



Department
for Environment
Food & Rural Affairs

Addendum to Defra's 2024 Habitats Regulations Assessment (HRA) and decision to issue general licence GL45

Assessment made following lowering of the highly
pathogenic avian influenza H5 (HPAIV) national wild
bird risk level from medium to low

April 2024

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Executive summary

This Habitats Regulations Assessment (HRA) addendum provides an updated assessment to the March 2024 HRA (Defra 2024a). This assessment has been made in light of the change in the national highly pathogenic avian influenza (HPAI) H5 (referred to throughout as HPAIV) wild bird risk level. It assesses the potential risk and impacts of issuing an updated general licence 45 (GL45) for the release of gamebirds (common pheasants and red-legged partridges) onto or within the 500-metre buffer zones of specified special protection areas (SPAs) in England.

The previous HRA was conducted under a medium national wild bird risk level. A medium risk means bird flu occurs regularly in wild birds. This risk level was changed from medium to low on 1 April 2024. This is due to a low number of wild bird cases and decreased infection pressure to poultry (Defra and APHA 2024).

This document provides an assessment of the suitability of all SPAs in England to be included in GL45 for the release of gamebirds in 2024 under a low (rare but does occur) national HPAIV wild bird risk level. A low risk means bird flu is rare but does occur in wild birds).

This assessment considers the impact and transmission risk of HPAIV to wild birds from released gamebirds given the change in national risk level. Previous HRAs have assessed broader impacts of gamebird releases on SPAs and special areas of conservation (SACs) to determine the effect of gamebird releases under GL43.

While the national wild bird risk level is currently assessed as low, if the national risk level returns to 'medium' or 'high', then Defra will make an assessment of the impact of the changed risk level on each SPA using the latest available evidence and tools. The assessment will include the impact of the GL biosecurity measures considering a heightened national wild bird risk level. Further mitigation will be assessed to determine if changes to the GL may be sufficient to reduce the site-specific risk to acceptable levels. Where that is not possible using a general licence instrument, Defra will consider the use of individual licences.

There are 88 SPAs in England (based on the [JNCC database](#)), which are designated for the protection of site-specific bird species. This HRA focuses on all 88 SPAs. SPAs are designated for either breeding features only, non-breeding (for example, overwintering birds) features only, or both breeding and non-breeding features.

These 88 sites are considered for inclusion in a GL under a low national wild bird risk level (see Parts C and D). They are considered on the basis that precautionary, reasonable, and proportionate mitigating conditions will reduce the risk of incursion of HPAIV from autumn migrations of wild birds into England. The proposed general licence is based upon the current GL45 (Defra 2024b) licence (which was informed by GL43 (Defra 2023a)), as outlined below.

GL43 is currently in use and valid from 31 May 2023 to 1 February 2025. It allows an authorised person to release a specified density of gamebirds onto a SAC in England or within its 500m buffer zone. The release of gamebirds onto SPAs or within 500m of their boundaries is not permitted under GL43 for the 2023 and 2024 release seasons.

GL45 licence is currently in use and valid from 31 May 2024 to 01 February 2025. It was published while under a medium national wild bird risk level and allows an authorised person to release a specified density of gamebirds onto specified SPAs in England or within their 500m buffer zones. The licence includes mandatory biosecurity measures and some SPA-specific conditions to mitigate the risk of HPAIV transmission from released gamebirds to the qualifying features of the site.

The appropriate assessment of this HRA (Part D) currently concludes that the inclusion of 84 SPAs in England in GL45 will not have an adverse effect on site integrity under a low-risk scenario. One of these SPAs can be included with a site-specific delayed release date. This is owing to the reduction in HPAIV reports in Great Britain, the reduced risk of HPAIV transmission, and the inclusion of mandatory biosecurity measures as currently included in GL45. Three SPAs cannot be included.

The risk from HPAIV will be monitored and reviewed over the licence period. Subject to any new evidence, our conclusions on site integrity may be amended accordingly, and the list of SPAs included on GL45 may also be amended.

Introduction

This document is an addendum to the Defra March 2024 HRA (Defra 2024a) and decision. This HRA was published having had regard to statutory nature conservation advice, under Regulation 63 of the Conservation of Habitats and Species Regulations (2017), also referred to here as the medium risk 2024 HRA. Defra is the competent authority in issuing a new interim general licence for releases of common pheasant (CP) and red-legged partridges (RLP) onto SPA sites in England or within 500m of their boundaries. Common pheasants (CP) and red-legged partridges (RLP) are collectively referred to as 'gamebirds' for the purposes of this HRA. The new interim general licence will provide an update to GL45 and will continue to be referred to as GL45.

Decision in relation to the protection of the designated avian species of special protection areas (SPAs) in England

This assessment considers new information relating to the risk of adverse impacts of HPAIV being transmitted to SPA populations of protected wild birds by released gamebirds and advice on this risk from Natural England (NE).

On 1 April 2024, the national HPAIV wild bird risk level was changed from medium (occurs regularly) to low (rare but does occur). National risk levels are based on Defra's own wild

bird surveillance, as well as the international situation. This change was made in response to the low number of wild bird cases and decreased infection pressure to poultry, as reported in 'Updated Outbreak Assessment #51 - High pathogenicity avian influenza (HPAI) in the UK and Europe' (Defra and APHA 2024). The report notes that the H5N5 subtype (also known as HPAIV) is still being detected in a low number of found-dead wild birds but has not been detected in poultry and does not appear to represent the start of a disease process in wild birds. Reports of HPAIV in wild birds and poultry in Europe have also decreased. The UK has self-declared zonal freedom from HPAI for Great Britain with effect from 29 March 2024. This is in line with World Organisation for Animal Health (WOAH) rules. The declaration is being reviewed and will be published by WOAH shortly.

The national HPAIV wild bird risk level had been maintained at medium since 1 November 2023 (records available online, see Defra and APHA 2016). It is on the basis of this maintained medium risk and now the reduction to low risk that Defra proposes the issuing of an updated general licence for gamebird release on SPAs for the 2024 gamebird release season can be considered. Defra has assessed whether releases of gamebirds on all SPAs in England or within 500m of their boundaries can be considered given the substantial reduction in risk (from 'very high' in winter 2022 to 'low' in spring 2024), and given there is additional information available regarding the benefit of potential actions that can be taken at a shoot level to mitigate risk. The updated GL45 will authorise the release of a specified density of gamebirds most SPAs in England or within 500m of their boundaries (see Annex A). Those wishing to deviate from conditions specified in GL45 will have the option to apply for an individual licence from Defra. Regarding sites designated as both SPAs and SACs, releases on SAC land that is also designated as SPA land will be covered by GL45.

The new GL45 will be valid from 7 June 2024 to 1 February 2025. Given the changing status of the national HPAIV wild bird risk level, Defra will keep this risk under review, alongside all available evidence, throughout the lifetime of this licence. The Secretary of State (SoS) may revoke or modify GL45 accordingly. If the national risk level returns to 'medium' or 'high', then Defra may revert to a more restricted general licence or a fully individual licensing process for 2024 gamebird releases, as described in the 2024 HRA (Defra 2024a). The national risk level is continually reviewed by the APHA and the UK Chief Veterinary Officers.

Methodology and use of evidence

In preparing the medium risk 2024 HRA Defra considered:

- NE's 2021 shadow HRA (sHRA) (Natural England 2021)
- the 2022 QRA (Defra 2022a)
- NE's January 2023 sHRA addendum (Natural England 2023)
- Defra's 2022 (Defra 2022b) and 2023 HRAs (Defra 2023b)
- the real time outputs of the Gamebird-Wild Bird Risk Assessment Tool (GWRAT) (Defra 2024c)

Defra also considered SPA-specific expert advice provided during the 2023 individual licensing assessment process by NE, Defra's Expert Panel, and the Game and Wildlife Conservation Trust (GWCT).

NE's expert advice was provided in the form of a written 'technical assessment' (also known as 'licence advice record') for each individual licence application in 2023 and provided a detail assessment of potential impacts of gamebird releases on SPA features. Defra's Expert Panel was composed of Defra staff with ornithological and exotic disease expertise who met regularly and provided comments on each individual licence application in 2023 (recorded as a meeting note). Additional information on SPA protected species obtained from the British Trust for Ornithology (BTO 2024), RSPB, and NE was also considered. The evidence informing the consideration of each SPA is set out in Part D of the medium risk 2024 HRA.

