- To take account of any international obligations of the United Kingdom notified to the CAA by the Secretary of State; and
- To take account of any guidance on environmental objectives given to the CAA by the Secretary of State after the coming into force of this section.

1.2 Problem under consideration

The Transport Act 2000 sets out the current process for modifying conditions in the en-route air traffic services licence.

Currently, the CAA must consult on a proposed licence modification and obtain agreement from the licence-holder before the modification can be made. NERL must consent to any proposed licence modification before it can be implemented. If agreement cannot be reached, the CAA has to either abandon the proposal, change them so as to secure NERL's consent, or make a reference to the Competition and Markets Authority (CMA). The CMA will independently investigate and make a determination on whether the proposed modification meets certain public interest considerations and can be imposed.

The reference to the CMA and subsequent determination can be a costly and time-consuming process, and therefore, the CAA is more likely to seek a compromise position with the licence-holder to achieve a mutually acceptable outcome. This risks both delaying and significantly weakening the benefits to consumers from any licence modification the CAA intends to implement.

In recent years, there have been two serious system failures that have prompted reviews of the regulatory framework for NERL. The first incident, a Voice Communications (VCS) failure on 7 December 2013, had a particularly disruptive effect on passengers, prompted a wide-ranging CAA review into the NERL licence and regulatory framework. Following a second system failure on 12th December 2014, the CAA and NATS established an independent enquiry into the cause of the failure. The independent enquiry into the 2014

system failure[1] however made a number of recommendations to update and modernise the licensing framework. Given the need to ensure the NERL licence adequately ensures service continuity and operational resilience, the CAA's ability to make changes to the licence independently of the licence-holder, has become more important.

1.3 Policy objectives

The Government's objective is to ensure the licensing framework for en-route air traffic control services:

- Continues to maintain a high standard of safety and service continuity;
- Supports economic growth and promotes efficiency in the provision of air traffic services;
- Takes into consideration the Government's principles on better regulation; and
- Accommodates the changing landscape of air traffic services.

As a means of delivering this objective, the Government has a policy aim to ensure the CAA has access to the right tools to fulfil its statutory duties to users and consumers, and is given sufficient flexibility to adapt to a changing economic and technological landscape.

2 Description of policy options

2.1 Preferred option – Direct licence modification with symmetric appeal rights (Option 1)

Under policy option 1, the licence modification process would work as follows. The process would involve the CAA consulting (as at present) relevant stakeholders about the changes it wants to make and thereafter directing the change to the licensee without having to seek consent from the licensee. This will allow the CAA to modify the licence in the way it feels best maximises the benefits to consumers, without any unnecessary delay.

Any relevant affected party, including the licensee, would have the right to appeal to the CMA after the decision has been made. The right to appeal a licence modification would be on the grounds that the decision to modify the licence was wrong because:

- The decision was based on an error of fact;
- The decision was wrong in law; and/or
- An error was made in the exercise of a discretion.

The CMA, as the appellate body, would be able to quash the decision appealed against, refer the matter back to the CAA to reconsider, or substitute its own decision over that of the CAA.

This approach would ensure there are appropriate checks on the CAA when it makes a licence modification, as the CMA would be able to consider significant economic and factual questions relevant to its determination. We believe allowing symmetric appeal rights (i.e. rights for both the licence-holder and other relevant adversely affected parties) would ensure the CAA retains an appropriate consumer focus.

2.2 Discounted options

Prior to consultation, it was considered whether an asymmetric appeal right (i.e. appeal rights for just the licence-holder) would be more appropriate. However, this option does not take account of the fact that stakeholders other than the licence-holder might also be affected by the CAA's decision to modify the licence and would have no recourse under the licensing regime. It would continue to distort incentives as the CAA, in its decision-making, would only need to consider the possibility of an appeal from the licence-holder and not the possibility of an appeal by other parties who might also be affected by the decision to modify. This carries the risk of potential regulatory overreach and lack of effective checks on the CAA's ability modify the licence in the interests of users and consumers pursuant to its statutory duties

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[1] NATS Independent Enquiry (2015) NATS System Failure 12 December 2014 – Final Report
http://www.nats.aero/wp-content/uploads/2015/05/Independent-Enquiry-Final-Report-2.0.pdf

3 Policy appraisal (including details of assumptions used)

3.1 Scope

In calculating the monetised net benefit of the policy, we just consider the direct financial impact in terms of the removal of determination costs, and the increase of appeal costs. We do not monetize the impact of the change in licence modifications that we expect to result from the policy change.

3.2 Assumptions

3.2.1 Appraisal period

Impacts are assessed across a 20 year appraisal period, instead of the standard 10 years. This is because the existing regulatory system will have been in existence for almost 20 years by time any modification occurs, meaning the proposed system can be considered likely to last equally long.

3.2.2 Number of proposed licence modifications

We assume that the number of licence modifications remain the same under both the counterfactual and policy option 1. Whilst it could be argued that by making it easier for the CAA to make a licence modification could increase the number of modifications proposed, the introduction of new appeal rights for the licence-holder means this is unlikely.

We split modifications by major and minor changes, and assume that over the 20 year appraisal period, the following number of modifications will be proposed:

Table 1 Number of proposed licence modifications

	Low	Central	High	*Source*
Major modifications				
Price controls	4	4	4	One every 5 years
Service continuity/resilience	2	4	6	Discussions with CAA
Financial resilience	2	4	6	Based on historic trend
Total	**8**	**12**	**16**	
Minor modifications				
Price control adjustments	2	4	6	Based on historic trend
Procedural changes	4	8	12	Based on historic trend
Total	**6**	**12**	**18**	

The number of price controls over the next 20 years is fairly certain as these generally take place once every five years. The assumptions around the remaining modifications are largely based on the number of modifications of each type that have taken place in the 15 years since the licence was granted (and then scaled for the 20 year appraisal period).

The only exception to this is the assumed number of service continuity modifications – historically, there have not been any modifications. However, as this policy change has arisen as a result of the two system failures in 2013 and 2014, it is not unreasonable to take the view that the CAA will be proposing licence modifications strengthening the provisions related to service continuity. This was a recommendation of the independent enquiry set up after the two system failures, and the CAA are in the process of introducing a new resilience condition to the NERL licence (which has been jointly developed by the CAA and NERL). After discussions with the CAA, we have assumed that there will be four service continuity or resilience related modifications over the 20 year appraisal period.

3.2.3 Counterfactual

Figure 1 outlines the various possible outcomes under the current regime and the proposed regime. Currently, the CAA can propose a licence modification which is then either accepted or rejected by NERL. If NERL accepts the modification the CAA can implement it. However, if there is a rejection, the CAA must either seek a determination from the CMA, water down the proposals to make them acceptable to NERL, or drop the proposals completely.

