

<p>Title: Interim Licencing Regime for the Release of Gamebirds on or within a 500m buffer zone of European sites.</p> <p>RPC Reference No: RPC-DEFRA-5051(2)</p> <p>Lead department or agency: Department for Environment, Food & Rural Affairs</p> <p>Other departments or agencies: N/A</p>	Impact Assessment (IA)
	Date: 07/07/2021
	Stage: Final
	Source of intervention: Domestic
	Type of measure: Secondary Legislation
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Summary: Intervention and Options	RPC Opinion: GREEN

Cost of Preferred (or more likely) Option (in 2019 prices)			
Total Net Present Social Value	Business Net Present Value	Net cost to business per year	Business Impact Target Status
£-5.5m	£-4.5m	£1.2m	4.8 Non -Qualifying provision

What is the issue being addressed?

The issue being addressed is the regulation of the release of non-native gamebirds on or near European sites in England. This issue has come about because the Secretary of State, as the relevant competent authority, is under a statutory duty to take appropriate steps to avoid significant disturbance or deterioration of European sites. European sites are protected sites of significant importance for nature conservation; they are defined in Regulation 8 of the Conservation of Habitats and Species Regulations 2017¹.

To ensure that Defra is meeting its legal obligations, Defra commissioned a review that considered the existing legislative arrangements regulating the release of the common pheasant and red-legged partridge on and around European sites. The review concluded on 20 October 2020 and is published on the gov.uk website².

Following the review, and in order to take a precautionary approach, the Secretary of State committed to put in place an interim licensing regime for the 2021 season of releases of common pheasant and red legged partridge within European sites and within a 500m buffer zone around the sites.

¹ <https://www.legislation.gov.uk/uksi/2017/1012/regulation/8/made>

² <https://www.gov.uk/government/publications/review-of-gamebird-releases-on-and-around-european-protected-sites>

All existing regulatory protections for European sites, including Natural England's (NE) Sites of Special Scientific Interest (SSSI) consenting regime³, remain in place.

The purpose of the interim licencing regime is to provide an additional, precautionary layer of protection whilst we continue to improve our understanding of the impacts of releases.

What are the current or future harms that are being tackled?

A rapid evidence assessment on the ecological effects of releases of gamebirds on habitats and wildlife,⁴ jointly commissioned by NE and the British Association of Shooting and Conservation (BASC) and published in July 2020, confirmed that released gamebirds can have some limited direct and indirect effects on the fauna and flora of the European sites habitats into which they are released. The main negative effects relate to eutrophication (nutrient enrichment of water and soil) and depletion of vegetation in and around release pens and feeding stations, and some evidence that released gamebirds could introduce disease.

What is the evidence base?

In line with its statutory obligations, Defra sought NE's advice on its proposal to introduce an interim general licence for gamebird releases. NE provided this advice in their role as the statutory advisor on natural environment matters. This advice discussed the evidence base and Defra's use of this evidence in conducting their Habitats Regulations Assessment (HRA);⁵ an assessment that must be undertaken to determine if a plan or project may affect the protected features of a European site before deciding whether to undertake, permit or authorise it⁶.

In their advice of 20 April 2020⁷, NE noted that "[t]he proposal to develop and issue this interim [general licence] has also been informed by a lack of up to date information about the general scale of gamebird releasing, the scale of releasing within and close to European Protected Sites, and also its impact on the sites themselves."

In its review, Defra set out the steps needed⁸ to address the gaps in the evidence about the impact of gamebird releases. Addressing these evidence gaps will allow for both regular evaluation of the efficacy of the conditions of the general licence in protecting European sites and for a permanent regulatory solution to replace the interim licencing regime in due course.

What are the policy objectives of the action or intervention and the intended effects?

The objective is to regulate the density of gamebird releases on and around European sites and to collect data about release activity conducted under the licence.

What are the intended outcomes of intervention?

To avoid significant disturbance or deterioration of European sites resulting from pheasant and red-legged partridge releases and to comply with the legal obligations as the relevant competent authority for the purpose of the 2017 Regulations.

³ <https://www.gov.uk/guidance/protected-areas-sites-of-special-scientific-interest>

⁴ <http://publications.naturalengland.org.uk/publication/5078605686374400>

⁵ <https://www.gov.uk/government/publications/gamebirds-decision-to-issue-the-gamebird-release-general-licence/gamebirds-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-decision-to-issue-general-licence>

⁶ <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

⁷ <https://www.gov.uk/government/publications/gamebirds-decision-to-issue-the-gamebird-release-general-licence/gamebirds-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-decision-to-issue-general-licence>

⁸ <https://www.gov.uk/government/news/defra-concludes-its-review-into-releasing-gamebirds-on-and-around-protected-sites>

What will the indicators of success be?

Immediate success will be that all releases of these gamebirds in and around European sites will comply with the conditions of the general licence (or any individual licence that is issued) and, as a result, that deterioration or significant disturbance of the protected features of European sites is avoided.

Better evidence obtained from the first licensing regime for the 2021 season, the evaluation of which will be able to inform future decisions about on-site consenting.

Why is government best placed to resolve the issue?

The Conservation of Habitats and Species Regulations 2017 ('the 2017 Regulations') requires government to take 'appropriate steps' to avoid significant disturbance or deterioration of European sites. In view of this obligation, the government committed to introducing an interim licensing regime for gamebird releases on and around European sites prior to releases commencing in June 2021.

Economic Rationale for intervention

To manage the potential for negative impacts on European sites, government intervention is required to move the market equilibrium to its optimal location, where the marginal social cost of production is equal to the marginal social benefit. It is not possible to use the current evidence base to calculate this optimal equilibrium. Instead, following the precautionary principle, the interim licence regime restricts pheasant and red-legged partridge release activity in those areas deemed at potential risk.

What will change as a result of intervention?

The releases of the (red-legged partridges and or common pheasant (gamebirds) on or within 500m of European sites from 2021 will be prohibited unless released in accordance with the conditions set out in the general licence, or, following an application to NE, a bespoke individual licence.

What policy options have been considered, including any alternatives to regulation?

Do nothing: As Defra accepted that in principle the annual release of non-native gamebirds on or affecting Special Areas of Conservation and Special Protection Areas is capable of constituting a plan or a project for the purpose of regulation 63 of the Conservation of Habitats and Species Regulations 2017, doing nothing was not an option.

Preferred option: Our preferred option, to put in place an interim licensing regime for the 2021 releases of common pheasant and red legged partridge within European sites and within a 500m buffer zone around the sites which came into force on the 31 May 2021⁹.

This approach balanced effective protections for sites whilst taking a proportionate approach which considers the interests of all stakeholders, as well as being deliverable within the tight timeframe.

We consulted on the draft statutory Instrument and the proposed interim licensing regime for individuals releasing gamebirds on or within a 500m buffer zone of European sites, with

⁹ <https://www.gov.uk/government/publications/gamebirds-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-and-within-500m-of-their-boundary-gl43/gl43-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-and-within-500m-of-their-boundary>

conditions focused around the number and density of birds released. A summary of consultation responses is on the gov.uk website¹⁰.

The licencing regime is required as a statutory instrument amended Schedule 9 Part 1 of the Wildlife and Countryside Act 1981 to make it a criminal offence to release or allow to escape into the wild pheasant and red legged partridges on or within 500m of an European sites, without a licence. Anyone seeking to release these species within this geographic scope after 31 May 2021 needs to comply with the terms of a general licence or apply for an individual licence.

Individual licences are required for a limited number of shoots taking place at these sites where the authorised person is not able to meet the conditions of the general licence. Individual licences are also required where the releasing activity is already subject to enforcement action by NE. This is so that site-specific individual assessments can be made at sites where damage from the activity is known to have occurred in the past. Any new instances of damage resulting in enforcement activity during the lifetime of the licence would also require an individual licence.

Rejected option: We have rejected an approach whereby all releases of common pheasant and red-legged partridge on or around European sites would have required an application to NE for a bespoke individual licence (rather than these releases being permitted via a general licence).

It is Defra’s view, based on the best available evidence and supported by NE’s advice of 20 April 2021¹¹, that the interim general licence is an appropriate, proactive and proportionate measure. Given that the general licence regime is sufficient to rule out deterioration or significant disturbance of European sites it would not be proportionate to require all potential licence users to apply for an individual licence. Individuals who cannot operate under the conditions of the general licence can apply for an individual licence which will be subject to individual appropriate assessments

Non-regulatory options: Following the review of evidence, the Secretary of State proposed a new interim licensing regime for the 2021 gamebird releases on and around European sites. The proposed measures and the reasons for these were set out in our three witness statements to the court¹² as part of a judicial review claim relating to non-native gamebird releases on and around the relevant sites. As a result, we were not in a position to consider other regulatory or non-regulatory approaches. Our objective was, and remains, to deliver an interim licensing regime which is both effective and workable for users in time for the 2021 gamebird releases. When looking for a longer-term solution we will be mindful of the wider suite of options, including optimal use of the existing consents regime.

Is this measure likely to impact on international trade and investment?		No		
Are any of these organisations in scope?	Micro Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)		Traded: Unknown		Non-traded: Unknown

¹⁰ <https://www.gov.uk/government/consultations/gamebird-release-interim-licence>

¹¹ Hold until we publish this.

¹² <https://www.gov.uk/government/publications/review-of-gamebird-releases-on-and-around-european-protected-sites>

Will the policy be reviewed? Yes

If applicable, set review date: Within three years of the statutory instrument coming into force.

The statutory instrument adding common pheasant and red legged partridge to Schedule 9 Part 1 of the Wildlife and Countryside Act 1981 will include a review clause after three years and a sunset clause after 4 years.