In preparing the low risk 2024 HRA (this assessment) Defra continues to give consideration to the documents outlined above and new information to assess the following points:

- the HPAIV transmission risks from gamebirds to protected wild birds associated with pheasant releases during 2024
- the HPAIV transmission risks from gamebirds to protected wild birds associated with RLP releases during 2024
- the risk of 'bridging species' to transmit HPAIV from gamebirds to protected wild birds more widely during 2024
- the effectiveness and feasibility of mitigating conditions to reduce these transmission risks

The HPAIV transmission risk pathways are discussed in the medium risk 2024 HRA so will not be detailed in full in this low risk addendum. Briefly, transmission between gamebirds and protected wild birds can occur in two ways:

- directly via beak-to-beak contact between live birds or via predation of live birds or scavenging of carcasses
- indirectly via environmental contamination and range overlap between gamebirds and wild birds, or via bridging species that may come into direct or indirect contact with both gamebirds and protected wild birds

Variables along the various transmission pathways have been assessed, and suitable management conditions identified, based on existing biosecurity advice (Defra 2022c) and a range of expert input, that will feasibly and effectively interrupt these pathways. In providing appropriate mitigation against direct and indirect HPAIV transmission risks we can reduce the risk of HPAIV transmission between gamebirds and protected wild birds. This will reduce the likelihood of adverse effects on the conservation objectives and consequently the integrity of the SPAs concerned.

The Gamebird-Wild Bird Risk Assessment Tool

The design and application of the GWRAT is described fully in the 2024 HRA, assessed in the context of a medium national risk level, and is considered here in this HRA addendum, assessed in the context of a low national risk level, to contribute towards a revised appropriate assessment. See also the published GWRAT methodology for further details (Defra 2024c).

The tool has been adapted from the International Disease Monitoring tool for risk of incursion to consider the likely presence of HPAI H5N1 across England at county level, the potential for spread into released gamebirds, and the exposure to SPA qualifying feature species.

It provides a comparative risk score between different sites for the likely exposure of the SPA feature species. This indicative tool forms part of the evidence base informing SPA-specific HPAIV risk determinations and decisions regarding effects on site integrity. We recognise a degree of uncertainty relating to the risk of transmission of HPAIV between gamebirds and wild birds.

There is not yet a methodology available which is sufficiently developed which is regarded as 100% reliable. The GWRAT has been developed to address this knowledge gap, but it is a novel tool, albeit using accepted published methodology, and a precautionary approach has been taken regarding its design and application to the appropriate assessment (see the medium risk HRA Part D 'Application of a precautionary approach' for details).

As described in the medium risk 2024 HRA (in the 'Methodology and use of evidence: The Gamebird-Wild Bird Risk Assessment Tool' section), the threshold value for an acceptable level of risk has been established as 'very low' risk (represented by a value <0.001) of HPAIV transmission. Below this value (under a 'very low' risk level), Defra considers that additional management conditions should be considered but are not deemed necessary as this this would mean applying mitigations for a possible risk for HPAIV transmission in all circumstances (including when HPAIV transmission is a background or negligible risk), even in the absence of any known outbreak.

While a 'very low' risk or GWRAT output <0.001 is considered a level at which mitigation should be considered but is not required, it is important to note that mandatory biosecurity measures will be applied to all SPAs covered by GL45 as a precautionary measure against the risk of HPAIV incursion from autumn migrations of wild birds into the UK for over-wintering.

Assessing the level of risk reduction to SPA qualifying features via the application of management conditions is important to ensure, beyond reasonable scientific doubt, that there will be no adverse effect on the integrity of the SPAs resulting from gamebird releases. For the purposes of GL45b these measures are again considered capable of achieving a twofold reduction in the risk of disease incursion (meaning entry into the SPA) as detailed in the GWRAT methodology This is a continued application of a precautionary

approach to the level of risk reduction that can be achieved by routine biosecurity, as applied in the assessment of GL45a. These measures will be implemented alongside a 'mandatory veterinary check and testing' condition.

Part A: Introduction and information about the plan or project and an initial assessment of credible risk to special protection areas

A1. Background to the plan or project

Defra is using the previous HRA assessment made in March 2024, which made reference to HRA assessments carried out in 2022 and 2023, to inform this HRA for the following reasons:

- we are not aware of any new methods or techniques of undertaking generally licensed activity that have not been covered in previous assessments and which would pose potentially new risks
- the evidence provided in these HRAs continues to be valid and is consistent with additional statutory advice provided by NE in 2023 for individual licences, though this also needs to be considered in light of the currently low national wild bird risk level
- there have been no new or amended SPAs designated or classified by government during the period since the previous HRAs were made
- the project being assessed, and the activities that would be authorised, remain the same as in previous years

This document is the note of that final assessment and decision in the undertaking of Defra duties as competent authority. It follows the structure of the medium risk 2024 HRA to explain how Defra has considered the evidence and arrived at its decisions and will refer to medium risk 2024 HRA where relevant rather than duplicate information in this addendum. Defra's low risk 2024 HRA addendum comprises a set of documents:

- this decision-document
- updated GL45 licence
- NE's 2021 sHRA and 2023 sHRA addendum
- Defra's medium risk 2024 HRA
- GWRAT methodology

A2. Details of the plan or project

Defra is proposing to issue an updated GL45 to permit the release of gamebirds on SPAs and within their buffer zones from 7 June 2024 to 1 February 2025. Current individual licences issued under the 2023 individual licensing regime for release of gamebirds on or in the buffer zone of SPAs are valid until, at the very latest, the end of May 2024. The open season for gamebirds ends on 1 February 2025 (inclusive).

Subject to this HRA, Defra is proposing to issue an updated GL45 with the same conditions that are included in the current GL45 but without the condition regarding SPA-specific mitigation (condition 7). We propose that the updated GL45 will apply to all 88 SPAs in England (see Annex A) (whereas the current GL45 applies to 30 SPAs) and will include the suite of biosecurity measures outlined in the current GL45 (see Annex B). As other conditions in GL45 are based on those included in GL43, release of gamebirds on land designated as both a SAC and SPA can continue to be licensed under GL45. GL43 will continue to apply to gamebird releases on land designated as a SAC only. Any releases of gamebirds that cannot be permitted under either GL43 or GL45 will require an individual licence.

Here we provide an assessment of an updated GL45 that can be issued under a low national HPAIV risk in wild birds. If the national risk level returns to medium or high, it is proposed that we return to a more restrictive general licence or individual licensing approach.

Part B: Information about SPAs and Ramsar sites which could be affected

B1. Brief description of the SPAs and their qualifying features and B2. European site conservation objectives

Defra notes the information set out in NE's 2023 sHRA addendum, as per NE's original sHRA dated January 2021, as an accurate account of SPAs, qualifying features, and conservation objectives. Further information on SPAs, their conservation objectives (Natural England 2024), and their qualifying features (JNCC 2024) can be found online (see Annex A for a list of SPAs in England).

Part C: Screening of the plan or project for appropriate assessment

C1. Is the plan or project directly connected with or necessary to the (conservation) management (of the European Site's qualifying features)?

NE's 2021 sHRA and 2023 sHRA addendum were produced for Defra as the competent authority to formally adopt as its own assessment and conclusion. Defra adopts NE's 2021 sHRA conclusion, as stated in the medium risk 2024 HRA, that the project (the release of gamebirds on SPAs under a GL) is not wholly directly connected with or necessary to the management of SPAs qualifying features.

C2. Is there a likelihood (or a risk) of significant adverse effects ('LSE')?

HPAIV was last recorded as low risk for wild birds in September 2021, at which time there had been no new cases of HPAIV in domestic poultry or in captive birds in the UK since the end of March 2021. The risk of incursion of HPAIV from autumn migrations of wild birds into the UK for over-wintering was noted at the time and stringent adherence to biosecurity measures for poultry (including gamebirds) and captive birds was advised.

In GL43 HRAs (informed by previous sHRAs), which applied to SPAs prior to 2023, the general risk-pathway of disease transmission was considered, and it was concluded that there were no likely significant effects from this pathway, which would include any likely risk of HPAIV transmission. This conclusion reflected both the low national HPAIV risk and the limited evidence of gamebird susceptibility to HPAIV at the time. It has since been established that gamebirds, particularly CP (Defra 2022a), are susceptible to HPAIV and can transmit the virus to other birds and into the environment. While the national HPAIV risk level has been reduced to 'low', we cannot apply the conclusions of previous low risk GL43 HRAs, which drew conclusions based on evidence (or a lack thereof) that has since been updated. As such, Defra has use relevant recent data to make an evidence-based assessment of the risk pathways and likely significant effect of gamebird release on SPAs under a low-risk scenario.