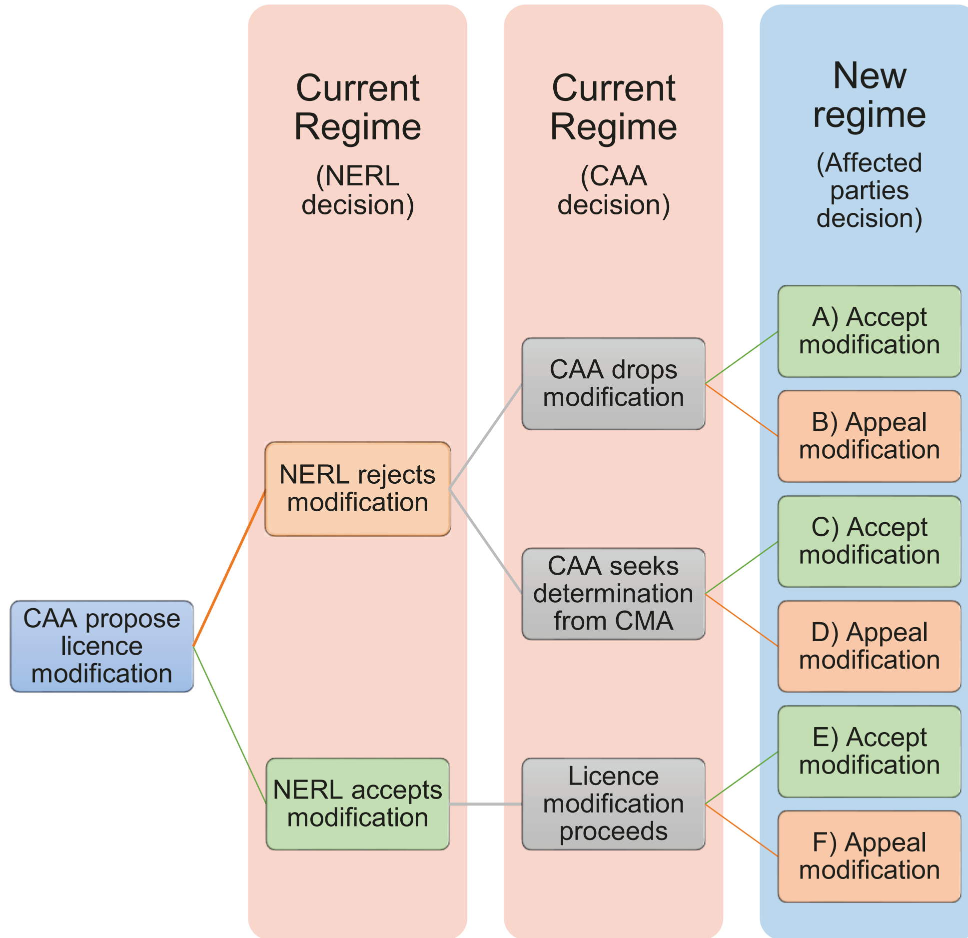


Figure 1 Current and proposed licence modification process

In this IA, we make a number of assumptions on the likelihood of NERL rejecting a licence modification, and the likelihood of the CAA seeking a determination from the CMA in the event of a rejection. The assumed rejection rate in the central case is loosely based on historic rejection rates of the proposed licence modifications. However these assumptions are, by their nature, highly uncertain and hence we have used fairly wide bounds for the high and low estimates.

Historically, the CAA has never sought a determination from the CMA in the event of a rejection of a proposed modification, having come to a compromise arrangement with NERL. However, we believe that it is unlikely this would continue into the future, given the potential need for licence modifications following the two system failures. If future service continuity modifications are rejected by the licence-holder, their importance means that a CMA determination may become the only option.

The assumed likelihood of the events in Figure 1 are as follows:

Table 2 Licence modification appeal rates under the current system

	Low	Central	High
Major modifications, of which:			
Rejected by NERL & CMA determined	0%	9%	24%
Rejected by NERL & dropped	20%	21%	16%
Accepted by NERL	80%	70%	60%
Minor modifications, of which:			

	Low	Central	High
Rejected by NERL & CMA determined	0%	1%	4%
Rejected by NERL & dropped	5%	9%	16%
Accepted by NERL	95%	90%	80%

3.2.4 Number of appeals

Similarly to the counterfactual, we make a number of assumptions on the likelihood of appeals under the new regime. As the new regime introduces appeal rights to airlines, we expect that a (small) proportion of proposed licence modifications that would have been accepted under the current regime, will now be appealed (Box F in Figure 1).

Similarly, a number (though not all) of proposed modifications that would be dropped under the current regime, will now likely be implemented and subsequently appealed by the licence holder (Box B). Finally, a proportion of proposed modifications that would end up with a CMA determination under the current regime, would now end up with an appeal to the Competition Appeal Tribunal (Box D).

The assumed appeal rates are as follows:

Table 3 Licence modification appeal rates under policy option 1

	Low	Central	High
Appeal rate of major modifications, of which previously:			
CMA determined	0%	15%	30%
Dropped	10%	35%	70%
Accepted by NERL	0%	5%	10%
Appeal rate of minor modifications, of which previously:			
CMA determined	0%	15%	30%
Dropped	10%	35%	70%
Accepted by NERL	0%	5%	10%

These are based on discussions with the CAA around the contentiousness of different types of licence modifications. The decision of whether to appeal a licence modification will be a trade-off between the cost of launching and engaging in an appeal, the appellant's likelihood of success, and the appellant's gain from successfully challenging a decision.

With modifications that in the counterfactual will have gone through a CMA investigation and determination, it is expected that the appeal rates would be relatively low – the CAA is unlikely to seek a determination from the CMA unless the gain to consumers and the likelihood of success are both high. Similarly, with modifications that in the counterfactual were accepted by NERL, the appeal rates are expected to be low though not zero. The introduction of new appeal rights to airlines and airports mean that there is a small possibility of an appeal if they believe the licence modification does not go far enough.

Appeal rates for licence modifications that were likely to have been dropped in the counterfactual, are likely to be higher with appellants seeing a higher likelihood of success.

There is significant uncertainty around these assumptions, as the likelihood of appeal will be dependent on the nature of proposed licence modifications, and the likelihood of success at an appeal. Therefore a large range has been used under the high and low assumptions to reflect that uncertainty.

3.2.5 Cost assumptions

For CMA determinations as they exist under the current regime, there are costs to the appellate body (CMA), to the CAA, and to the licence holder. Under policy option 1, there will additionally be costs to appellants that are not the licence-holder and costs to an intervener (a party that is not the appellant but provides evidence in the appeal).

The costs to the appellate body are the administrative costs of hearing an appeal. For the CAA under the current regime, its costs result from seeking a determination and from engaging with the investigative process. Under the new regime however, the CAA will not incur a cost of launching a determination, but will incur a cost from defending an appeal. Finally, the costs to the appellant will be from launching an appeal, whilst the costs to the licence holder (NERL) will be from engaging with the appeals process.

We assume that the costs involved in a CMA determination (of both major and minor modifications), would be of a greater magnitude than the costs involved in appeals (as they exist under policy option 1). This is because determinations are a more involved exercise, which require the CMA to take an investigative approach to their decision-making. Appeals on the other hand are much more limited in scope and are reliant on appellants, the CAA, and interveners, providing evidence.

Table 4 Appeal costs (2016 prices)

Costs (£ 000s)	Major modifications			Minor Modifications		
	Low	Central	High	Low	Central	High
CMA investigation (current system)						
To CMA	871	1,307	1,743	349	523	697
To CAA	545	545	545	218	218	218
To NERL	1,089	1,362	1,906	436	545	762
CMA appeal (policy option 1)						
To CMA	100	545	650	40	218	280
To CAA	100	545	650	40	218	280
To appellant	100	545	650	40	218	280
To intervener	100	545	650	40	218	280

The assumptions around the costs of CMA investigations vs CMA appeals, is largely based on those used in the 2012 Civil Aviation Act impact assessment. The 2012 Civil Aviation Act (CAA12), amongst other things, changed the licence modification process for economically regulated airports, to a CMA 'appeal-on-merits' regime. The costs used in the 2012 impact assessment form the central assumptions in this IA, uprated to 2016 prices. As no appeals have actually taken place since the launch of the new, it is difficult to validate and update these assumptions.

The high and low estimates of the costs of the current system are also based on the CAA12 IA. The low estimates of the costs of policy option 1 are based on more recent discussions with the Competition Appeal Tribunal (CAT)[2], who provided a range between £40k and £100k. These estimates are significantly lower than those used in the CAA12 IA, and therefore have been used as the low estimates (with the upper bound used for major modifications and the lower bound used for minor modifications).

3.3 Policy Option 1

3.3.1 Costs of new appeal rights

The following table gives an *annualised* cost of appeal rights under policy option 1. Costs are split by who bears them, and by the type of appeal. It is assumed that appeals of price control licence modifications are considered non-qualifying under the exclusions set out in the Better Regulation Framework Manual, with the remaining price control modifications being considered qualifying.

Additionally, we assume that costs to the CAA, the appellant and interveners are all costs to business (CAA costs are recovered from business), whilst costs to the CMA will be borne by the taxpayer.

[2] During the consultation, both the CMA and the CAT were being considered as possible appellate bodies.

Table 5 Costs of appeal rights, per annum

	Costs of Appeals (£000s, 2016 prices)		
	Low	**Central**	**High**
Qualifying Appeals (QRP)			
Cost to CMA	0.44	33.37	126.98
Cost to CAA	0.44	33.37	126.98
Cost to appellant	0.44	33.37	126.98
Cost to intervener	0.44	33.37	126.98
Non-Qualifying Appeals (NQRP)			
Cost to CMA	0.42	16.69	47.63
Cost to CAA	0.42	16.69	47.63
Cost to appellant	0.42	16.69	47.63
Cost to intervener	0.42	16.69	47.63
All Appeals			
Cost to CMA	0.86	50.06	174.62
Cost to CAA	0.86	50.06	174.62
Cost to appellant	0.86	50.06	174.62
Cost to intervener	0.86	50.06	174.62
Total	**3.44**	**200.24**	**698.46**

3.3.2 Savings from avoided CMA determinations

Similar to the previous section, we provide annualised estimates of the savings from avoided CMA investigations. Price control modifications are considered non-qualifying, whilst the remainder are considered qualifying.