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

Alastair Johnson –
Defra Senior
Economic Advisor

Date:

07/07/2021

Summary: Analysis & Evidence

Description:

FULL ECONOMIC ASSESSMENT

Price Base Year: 2019	PV Base Year: 2020	Time Period : 4 years	Net Benefit (Present Value (PV)) (£m)		
			Low: -15.5	High: -2.5	Best Estimate: £-5.5m
COSTS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)	
Low	1.6		0.2	2.5	
High	14.6		0.2	15.5	
Best Estimate	4.6		0.2	5.5	

Description and scale of key monetised costs by ‘main affected groups’

The main costs that we anticipate some licence users facing will include:

- Operational changes to move gamebird pens and feeders to comply with licence conditions.
- Lost revenue from reducing the stocking density of gamebirds.
- Costs associated with familiarisation with the general licence
- Costs associated with applying for an individual licence.

The scale of impact on each shoot business will include:

- All shoots falling under the new regime will incur familiarisation costs.
- A number of shoots whose operations do not currently comply with the conditions set out in the general licence will also either need to apply for an individual licence, adjust their operations or cease to operate. Unless the individual licence is granted, these businesses will incur higher costs on average as they adapt or cease to operate. Nevertheless, the number of businesses in this group is expected to be small.

Other key non-monetised costs by ‘main affected groups’

Some elements of operational changes may not incur significant financial costs but may take time, for example moving the location of an existing pen.

BENEFITS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional		Optional	Optional
High	Optional		Optional	Optional
Best Estimate	£0		£0	£0

Description and scale of key monetised benefits by ‘main affected groups’

There will be no monetised benefits to licence users; the interim regime will further regulate their activity and only has the potential to introduce new costs.

Other key non-monetised benefits by ‘main affected groups’

Releases on and around European sites conducted in compliance with the conditions set out in the interim licence regime will ensure that that deterioration or significant disturbance of the protected features of European sites is avoided.

**Key assumptions/sensitivities/risks
(%)**

Discount rate

3.5%

We seek to take a proportionate and balanced approach to effectively protect European sites.

The key immediate risk, that we did not deliver the interim regime in time for the June 2021, would have resulted in uncertainty to businesses. The licence regime came into force on time on 31/05/2021.

As set out in the Risks and Assumptions Section later, evidence is complex and not comprehensive, meaning the certainty over costs to business is low. For this reason, we have taken a conservative approach through-out the analysis and conducted sensitivity analysis.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: 1.2	Benefits: £0	Net: 1.2	4.8

Evidence Base

Problem under consideration and rationale for intervention

Gamebirds, European sites and the law

The Government has specific legal obligations (Regulation 9 of the Conservation of Habitats and Species Regulations (2017)) concerning how potential impacts of activities on sites that are protected under law are assessed and regulated under the Conservation of Habitats and Species Regulations

Two species of non-native game bird, the common pheasant and the red legged partridge, are released into the wild each year. This activity is generally undertaken by gamekeepers and landowners who organise 'shoots,' (businesses that release gamebirds onto their land for commercialised recreational shooting of these birds).

Some of these releases take place on and around European sites, which are protected under the Conservation of Habitats and Species Regulations 2017¹³. The shooting industry tell us that this covers about 8% of shoots¹⁴.

NE operate a system of consents for protected sites (Sites of Special Scientific Interest which underpin European Sites) as provided for by the 1981 Wildlife and Countryside Act; a SSSI landowner needs to apply for and abide by a consent to release game birds within these sites where this is listed as an operation requiring NE consent by a SSSI notification¹⁵. The practice has been for NE to issue consents for sites where NE has established that this activity will not have an adverse effect on the integrity of the site. In theory, a landowner operating under an NE consent has a set of parameters to follow to ensure that their release activity takes place in a way that does not damage the special wildlife interest of the site.

This consenting regime does not apply to activities taking place on land outside of a European site boundary. These are usually regulated using other complementary provisions of the 1981 Wildlife and Countryside Act which are triggered where an activity requires the prior permission of another public authority (e.g. a local planning authority). The releasing of gamebirds outside of European sites currently requires no such permission under the consenting regime.

This SSSI regime also contains several historical consents, some of which have no end date or detailed information, for example on the number of gamebirds to be released.

Releasing game birds and the impact on sites

Young game birds are ordered from game bird breeders. Pheasants are often placed into large open-air pens, where they live in a semi-wild state with access to food and protection. This activity is known as 'releasing.' As the birds mature, and over a process of several months, they gradually disperse into the surrounding land.

Game birds are stocked in pens at a level, or density, that ensures that shoots have the desired number of gamebirds on their site when the shooting seasons begin to ensure that recreational shooting is commercially viable.

¹³ Relevant sites are all sites that fall within the definition of European sites in Regulation 8 of the Conservation of Habitats and Species Regulations 2017.

¹⁴ Industry have provided an unpublished summary of data collected via shooting industry membership surveys. We have not got access to the underlying data or analysis. The provenance of this information is discussed in the section entitled "Monetised and non-monetised costs and benefits of each option (including administrative burden)".

¹⁵ <https://www.gov.uk/guidance/protected-areas-sites-of-special-scientific-interest>

Red-legged partridges are often also released into pens, which tend to be smaller than those used for pheasants. Other release techniques not involving cages are also used for partridges; techniques known as immediate or 'hard' releases involve partridges being released directly into the wild (often into sown or crop cover) without first being placed in a pen.

The released game birds can eat, or otherwise damage, surrounding flora and fauna and can otherwise degrade local biodiversity through a process of eutrophication¹⁶.

Judicial Review and Rapid Evidence Assessment

Following a threatened legal challenge from an eNGO, while not accepting the arguments upon which this was based, Defra committed to undertake a review (in the form of a rapid evidence assessment, or REA) to consider the legislative arrangements around the release of common pheasant and red legged partridge on and around European sites whether there are ways in which their effectiveness could be improved. A judicial review claim was subsequently issued and then later withdrawn after the Secretary of State set out intentions for an interim licensing regime.

The REA, *Ecological Consequences of Gamebird Releasing and Management on Lowland Shoots in England*¹⁷ by Madden & Sage (2020), was jointly funded and commissioned by NE and the British Association of Shooting and Conservation in 2020 and the key findings formed part of Defra's Witness Statements¹⁸ ahead of the Secretary of State's decision to commit to implementing an interim licensing regime for the 2021 release of gamebirds. The REA looked at areas including the number of gamebirds released and their impact on habitats, the consenting process, and whether further safeguards could be provided to protect sites.

The REA was peer reviewed by the Animal and Plant Health Agency's National Wildlife Management Centre. They found the approach and findings to be generally sound but reported some concerns, namely:

- The REA relied heavily on sources from the gamebird industry itself. This was not a criticism of the sources but a reflection of the reality in respect to research activity and gaps in available data.
- Findings relate to impacts on habitats and species generally and not specifically to European sites. The REA considered the best available evidence, but caution is required in extrapolating the findings of the REA to sensitive conservation areas.

The REA found that the negative effects of gamebird releases tend to be localised and that there are minimal or no effects beyond 500m from the point of release. It also highlighted a need to gain a better understanding of how any impacts - particularly local ones - might be mitigated. As a result of the review, the Secretary of State undertook to progress several measures¹⁹:

- A new interim licensing regime for the 2021 releases of common pheasant and red-legged partridge within European protected sites and within a 500m buffer zone around these sites. This proposal is the subject of this impact assessment.

¹⁶ Madden J.R. & Sage, R.B. (2020) *Ecological Consequences of Gamebird Releasing and Management on Lowland Shoots in England: A Review by Rapid Evidence Assessment for Natural England and the British Association of Shooting and Conservation*. Natural England Evidence Review NEER016. Peterborough: Natural England.

¹⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/931394/defra-witness-statement-gamebird-release-exhibit2.pdf

¹⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/931396/defra-witness-statement-gamebird-release-exhibit3.pdf

¹⁹ <https://www.gov.uk/government/news/defra-concludes-its-review-into-releasing-gamebirds-on-and-around-protected-sites>

- Improvements to the Animal and Plant Health Agency (APHA) poultry register. Individuals releasing 50 or more birds are legally obliged to provide details of these releases to APHA. This register is a potential key source of evidence and information on gamebird releases. However, it is believed that the level of industry compliance with the register is low at present. The general licence will highlight the existing legal obligation to comply with the APHA register.
- Review and improve the existing consenting regime. There are problems with some of the existing consents, which have arisen in light of the evidence and analysis presented in the recent review of gamebird releases. For example, some consents allow releases without any limit on numbers. The consents are being reviewed with a view to bringing them into line with the latest evidence.
- Improve monitoring of European sites.

Based on the key findings of the report, NE issued advice²⁰ to Defra as follows:

1. Release pens and feeding stations. These effects are density dependent. The available evidence indicates that smaller releases ($\leq 1,000$ birds/hectare) in line with existing 'good practice guidelines' (i.e. the 'Guidelines for sustainable gamebird releasing published by the Game and Wildlife Conservation Trust'²¹) have little or no discernible eutrophication or vegetation depletion effects beyond a relatively limited distance (up to 15m) from release pens and feeding stations.
2. Negative effects tend to be localised and studies indicate minimal or no effects beyond 500m from the point of release. Most studies tend to be within 300m of the point of release or within pens thus there is no direct evidence of the effects at or beyond this distance. However, NE concluded that negative effects beyond 500m are likely to be minimal because studies also show that dispersal of the majority of birds tends to be less than 500m from the release sites and the negative effects in consideration are linked to the presence and density of birds.
3. There is strong evidence of associated benefits for biodiversity from general woodland management associated with shooting but a limited evidence base on the positive effects of general habitat management associated with gamebird management which may benefit native biodiversity.

Description of options considered

The following options were considered. Only one, option 2, would ensure the Government complies with its legal obligations and would be deliverable before the June 2021 releases of gamebirds:

1. Do Nothing
2. Introduce an interim general licence regime, with a small number of individual licences, whilst reviewing the existing consent regime.
3. (Rejected) – Individual licences on European sites with general licences for the buffer zone.