While the current low risk level is informed by a low prevalence of HPAIV in wild birds and a decreased infection pressure to poultry, the HPAIV situation is variable and subject to change over the life of the project (the duration over which GL45 is valid). It is difficult to predict HPAIV risk levels later in the year pre- and post-gamebird release as HPAIV prevalence could be influenced by other factors such as the 'over-summering' of seabirds or colony nesting species (which could permit a HPAIV reservoir to persist) and the incursion of HPAIV from autumn migrations of wild birds into the UK for over-wintering.

Owing to the uncertainty of the risk HPAIV could pose over the life of the project, Defra cannot conclude no likely significant effect of gamebird release on any SPA's qualifying features as a result of gamebird release and an appropriate assessment is required.

Part D: Appropriate assessment and conclusions on site integrity

This assessment assumes a low national HPAIV wild bird risk level under which gamebirds could be released on or within the buffer zones of SPAs in England.

We refer to Part D of the medium risk 2024 HRA for full details on mitigating measures and transmission risk pathways and provide an updated assessment of impacts on site integrity under a low risk scenario here.

GL45b – to be issued under a low HPAIV risk scenario

Defra is proposing that a general licence is appropriate for all SPAs in England under the current low national HPAIV wild bird risk level. We previously referred to the medium-risk GL45 as GL45a. In these low-risk circumstances we will refer to the general licence as GL45b. GL45b would permit the release of CP and/or RLP on or within the buffer zones of all SPAs in England, a full list of which can be found on the JNCC website (JNCC 2024) and is detailed in Annex A. These SPAs have been included on the basis that biosecurity measures already included as conditions under GL45a (see Annex B) would mitigate the risk of HPAIV transmission from gamebirds to SPA qualifying features and prevent adverse effects on the SPAs conservation objectives and site integrity over the lifetime of the project. Conditions in GL45b, as with GL45a, go beyond those contained in GL43 (for instance, by including biosecurity measures) and include release densities consistent with GL43 for both SACs and SPAs, allowing for the application of GL45b to SACs that are co-designated as SPAs.

Mitigating measures and transmission risk

Here we clearly set out how the likely significant effects that could arise from HPAIV transmission identified in Part C can be mitigated by the inclusion of mandatory conditions in the GL and enable conclusions regarding the likelihood of adverse effects on site integrity. The mandatory measures included in GL45b aimed at reducing HPAIV transmission risk include biosecurity measures and pre-release veterinary checks and testing. Site-specific conditions previously included in GL45a (for example the delayed release date for Peak District Moors SPA) are not considered necessary in a low-risk scenario. These checks, testing and biosecurity measures will interrupt HPAIV transmission pathways by reducing the risk of sick gamebirds being released onto an SPA or its buffer zone, by reducing the risk of potentially infected gamebirds encountering other birds following release (and enabling direct transmission to protected features or indirect transmission via bridging species), and by reducing the risk of potentially infectious gamebirds contaminating habitat that is occupied by other birds following release (and enabling indirect transmission). Further detail on these conditions and the transmission pathways they interrupt is provided in Annex B and discussed in Part D of the medium risk 2024 HRA.

Other conditions are included in GL45b (and were also included in GL45a) that are not specifically targeted at the reduction of HPAIV transmission risk but serve to mitigate against wider risks or negative effects on the SPA itself (such as nutrient enrichment of water and soil, Madden and Sage 2020), some of which have been adapted from GL43. This includes conditions to mitigate against risks of gamebird releases on both SPAs and SACs such as specific gamebird release densities (conditions 1 and 2), the reporting of release activity (condition 3), and compliance and monitoring (condition 6) (see GL45b for full details).

Biosecurity measures and pre-release veterinary checks and testing

We refer to Part D of the medium risk 2024 HRA for full details of biosecurity measures and pre-release veterinary checks and testing. See Annex A for a summary of the conditions, their purpose, and the HPAIV transmission pathways they interrupt.

As set out in their previous statutory nature conservation advice to Defra, NE consider the application of biosecurity measures to all SPA licences (general and individual) should be a standard means of mitigating transmission risk, particularly where the wider background risk of HPAIV circulation remains either medium or high. This aligns with Defra's published advice around biosecurity and HPAIV (Defra 2022d) and best practice guidance (Defra 2022c). Defra considered the mandatory biosecurity measures specified in GL45a to be precautionary, reasonable, and proportionate under a medium national wild bird risk level. HPAIV was last recorded as low risk in September 2021. The continued risk of incursion of HPAIV from autumn migrations of wild birds was noted at the time and adherence to biosecurity measures for poultry (including gamebirds) and captive birds was advised. There is uncertainty regarding HPAIV risk later in the year owing to the potential 'over-summering' of seabirds and colony nesting species and the potential incursion of HPAIV from autumn migrations of wild birds into the UK for over-wintering, under a low risk scenario. As a consequence, Defra considers it to be precautionary, reasonable, and proportionate to continue to apply these same biosecurity measures under the updated GL45b. This is particularly relevant now that it has been established that gamebirds can be susceptible to HPAIV and pose a transmission risk to wild birds. See the GWRAT methodology section on 'gamebird susceptibility' for information on how CP and RLP susceptibility varies and is accounted for in the tool.

Inspection and testing of gamebirds are key components of the mitigating conditions, alongside biosecurity measures, and will reduce the risk of infected gamebirds being released onto the SPA or into the buffer and thereby reduce the risk of onward transmission of HPAIV to other bird species or contamination of the environment.

The continued inclusion of mandatory biosecurity measures and pre-release checks and testing as standard in GL45b will have a number of benefits: consistently applying a single set of measures will provide clarity for shoot managers and will reduce the risk of gamebird infection and of transmission to wild birds, which is of particular importance should autumn migrations result in an increase in prevalence of HPAIV in England, these measures mitigate the risk given the GWRAT assessment is based on current risk (which is based on the past 4 months of data). Further analysis of risk of gamebirds acting as a vector in HPAIV transmission over the autumn migration period suggests additional mitigation is required. By imposing effective and feasible mandatory biosecurity measures in advance of the autumn migrations and continually monitoring the local and national risk level, we can proactively mitigate against a potentially increased HPAIV transmission risk that might be observed after gamebirds have been released. Risk levels will be monitored, and further licence conditions will allow the competent authority to respond to elevated risk by modifying or revoking the general licence or utilising appropriate animal health legislation.

Application of a precautionary approach and process for managing escalating risk levels

We refer to Part D of the medium risk 2024 HRA regarding application of a precautionary approach and the process for managing escalating risk levels, including how additional mitigating conditions could be applied if an increasing risk level and corresponding risk assessment considers them appropriate. The same process outlined in the previous HRA will be followed if the national risk level increases from low to medium or above.

Decisions in relation to SPAs in England

Here we provide an overview of SPAs to be included in GL45 and evidence for the continued application of mitigating conditions. As with the medium risk 2024 HRA, we continue to apply the outputs of the GWRAT at local level as an estimate of SPA-specific risk and likely exposure of the SPA feature species. We refer here to the transmission pathways, qualifying features, behaviours and habitat preferences as outlined in Part D of the medium risk 2024 HRA for 31 of the 88 SPAs being considered for inclusion in GL45b. It is important to note that the GWRAT output is based entirely on current risk, which may change throughout the year. For instance, a SPA for which the GWRAT output currently falls below the 'very low' risk threshold could have a higher risk output following the autumn migrations. It is partly on this basis that the inclusion of precautionary mitigation measures to address the potential for an increase in risk as the season progresses is considered reasonable and proportionate.

When considering the risk of HPAI transmission for all SPAs in England the latest GWRAT assessment [dated 23 April 2024] informs the risk level for each SPA. The GWRAT could categorise the HPAIV risk to an SPA from gamebird release as one of 6 risk levels (these are negligible, very low, low, medium, high or very high - see 'The Gamebird-Wild Bird Risk Assessment Tool' section in the medium risk 2024 HRA for full details). If a SPA is categorised as negligible or very low risk, it can be included in GL45b. If a SPA is categorised as low risk or above, it can only be included in GL45b if mitigating conditions can be implemented that will sufficiently reduce the risk level to below the acceptable threshold (very low or below). If, after the application of mitigating conditions, a SPA is still categorised as low risk, it cannot be included in GL45b and would require an individual licence assessment.

As outlined in Annex A, the GWRAT output (at whole site level and species feature group level) for most SPAs in England currently falls within the 'negligible' or 'very low' risk threshold. Although management conditions are not currently deemed necessary under these risk levels, as previously discussed, the application of mandatory biosecurity measures through GL45b will further reduce the already negligible or very low risk to these sites and provide proactive mitigation against the risk of HPAIV incursion following autumn migrations of wild birds into England and a potential increase in risk level over time. Consequently, Defra can conclude that the release of gamebirds on or near the SPAs, included in GL45, will not have an adverse effect on site integrity.