Table 6 Avoided costs of CMA determinations, per annum

	Costs (£000s, 2016 prices)		
	Low	**Central**	**High**
Qualifying CMA Investigations (QRP)			
Cost to CMA	0.00	49.15	267.69
Cost to CAA	0.00	20.48	83.65
Cost to NERL	0.00	51.19	292.78
Non-Qualifying CMA Investigations (NQRP)			
Cost to CMA	0.00	24.57	92.02
Cost to CAA	0.00	10.24	28.76
Cost to NERL	0.00	25.60	100.64
All CMA Investigations			
Cost to CMA	0.00	73.72	359.71
Cost to CAA	0.00	30.72	112.41
Cost to NERL	0.00	76.79	393.43
Total	**0.00**	**181.23**	**865.54**

3.3.3 Benefits to appellants (non-monetised)

When deciding whether to launch an appeal, a potential appellant will estimate the expected gain from an appeal (given the likelihood of success) and balance that against the cost of launching an appeal. Only if the expected net impact is positive would they proceed with an appeal. Over a long period therefore, we would expect that the net impact to appellants is neutral or positive. However, due to the uncertain nature of potential gains from a successful appeal, this has not been monetised in this impact assessment.

3.3.4 Benefits to consumers (airlines, airports, passengers and cargo-owners) (non-monetised)

A symmetric right of appeal on the technical merits of CAA's decision, should help improve decision making and ensure that the CAA is able to independently make licence modifications that further its statutory duties. These duties include ensuring a high standard of safety in the provision of air traffic services, and to act to further the interests of airlines, passengers, airports and freight owners. When hearing an appeal, the CMA would also adopt the CAA's statutory duties for the purposes of the appeal, ensuring that any decision is consistent with those duties (which may not necessarily be the case under the current public-interest test in CMA determinations).

We expect the benefits to consumers from a more effective licence to heavily outweigh the administrative costs of appeals. The primary driver of the change in the licence modification process was the outcome of the enquiry into the two system failures. If the new licence modification process reduces the likelihood of a system failure in the future (as anticipated), we would expect the benefits of this to outweigh the administrative costs, given the significant disruptive impact of such failures[3]. This would benefit both industry (in terms of airlines and airports) and passengers.

3.3.5 Increased transparency and accountability (non-monetised)

The new process would be more transparent as major objections to licence modifications would be dealt with through a transparent appeals process. This contrasts with the current system where many proposed licence modifications may be dropped or watered down before they are consulted on in public. An increase in appeals under policy option 1 should improve the accountability of the CAA's decisions, as the appeal body would provide an additional level of expert and independent scrutiny.

3.3.6 Potentially reduced costs of capital for licensees (non-monetised)

Policy option 1 should lead to a build-up of case law of appeals, on the technical merits of proposed licence modifications. The current approach is somewhat opaque as the merits of proposed licence modifications are not openly debated. This, alongside the additional layer of CMA scrutiny of the CAA's decisions, should provide greater regulatory certainty for NERL's investors and lenders. This could lower NERL's cost of capital by making it a less risky investment proposition.

However, removing NERL's effective 'veto' of licence modifications could be argued to introduce additional regulatory risk. It is possible, though not clear whether the positive effect of increased accountability on the cost of capital outweigh the negative impacts of increased regulatory risk.

As airlines are considered to operate in a competitive market, it is expected that any change in the cost of capital is reflected in prices paid by passengers and freight owners.

3.4 Summary of monetised costs and benefits

Table 7 Summary of monetised costs and benefits – Central case (£m, 2016 prices)

	Per annum	Over 20-year appraisal period (undiscounted)	Present value (2018 base year)
Total costs	**0.20**	**4.00**	**2.95**
Of which to business	0.15	3.00	2.21
Total benefits	**0.18**	**3.62**	**2.67**

[3] The 2014 failure, which lasted for 45 minutes, led to 128 flights being cancelled affecting 10,000 passengers, and causing 16,000 minutes in delays

Of which to business	0.11	2.15	1.58
Net impact	**-0.02**	**-0.38**	**-0.28**
Of which to business	-0.04	-0.85	-0.63

Table 8 Summary – Low and high cases (£m, 2016 prices)

	Per annum	Over 20-year appraisal period (undiscounted)	Present value (2018 base year)
Total costs	**0.00 – 0.70**	**0.07 – 13.97**	**0.05 – 10.27**
Of which to business	0.00 – 0.52	0.05 – 10.48	0.04 – 7.71
Total benefits	**0.00 – 0.87**	**0.00 – 17.31**	**0.00 – 12.73**
Of which to business	0.00 – 0.17	0.00 – 10.12	0.00 – 7.44

4 OI3O, EANDCB, and Business Impact Target

The proposal is a domestic measure that concerns the economic regulatory framework of a statutory monopoly. It is therefore for the most part considered a Qualifying Regulatory Provision, with the exception of elements related to the price control (which forms an exclusion under the Better Regulation Framework Manual). The Qualifying Regulatory Provision element of the proposal imposes a net burden on business, which scores against the Business Impact Target as an IN.

5 Wider Impacts

Generally, this proposal is not expected to have significant wider impacts as it is fairly limited in its scope. However, as the proposal is designed to ensure the CAA's incentives are fully aligned with its duties to consumers of en-route air traffic services, it is not unreasonable to expect improvements in such areas:

5.1 Safety and efficiency

The CAA's overarching duty is to ensure the provision of air traffic services remains safe, with secondary duties to further the interests of consumers, promote efficiency on the part of the licence-holder, and to ensure the licence-holder can finance its activities. By ensuring the CAA's incentives are fully aligned with these duties when making licence modification decisions, we should expect a maintenance (or a possible improvement) of the current high standard of safety, and a better functioning economic regulatory regime that acts in the interests of its consumers.

5.2 Small and Micro Business Assessment

The proposals apply to a single regulated firm (NERL) and its customers (airlines and airports). Both sets of firms would be considered large businesses given the number of people they employ.

6 Post-Implementation Review

A Post Implementation Review will be carried out, incorporating a review of the entire licensing framework, rather than this specific aspect of it. Given the experience of the Civil Aviation Act 2012, it is unlikely that the objectives of the new licensing framework will have had enough of an impact to warrant a comprehensive review after five years. As such this review is expected to be light-touch, with a full review conducted after 10 years.

Title: NATS (En Route) plc (NERL) licence termination notice period extension **IA No:** DfT00367 **RPC Reference No:** RPC-3535(1)-DFT **Lead department or agency:** Department for Transport **Other departments or agencies:** Civil Aviation Authority	**Impact Assessment (IA)** **Date:** 06/12/2016 **Stage:** Final **Source of intervention:** Domestic **Type of measure:** Primary legislation **Contact for enquiries:** Tom Fletcher (thomas.fletcher@dft.gsi.gov.uk)
Summary: Intervention and Options	**RPC Opinion:** GREEN

Cost of Preferred (or more likely) Option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANDCB in 2014 prices)	**One-In, Three-Out**	**Business Impact Target Status**
£32.05m	£32.05m	-£1.9m	In scope	Qualifying provision

What is the problem under consideration? Why is government intervention necessary?

NATS (En-Route) Ltd (NERL) is currently the sole provider of most air traffic control services for the UK, operating under a licence issued by the Civil Aviation Authority (CAA). The current notice period after which NERL's licence can be terminated is 10 years, with 2021 being the earliest notice can be given. This has led to an effective notice period of 15 years (as of 2016), reducing to 10 years by 2021. NATS (NERL's parent company) has asked Government to review the longer-term financing of NERL in line with the Secretary of State's duties, arguing that a longer notice period would be more appropriate given its business activities, and would lead to lower financing costs and consequently, better outcomes for users of air traffic control services.

What are the policy objectives and the intended effects?

The objective of the policy is to ensure that the notice period for terminating NERL's licence is the most appropriate length for achieving:

1) a high quality service for users;
2) low costs for users of air traffic control services;
3) an appropriate environment to ensure that a licensee does not find it unduly difficult to finance its activities

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Three policy options have been considered in this impact assessment:

0. **Do Nothing** – keep the current licence conditions, such that the length of the effective notice period reduces to 10 years by 2021, and remains as a 10-year rolling period thereafter
1. **Extend to 15 years (preferred option)** – increase the notice period to 15 years, such that the Secretary of State could not terminate the licence until 15 years after serving notice
2. **Extend to 20 years** – increase the notice period to 20 years, such that the Secretary of State could not terminate the licence until 20 years after serving of the notice
3. **Extend to 25 years** – increase the notice period to a length greater than 20 years

Extending the notice period to 15 years was chosen as the preferred option, due to the consensus of views received during consultation. Additional, the incremental benefits of increasing the notice period to 20 years over 15 years (as presented in this impact assessment) are a lot more uncertain, whereas the potential risks to government and passengers is greater when extending to 20 years. Further information is presented in Section 6.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: January/2023

Does implementation go beyond minimum EU requirements?		N/A		
Are any of these organisations in scope?	**Micro** No	**Small** No	**Medium** No	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)		**Traded:** N/A	**Non-traded:** N/A	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister: ______________________ **Date :** Enter a date

Summary: Analysis & Evidence

Policy Option 2

Description: **Extend the licence termination notice period to 15 years (preferred)**

FULL ECONOMIC ASSESSMENT

Price Base Year: 2016	PV Base Year: 2018	Time Period Years: 20	Net Benefit (Present Value (PV)) (£m)		
			Low: 16.77	**High:** 52.20	**Best Estimate:** 32.05

COSTS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Cost** (Present Value)
Low	0.0		0.0	**0.0**
High	0.0		0.0	**0.0**
Best Estimate	0.0		0.0	**0.0**

Description and scale of key monetised costs by 'main affected groups'

The outlined costs do not lend themselves to being easily monetised, and are therefore assessed qualitatively.