A note on Non-Regulatory options: As part of the judicial review and review of evidence, the Secretary of State proposed a new interim licencing regime for the 2021 gamebird releases on and around European sites. The proposed measures and the reasons for these were set out in

²⁰ Details of the advice can be found via this link:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/931396/defra-witness-statement-gamebird-release-exhibit3.pdf

²¹ Accessible via this website: <https://www.gwct.org.uk/advisory/guides/sustainable-gamebird-releasing/>

our three witness statements to the court²². As a result, we were not able to consider other regulatory or non-regulatory approaches.

²² <https://www.gov.uk/government/publications/review-of-gamebird-releases-on-and-around-european-protected-sites>

Table 1: Options considered

<u>Options</u>	<u>Financial Impact</u>	<u>Ecological Impact</u>	<u>Other Impacts</u>
Do Nothing	<p>No financial impact.</p> <p>Individuals currently releasing specific gamebirds on or around European sites would be able to continue releasing gamebirds in 2021 without incurring costs associated with adhering to new licence conditions.</p>	<p>Doing nothing would not provide adequate reassurance that any impacts of releases on European sites or the surrounding areas will be able to meet the Regulation 9 of the Conservation of Habitats and Species Regulations (2017) requirement to 'take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species'.</p>	<p>The Secretary of State has publicly committed to introducing an interim licencing regime for the 2021 gamebird releases.</p>
Introduce interim general licence regime, small number of individual licenses, whilst reviewing existing consent regime	<p>Most of the minority of shoots in England who undertake release activity on or around European sites will be able to operate under the general licence conditions, which are partially derived from existing industry best practice. We anticipate this will reduce the costs for general licence users to amend their operations in order to comply with the licence conditions.</p> <p>Unpublished industry figures suggest that only 8% of shoots operate in or around European protected sites and that 98% of shoots already operate within the proposed general licence threshold of 1000 birds/ha. We have also proposed a stricter limit of 700 birds/ha on European sites.</p>	<p>This approach balances robust protections for sites which ensure the Government complies with our legal obligations, whilst being practical for users and deliverable within the tight timeframe.</p> <p>NE have advised that this approach will in principle significantly help to reduce the risk of deterioration (in the case of habitats and supporting habitats) and the risk of significant disturbance (in the case of species) occurring on European sites as a result of gamebird releasing.</p>	<p>We believe that our preferred approach satisfies the governments' legal obligations under Regulation 9 of the Conservation of Habitats and Species Regulations (2017).</p> <p>This option was deliverable by 31 May 2021</p>
<u>Individual licence European sites, General licences for buffer zone (Rejected)</u>	<p>Costs for businesses would have been higher were this approach pursued.</p>	<p>Would have allowed specific conditions to be applied to every affected shoot. However, given that the general licence regime is sufficient to rule out deterioration or significant disturbance of European sites it would not be proportionate to require all potential licence users to apply for an individual licence</p>	<p>Not realistic to review hundreds of individual licence applications and issue licences before releases in 31 May 2021</p>

Do Nothing

Gamebird releasing on and around European Sites is not a new activity. There are existing consents from NE for game bird release activity. It is important to note that the interim licencing regime will operate alongside the current consent regime and the APHA registration process described above. This will provide a consistent level of required and recommended activity on sites where game bird releases take place while NE undertakes its review of the consent regime.

The 'business as usual' practice for shoots that release game birds on European sites has been regulated by a system of consents overseen by NE. When a site is first notified as a Site of Special Scientific Interest (SSSI – a designation that underpins European Protected Sites), those with an interest in the land are given a notification package which includes a list of Operations Requiring Natural England Consent (ORNEC) – activities that are likely to damage the designated features of a site. Landowners or occupiers of the site must seek consent from NE before carrying out potentially damaging activity on these sites. Failure to do so constitutes an offence. Consents only apply to the protected sites themselves, and do not apply to the surrounding land. As discussed above, the existing consents for gamebird releasing are being reviewed by NE to check that they align with the most recent evidence.

Shooting industry bodies have published guidelines²³ for individuals releasing common pheasant and red legged partridges. Where possible and appropriate to do so, we have drawn on these guidelines when shaping our proposed licencing conditions. Industry have advised that these guidelines are widely adhered to.

Our preferred option, described below, differs from the existing approach to regulating gamebird releases in several ways:

- Consents only apply to the protected site itself; the interim licence regime applies to activity taking place on an additional 500m buffer zone surrounding the European site.
- The general licence applies uniform conditions and recommendations to all sites within scope, whereas consents have site specific conditions. Any individual licences issued will outline site specific conditions based on an NE assessment supported by the best available current evidence base.
- The interim licencing regime sets mandatory conditions on gamebird stocking densities on and around European sites, whereas previously these only form part of non-mandatory industry best practice.
- Gamekeepers and landowners operating under the interim general licence now need to provide NE with information about their releases (such as the release location and densities). They also need to provide NE with details of their current consent.

Interim General Licence Regime (Preferred Option)

The interim licensing regime came into force on 31 May 2021. An authorised person can use the general licence to release common pheasants or red-legged partridges on European sites and within their 500m buffer zones²⁴. A general licence is applicable to all relevant users without the need for a specific application, provided the conditions included within it are met.

²³ <https://www.gwct.org.uk/advisory/guides/sustainable-gamebird-releasing/>

²⁴ <https://www.gov.uk/government/publications/gamebirds-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-and-within-500m-of-their-boundary-gl43>

This approach balances our legal obligations to ensure there is no damage or significant disturbance to sites for the releases in June 2021 with new burdens on businesses and the capacity for NE to manage a system of individual licences.

Defra is administering the general licence (although users must provide NE with data and a copy of their consent). NE assess any individual licence applications and take decisions on their issuance.

Defra has now published the finalised interim general licence. A link can be found [here](#) and the web address is included in the associated footnote accompanying this paragraph²⁵.

(Rejected) Individual licences on European sites with general licences for the buffer zone

We have rejected an approach whereby all releases of common pheasant and red-legged partridge on or around European sites would have required an application to NE for a bespoke individual licence (rather than these releases being permitted via a general licence). As discussed above, given that the general licence regime is sufficient to rule out deterioration or significant disturbance of European sites it would not be proportionate to require all potential licence users to apply for an individual licence. Individuals who cannot operate under the conditions of the general licence can apply for an individual licence which will be subject to individual appropriate assessments.

²⁵ <https://www.gov.uk/government/publications/gamebirds-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-and-within-500m-of-their-boundary-gl43/gl43-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-and-within-500m-of-their-boundary>

Analysis Section

The only viable measure is the preferred option, which is appraised in the remainder of this document.

Evidence base

The level of evidence available to assess economic impacts is low and we have a high level of uncertainty about the information that is available.

We have received a high-level summary of data and estimates from industry. We have concerns about the sample size, methodology and assumptions that stakeholders have used to generate their estimates (see annex 5 for further details).

We launched a 3-week public consultation on 23/02/2021 in which we sought further information on the possible economic impacts of the proposals for the interim licensing regime. The consultation closed on 15/03/2021 with circa 2,200 responses. The summary of responses was published on 12/05/2021 and can be read on the gov.uk website²⁶. Circa 140 respondents identified themselves as releasing common pheasant and red legged partridges on or around European sites. These respondents provided valuable information on the estimated economic impact on their businesses of complying with the conditions of the general licence and their intentions around applying to NE for an individual licence.

Time period, prices and base year

The analysis is conducted using a 4-year time frame. This is the proposed maximum length of time the regime could be in force, with a review clause at 3 years.

This means the length of appraisal period is 4 years rather than the standard 10 years. The use of 4 years rather than spreading costs over 10 years also produces a larger equivalent annual net direct cost to business (EANDCB), consistent with our conservative approach to analysis (not wishing to understate the impact of the measure).

All values have been converted to 2019 prices and a base year of 2020 is used consistent with RPA guidance. This allows for consistent comparison to be made with other policies.

Counterfactual

Under the counterfactual scenario shooting business would continue as normal and no additional costs would be incurred by the shooting businesses, private sector or NE (i.e. Her Majesty's Government).

As detailed above, the REA suggests that possible environmental damage may include eutrophication of soil and the depletion of vegetation immediately within and around release pens and feeding stations. Nevertheless, there is also evidence of associated benefits for biodiversity from general woodland management associated with shooting.

If the interim licencing regime had not been implemented, it is possible that environmental damage would be caused to European sites due to continuation of unregulated non-native game bird release activity.

²⁶ <https://www.gov.uk/government/consultations/gamebird-release-interim-licence>

Differences between the proposal consulted on and the final policy position

It should be noted that the final policy position was developed following the analysis of the consultation, and consequently differs in a small number of places from the proposal outlined above. A link to the finalised, published general licence²⁷ can be found [here](#). As the data was collected via the consultation on our proposed approach, this means that the analysis within this impact assessment does not wholly match the general licence regime that is now in place.

Although there are differences between the approach consulted on and the final licensing regime, our conclusion is that these differences are not significant and would not result in an increase in costs for licence users. However, the way in which the data was collected precludes a follow-up analysis to produce a new model of costs. Regardless, we believe this impact assessment still provides a reliable estimate of the economic impacts of the interim licence regime. The key differences and their anticipated impacts on the analysis are explored in Annex 4.

Summary of Costs and Benefits

Costs to business – Summary - Direct costs to business

This section summarises the costs expected. The following section sets out in more detail the number of licence users we expect to be impacted and costs estimates for each.