Regarding SPAs for which the GWRAT risk output falls on the threshold of ‘very low’ or ‘low’ risk, or within the ‘low’ risk category (see Table 1 for an overview or Annex A for full details), the application of mandatory biosecurity measures will be applied through GL45b, which are considered to provide in the order of a twofold reduction in the risk level. As such, we can conclude that the current risk level following application of biosecurity measures would be sufficiently reduced for the SPAs listed below and allow for their inclusion in GL45b. Consequently, Defra can conclude that the release of gamebirds at the SPAs listed below under a GL will not have an adverse effect on site integrity and as such these SPAs can also be included in GL45b.

1. Abberton Reservoir
2. Broadland
3. Farne Islands
4. Gibraltar Point
5. Greater Wash
6. Mersey Estuary
7. Minsmere-Walberswick
8. Peak District Moors (South Pennine Moors Phase 1)
9. South Pennine Moors Phase 2
10. Thames Estuary and Marshes
11. The Wash

Table 1 – Table showing the outputs from the GWRAT for SPA with a ‘low’ HPAIV risk output at a site level or a feature-specific level only (see Farne Islands). See Annex A for full details. ‘Not applicable’ indicates that the risk output for this site was already below the risk threshold so the risk reduction afforded by biosecurity measures has not been considered here.

Site name	Current risk to site: CP	Current risk to site: RLP	Risk to site following biosecurity measures: CP	Risk to site following biosecurity measures: RLP
Abberton Reservoir	Very low	Very low	Very low	Very low
Broadland	Low	Not applicable	Very low	Not applicable
Farne Islands	Not applicable	Low (for the reservoir feature group specifically)	Not applicable	Very low (for the reservoir feature group specifically)
Gibraltar Point	Low	Low	Very low	Very low

Site name	Current risk to site: CP	Current risk to site: RLP	Risk to site following biosecurity measures: CP	Risk to site following biosecurity measures: RLP
Greater Wash	Low	Low	Very low	Very low
Lindisfarne	Low	Low	Low	Low
Mersey Estuary	Low	Not applicable	Very low	Not applicable
Minsmere-Walberswick	Very low	Not applicable	Very low	Not applicable
Northumbria Coast	Low	Low	Low	Low
Northumberland Marine	Low	Low	Low	Low
Peak District Moors (South Pennine Moors Phase 1)	Low	Not applicable	Very low	Not applicable
South Pennine Moors Phase 2	Low	Low	Very low	Very low
Teesmouth and Cleveland Coast	Low	Low	Low	Low
Thames Estuary and Marshes	Low	Not applicable	Very low	Not applicable
The Wash	Low	Not applicable	Very low	Not applicable

However, as shown in Table 1, the application of mandatory biosecurity measures, providing a twofold reduction in the risk level, would not reduce the current risk level below 'low' for CP and RLP for the sites listed below:

1. Lindisfarne
2. Northumbria Coast

3. Northumberland Marine
4. Teesmouth and Cleveland Coast

As biosecurity measures alone would not be sufficient to reduce the current risk level for these sites to an acceptable level, they may not be sufficient to mitigate risk associated with a potential HPAIV incursion following autumn migrations. As such, the following sites cannot be included in a GL without consideration of the suitability and effectiveness of further SPA-specific mitigation, such as delayed release dates.

SPA-specific assessments

Lindisfarne SPA

This SPA is designated for breeding little tern (*Sterna albifrons*) and roseate tern (*Sterna dougallii*). It is also designated for non-breeding bar-tailed godwit (*Limosa lapponica*), common scoter (*Melanitta nigra*), dunlin (*Calidris alpina alpina*), eider (*Somateria mollissima*), golden plover (*Pluvialis apricaria*), grey plover (*Pluvialis squatarola*), greylag goose (*Anser anser*), light-bellied Brent goose (*Branta bernicla hrota*), long-tailed duck (*Clangula hyemalis*), red-breasted merganser (*Mergus serrator*), redshank (*Tringa totanus*), ringed plover (*Charadrius hiaticula*), sanderling (*Calidris alba*), shelduck (*Tadorna tadorna*), whooper swan (*Cygnus cygnus*), wigeon (*Mareca penelope*), and a non-breeding waterbird assemblage.

Regarding spatial considerations, this wide array of qualifying features are known to occupy the range of coastal habitats within the site, foraging and roosting on intertidal mud flats, sand dunes, rocky shores, and shallow waters. It is also likely that some of the wild bird species (for instance whooper swan, light-bellied Brent goose) will forage on areas of coastal grazing marsh and arable land adjacent to the SPA, which gamebirds would also likely visit.

While some species (such as little tern) have different habitat preferences to gamebirds so may not come into direct contact or share habitat, there is a risk that gulls or other protected features could also act as bridging species. [WeBS](#) data shows that black-headed gulls (*Chroicocephalus ridibundus*) and herring gulls (*Larus argentatus*) are present on site. Black-headed gulls were seriously impacted by HPAIV on their breeding grounds in 2023 and considered highly susceptible to HPAIV infection. As such, it is likely that any gamebirds released onto Holy Island (the main land body within the coastal SPA) or mainland within or adjacent to the SPA would feasibly come into contact with several protected wild bird species directly in shared habitat or could facilitate indirect HPAIV transmission via environmental contamination of shared habitats or bridging species.

Regarding temporal considerations, little tern and roseate tern are only present on the SPA during the breeding season from April to September, whilst the non-breeding features overwinter on site between approximately October and March. As the combination of breeding and non-breeding qualifying features means that features are present on site year-round it is unavoidable that gamebirds would be released on site while the qualifying

features are present, providing the potential for both direct and indirect HPAIV transmission.

As biosecurity measures alone would not be sufficient to reduce the current risk level to an acceptable level this also suggests that they may not be sufficient to mitigate risk associated with a potential HPAIV incursion following autumn migrations. Other measures such as delayed release dates therefore need to be considered to provide additional mitigation; however, as the SPA has both breeding and non-breeding qualifying features a delayed release date alone would not mitigate against the impact of gamebird release to non-breeding features, which would unavoidably occupy the SPA at the same time as released gamebirds.

Consequently, Defra cannot conclude that the release of gamebirds under a GL will not have an adverse effect on site integrity and as such the release of gamebirds on this SPA should not be included in GL45b. Licence-specific conditions would need to be considered through the IL process to determine whether the risk level could be reduced sufficiently to conclude no adverse effect on site integrity.

Northumbria Coast SPA

This SPA is designated for breeding Arctic tern (*Sterna paradisaea*) and little tern (*S. albigrons*). It is also designated for non-breeding purple sandpiper (*Calidris maritima*) and turnstone (*Arenaria interpres*).

Regarding spatial considerations, during the breeding season Arctic tern forage in a range of marine locations generally in shallow inshore water (but also further offshore) and nest on shingle substrates, spits, and tiny islets of sand or rock close to the high-tide mark. They forage in shallow inshore waters close to their breeding sites. Non-breeding purple sandpiper occur in high numbers on wave-cut platforms on the SPA's rocky shore but occasionally forage on banks of rotting seaweed on the strandline. Non-breeding turnstone predominantly forage on the rocky shore, along seawalls and jetties, as well as along sandy and muddy shores where they feed on banks of washed up seaweed.

Owing to considerably different habitat preferences between the qualifying features and gamebirds, largely due to the coastal nature of this small SPA, it is not considered likely that gamebirds and qualifying features would come into direct contact in shared habitat nor qualifying features be at risk of indirect HPAIV transmission from environmental contamination of shared habitat.

However, while WeBS does not hold any data specifically for Northumbria Coast SPA, this SPA adjoins Lindisfarne SPA immediately to the south and it is noted that the wider Northumberland coast area supports important breeding colonies of seabirds and auks. Given the populations of black-headed gulls (*C. ridibundus*) and herring gulls (*L. argentatus*) present on Lindisfarne SPA it is feasible that these species are also present on Northumbria Coast SPA and could act as bridging species between gamebirds released into farmland and grassland in proximity to the SPA and qualifying features that occupy the coastal habitats, posing a risk of indirect transmission. Black-headed gulls in

particular were seriously impacted by HPAIV on their breeding grounds in 2023 and must be considered highly susceptible to HPAIV infection.

Regarding temporal considerations, Arctic tern and little tern are only present on the SPA during the breeding season from April to September, whilst the non-breeding features overwinter on site between approximately October and March. As the combination of breeding and non-breeding qualifying features means that features are present on site year-round it is unavoidable that gamebirds would be released on site while the qualifying features are present, providing the potential for both direct and indirect HPAIV transmission.