Other key non-monetised costs by 'main affected groups'

Increasing the notice period from 10 to 15 years reduces the flexibility available to government, should the regulatory, technological or economic environment change such that licence termination is necessary. Under this scenario, the government would either have to terminate the licence without full notice, or users would have to wait longer to experience the benefits of a new provider. Precisely quantifying the value of this lost flexibility, including the compensation of debtors and shareholders in the case of premature licence termination, is difficult, though a longer notice period would intuitively increase the compensation owed. Further, a longer notice period may reduce NERL's incentives to control costs and maintain a quality service, as licence revocation becomes a more remote prospect. Advice from the CAA suggests even a small relaxation in these incentives could have significant and wide ranging consequences (see paragraphs 10.8 and 10.9).

BENEFITS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Benefit** (Present Value)
Low	0.0		1.1	**16.8**
High	0.0		3.6	**52.2**
Best Estimate	0.0		2.2	**32.1**

Description and scale of key monetised benefits by 'main affected groups'

Under the 'Do Nothing' case, by 2021, NERL's effective notice period will have reduced from 15 years in 2016 to a rolling 10 years. Analysis conducted by the CAA on behalf of DfT suggests that whilst NERL is still likely to be able to finance debts expiring beyond the notice period, this will incur an interest rate premium in the region of 0.5%. Increasing the notice period to 15 years would remove some or all of the resulting increase in NERL's costs by allowing NERL to finance longer-term investments more efficiently, leading to estimated annual savings of approximately £1.7 million under the central case. Savings would also occur through a reduction in the cost of equity, as an extension of NERL's licence period would intuitively make investment in the company less risky (assessed as circa £0.6 million per annum under the central case).

Other key non-monetised benefits by 'main affected groups'

A 15-year notice period would match the 15-year period over which the CAA depreciates NERL's regulated asset base (RAB). This would ensure that NERL is able to efficiently raise debt to finance such investments, the size of debt repayments are more closely aligned with the revenue received in any single year. This benefits NERL as it simplifies cash flows and doesn't require them to frequently refinance short-term debt. This benefit is difficult to accurately quantify, and existing analysis conducted by the CAA on behalf of DfT considered it relatively minor in scale, as such it was excluded from the monetisation process.

Key assumptions/sensitivities/risks — **Discount rate (%)** 3.5%

The measured benefits of licence extension as modelled are very sensitive to both the assumed proportion of NERL's debt which expires beyond the notice period, and the implied risk to equity. High and low estimates are presented for each option, around the central case, and attempt to capture some of this uncertainty. Similarly, a number of potential costs and benefits proved difficult to quantify, and as such, the NPV should be assessed within the context of the additional, non-monetised costs and benefits outlined above. Should regulatory change occur at a European level, a 15 year notice period could quickly become outdated (see section 5).

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			**Score for Business Impact Target (qualifying provisions only) £m:** -9.5
Costs: 0.0	Benefits: 1.9	Net: 1.9	

Summary: Analysis & Evidence

Policy Option 2

Description: **Extend the licence termination notice period to 20 years**

FULL ECONOMIC ASSESSMENT

Price Base Year: 2016	PV Base Year: 2018	Time Period Years: 20	Net Benefit (Present Value (PV)) (£m)		
			Low: 32.17	High: 52.20	Best Estimate: 42.43

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.0		0.0	**0.0**
High	0.0		0.0	**0.0**
Best Estimate	0.0		0.0	**0.0**

Description and scale of key monetised costs by 'main affected groups'

The outlined costs do not lend themselves to being easily monetised, and are therefore assessed qualitatively.

Other key non-monetised costs by 'main affected groups'

Increasing the notice period to 20 years would amplify the costs outlined under option 1, including a significant further reduction in the flexibility available to government should licence termination prove necessary following a change in the technological, economic or regulatory environment. It might also further worsen incentives for NERL to control costs and meet CAA efficiency targets. Over the longer-term, there is a possibility that there will be a push for further reductions in fragmentation amongst European countries, leading to mergers of ANSPs. These mergers may necessitate a termination of the NERL licence in its current form – and a longer notice period would lead to either a longer transition or premature termination, likely leading to compensation claims. Any further reduction in incentives to control costs and maintain service quality could have significant impacts (see 10.8 and 10.9).

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0.0		2.2	**32.2**
High	0.0		3.6	**52.2**
Best Estimate	0.0		2.9	**42.4**

Description and scale of key monetised benefits by 'main affected groups'

Increasing the notice period to 20 years would likely amplify the cost savings outlined under option 1. This reflects the potential benefits drawn offered by a 20 year licence termination notice period, should NERL need to issue a single bond with a maturity greater than 15 years, in order to finance a package of investments spanning several years. The central estimate captures this effect, suggesting real terms annual cost savings of £2.9 million (£2.3 million through a reduction in the cost of debt, £0.8 million equity), versus £2.2 million under option 1.

Other key non-monetised benefits by 'main affected groups'

Under certain circumstances, a licence period of 20 years may provide further benefits to NERL in terms of efficiently financing its debt vs. a 15 year notice period. In particular, such an increase would be beneficial should regulatory change occur at a European level via the Single European Sky (SES) initiative.

This is because the CAA's regulatory regime for NERL differs from standard European practice in areas, including the time period over which new investment is depreciated. Whilst the CAA depreciates new investment from the point of spend (over 15 years), the European approach depreciates from the point of use (over the life of the individual asset). Given lead times for new investment, the difference between the two may be several years, meaning if the European approach was enforced, the ideal length of debt maturity may increase to greater than 15 years, as 15 would be insufficient for NERL to efficiently finance its investments (see section 5).

Key assumptions/sensitivities/risks	Discount rate (%)	3.5%

The measured benefits of licence extension are very sensitive to both the assumed proportion of NERL's debt which expires beyond the notice period, and the implied risk to equity. High and low estimates are presented for each option, around the central case, and attempt to capture this uncertainty. Similarly, a number of potential costs and benefits proved difficult to quantify, and as such, the NPV should be assessed within the context of the additional, non-monetised costs and benefits outlined above. The significantly reduced flexibility offered by a 20 year notice period could prove problematic should there be a push for consolidation amongst European ATC providers, leading to mergers, as it may necessitate the premature termination of NERL's licence, leading to compensation claims from its shareholders for the loss of value over the remaining length of the notice period (see section 5).

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m: -13.0
Costs: 0.0	Benefits: 2.6	Net: 2.6	

Summary: Analysis & Evidence

Policy Option 3

Description: **Extend the licence termination notice period to 25 years**

FULL ECONOMIC ASSESSMENT

Price Base Year: 2016	PV Base Year: 2018	Time Period Years: 20	Net Benefit (Present Value (PV)) (£m)		
			Low: 32.17	**High:** 52.20	**Best Estimate:** 42.43

COSTS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Cost** (Present Value)
Low	0.0		0.0	**0.0**
High	0.0		0.0	**0.0**
Best Estimate	0.0		0.0	**0.0**

Description and scale of key monetised costs by 'main affected groups'

The outlined costs do not lend themselves to being easily monetised, and are therefore assessed qualitatively.

Other key non-monetised costs by 'main affected groups'

Increasing the notice period to 25 years would amplify the costs outlined under option 1 and 2, including a significant further reduction in the flexibility available to government should licence termination prove necessary. It might also further worsen incentives for NERL to control costs and meet CAA efficiency targets. Over the longer-term, there is a possibility that there will be a push for further reductions in fragmentation amongst European countries, leading to mergers of ANSPs. These mergers may necessitate a termination of the NERL licence in its current form – and a longer notice period would lead to either a longer transition or premature termination, likely leading to compensation claims from shareholders for the loss of value over the remaining notice period. Any further reduction in incentives to control costs and maintain service quality could have significant impacts (see 10.8 and 10.9).

