



Animal & Plant Health Agency

Rapid risk assessment of the likelihood of New World Screwworm (NWS) introduction into Great Britain from the USA and South America

June 2026

Executive summary

New World Screwworm (NWS), *Cochliomyia hominivorax*, is a parasitic blowfly that can cause severe, potentially fatal myiasis. It mainly affects mammals.

Following the detection of NWS in the USA in June 2026, this rapid risk assessment was commissioned to evaluate the likelihood of NWS being introduced into Great Britain through the legal importation of live mammals and the likelihood of the parasite surviving under climatic conditions in Great Britain. The assessment considered the USA, Brazil and Argentina only. Brazil and Argentina were included because they account for most live mammal imports into Great Britain from South America, where NWS is endemic.

This assessment focuses on the importation of live horses, cats and dogs (both commercial and non-commercial movements), as these species account for most live mammal imports from the countries considered. The assessment assumes compliance with all relevant export health certification and disease reporting requirements; that animals arrive on direct flights; that they are exported within 24 hours of pre-export inspection; and that cats, dogs, and horses are closely monitored by their owners or keepers and presented to a veterinarian if they develop signs of disease or infestation. The

assessment does not consider introduction through pathways other than the legal importation of live mammals.

The overall likelihood of introduction of NWS through the importation of a single horse, cat or dog from the USA is assessed as **Negligible** with Low uncertainty. The corresponding likelihood for Brazil and Argentina is also assessed as **Very Low**, but with High uncertainty. These estimates reflect the very low likelihood of infestation and the characteristic clinical signs of NWS, which are likely to be detected during pre-export checks. The principal uncertainties relate to limited data on NWS prevalence and surveillance in Brazil and Argentina.

Although the per-animal likelihood of introduction is Negligible to Very Low, the likelihood of NWS introduction will increase as the number of cats, dogs and horses imported from infested countries increases. Between 2021 and 2025, the mean annual numbers of commercially imported cats, dogs and horses from the USA were 292, 569 and 140, respectively. The corresponding mean annual numbers imported from Brazil and Argentina combined were 64, 95 and 331 animals, respectively (source: IPAFFS data). No data are available on the number of non-commercial movements of cats and dogs.

If an infested animal were imported, the likelihood of at least one egg, larva or pupa surviving to adulthood in Great Britain is assessed as **Negligible to Very Low** between November and March and **Medium to High** between April and October, when temperatures are more favourable. Laboratory evidence suggests that daytime temperatures in Great Britain may be most conducive to adult survival to oviposition between June and September. These risk estimates are based on air temperatures in Southeast and Central South England, the warmest parts of Great Britain, representing a worst-case scenario.

Overall, the per-animal likelihood of NWS introduction into Great Britain through the legal importation of cats, dogs and horses is assessed as **Negligible** for imports from the USA and **Very Low** for imports from Brazil and Argentina. Should introduction occur, climatic conditions in Great Britain are likely to permit development to adulthood between April and October. Laboratory evidence further suggests that climatic conditions would be most favourable for adult survival to oviposition between June and September.

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Background

New World Screwworm (NWS), *Cochliomyia hominivorax*, is a species of parasitic blowfly native to tropical and subtropical America whose larvae hatch from eggs and infest the living tissue of warm-blooded animals. The infestation, known as myiasis, can be fatal if left untreated ([Valdez-Espinoza et al., 2025](#)).

NWS is endemic across most of South America, except Chile, which reported its last autochthonous case in 1947 ([IAEA, 2026](#)). The parasite was eradicated in the USA (1991–1996), Mexico (1991), and Central America (1994–2008) using the sterile insect technique, which relies on gamma radiation to produce sterile male flies for pest control ([Wainwright et al., 2024](#)).

Sporadic reintroductions of NWS into North and Central America have occurred at various times following eradication, associated with the movement of infested animals or humans, or with the natural northward movement of flies from South America. However, North and Central America were considered NWS-free between 2018 and 2020 ([CFSPH, 2025](#), [Valdez-Espinoza et al., 2025](#)). Since 2023, NWS has gradually moved northwards through Mexico and Central America ([CDC, 2026](#)).

Between 3rd and 29th June 2026, the USA reported 27 confirmed cases in domestic animals in Texas and New Mexico, including cattle, sheep, goats and one dog ([USDA, 2026a](#)). These cases represent the USA's first NWS outbreak since an outbreak in Florida in 2016, which primarily affected wild deer. The outbreak was eradicated in 2017 through use of sterile flies ([Wainwright et al., 2024](#), [WOAH, 2026](#)).