Transitional/one-off costs (year 2021/22):

- Familiarisation costs: all individuals releasing gamebirds on or around European sites in England will need to familiarise themselves with the new regime. We anticipate this cost to be low. This is because we have worked closely with stakeholders to draw some of the proposed conditions and recommendations from existing industry guidelines where it was appropriate for us to do so.
- Administrative costs: We require general licence users to provide NE with information about their releases and the consent that they are operating under. We anticipate the cost in time associated with calculating the required information and providing it to NE to be low. This is because the information being asked for is linked to the conditions of the licence; an individual will have gathered the necessary information as part of the familiarisation process to understand whether they comply with the licence conditions.
- Individual licence costs: For individuals unable to use the general licence, there is a cost associated with applying for an individual licence from NE (if they choose to apply).
- Additional expenditure, resulting from changing operations to comply with the interim licencing conditions (e.g. moving gamebird pens, feeding stations and other infrastructure). This will only impact those who are unable to use the general or individual licence.
- Lost profit for those shoots which are forced to cease operations. This will only impact those who are unable to use the general or individual licence and are unable/unwilling to amend their operations to comply with the general licence. Note that it is possible that some of the loss in profit will be offset by the over 90% (according to unpublished industry estimates) of shoots in England that do not release common pheasant and / or red legged partridge on or around European sites areas increasing their production to serve the market. Nevertheless, to take a conservative approach and not risk underestimating costs,

²⁷ <https://www.gov.uk/government/publications/gamebirds-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-and-within-500m-of-their-boundary-gl43/gl43-licence-to-release-common-pheasants-or-red-legged-partridges-on-european-sites-and-within-500m-of-their-boundary>

we assume that this doesn't occur for the first year of this the regime, so we include these lost profit costs in the IA for year 1.

Ongoing costs

We envisage no ongoing costs of the measure after year 1 once the impacted businesses adapt to the new regime. Although some shoots may cease to operate in year 1 we expect the economic activity to be absorbed by the remaining 92% of shoots which do not operate in the relatively small geographic area within the scope of the interim licence regime and who could increase their stocking densities.

Costs to HMG - Summary

Administrative costs; costs of administering additional individual licences.

We assume that individuals apply for individual licences in year 1, when they adapt their business to the new regime.

Monitoring and evaluation costs

Monitoring and evaluation (M&E) will be carried out by NE. See section on Monitoring and Evaluation, below.

Benefits – Summary

NE have assessed that the interim general licence “as a general precautionary measure, will significantly help to reduce the risk of deterioration (in the case of habitats and supporting habitats) and the risk of significant disturbance (in the case of species) occurring on European Protected Sites as a result of gamebird releasing²⁸.”

Missing impacts:

As set out in the “Wider Impact section” below, impacts which have not been quantified are:

- Relocation of shoots - the policy could lead to shooting activities to move location. As set out in Annex 1, given that data suggests the majority of businesses will stay in the same location and simply modify their activities to allow shoots to continue as normal, and that only a small number will cease to operate (low tens) or move, we deem that the magnitude of this effect will be very small.
- Impacts on Civil Society Organisations (CSOs) – organisations which could own European sites could be impacted by the proposal; for example, through lost rent if a shoot no longer conducts activities on the land. Again, we deem this impact to be very small given the small number of businesses which are expected to cease operations or move location.
- Wider loss of upstream business and business derived from complimentary services (accommodation, pubs). If shoots cease to operate it is expected that a wider knock on impacts would be felt in the local area. We deem this impact to be very small given the small number of businesses which are expected to cease operations or move location.

²⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/996634/annex-G-formal-advice-from-NE.pdf

Quantifying Costs

Direct costs and benefits to business

Familiarisation costs

All individuals releasing gamebirds on or around European sites will need to familiarise themselves with the new regime. As set out in Annex 1²⁹, this group is made up of the 7.7% of shoots which have release pens on or within 500m of European sites in England, estimated to be between 517 and 708 shoots.

We anticipate these familiarisation costs to be low. This is because we have worked closely with stakeholders and drawn some of the proposed conditions and recommendations from existing industry guidelines where it was appropriate for us to do so. Industry have indicated that these guidelines are widely followed. Individuals that comply with the general licence conditions will not need to apply to operate under the licence and will be able to operate under the conditions set out for the duration of the period.

Based on NE estimates (see Annex 3), the cost per shoot for reading/understanding of requirement under the licence is expected to range between £46 and £200.

Administrative costs

We require general licence users to provide NE with information about their releases and the consent that they are operating under. We anticipate the cost in time associated with calculating the required information and providing it to NE to be low. This is because the information being asked for is linked to the conditions of the licence; an individual will have gathered the necessary information as part of the familiarisation process to understand whether they comply with the licence conditions.

Based on NE estimates (see Annex 3 for more detailed calculation), the cost per shoot for an annual data return is between £23 and £100. The estimates present a maximum cost as they assume that an advisor is employed to undertake the work. As with familiarisation costs we estimate between 517 and 708 shoots incurring this cost.

Individual licence costs

For individuals unable to use the general licence, there will be the option to apply for an individual licence. Prior to the launch of the interim licence regime, NE launched an online service³⁰ to help landowners check if they need to apply for an individual licence.

As set out in Annex 1³¹, this group is made up of the proportion of shoots assumed to operate on or within 500m of European sites which release >700 or >1000 birds/ha respectively in England³². This is estimated to be 259-354 shoots.

²⁹ Data provided directly to Defra by the shooting industry. Data is based on an unpublished summary of data collected via shooting industry membership surveys.

³⁰

https://forms.office.com/Pages/ResponsePage.aspx?id=UCQKdycCYkyQx044U38RAmbQcJrh_OJtcWmw_eYXBJUOTPrzJJMTBRVjhHUEc5QjIzM080TDJTSC4u

³¹ Data provided directly to Defra by the shooting industry. Data is based on an unpublished summary of data collected via shooting industry membership surveys.

³² As set out in Annex 1, no data exists which allows precise identification of the numbers of shoots that fall within the scope of the interim licence regime but may not be able to use the general licence without adapting their operations. Given this, the industry estimate of 1.2% (based on an early conception of the licence regime) has been magnified by 300% in an attempt to ensure costs to business are not underestimated. This means that we are assuming 3.85% of all shoots fall into the category. The rationale for this is explained in Annex 1.

Using the costs per hour provided by NE (£23-£100), the cost associated with applying for an individual licence from NE is anticipated to be between £115 and £500.

Table 2: Cost to business associated with applying for an individual licence

Activity	Hours	Cost		
		Lower	Mid	Upper
a) Download, completion and submission of licence	3	£69	£184.5	£300
b) Receipt of licence and awareness raising	2	£46	£123	£200
Total	5	£115	£308	£500

Although we cannot predict the number of individuals who would choose to apply for an individual licence, 50% of individuals responding to the consultation suggested they would consider applying. This figure is used in our central estimate and sensitivity analysis is undertaken using a +/-50% range.

Additional expenditure from adapting operations to comply

Those who are unable to use the general licence and either choose not to apply for an individual licence, or apply for an individual licence but have that application rejected, have 2 options; to adapt their shoot (moving gamebird pens, feeding stations and other infrastructure to comply) or cease operations.

To take a conservative approach, we assume that no individual licences are issued, meaning that 3.85% of shoots must either adapt operations or cease to operate.

21% of individuals who responded to the consultation said they would close if they were not granted an individual licence. We assume that the remaining 80% would adapt.

The average cost of adapting the shoot is £18,862, based on responses from the consultation. This is broadly consistent with figures suggested previously by Industry, but sensitivity analysis is undertaken. The upper limit estimate of costs is based on the total cost of moving pens and feeders (£42,935) estimated by industry prior to the consultation.

Ceased business

For those who are unable to use the general and do not apply/are refused an individual licence and are unable/unwilling to amend their operations to comply with the general licence, the remaining option is to cease operations. The businesses ceasing to operate will be those for whom adapting is not financially optimal (the annual revenue they would forgo by ceasing to operate is not high enough to merit the adaptation cost).

In this case, the cost to these businesses would be the loss in profit otherwise derived from the shoot activity.

We predict that much of this loss in profit for the business directly impacted by the measure will be offset by shoots in other areas increasing their production to serve the market. Nevertheless, to take a conservative approach and not risk underestimating costs, we include the cost of lost profits in cost estimates for the year 2021.

We do not have data on the average profit of this group. Instead we use a range, based on farm business survey data (Defra internal data, 2021). The average profit used is £2,905, and the lower bound profit is set to zero given that data suggests these businesses make a loss. The upper bound profit is £11,049.

Table 3: Average profit of businesses

Quartiles	Average Income from recreation (£ per farm)	95% confidence interval	Sample size
Bottom 25%	-2,694	5,156	16
Second quartile	481	104	12
Third quartile	1,697	322	22
Top 25%	11,049	3,802	15
All farms	2,905	2,291	64
Source: Farm Business Survey, England 2019/20			
Data are based on income from recreation and Includes only those farms which undertake this activity. "Recreation" as defined here includes activities such as shooting, fishing, nature trails, agricultural shows, sheepdog trials, etc. Excludes: Equine activities, income from livery, sports and golf			
The lower quartile and all farms values have very wide confidence intervals, caution should be taken when drawing conclusions from these values.			

This data is consistent with evidence from other sources of literature on the magnitude of profits derived from shooting below:

- Teanby *et al.* 2019³³ report the cost per bird shot averages £39.24 and in comparison, the average income per bird shot on shoot days was £36.92 in 2018/19, so many shoots may make a loss.
- PACEC 2006³⁴ uses data from the PACEC Survey of Providers 2014 to report that shooting is profitable for providers in around a sixth of cases (16%), regardless of the size of the organisation. 62% roughly break even. Note that this sample included other forms of game shooting (deer etc).

Using GVA in estimates:

If GVA were to be used rather than profit, estimates for the cost of ceased business operations may increase.