BENEFITS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Benefit** (Present Value)
Low	0.0		2.2	**32.2**
High	0.0		3.6	**52.2**
Best Estimate	0.0		2.9	**42.4**

Description and scale of key monetised benefits by 'main affected groups'

Increasing the notice period to 25 years would be unlikely to provide a significant incremental benefit in terms of cheaper financing of debt versus a 20 year notice period. This is reflected in the fact that the NPV in all three cases is equal to option 2.

Other key non-monetised benefits by 'main affected groups'

Under certain circumstances, a licence period of 25 years may provide an incremental benefit to NERL in terms of efficiently financing its debt vs. a 15 year notice period. In particular, such an increase would be beneficial should regulatory change occur at a European level via the Single European Sky (SES) initiative. This is because the CAA's regulatory regime for NERL differs from standard European practice in areas, including the time period over which new investment is depreciated. Whilst the CAA depreciates new investment from the point of spend (over 15 years), the European approach depreciates from the point of use (over the life of the individual asset). Given lead times for new investment, the difference between the two may be several years, meaning if the European approach was enforced, the ideal length of debt maturity may increase to greater than 15 or 20 years, as they would be insufficient for NERL to efficiently finance its investments (see section 5).

Key assumptions/sensitivities/risks — **Discount rate (%)** 3.5%

The measured benefits of licence extension are very sensitive to both the assumed proportion of NERL's debt which expires beyond the notice period, and the implied risk to equity. High and low estimates are presented for each option, around the central case, and attempt to capture this uncertainty. Similarly, a number of potential costs and benefits proved difficult to quantify, and as such, the NPV should be assessed within the context of the additional, non-monetised costs and benefits outlined above. The significantly reduced flexibility offered by a 25 year notice period could prove problematic should there be a push for consolidation amongst European ATC providers, leading to mergers, as it may necessitate the premature termination of NERL's licence, leading to compensation claims from its shareholders for the loss of value over the remaining length of the notice period (see section 5).

BUSINESS ASSESSMENT (Option 3)

Direct impact on business (Equivalent Annual) £m:			**Score for Business Impact Target (qualifying provisions only) £m:** -13.0
Costs: 0.0	Benefits: 2.6	Net: 2.6	

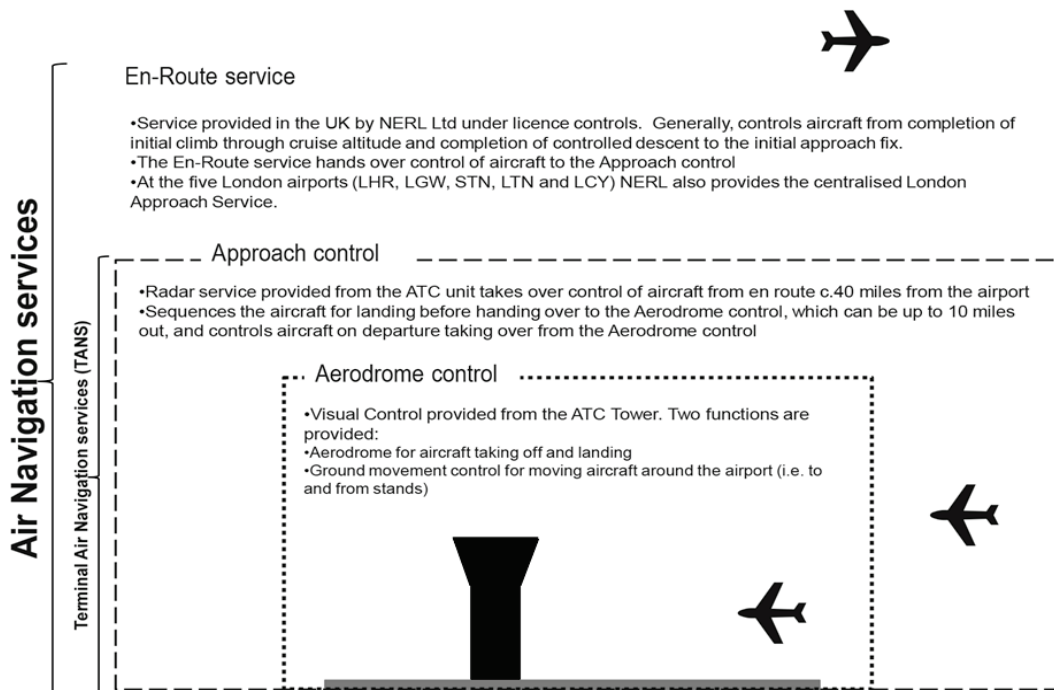
Evidence Base

7 Background

7.1 NATS Holdings Ltd (formerly National Air Traffic Services) provides en-route (see Figure 1) air traffic control services in the UK and Eastern North Atlantic (Oceanic) Airspace and control tower services in the UK and abroad. It is split into two businesses which provide distinct services:

- NATS En-Route plc (NERL) – the economically regulated part of the business (NERL operates as a state sanctioned monopoly, where the CAA imposes price controls) which provides en-route air traffic management services to aircraft within the UK and Oceanic airspace; and
- NATS Services Ltd (NSL) – the unregulated part of the business which provides air traffic control services at some of the UK's major airports and Gibraltar, as well as consulting services

Figure 1 – Diagrammatic explanation of air traffic services[1]



7.2 The European Union has had competence in air traffic management and air navigation services since 2004, when the first Single European Sky (SES) package was adopted. The SES regime, amongst other things, provides a framework for the economic regulation of air navigation service providers (ANSPs), and requires member states to collectively organise themselves around functional airspace blocks (FABs) with the objective of reducing fragmentation.

7.3 NATS operates NERL as a statutory monopoly under a licence granted by the Secretary of State on 28 March 2001. The Secretary of State currently has the power to serve notice of termination of the licence no earlier than 20 years after the date on which the licence was granted (i.e. 2021), and with a notice period no shorter than 10 years. This means that the earliest date on which licence can be terminated via this route is 2031, but from 2021 NERL will effectively be operating under a licence with a rolling 10 year notice period.

7.4 In 2011 the Department for Transport, following an application from NATS, consulted on a proposal to increase the notice period after which NERL's licence can be terminated, from 10 to 25 years. Following the consultation, the Department decided not to take any action but has kept the issue under review.

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[1] Civil Aviation Authority (2015) CAP1293: Review of advice on SES Market Conditions for Terminal Air Navigation Services in the UK http://publicapps.caa.co.uk/CAP1293

8 Problem under consideration and policy objectives

8.1 In the Transport Act 2000, the Secretary of State has the general duty to ensure that he exercises his functions to:

- Primarily maintain a high standard of safety in the provision of air traffic services; and,
- Further the interests of operators and owners of aircraft, owners and managers of aerodromes, persons travelling in aircraft and persons with rights in property carried in them;
- Promote efficiency and economy on the part of licence holders;
- Ensure that licence holders will not find it unduly difficult to finance activities authorised by their licences

8.2 NATS has proposed a longer licence period than the current 10 years, arguing that greater security around the licence would promote a more efficient financing of NERL's investment programme. As NERL is an economically regulated entity, more efficient financing of NERL would lead to lower charges on users of en-route air traffic management services and/or a higher quality service.

8.3 This impact assessment therefore is a consideration of the most appropriate length of a licence termination notice period for NERL, given the following objectives in regard to the Secretary of State's duties under the Transport Act 2000:

1) Delivering low charges for both current and future users of en-route air traffic management services;
2) Delivering a high quality service for both current and future users of en-route air traffic management services;
3) Delivering the appropriate environment to ensure that the licensee does not find it unduly difficult to finance its activities

9 Description of options and issues considered

9.1 We believe that there are three policy options when considering the most appropriate length of the licence termination notice period:

- **Do Nothing** – Keep the current licence conditions, such that the length of the notice period reduces to 10 years by 2021, and remains as a 10-year rolling period thereafter
- **Policy Option 1: Extend to 15 years (preferred)** – Increase the notice period to 15 years, such that the Secretary of State could not terminate the licence until 15 years after serving of the notice. An extension to 15 years would bring the notice period in line with the average life of NERL's assets and in line with the period under which NERL's regulatory assets are depreciated under the current economic regulation regime[2].
- **Policy Option 2**: **Extend to 20 years** – Increase the notice period to 20 years, such that the Secretary of State could not terminate the licence until 20 years after serving of the notice. A notice period of 20 years would extend beyond the average life of NERL's assets and the depreciation period, to include any lead time in the commissioning of assets.
- **Policy Option 3**: **Extend to greater than 20 years** – NATS is of the view that a 25-year period would allow optimal financing of their investment programme

9.2 Given the policy objectives outlined in paragraph 8.3, we have considered the following issues when comparing the relative merits of each policy option:

[2] All of NERL's assets are depreciated over a 15-year period, regardless of the useful life of the asset.