In response to the latest outbreak in the USA, the following risk assessment was commissioned by Defra's UK Office for Sanitary and Phytosanitary Trade Assurance. It aims to evaluate the likelihood of NWS eggs, larvae or pupae being introduced into Great Britain from South America and the USA through legal trade in live mammals. It also assesses the likelihood of NWS eggs, larvae or pupae from an infested animal surviving under the climatic conditions of Great Britain.

The assessment is intended to support policy decision-making on whether additional risk mitigations are required, such as prophylactic insecticide treatment of live animals imported from NWS-infested countries. This is not currently a requirement for live animals imported into Great Britain but is one of the recommendations in the WOAHTerrestrial Code ([WOAH, 2025](#)).

Current situation

USA

On 3rd June 2026, the USA reported a case of NWS in a three-week-old domestic calf in Texas to the World Organisation of Animal Health. As of 29th June 2026, 27 confirmed cases have been reported in domestic animals in the USA, including 26 cases in Texas (15 cattle, 7 sheep and 4 goats, including the index case) and one case in a dog in New Mexico (Figure 1). Six of these cases have now been resolved (successfully treated or died), including 3 cattle, 1 sheep and 1 goat and the dog in New Mexico. There have been no confirmed reports in wildlife ([USDA, 2026a](#)). The origin of the outbreak has not been confirmed ([WOAH, 2026](#)).

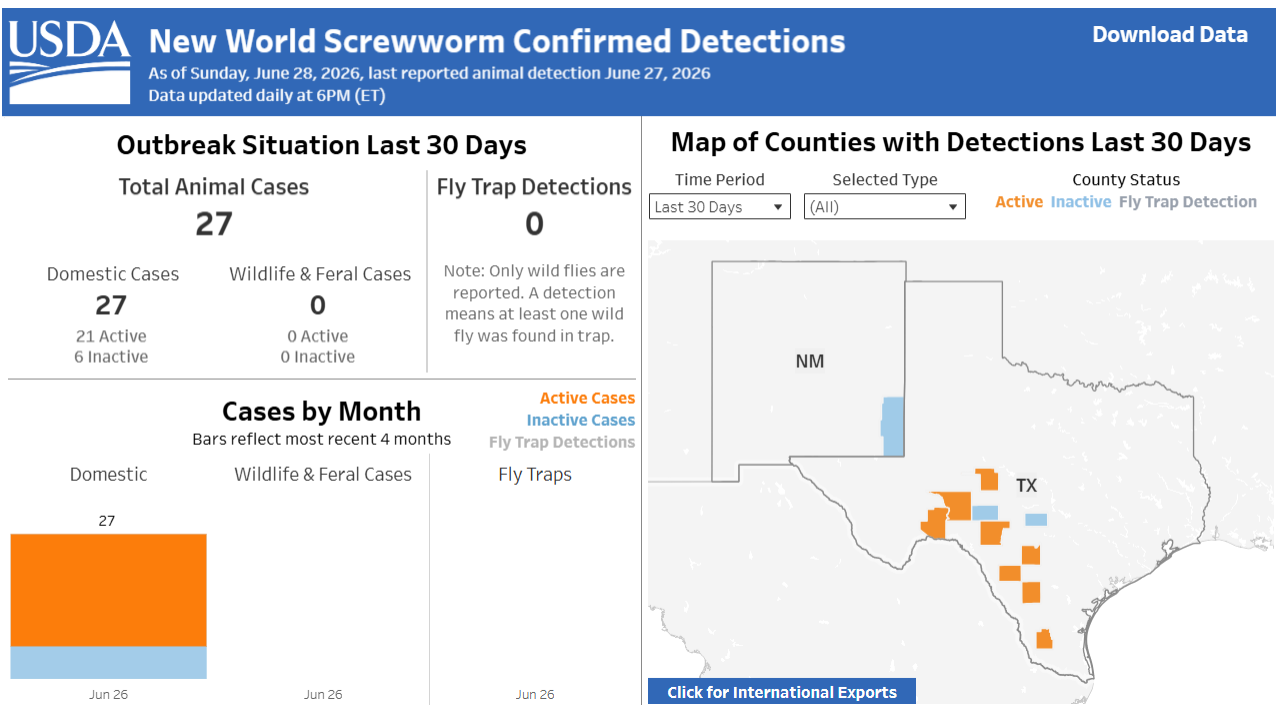


Figure 1. Map showing confirmed NWS cases (active and inactive) and wild NWS fly detections in the USA reported between 3rd and 29th June 2026 ([USDA, 2026a](#)). Active cases are those that involve ongoing disease mitigation efforts, such as treatment and wound management, while inactive cases refer to situations where mitigation efforts are no longer required, either because the animal has fully recovered, or because, where treatment was not performed, appropriate measures have been taken to prevent further spread of NWS, such as carcass management of a deceased infested animal.