PACEC (2014) state that approximately £2 billion Gross Value Added (GVA) in 2012/13 was attributable to the UK shooting industry as a whole. Nevertheless, this does not follow ONS GVA methodology and includes second round expenditure (e.g. supply chain contributions) as well as subsidy payments, so estimates cannot be taken at face value. In addition, many of the values presented in these reports represent all UK shooting types including clay pigeon and target shooting, as well as all types of live quarry and pest-control shooting (PACEC 2006, PACEC 2014). Cormack and Rotherham (2014) estimate the GVA attributable to the shooting industry as between £267 million and £480 million (depending on whether participant spending or provider income are used respectively), calculated at market prices (what the consumer pays) and not accounting for indirect taxes levied on the industry. We do not know which shoots are included in these sector GVA calculations, but if we assumed they only cover the shoots in the subsector of relevance to this IA (8,000-10,000 shoots in the UK), this would suggest GVA of between £26,700 and £60,000 per shoot, averaging £43,350 per shoot. As an illustrative example, if this figure was used in calculations, the central estimate of cost to shoot businesses of ceasing operations would be £2.6m.

Costs to HMG

Administrative costs; costs of administering additional individual licences (transitional cost)

We assume that individuals apply for individual licences in year 1, when they adapt their business to the new regime.

Data on the cost of processing individual licences was provided by NE, based on the application costs for individual licences for European sites (see annex 3). This cost figure is multiplied by the number of individuals applying in each scenario to generate the total cost of administration.

Monitoring and evaluation costs (annual)

The main purpose of further evidence gathering and evaluation will be to inform future decisions about on-site consenting. This will draw upon the requirement in the interim licencing regime for licence users to report to NE the location and size of gamebird releases taking place within European Sites under the interim licence.

We have assumed a sum of £1m over 3 years based on experience of similar types of evidence gathering projects³⁵. This figure may decrease given the complementarity between evidence gathering for this specific measure and the broader review of the whole consenting regime. This can be updated as more information becomes available.

³³ Teanby, A., Norton, E., Steel, D. & Draycott, R. (2019) *Game and conservation benchmarking: UK rural - Summer 2019* GWCT and Savills

³⁴ PACEC (2006) *Economic and environmental impact of sporting shooting in the UK*. Public and Corporate Economic Consultants (PACEC) on behalf of BASC, CA, CLA and GWCT: Cambridge, UK

³⁵ Researchers from Defra and NE with experience in designing, commissioning and managing similar research projects.

Indirect costs

As set out in the “Wider Impacts” section below, it is possible that some wider effects are felt, particularly in year 2021/22, due to the small number (low tens) of businesses which may cease to operate due to the new regime. These wider effects could include losses to upstream supply chains and to wider local businesses providing complimentary services – such as pubs.

Nevertheless, we expect wider impacts will be on a very small scale given the numbers of shoots we expect to cease operations (in the low tens) and expectation that the lost activity will be absorbed by the rest of the shooting sector (made up of hundreds of businesses).

Given the very small indirect costs expected it was not deemed proportionate to estimate effects quantitatively.

Results - Summary of impact of this proposal

Table 4 - Equivalent Annual Net Direct Cost to Business (EANDCB) - in £million

EANDCB	Annualised	2019 Prices	2020 Base Year
Direct Business Costs	1.3	1.2	1.2
Direct Business Benefits	0.0	0.0	0.0
Net Direct Cost to Business	1.3	1.2	1.2

Table 5 – Business Net Present Value - in £million

Business NPV	2019 Prices	2020 Base Year
Total Business Costs	4.7	4.5
Total Business Benefits	0.0	0.0
Net Total Business Impact	-4.7	-4.5

Table 6 – Net Present Social Value - in £million

NPSV	2019 Prices	2020 Base Year
Total Costs	5.7	5.5
Total Benefits	0.0	0.0
Net Impact	-5.7	-5.5

Risks and assumptions

Numbers of shoots impacted - UK estimates

As set out in Annex 1, the most appropriate data source was considered to be that provided by Industry. This data is for the whole UK.

Weaknesses:

- We are unable to corroborate the information; it is based on industries calculations drawn from raw data we have not seen. We do not know anything about the sample size and its representativeness of the industry as a whole. We have not seen the questions used to elicit the information.
- We do not know where these shoots are, some may be on sites excluded from the scope of the general licence because there is no risk, or because they are vulnerable and will require an application for an individual licence instead.
- The data is for the whole UK, rather than England (where the licence regime is in effect).
- Individual licences: The figures for number of shoots which will need to adapt their business does not account for the fact that shoots could apply for an individual licence to cover their activities. NE will consider reasonable applications for shoots that cannot comply with, or are outside of, the scope of the general licence. Consequently, the magnitude of impact on the industry may be overestimated by using this data.

England estimates

As set out in Annex 1, there is no data available on the proportion of shoots in England relative to the UK as a whole (upon which most data is based).

Given this, we have used the most appropriate data in the literature regarding shooting activity in England versus the UK. This figure is consistent with industry's verbal assertion that "the vast majority" of UK common pheasant and red legged partridge shooting is in England.

A range of values have been used in the analysis to account for this uncertainty.

Cost of adjusting operations to comply

As set out in Annex 2, the most appropriate data source for estimating the magnitude of impact on affected businesses was considered to be the consultation responses. This data was chosen over other sources as it is the only data based on the regime set out in this impact assessment. Respondents had a clear picture of what the new regime would entail when responding and suggesting how they would adapt their businesses.

The consultation respondents are not a representative sample. It is likely that those responding to the consultation are more impacted by the proposed new regime (have more incentive to respond to the consultation) than those who did not respond. Consequently, the magnitude of impact on the industry may be overestimated by using this data.

A range of values have been used in the analysis to account for uncertainty.

Loss of profit from shoots which cease to operate

As set out in the Quantifying costs section, we do not have data on the average profit of this group. Instead we use a range, based on farm business survey data. Sensitivity analysis is done using the bottom and upper quartile profit figures.

Small and micro businesses

The policy options will predominantly affect micro businesses as most shoot providers employ fewer than 10 full time equivalent (FTE) employees – see PACEC survey figure below.

This suggests that most of the overall cost to business would be expected to fall predominantly on micro businesses.

Applying an exemption to small and micro businesses would, however, significantly reduce the effectiveness of the policy options.

Figure 1: PACEC Survey of Providers 2014 was used by PACEC 2014 to assess the proportion of businesses with different numbers of employees.

Table 19: Number of paid stalkers, gamekeepers, and other employees per organisation (%)

	% of providers by type of employee		
	Stalkers	Gamekeepers	Other paid employees
None	90	68	55
1 Part time	4	13	21
1 Full time	2	8	11
2 (part or full time)	2	7	8
3+ (full or part time)	2	5	5
<i>Number of respondents</i>	<i>3,681</i>	<i>3,756</i>	<i>3,703</i>

See Appendix B1 for notes on bold figures and rounding.

Source: PACEC Survey of Providers 2014

Regional/distributional impact

There are 326 European sites in England. These are divided by region as illustrated in the table below:

Table 7: European sites in England, by Region

	Number	Proportion of total
South West	75	23.0%
South East	67	20.6%
East of England	48	14.7%
North West	43	13.2%

North East	19	5.8%
Yorkshire & Humber	18	5.5%
West Midlands	13	4.0%
East Midlands	11	3.4%
London	2	0.6%
European sites covering more than 1 region	30	9.2%

As set out in the REA, our knowledge is incomplete on the location and size of gamebird releases on and around these protected sites in England. The inclusion of a requirement for users of the interim licence regime to share with NE the location and size of gamebird releases is a necessary component of moving forward with improving our understanding, as are improvements to compliance with, and use of data from, the APHA Poultry Register.

We are not in a position to say with confidence where individuals releasing gamebirds on or around European sites are within England and how many birds are being released on these sites. As a result, while it may be reasonable to speculate that the majority of potential licence users will be in the south west, south east and east of England, it is not possible for us to conclude at present whether the interim licensing regime may have a disproportionate impact on different regions.

Distributional impact

We do not hold data on the make-up of the impacted group in terms of other characteristics of interest (gender, age etc). Nevertheless, if the impacted group is similar to that of the farming sector, we can assume that individuals impacted are more likely to be male and in higher age groups. In 2016, 85% of farm holders in the UK in 2016 were male and over a third of all farm holders in the UK were over the age of 64 years. Just 3% of holders were aged less than 35 years³⁶

Wider impacts (consider the impacts of your proposals)

We expect that the economic activity ceased by the small number of individuals who choose not to change their operations to comply will be absorbed into market supply by nearby shoots who are not subject to the new regime. We also expect this to mitigate any wider and multiplier effects on the local economy.

Nevertheless, it’s possible that this adjustment doesn’t take place for the first year of the new regime which may causes some wider impacts in 2021/22.

³⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/834432/evidence-compendium-26sep19.pdf

Mason *et al* (2000)³⁷ reviewed available evidence on the industry and reported strong evidence for the wider impacts on the rural community of shooting. Natural Resources Wales concluded that shooting represented a positive contribution to local economies in Wales after an evidence review and public consultation in 2017 (NRW 2018³⁸).

For some local areas wider impacts could include fewer overnight stays at guest accommodation or spending in local pubs. PACEC 2014³⁹ reports that 54% of shoot providers said that their shooting sports activity led to visitors staying overnight although this sample covers the wider shooting businesses sector, not just the shoots affected by this proposal.

Industry have also provided us with unpublished figures of 'economic loss to the rural economy'. This is reported to be (~£90,000) for medium and (~£350,000) for large shoots (see annex 5). Industry cite the Savills/GWCT 2019/2020 game and conservation benchmarking survey as the source of data for estimations. We do not have access to the data or calculations upon which the figures are based. A very small number of consultation responses also offered estimates of financial impact on the shoot and wider rural economy, but these figures were not assessed to be suitable for use given sample sizes.