- **Efficient financing of NERL's investment programme** – Firms are constantly optimising the maturity of the debt they issue, depending on refinancing costs, and current and forecast interest rates. If NERL attempts to issue debt maturing beyond the licence termination notice period, it may find that it is unable to do so, or that there is a risk premium attached to doing so. Both of these scenarios will lead to inefficient financing of NERL's investment programme.

- **Ensuring sufficient flexibility to change the licence-holder** – There is a likelihood of either the economic, regulatory, or technological environment changing, such that it is necessary to amend the scope of the licence or the licence-holder. A shorter notice period would give the government more flexibility to change the licence should this occur, without having to wait a long time until the end of the notice period, or having to compensate NERL for terminating the licence before the end of the notice period.

- **NERL's incentives on cost efficiency and service quality** – A longer notice period lowers the immediate risk of licence termination, which means NERL management may have less of an incentive to satisfy key stakeholders (regulators and users). As a result, they may have less of an incentive to control costs and/or avoid poor service.

10 Costs and benefits of each policy option

Do Nothing

10.1 **Difficulty financing investments and/or more expensive to finance investments** – NATS have raised concerns that NERL will be unable to issue bonds that mature beyond the length of the licence termination notice period (LTNP) and as a result would be forced into inefficient financing arrangements. The average asset life of NERL's investments is 15 years, and the CAA depreciates NERL's investments over a 15 year period, under its economic regulatory regime. Where NERL is forced to issue bonds with shorter maturity than the life of the asset it is being used to finance, this will lead to additional costs for re-issuing those bonds, as well as potentially less favourable interest rates. Such costs, under the regulatory regime, would be passed on to consumers.

10.2 The CAA has investigated these concerns on behalf of DfT and has concluded that whilst other regulated industries have been able to issue bonds maturing beyond the licence termination notice period, there is an average risk premium attached to such bonds of 47 basis points (0.47%)[3].

Policy option 1 – Extend the licence termination notice period to 15 years (preferred)

10.3 **Ability to finance longer term investments** – Whilst the CAA in its analysis did conclude that other regulated industries have been able to finance investments maturing beyond the LTNP, there is a possibility that these industries have specific characteristics that do not apply in NERL's case. For example, unlike Network Rail, NERL does not benefit from a government guarantee of its debt. However, on balance, we are minded to accept the CAA's position that NERL will be able to issue bonds extending beyond the LTNP.

10.4 **Less expensive to finance longer term investments** – As mentioned in the *Do Nothing* section, a longer LTNP would lead to cheaper financing of NERL's capital investment programme. Accepting the CAA's conclusions of a 0.47% risk premium, this would lead to annual savings of approximately £1.8 million under the central case.

10.5 **Match licence termination notice period to regulatory depreciation period** – Under the current NERL licence, the CAA depreciates the assets in NERL's regulated asset base over a 15-year period. The 15-year period is based on the average life of the assets NERL invests in. Matching the LTNP with the depreciation period will ensure that NERL is able to efficiently raise debt to finance such investments. The maturity of the debt will therefore be closely aligned with the period over which NERL charges back the investment cost to its customers, which in turn means that the size of the debt

[3] Based on findings of Europe Economics report entitled 'Implications for debt-raising and the cost of debt of changing the minimum termination notice period for NERL's licence' (September 2015, p.15).

repayments are more closely matched with the revenue received in any single year. This benefits NERL as it simplifies cash flows and doesn't require NERL to frequently refinance shorter term debt.

10.6 **Reduced flexibility in making regulatory changes** – There is a possibility that future economic, regulatory or technological developments would necessitate the termination of the NERL license. A longer LTNP would either mean UK users of air navigation services having to wait longer before experiencing the benefits of these changes, or the government electing to terminate the license without full notice. The latter option would most likely require the Government to service the outstanding debt finance and compensate NERL shareholders for the loss of value over the remaining length of the notice period.

10.7 It is difficult to quantify the size of the compensation as it is linked to the difference in the market value of NERL and the value of NERL's regulated asset base (RAB)[4]. The CAA has advised that there is likely to be a premium in the market value of NERL over the value of the RAB, representing shareholder expectation over the company's ability to outperform the regulatory assumptions in each price-control period. Evidence from the water industry suggests this could be as high as 18% over a 10-year period. Intuitively, a longer LTNP would lead to a greater claim for compensation. Whilst the likelihood of an early termination of the licence is very low, extending the notice period by 5-years increases the size of any compensation claim, by somewhere in the order of several million pounds[5].

10.8 **Reduced incentives for cost efficiency and service quality** – A longer licence notice period may reduce NERL's incentives to control costs, if the threat of licence revocation becomes a more remote prospect. Under the economic regulatory framework, the price control regime, where NERL's charges are determined by the CAA, is designed to incentivise cost efficiency by allowing NERL to make larger profits by beating the efficiency targets set by the CAA. However, it is possible that the threat of license revocation acts as a regulatory backstop to further incentivise cost efficiency.

10.9 Advice from the CAA suggests HMG should be particularly mindful about relaxing these incentives. Whilst the impact via incentives is highly uncertain, they estimate NERL's operating expenditure amounts to approximately six times the cost of capital. Or alternatively even a small increase in operating expenditure (at 0.1% a year), would lead to costs of £55 million in present value terms, outweighing the benefits expected from the proposals. Using the same logic, a longer notice period may reduce incentives to avoid service issues (including resilience), which could potentially have much larger implications than the sums discussed in this assessment.

10.10 **Delayed introduction of new provider** –There may be a change to the market landscape such that the Government identifies a more efficient Air Navigation Services Provider (ANSP). In such circumstances, it is likely the Government will wish for the more efficient ANSP to replace NERL as the provider of en-route air traffic management services. Under such a scenario, a longer LTNP would mean users would have to wait longer before benefitting from the lower charges from the more efficient provider.

Policy option 2 – Extend the licence termination notice period to 20 years

10.11 Extending the license termination notice period beyond 15 years would amplify the impacts identified in the previous section. In certain circumstances, it could make it cheaper for NERL to finance its investments, though these would be subject to diminishing marginal returns (i.e. the incremental benefit from moving from 15 to 20 years will be lower than the move from 10 to 15 years). It would also further reduce the government's flexibility in the event of changes to the regulatory or economic/market landscape, particularly if the government wished to grant a licence to a cheaper, alternate provider.

10.12 One reason for why 15 years may be insufficient for efficiently financing NERL's investment programme, is because NERL may need to issue a single bond to finance a package of investments. If this package of investments spans several years, it may be more prudent to issue a bond with maturity greater than 15 years in which case a licence termination notice period of 20 years may be more

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[4] It is assumed the value of the RAB would be charged back to customers regardless of who the licence-holder is.

[5] The CAA provided a rough estimate where the potential compensation claim increased by £7.2 million when extending the notice period from 10 to 15 years, and by £22 million when extending the notice period from 10 to 25 years.

appropriate. However, any such benefit must be balanced against the risks of extending the licence beyond 15 years (see sections 5 and 6).

10.13 An additional consideration is the possibility of future regulatory changes at EU level, and the outcome of upcoming negotiations on Britain's future relationship with the EU. The CAA's regulatory regime for NERL differs from standard European practise under the Single European Sky (SES) regulations in a number of respects. One key difference is that the CAA regime depreciates new investment from the point of spend (over 15 years), whereas the European approach has been to depreciate from the point of use (over the life of the individual asset).

10.14 Given the lead time of new investments, there exists a gap of several years between the point of spend and the point of use[6]. If the remaining flexibility for the regulatory regimes to differ is removed (and the UK continues to be a part of the Single European Sky initiative), then the ideal length of debt maturity may increase to greater than 15 years (assuming a 15 year depreciation period and additional lead time). In this scenario, an LTNP of 15 years would be insufficient for efficient financing of NERL's investments. However, the European Commission hasn't shown any indication that they are planning to make this change (see section 5). The government has agreed to reconsider the licence length if this change occurs in the future, and the UK remains part of the Single European Sky initiative.

Policy option 3 – Extend the licence termination notice period to 25 years

10.15 The longer the LTNP is extended, the smaller the incremental benefit to NERL in terms of cheaper financing, and the larger the cost of reduced flexibility and potentially higher operating costs (and reduced service quality). Reflecting this, estimates for low, central and high are identical to option 2.