As biosecurity measures alone would not be sufficient to reduce the current risk level to an acceptable level this also suggests that they may not be sufficient to mitigate risk associated with a potential HPAIV incursion following autumn migrations. Other measures such as delayed release dates therefore need to be considered to provide additional mitigation; however, as the SPA has both breeding and non-breeding qualifying features a delayed release date alone would not mitigate against the impact of gamebird release to non-breeding features, which would unavoidably occupy the SPA at the same time as released gamebirds.

Consequently, Defra cannot conclude that the release of gamebirds under a GL will not have an adverse effect on site integrity and as such the release of gamebirds on this SPA should not be included in GL45b. Licence-specific conditions would need to be considered through the IL process to determine whether the risk level could be reduced sufficiently to conclude no adverse effect on site integrity.

Northumberland Marine SPA

This SPA is designated for breeding Arctic tern (*S. paradisaea*), common tern (*Sterna hirundo*), guillemot (*Uria aalge*), little tern (*S. albifrons*), puffin (*Fratercula arctica*), roseate tern (*S. dougallii*), sandwich tern (*Thalasseus sandvicensis*), and a breeding seabird assemblage.

Regarding spatial considerations, during the breeding season the SPA supports breeding seabird colonies located across the Farne Islands, Coquet Island, Lindisfarne, and at Long Nanny on the Northumbria Coast. Arctic tern, common tern, little tern, roseate tern, and sandwich tern forage in the water column habitat generally in shallow inshore waters and the uppermost waters, whereas common guillemot and puffin use the water column for behaviours like preening, bathing, and sleeping. In addition to these species, the breeding seabird assemblage also includes great cormorant (*Phalacrocorax carbo*), European shag (*Gulosus aristotelis*), black-headed gull (*C. ridibundus*), black-legged kittiwake (*Rissa tridactyla*), northern fulmar (*Fulmarus glacialis*), great black-backed gull (*Larus marinus*), lesser black-backed gull (*Larus fuscus*), herring gull (*L. argentatus*), and razorbill (*Alca torda*). These species also use the water column habitat for foraging and maintenance behaviours. Owing to considerably different habitat preferences between most of the qualifying features and gamebirds, and the marine nature of this SPA, it is unlikely that gamebirds and qualifying features would come into direct contact in shared habitat nor

qualifying features be at risk of indirect HPAIV transmission from environmental contamination of shared habitat. This is not the case for gulls, however, which are known to forage in grassland and arable land where they could come into direct and indirect contact with gamebirds. Black-headed gulls in particular were seriously impacted by HPAIV on their breeding grounds in 2023 and must be considered highly susceptible to HPAIV infection. It is also feasible that these gull species could act as bridging species between gamebirds ranging into farmland and grassland in proximity to the SPA and qualifying features that share the marine habitat or nest near the gull colonies, posing a risk of indirect transmission.

Regarding temporal considerations, the qualifying features are present on the SPA during the breeding season from approximately March to September (though some species arrive later and leave sooner). While breeding features should be off site for much of the time that gamebirds could be present on the mainland adjacent to the SPA (in the buffer), there is the potential for transmission via bridging species if gamebirds are released into pens or onto site in July or August prior to the October to February shooting season, which could allow for transmission.

As biosecurity measures alone would not be sufficient to reduce the current risk level to an acceptable level this also suggests that they may not be sufficient to mitigate risk associated with a potential HPAIV incursion following autumn migrations. Other measures such as delayed release dates therefore need to be considered to provide additional mitigation. Given that this SPA is designated for breeding features, which should have finished breeding by September, a delayed release date in early September (such as 7th September) would provide additional mitigation against the risk of transmission between gamebirds and qualifying features.

Consequently, Defra can conclude that, subject to the addition of a delayed release date for both CP and RLP, the release of gamebirds under a GL will not have an adverse effect on site integrity and as such this SPA can be included in GL45b.

Teesmouth and Cleveland Coast SPA

This SPA is designated for breeding avocet (*Recurvirostra avosetta*), common tern (*S. hirundo*), and little tern (*S. albifrons*). It is also designated for non-breeding knot (*Calidris canutus*), redshank (*T. totanus*), ruff (*Calidris pugnax*), sandwich tern (*T. sandvicensis*), and a non-breeding waterbird assemblage that involves a wide range of wintering and passage waterbird species including shoveler (*Anas clypeata*), wigeon (*M. penelope*), gadwall (*Mareca strepera*), lapwing (*Vanellus vanellus*), sanderling (*C. alba*), herring gull (*L. argentatus*) and black-headed gull (*C. ridibundus*).

Regarding spatial considerations, breeding avocet nest on open ground, exposed mud or short vegetation adjacent to shallow, brackish coastal lagoons and feed on shallow brackish waterbodies and mudflats. Breeding common tern tend to nest on islands within SPA, with variable and smaller numbers of nests on the saline lagoon, and forage in the water column habitat. Breeding little tern nest in scrapes on the shingle, sometimes only metres away from the high tide mark and forage predominately within the shallow coastal

waters of the SPA but may also forage within the downstream reaches of the estuary channel. Non-breeding knot roost on rocky outcrops and forage on the intertidal sandflats and mudflats, mussel beds, intertidal rock and rocky shores on both sides of the estuary. Redshank roost in a number of locations within the SPA in habitat like saltmarsh and forage on intertidal mud, tidal channels, saltmarsh, wet grassland, and rocky shores. Conversely, migrating ruff avoid the coastal areas and favour the inland waterbodies of the SPA where they forage within the shallow freshwater and brackish waterbodies as well as on wet grassland and grazing marsh. Non-breeding sandwich tern are known to roost on stretches of sandy beach within the SPA and forage in the shallow inshore waters in and around the estuary mouth. The non-breeding waterbird assemblage typically roost on saltmarsh, rocky shores, slag training walls, upper mudflats, and sandflats. A high proportion of the assemblage also forages on grazing marsh and 'brinefield' habitats (including freshwater and brackish pools) within the SPA, as well as various habitats within the estuary.

Owing to considerably different habitat preferences between the qualifying features and gamebirds, largely due to the coastal nature of this SPA, it is not considered likely that gamebirds and most of the qualifying features would come into direct contact in shared habitat nor qualifying features be at risk of indirect HPAIV transmission from environmental contamination of shared habitat. However, it is feasible that gamebirds could visit the same grassland and grazing marsh habitats that redshank, ruff, and several of the assemblage species occupy (such as herring gulls, black-headed gulls), posing a risk of both direct and indirect transmission. Black-headed gulls in particular were seriously impacted by HPAIV on their breeding grounds in 2023 and must be considered highly susceptible to HPAIV infection. The presence of gulls on the SPA also poses a risk of indirect transmission via bridging species, as they are likely to occupy grassland and arable land adjacent to the SPA (in which gamebirds would likely be present) and could facilitate transmission to qualifying features in shared habitats.

Regarding temporal considerations, breeding avocet, little tern and sandwich tern are present on the SPA during the breeding season from April to September, whilst the non-breeding features overwinter on site between approximately October and March, though passage species like ruff and sandwich tern are present in higher numbers can be present earlier in the year (mid-July to September). As the combination of breeding and non-breeding qualifying features means that features are present on site year-round it is unavoidable that gamebirds would be released on site while the qualifying features are present, providing the potential for both direct and indirect HPAIV transmission.

As biosecurity measures alone would not be sufficient to reduce the current risk level to an acceptable level this also suggests that they may not be sufficient to mitigate risk associated with a potential HPAIV incursion following autumn migrations. Other measures such as delayed release dates therefore need to be considered to provide additional mitigation; however, as the SPA has both breeding and non-breeding qualifying features a delayed release date alone would not mitigate against the impact of gamebird release to non-breeding features, which would unavoidably occupy the SPA or buffer at the same time as released gamebirds.

Consequently, Defra cannot conclude that the release of gamebirds under a GL will not have an adverse effect on site integrity and as such the release of gamebirds on this SPA should not be included in GL45b. Licence-specific conditions would need to be considered through the IL process to determine whether the risk level could be reduced sufficiently to conclude no adverse effect on site integrity.

Summary of SPA-specific assessments

The GWRAT considers the geographical prevalence of HPAI in England, and how that may impact on the risk of releasing gamebirds around SPAs. The risk level output provided by the GWRAT is based on several factors that are entered into the model and can change week-to-week. These are: the probability of HPAI infection in a county in the last few weeks; the presence of different SPAs in the counties; the likely intra-flock transmission rate of different gamebirds and aggregated probability for either CP or RLP; and the likely intra-flock transmission rate and aggregated probability for different SPA features.