As an illustration of how the use of the Industry figure of an average of £220,000 cost per shoot ceasing to operate would impact the cost estimates in this impact assessment, we multiply the £220,000 by the shoots we assume would cease. Use of this extreme figure would produce a total cost of ceased business of around £13.5m.

In summary, it is possible that wider effects are felt, particularly in year 2021/22. Nevertheless, it's important to remember that wider impacts will be on a very small scale given the numbers of shoots we expect to cease operations (in the low tens) and expectation that the lost activity will be absorbed by the rest of the shooting sector.

A summary of the potential trade implications of measure

N/A

Monitoring and Evaluation

We plan to introduce this interim licencing regime to provide certainty that the government is compliant with its obligations under the Conservation of Habitats and Species Regulations 2017. As part of its general duty, the government is required to take appropriate steps to avoid the deterioration of natural habitats and the habitats of species for which European Sites have been designated. We need to ensure that there is a clear plan to ensure that this certainty (that the government is compliant with its obligations) is maintained following the end of the interim licencing regime.

Witness Statement 3⁴⁰ outlined that NE itself was not in a position to be able to address the knowledge gaps identified in the Rapid Evidence Assessment (REA). The REA highlighted 2 areas that particularly required a better understanding: the impact of the release of gamebirds

³⁷ Mason, L., Bicknell, J., Smart, J., Peach, W. (2000). *The impacts of non-native gamebird release in the UK: an updated evidence review*. RSPB Centre for Conservation Science.

³⁸ NRW (2018) A review of the use of firearms on the land managed by Natural Resources Wales. Paper 2: Synthesis of Evidence. Natural Resources Wales. <https://cdn.cyfoethnaturiol.cymru/media/683945/paper-2-synthesis-of-evidence.pdf?mode=pad&rnd=131625760710000000>

³⁹ PACEC (2014) *The value of shooting: The economic, environmental and social contribution of shooting sports to the UK*. Public and Corporate Economic Consultants (PACEC) on behalf of UK shooting and countryside organisations: Cambridge, UK

⁴⁰ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/931396/defra-witness-statement-gamebird-release-exhibit3.pdf

(both on sites and in the surrounding landscape) on protected sites and the location and extent of gamebird releases on and around protected sites.

NE's proposal for reviewing its gamebird consents includes a phased approach and is subject to having a better understanding of the scale of the task, along with the availability of resource from 2022 onwards. On the current trajectory, the earliest that the identification and technical assessment phases (Phases I and II) would be completed would be March 2023, and it is likely that the lengthiest phase would be the statutory modifications should these be needed (Phase III), taking completion into 2024 and beyond. This will be accompanied by work to improve the APHA registration process, which will be a critical means of data gathering.

As a result of the licencing regime being an interim measure, the main purpose of further evidence gathering, and evaluation will be to inform decisions about on-site consenting in the future. Therefore, NE are developing a costed proposal for reviewing consents relating to gamebird releases and will draw upon the requirement in the interim licencing regime for licence users to report to NE the location and size of gamebird releases.

NE evidence needs for a robust consenting regime have not been finalised. At this stage it is not possible to estimate what proportion of this overall programme (and associated costs) could be attributed to evaluating the impact of gamebird releases.

Annex 1 - Summary of data on the number of shoots impacted by the measure

The most appropriate data source was considered to be that provided by Industry. Industry provided us with an unpublished summary of data collected via shooting industry membership surveys. We have not got access to the underlying data. The weaknesses in this data are outlined on page 21.

The key facts from this industry summary of data are as follows:

- There is a total of 8,000 – 10,000 shoots (i.e. businesses that run commercial recreational shooting of gamebirds) in the UK.
- 7.7% (616-770) of all UK shoots release gamebirds on or around European sites. These shoots would likely fall under the scope of the general licence, or, if the site is deemed vulnerable and outside the scope of the general licence, would need to apply for an individual licence. The remaining 92.3% of shoots would be unaffected as they fall outside of the geographic scope of the proposed changes.
- 16% of shoots in these areas do so at densities of >1,000 birds per hectare. This means that 1.2% (96-120) of all UK shoots are both on or around European sites AND have densities >1000. These would therefore not be complying with the general licence conditions.

The finalised general licence also sets out conditions for release densities on European sites; an authorised person can only release gamebirds under the general licence on a European site if they release fewer than 700 pheasants or 700 red-legged partridges per hectare of land. As the industry data estimated the proportion of shoots impacted by considering shoots releasing over 1,000 (rather than 700) gamebirds per hectare, the finalised policy will increase the number of shoots impacted relative to the 1.2% identified above.

No data exists which allows precise identification of the numbers of individuals that may not be able to use the general licence without amending their operations. Note that can apply to NE for an individual licence tailored to their circumstances. Given this, the estimate above is magnified up ~~to 2%~~ to ensure costs to businesses are not underestimated. Industry report that 16% of shoots in the areas of interest are reported to have densities of >1000. We use an assumption that 50% of shoots in these areas have densities >700 birds; effectively magnifying the Industry figure by over 300% to take following our conservative approach to estimates.

This means that we are assuming 3.85% of all shoots fall into the category of releasing over 1000 birds around sites or >700 birds on sites and therefore cannot use the general licence without amending their operations.

Clearly this assumption is a weakness of the analysis and we will update estimates if any improved data becomes available.

We also set out sensitivity testing around this figure in Annex 6.

Shoots in the UK vs England.

Industry data provides the likely number of affected shoots for the UK.

Industry have told us that the 'vast majority' of shooting is in England but have not been able to give us a definitive figure.

To estimate for England only the following method has been used:

Page 26 of the industry survey *The Value of Shooting 2014*⁴¹ lists a number of indicators of shooting activity by nation:

- Gun days: 87.3% in England
- Shooting providers: 84% in England
- Participants in shooting: 92% in England
- Gross value added (£): 85% in England

None of these figures provides an estimate of the number of shoot businesses which are in England versus the rest of the UK, but the range of values here suggest that the figure is likely to be around (84-92%). We apply this range to the estimates of business impacted in the UK (see Annex 1) to calculate the upper and lower estimates for the number of shoot businesses which are in England.

Table 8: Estimate of number shoots impacted in England

Group	UK shoots*			Estimate of number shoots impacted in England		
	Lower bound	Mid-point	Upper bound	Lower bound (best case)	Mid-point	Upper bound (worst case)
A) Total number of shoots	8,000	9,000	10,000	6720	7920	9200
B) All shoots to which the new regime applies (shoots releasing gamebirds on or around EPS). These shoots will incur <i>familiarisation</i> and <i>administrative</i> costs.	7.70%			517	610	708
C) Shoots having to change their operations or apply for individual licence to comply (shoots that release gamebirds on or around EPS at densities of >1,000 birds or 700 birds per hectare respectively) *****	3.85%			259	305	354

⁴¹ <http://www.shootingfacts.co.uk/pdf/The-Value-of-Shooting-2014.pdf>

D) Shoots applying for Individual licence (as percentage of group (C))	25%	50%	75%	65	152	266
E) Shoots successful at individual licence (as percentage of group (D))	0%			0	0	0
F) Shoots still having to adapt or cease to operate				259	305	354
G) Shoots adapting operations to comply (as percentage of group (F))	70%	80%	90%	181	244	319
H) Shoots ceasing to operate (as percentage of group (F))	30%	20%	10%	78	61	35

** Data provided by Industry is in blue, data obtained via the consultation responses in green, data obtained by NE in red. Note that figures may not add due to rounding.*

****** Group (C), is based on an assumption that 50% of shoots in or around sites have densities >700 birds. This is based on the 16% identified by industry as releasing >1000 birds (1.2% of whole shoot population), plus a magnifier to account for those releasing >700 birds.*

Annex 2 – Summary of consultation data used in calculations

The consultation data was used to estimate the size of the cost to businesses who need to adapt under the new regime, and number of respondents who would apply for an individual licence.

This data was chosen over other sources as it is the only data based on the regime set out in this IA. Respondents had a clear picture of what the new regime would entail when responding and suggesting how they would adapt their businesses.

Key data used:

- 50% of shoots who responded said they would consider applying for individual licence. We use this figure but given the uncertainty around its representativeness of what will happen we do sensitivity analysis between 25% and 75%.
- 20% of shoots who responded said they would close if they were not granted an IL. given the uncertainty around its representativeness of what will happen we do sensitivity analysis between 10% and 30%.
- The remaining 80% of shoots are assumed to adapt their business rather than cease to operate.

A sample of shoots who responded provided estimates of the costs to their business of adapting if they were required to do so. These costs focused on moving/adapting pens to comply. The average cost was £18,862. Again, given the uncertainty around its representativeness of what will happen we conduct sensitivity analysis. In the upper-case estimate of costs we use Industry data (Annex 5) which provided a higher estimate of the total costs of relocating feeders and pens. Although this Industry data has weaknesses, we use it to present an upper cost scenario to ensure we do not underestimate costs to businesses.

Weaknesses:

- The consultation respondents are not a representative sample. It is likely that those responding to the consultation are more impacted by the proposed new regime (have more incentive to respond to the consultation) than those who did not respond. Consequently, the magnitude of impact on the industry may be overestimated by using this data.

Annex 3 – Costs of familiarisation, applying for individual licence and returning data.

Cost to business

Based on costs associated with licences to trap beaver⁴², colleagues in NE estimate that the time and cost taken to apply for an individual licence and undertake the associated data return is 8 hours, broken down as follows:

Table 9: Costs to business of familiarisation, applying for individual licence and returning data

Activity	Hours	Cost		
		Lower	Mid	Upper
a) Reading/understanding of requirement under the licence	2	£46	£123	£200
b) Download, completion and submission of licence	3	£69	£184.5	£300
c) Receipt of licence and awareness raising	2	£46	£123	£200
d) Annual data return	1	£23	£61.5	£100

Note that following RPA guidance, we have not explicitly included an additional “non-wage uplift” in the cost estimates on top of what is presented above ⁴³.