11 Policy risks

Description of future policy risks and assessment of their likelihood	Impact on NPV		
	OPTION 1 (15 YEARS)	OPTION 2 (20 YEARS)	OPTION 3 (25 YEARS)
Move to European-style depreciatory regime			
Reform at a European level reduces the CAA's flexibility to impose a bespoke depreciatory regime for NERL (see 10.13). **Unlikely over the short-term**: there has been no indication that such a move is currently being considered.	↓	↑	↑↑
Consolidation in the European ANSP market			
The European Commission may push for a reduction in fragmentation amongst European ANSPs, leading to mergers, and requiring the premature termination of NERL's licence. There would be greater costs associated with shareholder compensation where there is a longer licence notice period. **Longer-term risk**: a big change complicated by issues of sovereignty.	↑↑	↓	↓↓
Implementation of a franchising model			
HMG decides to switch to a franchise model for the provision of en-route air traffic management, where there is competition for the market. Intuitively, they seek to award the contract to a new provider (who may be more efficient) as soon as possible. **Unlikely over the short-term**: franchising in this market faces significant practical difficulties.	↑↑	↓	↓↓

(↓/↑ = decrease/increase in NPV of option, ↓↓/↑↑ = stronger effect)

[6] NATS has informed DfT of lead times of up to 10 years for certain investments.

11.1 EU Exit – The outcome of the EU referendum on 23 June will see the UK leave the European Union. This may have an impact on the likelihood of some of the risks identified above. However until negotiations with the European Union have concluded, it is not possible to determine whether the likelihood of the above risks have reduced.

11.2 Overall, the balance of policy risks is on the side of a shorter (15 year) notice period. A move to a European-style depreciatory regime is a medium-term possibility that could lead to a 15 year notice period quickly becoming outdated, though the government has agreed to reconsider the licence length if such a move occurs. On the other hand, were the licence period extended beyond 15 years, and should either consolidation in the European ANSP market to occur or HMG look to implement a franchise-style model in the future, then this would impose significant constraints on government by making actions such as the premature termination of NERL's licence more costly. A longer notice period risks delaying the benefits to customers from a more efficient provider of en-route air traffic control services (either a UK-only provider or a pan-European provider), unless the government agrees to compensate shareholders (as explained in paragraphs 4.6 and 4.7).

12 Comparative assessment

12.1 When considering the optimal length of the LTNP, it is not sufficient to study the NPV in isolation, due to the presence of non-monetised costs and given the benefits presented are not uniformly certain. It is therefore necessary to balance the additional flexibility offered to NERL in financing its investment programme should its licence notice period be extended against the reduced flexibility to government for making regulatory changes (including changing the licence-holder), as well as the potential for a reduction in incentives to control costs and maintain a quality service.

12.2 The evidence suggests that there is a robust case for increasing the licence notice period from the current 10 years, to 15 years, in line with the Secretary of State's duties. This is reflected in the potential cost savings on NERL's part of £32.1 million (central case), which may be considered to outweigh the small reduction in flexibility available to government, and potentially reduced incentives.

12.3 It is less clear that there is a case for extending the notice period beyond 15 years. The additional monetary benefit to NERL is far more uncertain, whilst the risks are far greater. A 20 or 25 year notice period may be preferable where reform at a European level necessitated a change to the CAA's depreciatory regime (see 10.13). However as stated previously, the risk of this happening is fairly low and can be dealt with if such a change occurs.

12.4 As the licence notice period becomes longer, the incremental benefits in terms of cheaper financing costs decline, yet the cost to government in terms of reduced flexibility, especially in the case of future policy risks (see section 5), increase further. The analysis suggests there is a large amount of uncertainty around the additional benefit in terms of cost savings from a licence period of 20 years vs. 15 years. By extending the notice period beyond 15 years, NERL has a reduced incentive to limit its cost and maintain a high quality service. Whilst difficult to accurately quantify, advice from the CAA emphasises the potential for this to significantly outweigh any benefit (see 10.8 and 10.9). During the consultation process, this view was supported by the majority of respondents including British Airways and Virgin Atlantic Airways, who argued that 15 years was the right compromise between reducing NERL's financing costs, and the potential decline in incentives to control costs (and maintain service quality) associated with a longer notice period.

12.5 On balance, the potential benefits drawn from a licence period greater than 15 years are not considered to outweigh the risks and non-monetised costs. These non-monetised costs include the significantly reduced flexibility available to government, and potentially reduced incentives to control costs and maintain service quality, which, although difficult to quantify, are considered to significantly exceed estimated benefits for options 2 and 3 (see 10.8 and 10.9). As such, policy option 1 is recommended.

12.6 This recommendation is in line with the results of the consultation, which captured views from other government departments, airlines and their representative bodies, as well as the CAA and NATS itself. Respondents were in favour of policy option 1 by a majority, recognising the limited incremental benefit drawn from a licence notice period greater than 15 years. The

decision to recommend option 1 was made partly in recognition of this consensus amongst the majority of stakeholders, with DfT's position prior to consultation being neutral between 15 and 20 years.

13 Methodology and assumptions

13.1 As explained in the individual option summaries, the analysis attempts to quantify and monetise the potential cost savings resulting from licence extension, both in terms of NERL's ability to more efficiently finance its debts, and a reduction in the risk associated with investing in NATS, and therefore the cost of equity.

13.2 The following attempts to capture the underlying logic of the model in terms of measuring the annual cost premium resulting from a specified notice period length. After calculating this figure, the final NPV figure can be obtained by subtracting the total value from that of the baseline (10 year notice period) case. As such, it is arithmetically equivalent to the benefits accrued from extending the notice period.

$$TotalAnnualPremium = AnnualDebtPremium + AnnualEquityPremium$$

$$AnnualDebtPremium = (\%PostLTNP * (GrossDebt) * DebtUplift)$$

$$AnnualEquityPremium = (EquityRisk * (Equity) * EquityUplift)$$

$$[GrossDebt = (RAB * Gearing) - BankDebt + Cash]$$

Where…

$\%PostLTNP$	=	proportion of debt maturing beyond the notice period
$GrossDebt$	=	implied long-term gross debt (incl. cash balances, excl. bank debt)
$DebtUplift$	=	0.47% uplift applied to debt maturing beyond notice period
$EquityRisk$	=	implied risk to equity (assumed equivalent to $\%PostLTNP$)
$Equity$	=	implied equity (RAB less $NetDebt$)
$EquityUplift$	=	uplift applied to equity at risk (a scalar transformation of $DebtUplift$)
RAB	=	NERL's Regulated Asset Base
$Gearing$	=	ratio of debt to equity
$BankDebt$	=	debt owed to banks (short-term debt)
$Cash$	=	additional assets held as cash balances
$NetDebt$	=	implied debt (incl. bank debt, excl. cash balances)

13.3 **Regulated Asset Base** – Data on NERL's Regulated Asset Base (RAB) is taken from CAA RP2 (2015-19) projections[7], as the sum of the closing RABs for UK and Oceanic operations. After 2019, the RAB is assumed constant. Gearing is assumed as a constant 60% across the appraisal period, in line with NERL's short-term target. All output values are deflated to 2016 prices using the Treasury GDP deflator series, and then discounted using the standard 3.5% rate. These inputs are summarised in the table below. Additional, disaggregated financial information was provided in confidence by NATS, but the values have been withheld due to their commercially sensitive nature.

Input data	2018	2019-
	YEAR 1	YEAR 2 ONWARDS
RAB (£m)	910.3	839.4
$Gearing$ (%)	60%	

13.4 **Debt premium –** $AnnualDebtPremium$ is estimated by taking the proportion of debt which matures beyond the notice period, and multiplying it by the implied long-term gross debt ($GrossDebt$), to produce the value of debt maturing beyond the licence period. It is then multiplied by the $DebtUplift$ (0.47%

[7] See http://www.nats.aero/wp-content/uploads/2016/09/NATS-En-Route-plc-Regulatory-Accounts-2015.pdf (Table 14/15, p.24).

across all sensitivities) to produce an estimate of the additional costs associated with a shorter licence notice period. As an illustration, for the year 2021, when the full extent of annual benefits are expected to be realised, the calculation is as follows.

13.5 **Equity premium** – $AnnualEquityPremium$ is estimated in a similar manner. The implied risk to equity ($EquityRisk$, assumed equal to $\%PostLTNP$ – this assumption exists due to a lack of available evidence to suggest an alternative value) is multiplied by the implied equity (i.e. the remainder of the RAB once $NetDebt$ has been subtracted), giving the estimated value of equity affected by the costs associated with a shorter licence notice period. The estimated value of these additional costs is calculated by multiplying this figure by the $EquityUplift$.