These factors are based on the type of infection pathway. For instance, reservoir species are vulnerable to environmental and aerosol pathways, spill-over species are vulnerable to aerosol pathways, and raptors are vulnerable to infection from consumption of infected dead birds. These factors enable the model to give an overall score for a SPA depending on the approximate number of gamebirds released and number of features present (meaning bird species present).

A final step of the GWRAT considers the impact of HPAI on the SPA itself from the background level of risk. This will depend on the overall population size of the SPA, the number of features, and the number of other wild birds. For example, for most SPAs that have only a few birds present the impact on duration of infection will be far less than for a SPA with large waterfowl assemblages. However, the impact on the bird population itself will be greater if there are a few highly susceptible birds with a small breeding population. See the GWRAT methodology for further detail.

Regarding the 4 SPAs for which the release of gamebirds on or in the buffer continue to pose a 'low' risk after application of biosecurity measures: Lindisfarne, Northumbria Coast, Northumberland Marine, and Teesmouth and Cleveland Coast.

The first 3 sites are all located within the county of Northumberland, which had a HPAIV detection in the month prior to the latest GWRAT outputs being generated. This gives the 3 SPAs in this county a higher prevalence score in the GWRAT than SPAs in counties that have not had recent disease detections, which has increased the overall comparative risk score. These SPAs are also designated for multiple sizeable seabird and wading (reservoir and spill-over) species populations. Reservoir species in particular tend to form dense aggregations and spend extended periods of time living in highly transmissible environments (such as cold water), which promotes multiple and substantial direct and indirect HPAIV transmission pathways that also influence the overall risk score. Combined, these factors have led to the higher overall risk scores for these 3 SPAs compared to other SPAs in England.

Similarly, Teesmouth spans North Yorkshire and County Durham. North Yorkshire has a high score relative to the rest of the country (besides Northumberland) because of a HPAIV detection within the past few months. The combination of this background risk and significant populations of both reservoir and spill-over species has resulted in a higher overall comparative risk score. Species feature group risk values (see Annex A) also show that it is the reservoir and spill-over species (such as waterbirds) that are at risk of HPAI from gamebird releases at these SPAs. We note that an SPA having populations of multiple species feature types will generally generate risk scores higher than an SPA with only one species feature type, even if that one feature type massively outnumbers an SPA with all 3.

We also note that, like Northumberland Marine SPA, the Farne Islands SPA and Coquet Island SPA are located on the Northumberland coast and have reservoir and/or spillover species feature types, and Northumberland has had a HPAIV detection within the last month, therefore some high output risk scores. Farne Islands SPA and Coquet Island SPA, however, have the background risk scores from each county they span halved as they are at sea and separated from the mainland, where the HPAIV detection was recorded, whereas the other Northumberland-based SPAs are on or directly connected to the mainland and therefore retain the highest score. It is important to recognise too that multiple other SPAs had overall risk scores that placed them above the threshold for inclusion in the GL (those at 'low' risk, see Table 1), but the application of a twofold reduction in the risk due to the application of biosecurity measures enabled the risk level for these SPAs to be reduced to 'very low', which allowed for their inclusion in GL. In the case of these 4 SPAs the twofold risk reduction was not sufficient to bring their overall risk scores below the required threshold and the effectiveness of additional mitigation had to be explored.

Conclusions on site integrity

Regarding the consideration of this project in combination with other plans and projects, Defra is not aware of any plans or projects, other than gamebird releases under GL45 and any individual licences that might be issued for gamebird release in 2024, that would impact HPAIV transmission on SPAs in England during the 2024 gamebird release season. The GWRAT is sensitive to the numbers of gamebirds that could be released into the SPA. Defra has taken a precautionary approach to the numbers entered into the assessments by using the total number of gamebird releases applied for in 2023 (with estimates made for SPAs that did not receive individual licence applications in 2023 – see the GWRAT methodology for full details) as an estimate of numbers that could be released per SPA in 2024 as opposed to the lower number of gamebirds that were licensed for release in 2023. As the GWRAT produces an estimate of risk informed by the total number of birds estimated to be released per SPA in 2024, Defra can evaluate the likely risk of the total number of birds released by multiple users acting under the licence per SPA (also known as 'in combination'). As such, Defra can conclude that this project will not have an adverse effect on site integrity in combination with other plans and projects.

Defra can ascertain that, based on available evidence, under a low national risk level the project (the proposed GL45b) will not have an adverse effect on the integrity of SPA sites listed below), either alone or in combination with other plans and projects. Defra is content that a conclusion of no adverse effect on the integrity of the SPAs either alone or in combination with other plans and projects can be made, including over the period of the licence. The risk from HPAIV will be monitored and reviewed over the licence period.

1. Abberton Reservoir
2. Alde-Ore Estuary
3. Arun Valley
4. Ashdown Forest
5. Avon Valley
6. Benacre to Easton Bavents
7. Benfleet and Southend Marshes
8. Blackwater Estuary (Mid-Essex Coast Phase 4)
9. Bowland Fells
10. Breckland
11. Breydon Water
12. Broadland
13. Chesil Beach and The Fleet
14. Chew Valley Lake
15. Chichester and Langstone Harbours
16. Colne Estuary (Mid-Essex Coast Phase 2)
17. Coquet Island
18. Crouch and Roach Estuaries (Mid-Essex Coast Phase 3)
19. Deben Estuary
20. Dengie (Mid-Essex Coast Phase 1)
21. Dorset Heathlands
22. Dungeness, Romney Marsh and Rye Bay
23. East Devon Heaths
24. Exe Estuary
25. Falmouth Bay to St Austell Bay
26. Farne Islands
27. Flamborough and Filey Coast
28. Foulness (Mid-Essex Coast Phase 5)
29. Gibraltar Point
30. Great Yarmouth North Denes
31. Greater Wash
32. Hamford Water
33. Holburn Lake and Moss
34. Hornsea Mere
35. Humber Estuary
36. Isles of Scilly
37. Lee Valley
38. Leighton Moss
39. Liverpool Bay (Bae Lerpwl)

40. Lower Derwent Valley
41. Marazion Marsh
42. Martin Mere
43. Medway Estuary and Marshes
44. Mersey Estuary
45. Mersey Narrows and North Wirral Foreshore
46. Minsmere-Walberswick
47. Morecambe Bay and Duddon Estuary
48. Nene Washes
49. New Forest
50. North Norfolk Coast
51. North Pennine Moors
52. North York Moors
53. Northumberland Marine (with a condition for a delayed release of 7 September)
54. Ouse Washes
55. Outer Thames Estuary
56. Pagham Harbour
57. Peak District Moors (South Pennine Moors Phase 1)
58. Poole Harbour
59. Porton Down
60. Portsmouth Harbour
61. Ribble and Alt Estuaries
62. Rutland Water
63. Salisbury Plain
64. Sandlings
65. Severn Estuary
66. Solent and Dorset Coast
67. Solent and Southampton Water
68. Solway Firth
69. Somerset Levels and Moors
70. South Pennine Moors Phase 2
71. South West London Waterbodies
72. Stodmarsh
73. Stour and Orwell Estuaries
74. Tamar Estuaries Complex
75. Thames Basin Heaths
76. Thames Estuary and Marshes
77. Thanet Coast and Sandwich Bay
78. The Dee Estuary
79. The Swale
80. The Wash
81. Thorne and Hatfield Moors
82. Thursley, Hankley and Frensham Commons (Wealden Heaths Phase 1)
83. Upper Nene Valley Gravel Pits
84. Walmore Common
85. Wealden Heaths Phase 2

Defra cannot ascertain that, based on available evidence, under a low national risk level the project (the proposed GL45b) will not have an adverse effect on the integrity of SPA sites listed below, either alone or in combination with other plans and projects. As such, these SPAs cannot be included in GL45b and will require an application for an individual licence for gamebird release.

1. Lindisfarne
2. Northumbria Coast
3. Teesmouth and Cleveland Coast

The risk from avian influenza will continue to be monitored and reviewed over the licence period. Subject to any new evidence, our conclusions on site integrity and the licence may be revoked or amended accordingly.

SSSI considerations

Regarding areas that are designated as both sites of special scientific interest (SSSIs) and SPAs and considering the potential for HPAIV transmission from gamebirds to SSSI notified features, Defra note that many bird features for which SSSIs are notified overlap wholly or in part with the qualifying features for which the co-designated SPAs are designated.

For example, Peak District Moors SPA is designated for breeding merlin, breeding golden plover, and breeding short-eared owl. Dark Peak SSSI, a SSSI that is designated on land within the SPA, is notified for breeding curlew, golden plover, merlin, and short-eared owl, non-breeding dunlin, and a breeding bird assemblage. As such, the risk of HPAIV transmission to birds that are both SPA and SSSI features (breeding merlin, golden plover, and short-eared owl) has been assessed as part of the habitats regulations assessment of impacts on the SPA features and we can conclude that the risk of HPAIV transmission to these SSSI features, given the low national wild bird risk level, will also be appropriately mitigated under the conditions of the general licence.