The estimates present a maximum cost as they assume that an advisor is employed to undertake the work (costing between £23 and £100 per hour). This would cost more than if the costs were undertaken using shoot staff. If shoot staff were used, we can expect these costs to be a maximum of the lower bound of the NE estimates above. [Estimates of annual earnings of gamekeepers range between £14,000⁴⁴, to £30,000⁴⁵ and up to £42,000⁴⁶ which imply the maximum average hourly wage to be around £20.]

Cost to HMG

Data on the cost of processing individual licences was provided by NE, based on the application prices for individual licences for European Protected sites.

⁴² See Witness Statement 3: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/931396/defra-witness-statement-gamebird-release-exhibit3.pdf

⁴³ This is because we have used costs of contracting a consultants to undertake the work (which already include them) – see page 4 of RPA guidance note “Price consists of a tariff and time. For activities carried out internally, the tariff comprises wage costs and non-wage costs (e.g. national insurance and pensions contributions). For activities carried out by an external provider, the tariff is comprised of the hourly external rate. Time is the amount of time required to complete the activity.” https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/827926/RPA_short_guidance_note_-_Implementation_costs_August_2019.pdf

⁴⁴ [Govt national careers service data](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/827926/RPA_short_guidance_note_-_Implementation_costs_August_2019.pdf)

⁴⁵ <https://www.findcourses.co.uk/jobs/Gamekeeper-average-uk-salary>

⁴⁶ <https://www.myworldofwork.co.uk/my-career-options/job-profiles/gamekeeper>

Table 10: Costs to HMG for processing an individual licence:

Activity	Hours	Cost (2021 prices)
Receipt of licence processing	0.5	£17
Assessment of application*	4	£136
Updating internal systems and issue licence	1	£34
Manage annual data return	0.5	£17
Total	6	£204

Assume cost/hour of staff £34 (NE most recent official cost of 2013 £29, adjusted for inflation)

*Excludes any field visit as part of the assessment of the application. Where this is deemed necessary, an additional standard rate cost of £110 per hour would apply. For individual Gamebird Licences, it is anticipated that the need for site visits by NE staff will be limited and dependent on the degree of existing local knowledge and/or the complexity of the application.

Annex 4: Comparison of differences between the proposal consulted on and the final policy position

Proposal in consultation	Final Policy	Relevant data and scope of analysing costs
<p>Sites out of scope: Some sites are out of scope of the general licence:</p> <p>A) 2 named sites subject to NE enforcement action (these would need an individual licence)</p> <p>B) a list of circa 90 sites considered to be not at risk from damage from gamebird releases (no licence needed).</p>	<p>A) No named sites, instead individuals who have been notified that they are subject to investigation by NE cannot use the general licence.</p> <p>B) No sites excluded.</p>	<p>In the consultation, respondents were asked to identify whether they released gamebirds on or around the relevant European sites (SACs and SPAs), not to consider whether the particular SPA or SAC was exempt from the general licence. This is in line with the final policy approach.</p> <p>The final policy is arguably simpler than the proposal in the consultation, as it does away with the potential complexity of carving out named sites from the general licence. Our final approach also reduces the risk of future confusion if new European sites were to be designated.</p> <p>We argue that the final policy represents a small but not significant decrease in the time taken to assess whether a release falls within the scope of the licencing regime, and therefore represents a small but not significant reduction in the following costs explored in the IA, compared to the proposal in the consultation:</p> <ul style="list-style-type: none"> • Costs associated with familiarisation with the general licence • Costs associated with applying for an individual licence. <p>It is not possible to quantify the potential difference in costs between the proposed and final policy proposals.</p>

		The final policy is still in line with estimates of the number of shoots impacted by the regime (used in the analysis)
<p>500m buffer zone: Gamebird releases will be permitted via a licencing regime both on SPAs and SACs and SACs (aside from those out of scope of the general licence) and a 500m buffer zone around these sites.</p>	Gamebird releases will be permitted via a licencing regime both on SPAs and SACs and a 500m buffer zone around these sites. No SPAs or SACs are out of scope. An individual subject to investigation must apply for an individual licence.	The final policy is still in line with estimates of the number of shoots impacted by the regime (used in the analysis)
<p>Stocking density: Pheasants: no more than 1,000 birds per hectare of release pen within the 500m buffer zone and either no more than 700 birds per hectare of pen or the release density stipulated by a SSSI consent (whichever is the lower) within an SAC or SPA.</p>	We have presented these requirements slightly differently in the final general licence, but their effect has not changed.	No change – we worked extensively with the Defra content team (who are responsible for ensuring the usability of Defra’s public facing web content) to ensure that the final policy and licence were comprehensible. This resulted in some presentational changes in how conditions were grouped together but did not change the conditions.
<p>Stocking density: Partridges: the density of red legged partridges released into a pen within an SAC or SPA and the 500m buffer must not exceed 3 birds per square metre of pen or the release density stipulated by a SSSI</p>	This has changed from the proposal in the consultation. It reads as follows: On site: The density of red-legged partridges released within a European site must be no more than 700 birds per hectare of land they inhabit, or	Partridges are released using a wide variety of techniques, not all of which involve pens. We were concerned that the wording of the general licence would inadvertently criminalise release methods that did not involve pens. We also looked to ensure that the change was both precautionary whilst clear and operable for users. We have discussed this change with industry to ensure the new wording reflects this.

<p>consent (whichever is the lower).</p>	<p>lower if required by a SSSI consent.</p> <p>Within the buffer: The density of red-legged partridges released within the 500m buffer zone of a European site must be no more than 1,000 birds per hectare of land they inhabit. Any release, including single or trickle releases, must not exceed this limit.</p>	<p>By linking the upper limit of partridge stocking densities to land, rather than cage area, we have removed an unintended consequence and ensured that our policy can operate as it was originally intended. As a result, this change should not result in any impacts on costs for licence users.</p>
<p>Pen location: Partridges</p> <p>There were no specific conditions associated with the location of partridge release pens in the original proposal.</p>	<p>The finalised general licence includes the following additional condition for releasing partridges <i>within</i> European sites:</p> <p><i>You must site red-legged partridge release pens in cover crops on arable land or on improved grassland within a European site. You must not site them in semi-natural or unimproved habitats</i></p>	<p>Although this new condition on the placement of partridge pens within European sites further regulates licence users' activity, we do not believe that this additional condition would lead to a significant increase in costs for licence users who release partridges.</p> <p>This is because the additional condition is in line with existing industry guidelines and best practice that partridge release pens within European Sites should be sited in cover crops on arable or in improved grassland, rather than on seminatural or unimproved habitats. This condition will ensure that pens are not placed on sensitive habitats within the site boundary under the general licence.</p> <p>This new condition could increase upfront additional expenditure for licence users to relocate pens for partridges in order to comply with the licence conditions. This would impact potential licence users intending to release partridges on European sites who do not currently follow industry guidelines and who do not successfully apply for an individual licence.</p>

We have not extended this condition to partridge releases within the buffer zone of a site. The purpose of the buffer zone is to protect the adjacent site so we do not consider it necessary to include a mandatory condition on the siting of pens within the buffer zone. This reduces the number of potential partridge-releasing general licence users impacted by the new condition.

It should also be noted that alternative means of releasing partridges (such as immediate release) which do not involve pens are possible. This means it is possible for individuals to comply with the general licence when releasing partridges if an alternative, non-pen, method is used.

It is arguable that the non-quantifiable savings described elsewhere in this annex could balance any increased expenditure associated with this condition.

The changes should not impact the estimates to businesses in the IA as:

- Estimated number of shoots impacted is not expected to change. The numbers used in analysis (based on industry data – Annex 1) are based on stocking densities and do not differentiate between pheasants and partridges so are expected to capture all groups.
- Estimated cost of adapting businesses (provided by consultation) was also based on costs to pheasant and partridge shoots who responded so costs included in estimates should not require amendment.

<p>Seasonal limit: The following condition was proposed in the consultation:</p> <p><i>Single and trickle releases of the common pheasant must not exceed these limits during the entirety of one season cycle and gamebirds must not be released to replenish or replace any that have already been released and shot or otherwise killed in that season, except within the limits as stated.</i></p>	<p>This seasonal limit is now also applied to partridges.</p>	<p>This condition prohibits further 'trickle' releases that would lead to an individual exceeding the stocking limits described above.</p> <p>This condition has not changed for pheasant, although has been presented differently in the final licence for clarity. It was not possible to articulate an annual upper limit for partridge because stocking densities only reflected cage releases (i.e. birds per square meter).</p> <p>Extending this condition to common partridge is a clarification to articulate the clear and obvious policy intention presented in the consultation and in our stakeholder engagement. Without a seasonal limit, there would be no upper limit on how many partridges can be released by an individual licence user in a year. We are clear in our consultation document that the overall number of birds released is a key issue that influences the ecological impact of release activity⁴⁷ and an important means of managing this impact. As a result, clarifying that the general licence authorises an upper limit for annual partridge releases is consistent with our widely communicated policy intention. As a result, this clarification is not expected to lead to increased costs for licence users.</p>
<p>Condition on activity in the buffer zone: This condition was proposed in the consultation:</p>	<p>This is a condition of the final licence.</p>	<p>Feedback via the consultation showed that the proposed condition may be difficult for users to understand. To address this, we have included clarifying advice as part of the general licence to help users comply with this condition. This advice outlines specific activities users should undertake.</p> <p>We argue that this approach in the final policy would result in a small but non-significant and non-quantifiable saving in that it</p>

⁴⁷ https://consult.defra.gov.uk/gamebird-review/interim-2021-england-gamebird-release-licence/supporting_documents/210222%20Final%20Interim%20GIB%20Licensing%20Consultation%20Doc.pdf