13.6 **Direct/Indirect impacts** – The benefits from extending the notice period on debt and equity have both been treated as direct benefits, as both are considered first order impacts of the policy intervention. Whilst the impact on the cost of equity is more abstract than the impact on the cost of debt, the underlying channels through which both are affected are the same. In other words, changing the licence length affects the riskiness of the business, which is in turn reflected in the cost of debt and the cost of equity. There is less evidence surrounding the scale of the reduction in the cost of equity, which has been reflected in the sensitivities. However, the underlying mechanism of action is identical to that of debt in that both impacts rely on the assumption of investor rationality with regards to investment risk. As such, it would be inappropriate to treat these benefits differently from one another. (i.e. both should be treated as direct, or both as indirect).

13.7 **Benefits profile** – The benefits of extending the notice period are only fully realised in 2021, increasing gradually from the implementation date (2017) to 2021. This is because the effective notice period in the baseline is not 10 years until 2021, given the restriction on the earliest date at which notice can be served (set to 2021, see paragraph 1.3). The effective notice period is therefore as follows:

Year	2016	2017	2018	2019	2020	2021 ONWARDS
Notice period	15 years	14 years	13 years	12 years	11 years	10 years

13.8 **Appraisal period** – Impacts are assessed across a 20 year appraisal period, instead of the standard 10 years. There are two main reasons for this. Firstly, the existing regulatory system will have been in existence for almost 20 years by time any modification occurs, meaning the proposed system can be considered likely to last equally long. Secondly, a 10 year appraisal period would not be sufficient to fully capture the benefits accrued from extending the licence notice period.

Input Sensitivities

13.9 The analysis is very sensitive to the proportion of gross debt which is assumed to expire after the licence termination notice period ($\%PostLTNP$). $\%PostLTNP$ is taken as an input for 10/15/20/25 year notice periods, with a linear interpolation calculated for the years in between.

13.10 The analysis is also sensitive to the implied risk to equity ($EquityRisk$, assumed equal to $\%PostLTNP$). Whilst intuitively, a longer notice period would make NERL less risky to invest in, the evidence for the existence of an $AnnualEquityPremium$ is mixed, and therefore, its value is uncertain.

13.11 In an attempt to capture some of this uncertainty, the analysis includes high and low estimates, which vary the proportion of debt maturing post notice period (and therefore implied equity risk) as follows;

Scenario	% of debt maturing beyond effective notice period (and % equity at risk)			
	10 YEARS	15 YEARS	20 YEARS	25 YEARS
Low	100%	50%	0%	0%
Central	100%	25%	0%	0%

High	100%	0%	0%	0%

However, whilst we have presented a proportion of the debt expiring beyond a 15 year notice period (the shaded column), these estimates are subject to much greater uncertainty. The high case scenario is a likelier reflection of reality than the low estimate, though we have used the assumptions above in the interests of presenting a cautious estimate of the benefits of the preferred policy option. This inadvertently has the effect of making policy options 2 and 3 seem relatively more beneficial when compared with policy option 1.

13.12 The underlying logic behind the assumed values presented in the table above, as well as the assumptions around the variation in the uplift applied to equity are as follows;

- **Low case** – the average maturity length of non-bank debt is assumed to be exactly 15 years, in line with the CAA's depreciatory regime (see table above). NERL's debt is assumed equally spread across this period, and the possibility of lead-in times for investments is discounted. Under this case, no equity premium exists, reflecting the uncertainty surrounding its existence.

- **Central case** – the average maturity length is assumed to be marginally longer than 15 years, accounting for lead-in times for investments where NERL is required to finance multiple investments with a single bond (see 10.12 and table above). Under this case, the uplift applied to the cost of equity is considered to be half of that applied to debt (i.e. half of 0.47%), reflecting the uncertainty around its true value.

- **High case** – the average maturity length is assumed to be significantly more than 15 years, reflecting the possibility of longer lead-in times (see table above). Under this case, the equity premium is assumed to be equal to that applied to debt expiring beyond the notice period (i.e. 0.47%), reflecting uncertainty around its true value.

13.13 Due to the variation in assumptions around the value of the equity premium across cases, $AnnualDebtPremium$ accounts for around 60% of the total monetised benefits in the low case scenario, 75% in the central case, and 100% in the high case (see annex for detailed breakdown). The extent of uncertainty surrounding this numbers should be highlighted, and is reflected in the range of estimated benefits – under option 1, the benefits under the high case are 311% of those under the low case, and under options 2 and 3, the high case benefits are 162% of the low case.

13.14 In addition, the assessed level of benefits is sensitive to the input level of $DebtUplift$, though this does not affect the relative ordering of the three options. Analysis conducted for the CAA suggested that an average interest rate premium of 0.47% was applied to debt expiring beyond the licence termination notice period, across comparable regulated companies in the UK[8]. Whilst this is the best estimate we have of said premium, it remains uncertain. A 0.1 percentage point increase/decrease in the premium would have the effect of increasing/decreasing the central case NPV by around £7 million under option 1, and £9 million under options 2 and 3.

13.15 Finally, there are a number of other assumptions made in the analysis, which the NPV is relatively robust to changes in:

- **Gearing** – in the primary analysis, NERL's gearing (ratio of debt to equity) is assumed to be 60%, in line with its targeted level for RP2 (2015-19). It is possible that NERL may find it difficult to maintain this level of gearing, but changes in the assumed gearing ratio have little effect on the NPV.

- **Bank debt** – NATS provided DfT with the approximate proportion of NERL's debt that is held as bank debt. This is taken as a constant across all assessed options, and is excluded from the interest rate uplift (and therefore benefit calculations) because it is short-term debt (less than five years). Changes to the assumed level of bank debt have little effect on the NPV figure.

[8] Based on the findings of the Europe Economics report entitled 'Implications for debt-raising and the cost of debt of changing the minimum termination notice period for NERL's licence' (September 2015, p.15)

- **Cash balances** – NERL holds cash balances to cover annual net financing costs, and Eurocontrol receipts, as well as CAA requirements to hold a minimum level of liquid assets. This debt is assumed to be funded by debt and equity in the same proportions as the RAB. Changes to this value have little effect on the NPV figure.

14 Wider impacts

14.1 Business Impact Target (BIT) status - The proposal is a domestic measure that concerns the economic regulatory framework of a statutory monopoly. It is therefore considered a Qualifying Regulatory Provision, which scores against the Business Impact Target as an OUT.

14.2 **Competition** – NERL acts as a statutory monopoly in the provision of en-route air traffic management services, and is economically regulated by the CAA to mimic competitive pressures on the company. Therefore, the proposals are unlikely to directly have an effect on competition.

14.3 However, as noted in section 5, it is possible that the Government in future, may wish to move to a franchise style model for the provision of en-route air traffic management services, where there is competition for the market. In this context, a longer notice period may act as a potential barrier to competition, as there would be a longer wait before a new more efficient provider could be awarded the franchise contract. Nonetheless, there are a number of practical difficulties with implementing a franchise model, which means the potential competition impacts are not currently relevant.

14.4 **Small and micro businesses** - this policy only affects NERL, and as such has no impact on small businesses.

14.5 **Equality** - this policy has no impact on equality.

15 Post Implementation Review

15.1 A Post Implementation Review will be carried out, incorporating a review of the entire licencing framework, rather than this specific aspect of it. It is unlikely that enough will have changed in this area to warrant a comprehensive review after five years, and as such this review is expected to be light touch, with a full review conducted after 10 years.

16 Annex: Summary of monetised annual benefits

16.1 All figures presented below are undiscounted, and adjusted to reflect 2016 prices using the September 2016 HM Treasury GDP deflator series.

16.2 As explained in 13.7, annual benefits drawn from licence extension are expected to build to 2021, when the full annual benefits are realised, and remain constant until the end of the appraisal period.

16.3 The first table presents anticipated benefits in the form of reductions in the cost of debt under each option, and in low, central and high scenarios. The second table presents the same data for expected reductions in the cost of equity, with the final table presenting the sum of the two.

Scenario	Reduction in the cost of debt – annual benefits from 2021 onwards (£m)		
	Option 1 (15 years)	Option 2 (20 years)	Option 3 (25 years)
Low	1.1	2.3	2.3
Central	1.7	2.3	2.3
High	2.3	2.3	2.3

Scenario	Reduction in the cost of equity – annual benefits from 2021 onwards (£m)		
	Option 1 (15 years)	Option 2 (20 years)	Option 3 (25 years)
Low	0.0	0.0	0.0
Central	0.6	0.8	0.8
High	1.6	1.6	1.6

Scenario	Total annual benefits - 2021 onwards (£m)		
	Option 1 (15 years)	Option 2 (20 years)	Option 3 (25 years)
Low	1.1	2.3	2.3
Central	2.3	3.1	3.1
High	3.9	3.9	3.9