Other SSSI features that are not also SPA features (breeding curlew, non-breeding dunlin) have not been considered as part of the HRA for Peak District Moors SPA. However, these species are categorised as 'spill-over' species in the GWRAT, which are at 'very low' and 'negligible' risk of HPAIV from gamebird releases (see Annex A). Considering that the application of mandatory mitigating conditions like pre-release testing and biosecurity measures will further reduce the risk of HPAIV transmission, mitigation applied as standard under GL45b can be considered sufficient to mitigate risk to these SSSI features. This logic can be applied to all SSSIs with bird features that can be assessed under the GWRAT to ascertain whether gamebirds pose a transmission risk to SSSI features, as captured in Annex A.

In some instances, notified SSSI bird features may not be listed in the species feature groups assessed by the GWRAT (see Table 1 in the GWRAT methodology) but could still be clearly categorised into one of the 3 species feature groups (reservoir, spill-over, or

raptor), thereby allowing the GWRAT outputs to provide an indicator of transmission risk to the SSSI features. For example, twite are part of the breeding bird assemblage on Dark Peak SSSI and could be categorised as a spill-over species along with comparable passerines like the Dartford warbler or wood warbler to ascertain the likely risk to this species.

Based on the most recent outputs of the GWRAT (see Annex A), most species feature groups are at negligible or very low risk from HPAIV transmission from gamebird releases, and further assessments have been undertaken where risk levels were above the acceptable threshold to assess the risk after the application of mitigation (such as biosecurity measures, see Table 1). In most instances the application of mitigating measures has sufficiently reduced the risk to allow Defra to conclude no adverse effect on site integrity and allow the SPA to be included in GL45b. Defra considers this method to also provide an appropriate measure of the risk of gamebird releases to SSSI bird features.

Annex A: List of SPAs in England and GWRAT outputs

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
Abberton Reservoir	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Alde-Ore Estuary	Very low	Very low	Very low; very low; very low	Very low; very low; very low
Arun Valley	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Ashdown Forest	Very low	Negligible	Negligible, very low; negligible	Negligible; negligible; negligible
Avon Valley	Very low	Negligible	Very low; very low; negligible	Negligible; negligible; negligible
Benacre to Easton Bavents	Very low	Negligible	Negligible; negligible; very low	Negligible; negligible; negligible

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
Benfleet and Southend Marshes	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Blackwater Estuary (Mid-Essex Coast Phase 4)	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Bowland Fells	Very low	Very low	Very low; negligible; very low	Very low; very low; very low
Breckland	Very low	Very low	Negligible; very low; negligible	Negligible; negligible; negligible
Breydon Water	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Broadland	Low	Very low	Very low; negligible; very low	Very low; negligible; very low
Chesil Beach and The Fleet	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Chew Valley Lake	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Chichester and Langstone Harbours	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible
Colne Estuary (Mid-Essex Coast Phase 2)	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Coquet Island	Very low	Very low	Negligible; very low; negligible	Negligible; very low; negligible

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3)	Negligible	Very low	Negligible; negligible; negligible	Very low; negligible; negligible
Deben Estuary	Very low	Very low	Very low; very low; negligible	Negligible; very low; negligible
Dengie (Mid-Essex Coast Phase 1)	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Dorset Heathlands	Very low	Negligible	Negligible; very low; very low	Negligible; negligible; negligible
Dungeness, Romney Marsh and Rye Bay	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible
East Devon Heaths	Very low	Very low	Negligible; very low; negligible	Negligible; very low; negligible
Exe Estuary	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible
Falmouth Bay to St Austell Bay	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Farne Islands	Very low	Very low	Negligible; very low; negligible	Low; negligible; negligible
Flamborough and Filey Coast	Very low	Very low	Negligible; very low; negligible	Negligible; very low; negligible
Foulness (Mid-Essex Coast Phase 5)	Negligible	Very low	Negligible; negligible; negligible	Very low; very low; very low

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
Gibraltar Point	Low	Low	Negligible; very low; negligible	Low; negligible; negligible
Great Yarmouth North Denes	Very low	Very low	Negligible; very low; negligible	Negligible; very low; negligible
Greater Wash	Low	Low	Negligible; very low; negligible	Low; very low; negligible
Hamford Water	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible
Holburn Lake and Moss	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Hornsea Mere	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Humber Estuary	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Isles of Scilly	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible
Lee Valley	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Leighton Moss	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Lindisfarne	Low	Low	Low; low; negligible	Low; low; negligible
Liverpool Bay (Bae Lerpwl)	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Lower Derwent Valley	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
Marazion Marsh	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Martin Mere	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Medway Estuary and Marshes	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Mersey Estuary	Low	Negligible	Very low; very low; negligible	Negligible; negligible; negligible
Mersey Narrows and North Wirral Foreshore	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Minsmere-Walberswick	Very low	Negligible	Very low; very low; very low	Negligible; negligible; negligible
Morecambe Bay and Duddon Estuary	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Nene Washes	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
New Forest	Very low	Negligible	Negligible; very low; very low	Negligible; negligible; negligible
North Norfolk Coast	Negligible	Very low	Negligible; negligible; negligible	Very low; negligible; very low
North Pennine Moors	Very low	Very low	Negligible; very low; very low	Negligible; very low; very low

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
North York Moors	Very low	Very low	Negligible; very low; very low	Very low; very low; very low
Northumbria Coast	Low	Low	Low; low; negligible	Low; low; negligible
Northumberland Marine	Low	Low	Low; negligible; negligible	Low; negligible; negligible
Ouse Washes	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Outer Thames Estuary	Very low	Very low	Negligible; very low; negligible	Negligible; very low; negligible
Pagham Harbour	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Peak District Moors (South Pennine Moors Phase 1)	Low	Negligible	Negligible; very low; very low	Negligible; negligible; negligible
Poole Harbour	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Porton Down	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Portsmouth Harbour	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible
Ribble and Alt Estuaries	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible
Rutland Water	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
Salisbury Plain	Very low	Negligible	Negligible; negligible; very low	Negligible; negligible; negligible
Sandlings	Very low	Negligible	Negligible; very low; negligible	Negligible; negligible; negligible
Severn Estuary	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Solent and Dorset Coast	Very low	Very low	Negligible; very low; negligible	Negligible; very low; negligible
Solent and Southampton Water	Very low	Negligible	Very low; very low; negligible	Negligible; negligible; negligible
Solway Firth	Very low	Very low	Very low; very low; negligible	Very low; very low; negligible
Somerset Levels and Moors	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
South Pennine Moors Phase 2	Low	Low	Negligible; very low; low	Negligible; very low; low
South West London Waterbodies	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible
Stodmarsh	Very low	Very low	Very low; very low; negligible	Very low; negligible; negligible
Stour and Orwell Estuaries	Very low	Very low	Very low; negligible; negligible	Very low; negligible; negligible

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
Tamar Estuaries Complex	Negligible	Very low	Negligible; very low; negligible	Negligible; very low; negligible
Teesmouth and Cleveland Coast	Low	Low	Negligible; very low; negligible	Low; very low; negligible
Thames Basin Heaths	Very low	Very low	Negligible; very low; negligible	Negligible; very low; negligible
Thames Estuary and Marshes	Low	Very low	Very low; very low; very low	Very low; very low; negligible
Thanet Coast and Sandwich Bay	Very low	Very low	Negligible; very low; negligible	Negligible; very low; negligible
The Dee Estuary	Very low	Very low	Negligible; very low; negligible	Very low; very low; negligible
The Swale	Very low	Very low	Negligible; very low; negligible	Very low; very low; negligible
The Wash	Low	Negligible	Low; negligible; negligible	Negligible; negligible; negligible
Thorne and Hatfield Moors	Negligible	Negligible	Negligible; negligible; negligible	Negligible; negligible; negligible
Thursley, Hankley and Frensham Commons (Wealden Heaths Phase 1)	Very low	Negligible	Negligible; very low; negligible	Negligible; negligible; negligible
Upper Nene Valley Gravel Pits	Very low	Very low	Negligible; negligible; negligible	Very low; very low; negligible

Site name	Risk to site: CP	Risk to site: RLP	Risk to species feature groups (reservoir; spillover; raptors): CP	Risk to species feature groups (reservoir; spillover; raptors): RLP
Walmore Common	Very low	Very low	Negligible; negligible; negligible	Very low; negligible; negligible
Wealden Heaths Phase 2	Negligible	Negligible	Negligible; very low; negligible	Negligible; negligible; negligible

Annex B: Mandatory testing and checks, biosecurity measures and other conditions

Condition 4 - Vet checks and mandatory testing

Before releasing gamebirds, you must arrange for an experienced poultry or gamebird vet to carry out the following inspection and sampling for signs of notifiable disease. This applies to single or trickle releases.