<p><i>Activity in the buffer zone, including the siting of pens and feeding of birds, must not encourage the released birds towards, or over, the boundary of the adjacent Special Area of Conservation or Special Protection Area.</i></p>		<p>makes the licence easier to understand and enforce, reducing costs for users and law enforcement.</p>
<p>Non-mandatory recommendation for activity in the buffer zone: This non-mandatory recommendation was proposed in the consultation:</p> <p><i>Any pens and feeding stations located within the buffer zone must be placed on level ground and should not be placed within 50 metres of a watercourse flowing towards a SAC or SPA designated for its river or wetland habitat</i></p>	<p>We have presented this recommendation as part of the non-mandatory advice to help users ensure that their releases do not inadvertently damage SACs and SPAs. We have provided more detail and links to established government guidelines to very clearly outline what is meant by ‘sloping ground.’</p>	<p>Some respondents were confused by this proposed recommendation in the consultation. They appeared to think it was a mandatory condition and felt it was difficult and potentially expensive to operationalise. This misunderstanding of our policy intention may have led to an over-estimation of costs from some users, although the data we have does not provide sufficient detail to draw firm conclusions on this.</p> <p>By clearly framing this recommendation amongst the wider non-mandatory advice, and using established guidelines to clarify the meaning of the advice, we have more effectively communicated our stated policy goal. This could lead to some erroneous overestimation of costs coming down, but it is not possible to quantify by how much.</p> <p>The licence is also easier to understand, which could result in a small reduction in the time taken by users to familiarise themselves with the licence. I don’t think it is possible to quantify this saving.</p>
<p>Data collection: we proposed a condition on collecting data on the numbers (overall number)</p>	<p>This is a condition on the general licence, in line with the proposal we set out in the consultation.</p>	<p>These costs have been fully explored in the impact assessment already. Nothing we have included to help users understand the precise requirements will make this process more time-consuming or costly.</p>

<p>and densities (birds/ha) of the common pheasant and red-legged partridge releases and locations of release pens (grid reference) within SACs and SPAs and the 500m buffer zones, in addition to details of the SSSI consent under which the release activity is operating.</p>	<p>We have provided some further detail specifying exactly what is required from users of the general licence.</p>	
<p>Sunset / review clause: we proposed including a sunset clause in the statutory instrument to repeal it after three years, as well as a provision which would confer a duty on the Secretary of State to carry out a review after two years of the need for these statutory restrictions on gamebird releases on SACs and SPAs and in a 500m buffer zone around those sites</p>	<p>This time limit on the period in which the licencing regime will be in place is referenced in the <u>implementing legislation</u>. This Order will expire after 4 years unless repealed sooner, with a review after 3 years.</p>	<p>The timing of this decision allowed for this revised timescale to be factored into the analysis underpinning the impact assessment.</p>

Annex 5: Industry Estimates of Impact

While we have used the information on estimates of the number of shoots operating in the UK and the proportion of these releasing gamebirds on or around European sites, the information on economic impact provided by industry was not suitable for use in this impact assessment. This section outlines the industry estimates of economic impact and outlines why this information was not usable.

Industry Estimates

Industry provided Defra with a high-level summary of the most recent surveys of landowners and gamekeepers conducted via different industry groups⁴⁸. The key facts from this industry summary of data are as follows:

- There is a total of 8,000 – 10,000 shoots (i.e. businesses that run commercial recreational shooting of gamebirds) in the UK.
- 7.7% (616-770) of all UK shoots release gamebirds on or around European sites. These shoots would likely fall under the scope of the general licence, or, if the site is deemed vulnerable and outside the scope of the general licence, would need to apply for an individual licence. The remaining 92.3% of shoots would be unaffected as they fall outside of the geographic scope of the proposed changes.
- 1.2% (96-120) of all UK shoots that release gamebirds on or around European sites do so at densities of >1,000 birds per hectare, and therefore would not be complying with the general licence conditions.
- Approximately 25 shoots report they could comply with the interim general licence conditions and remain financially viable by reducing the stocking densities of gamebirds. Industry estimate that this would cost these shoots circa £22,000 each, or £550,000 in total.
- Approximately 75 shoots report that it would not be financially viable for them to reduce their densities to a point where they comply with the general licence conditions. Industry estimate the total cost, expressed as 'economic loss to the rural economy,' of all these shoots closing to be circa £30,000,000.
- Industry's estimate of the impact of this policy in 2021/22 is therefore circa £30.5m.

Industry also provided estimated, weighted breakdowns of the costs associated with activity that shoots may need to undertake to amend their activities in order to comply with a licencing regime; reducing the density of gamebirds released, moving release pens and moving gamebird feeders. These estimates are replicated below:

1. Costs of reducing release density: For shoots operating within 500m of an European sites and releasing over 1000 birds/ha of release pen the average cost of adjusting the shoot was calculated as £21,904.60 per shoot within the scope of the interim licence regime for 2021/22.

⁴⁸ Industry have provided an unpublished summary of data collected via shooting industry membership surveys. We have not got access to the underlying data or analysis

Cost description	Percentage of shoots	Average cost reported per shoot	Weighted average
New pen(s)	75	£11,968.75	£8,976.56
Release fewer birds	43	£11,000.00	£4,730.00
New infrastructure	39	£3,857.69	£1,504.50
New woodlands	23	£2,015.38	£463.54
Staff costs	14	£7,000.00	£980.00
Other	7	£75,000.00	£5,250.00
Total			£21,904.60

2. Costs of relocating release pens (independent of reducing density): For shoots releasing within 500m of an European sites the average cost of relocating pens, or subsequent cost of the loss of pen(s) was £35,061.23 per shoot within the scope of the interim licence regime for 2021/22.

Cost description	Percentage of shoots	Average cost reported per shoot	Weighted average
New pen(s)	87	£27,666.66	£24,069.99
New infrastructure	71	£5,111.11	£3,628.89
Change feeding	66	£4,388.88	£2,896.66
Change drives	58	£3,201.78	£1,857.03
Loss of drives	45	£2,583.00	£1,162.35
New woodlands	29	£2,500.00	£725.00
Release fewer birds	26	£1,463.63	£380.54

Staff costs	24	£982.35	£235.76
Other	11	£954.55	£105.00
Total			£35,061.22

3. Costs of relocating feeders: For shoots releasing within 500m of an European sites the average cost of relocating feeders, or subsequent cost of the loss of feeder(s) was £6,873.61 per shoot within the scope of the interim licence regime for 2021/22.

Cost description	Percentage of shoots	Average cost reported per shoot	Weighted average
Loss of drives	71	£4,160.00	£2,953.60
Change feeding	63	£2,053.00	£1,293.39
Change drives	61	£1,666.67	£1,016.67
New feeders	37	£1,423.07	£526.54
Release fewer birds	37	£1,333.00	£493.21
New infrastructure	34	£1,300.00	£442.00
Staff	13	£1,140.00	£148.20
Other	11	0.00	£0.00
Total			£6,873.61

Problems with this data

- We are unable to corroborate this information; it is based on industries calculations drawn from raw data we have not seen. We do not know anything about the sample size and its representativeness of the industry as a whole or how effectively the industry figures relate to the minority of shoots that may be impacted by the interim licencing regime. We have not seen the questions used to elicit the above information. Without this access to the underlying data, we have been unable to test, replicate or verify any of the estimates or incorporate them into our analysis of the data on economic impacts generated by the three-week consultation.

- We do know that the information underlying the industry estimates was gathered before the three-week government consultation. Although we have not seen the specific questions posed to shoot operators, we know that, because the data was gathered before the proposed interim licence conditions were published, these estimates cannot be based on questions that reflect the specific interim licencing conditions that were proposed in the three-week consultation. This limits the utility of the industry estimates, particularly when compared to the data gathered in the three-week consultation, which asked respondents to consider their operations in the context of the proposed licencing conditions and outline the potential economic impacts of adapting their operations.
- The data is for the whole UK, rather than England (where the licence will take effect).
- There is no recognition in the industry data that shoots that do not believe they comply with the proposed licencing conditions could apply for an individual licence to cover their activities. NE will consider reasonable applications for shoots that cannot comply with, or are outside of, the scope of the general licence.
- We have not seen a breakdown of the £30m ‘economic loss to the rural economy’ figure that estimate the impact of ~75 shoots closing. We are not convinced that the closure of shoots would mean that all economic activity related to shooting would disappear. It is more likely that a proportion of the demand for shooting would be displaced to other local shoots, the vast majority of which do not releases common pheasant or red legged partridge on or within 500m of European sites.

Annex 6 – Sensitivity testing of Number of shoots impacted

As set out in Annex 1, there is uncertainty around the number of shoots within or around the sites with densities over 700 birds, and which would therefore be impacted by the regime.

The IA estimates use an assumption that 50% of shoots in the areas release over 700 birds. This over 3 times the percentage provided by industry itself on the number of shoots in these areas with >1000 birds.

We have tested the assumption below; providing an upper and lower case scenario for the % shoots falling in this category of interest.

We acknowledge that use of these assumptions is a weakness of the analysis and we will update estimates if any improved data becomes available.

Table 11 Illustrative testing sensitivity of results to number of shoots impacted:

Scenario	Assumption	Total Present Social Value (£m)	Net Net Present Value (£m)	Business Net Present Value (£m)	Net direct cost to business (£m)	BIT Score
Central case (used in main IA)	50% of shoots in or around sites release at densities above 700 birds	-5.5		-4.5	1.2	4.8

Lower case	25% of shoots in or around sites release at densities above 700 birds	-3.2	-2.3	0.6	2.4
Upper (worst) case	All shoots in or around sites release at densities above 700 birds	-9.9	-9.0	2.4	9.4