Inspecting gamebirds:

Within the 24 hours before release, you must make sure the vet inspects all:

- gamebirds to be released
- other kept birds (such as poultry) held in the same release pen or release area.

You must only release gamebirds if the vet confirms there is no evidence of notifiable disease in any of the gamebirds you plan to release, or the other kept birds.

You must get a written statement from the vet confirming this.

You must keep this statement and:

- produce it for inspection when requested by any wildlife inspector [footnote 10]
- send a copy to glenquiries@defra.gov.uk within one week of releasing gamebirds

Testing red-legged partridges:

If red-legged partridges have not mixed (had beak to beak contact) with common pheasants or other indicator species for bird flu, you must make sure the vet takes

samples to test for bird flu (highly pathogenic avian influenza (HPAI)) within 48 hours of the intended release. Indicator species for bird flu include chickens and turkeys.

You must make sure the vet samples at least 60 of the red-legged partridges you plan to release, or all of the red-legged partridges if you plan to release fewer than 60 red-legged partridges.

You must arrange for the vet to send the samples to the Animal and Plant Health Agency (APHA) National Reference Lab.

You must not release the red-legged partridges until the vet receives the test results confirming negative results for HPAI.

You must keep the test results and:

- produce them for inspection when requested by any wildlife inspector
- send a copy to glenquiries@defra.gov.uk within one week of releasing gamebirds

Purpose of condition 4

Detect HPAIV in gamebirds (both symptomatic and asymptomatic) prior to release and prevent gamebirds infected with HPAIV from being released onto the SPA or into the SPA buffer zone.

Relevant transmission pathway condition 4 addresses

Reduces the risk of releasing gamebirds with HPAIV onto the SPA by identifying infected gamebirds prior to release. Prevents direct and indirect transmission to wild birds by preventing release of infected gamebirds on or in the buffer of the SPA.

Condition 5 - Biosecurity measures

Keeping footwear and clothing clean

If birds are in the release pen or release area, you must make sure footwear and clothing is clean when you enter. In this condition, 'release area' refers to the area you release red-legged partridges into if you do not use a release pen.

For footwear, you must either:

- use a disinfectant foot dip before you enter and when you step out of the release pen or release area – use a Defra-approved disinfectant at the dilution rate for the Diseases of Poultry Order
- use dedicated footwear inside the release pen or release area – leave your general footwear outside

Cleaning and disinfecting vehicles and equipment

You must clean and disinfect any vehicles that come onto the site for shooting business purposes and will enter a release pen or release area. You must do so:

- every time they enter the site where a shoot will take place
- weekly if they are kept on the site

You must also clean and disinfect equipment before use in a release pen or release area.

When disinfecting vehicles and equipment, you must use a Defra-approved disinfectant.

Maintaining feeding and watering stations

You must:

- have at least one feeding station per 60 released gamebirds, to reduce gamebird density per station
- remove any spilled feed daily, as this could attract wild birds
- only scatter feed when necessary and not within 50 metres of a water body regularly visited by wildfowl

You must also do one of the following:

- cover feeding and watering stations to avoid contamination from wild bird droppings
- clean feeding and watering stations daily to remove droppings and feathers
- move feeding and watering stations at least once a week to avoid the build-up of droppings and feathers

Checking for signs of bird flu

You or anyone acting on your behalf must check gamebirds on a daily basis for signs of bird flu.

You or anyone acting on your behalf must consider the welfare of the bird and humanely cull any gamebirds showing signs of bird flu where necessary.

Read guidance on bird flu rules if you keep gamebirds in the 'Advice on how to comply with the conditions of this licence' section.

Read the 'Code of Practice for the Welfare of Gamebirds Reared for Sporting Purposes' under point 4 of 'information and advice specific to this licence'.

Disposing of carcasses

You must collect common pheasant, red-legged partridge and other wild bird carcasses in and around your release pens, release areas and any areas gamebirds are encouraged into. You must dispose of bird carcasses safely. Read guidance on disposing of carcasses in the 'Advice on how to comply with the conditions of this licence' section.

Purposes of condition 5

Keeping footwear and clothing clean and cleaning and disinfecting vehicles and equipment

To prevent transmission of HPAIV between release pens or release areas and other pens or areas and the surrounding environment via transmission of virus on contaminated items. Items such as clothing, footwear, vehicles, and equipment, can become contaminated with and deposit contaminated material (such as soil and faecal matter), thereby moving the virus between locations. Routine cleaning of footwear, clothing, vehicles, and equipment will reduce the risk of transferring contaminated material between locations.

Maintaining feeding and watering stations

Routine cleaning, movement, and covering of stations will:

- reduce the build-up of potentially HPAIV-contaminated material on substrate surrounding stations
- remove potentially contaminated faecal matter from station surfaces
- prevent attraction of wild birds to stations or scattered feed and consequently areas in which gamebirds are being kept or fed, where they could contaminate stations, come into contact with contaminated material, or come into contact with gamebirds.

Checking for signs of bird flu

Removal of potentially infected gamebirds via culling reduces likelihood and frequency of contact between sick gamebirds, other gamebirds, and wild birds. This also reduces the risk of environmental contamination by potentially infected gamebirds or via potentially HPAIV-infected gamebird carcasses should a gamebird die in the pen or surrounding area and go undetected. Removal of potentially infected gamebirds also prevents scavenging by other gamebirds and wild birds on potentially HPAIV-infected gamebird carcasses should an infected bird then die.

Disposing of carcasses

Removal of potentially infected gamebird carcasses from the environment reduces likelihood of contact with and prevents scavenging by gamebirds and wild birds on infectious carcasses. Removal also reduces the risk of environmental contamination by potentially HPAIV-infected carcasses.

Relevant transmission pathways condition 5 addresses

Cleaning clothing and footwear reduces the risk of indirect HPAIV transmission between gamebirds and wild birds via environmental contamination of release pens and areas and other pens, areas, and the surrounding environment with HPAIV.

Cleaning vehicles and equipment reduces the risk of indirect HPAIV transmission between gamebirds and wild birds via environmental contamination of feeding and watering stations, and the ground surrounding stations or scattered feed with HPAIV. Also reduces

the risk of direct transmission between gamebirds and wild birds visiting the same station or in the same area.

Checking for signs of bird flu reduces the risk of HPAIV transmission from potentially HPAIV-infected gamebirds to other gamebirds and wild birds indirectly via environmental contamination and directly via contact with other gamebirds and wild birds.

Disposing of carcasses reduces the risk of direct transmission between potentially infective carcasses and gamebirds and wild birds by preventing consumption of highly infective organs before any significant environmental degradation can occur. This is particularly relevant in months (namely winter) when the propensity for many species to scavenge during lean or stressful periods suggests significant likelihoods of interaction with infective prey. Also reduces the risk of decomposing infected carcasses contaminating the environment and enabling indirect transmission to gamebirds and wild birds.

Advice re 'catching up' of gamebirds

Defra requests you 'catch up' any gamebirds remaining in the wild that have been released under this licence by no later than 1 February 2025. This helps to make sure they cannot pass bird flu to SPA bird species once the shooting season has closed.

Purpose of the advice

Encourage those acting under the licence to 'catch up' (meaning to remove) any gamebirds still on site at the end of the shooting season to make sure that as few birds as possible remain in the wild at the end of the shooting season and into the following breeding season.

Relevant transmission pathways the advice addresses

Reduces the risk of direct and indirect transmission (via direct contact, environmental contamination, and bridging species) to wild birds by reducing the likelihood that a substantial number of gamebirds remain on site after the shooting season has ended.

Advice re numbers of birds to be released

This licence specifies a maximum density of gamebirds that you can release. You should also consider the total number of gamebirds you will release. This should not be excessive compared to the number of birds expected to be shot throughout the shooting season. This will help you make sure that as few birds as possible remain in the wild at the end of the shooting season.

Purpose of the advice

Encourage those acting under the general licence not to release excessive numbers of birds in relation to the numbers expected to be shot to reduce the risk of substantial numbers of gamebirds surviving post-shooting season and remaining on site over winter and into the following breeding season.

Relevant transmission pathways the advice addresses

Reduces the risk of direct and indirect transmission (via direct contact, environmental contamination, and bridging species) to wild birds by reducing the likelihood that a substantial number of gamebirds remain on site after the shooting season has ended.

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