Alt text: Map of confirmed New World Screwworm cases and wild fly detections in the USA reported between 3 and 29 June 2026, distinguishing active and inactive cases and indicating the affected areas described in the surrounding text.

The US Department of Agriculture (USDA) and state animal health officials are conducting epidemiological investigations and taking steps to detect, contain and eradicate NWS based on the strategies and actions outlined in the NWS Response Playbook ([WOAH,](#)

[2026](#), [USDA, 2026b](#)). This includes establishing a unified Incident Command Team with state animal health officials and deploying personnel to affected areas, quarantine and disinfestation of cases, and establishing 20 km infested zones (IZs) around infested premises. The 20 km radius reflects the estimated dispersal capacity of adult NWS flies, based on their daily flight distance (1–2 km) and lifespan (10–14 days), and has been used historically in NWS control programmes worldwide ([USDA, 2026c](#)).

Animals within each IZ are subject to movement restrictions and must be accompanied by a certificate confirming that they have been clinically inspected by an Official Veterinarian (OV) before being moved out of the IZ. The inspection verifies that the animals are free from NWS and, where required, have been disinfested using appropriate drugs or pesticides ([USDA, 2026c](#)). Although the USDA NWS Response Playbook primarily discusses movement controls in relation to livestock, the animal movement restrictions established in Texas in June 2026 applied to "warm-blooded animals" within designated infested zones, which would include cats, dogs and horses ([Texas Animal Health Commission, 2026](#)). In New Mexico, following the detection of an infected dog in Lea County, animals within the designated infested zone were required to undergo inspection and, where necessary, disinfestation prior to movement ([NMDA, 2026](#)). Although the published guidance did not explicitly state whether companion animals were included, the measures were implemented following the detection of NWS in a dog and applied generally to "animals" within the infested zone.

Active and passive surveillance for NWS is undertaken in wild and domestic animals within and around the IZ ([USDA, 2026b](#)). NWS myiasis is a legally notifiable disease in the USA, requiring suspected and confirmed cases in animals and humans to be reported to the USDA ([Wainwright et al., 2024](#), [USDA, 2026b](#)). Limited information is available about the active surveillance currently in place in and around each IZ. However, according to the NWS Response Playbook, this should include fly trapping and clinical inspections for domestic animals moving out of an IZ. Additional measures may include regulatory visits to premises, routine monitoring of dogs and other outdoor animals on premises with farm-raised animals, and ante-mortem examinations at slaughterhouses. Wildlife surveillance may include hunter check stations, inspection of wildlife being transported for any reason and road-kill checks (among other methods) ([USDA, 2026c](#)).

Other measures the USDA is taking to control and eliminate NWS include outreach in affected areas to raise awareness of recognising and reporting signs of infestation. They are also releasing sterile NWS flies in infested areas and conducting fly trap surveillance to monitor wild NWS fly activity ([USDA, 2026b](#)).

In July 2025, the USDA also restricted the importation of cattle, horses and bison from Mexico, which is currently experiencing a re-emergence of NWS. Horses can be imported by air but must have resided in Mexico at least 60 days immediately prior to travel and have undergone treatment for NWS and veterinary examination, followed by a 7-day post-import quarantine ([USDA, 2025b](#)).

South America

Except for Chile, NWS is endemic across South America ([Costa-Júnior et al., 2019](#), [IAEA, 2026](#)). Occurrence is typically year-round in tropical and subtropical regions, while in some areas, such as Central Argentina, there can be strong seasonality, with higher incidence during warmer months ([IAEA and FAO, 2017](#)). Disease distribution varies geographically. In Brazil, the parasite has been reported in all 26 states ([Costa-Júnior et al., 2019](#)).

Surveillance and reporting systems across South America are variable. In several countries, underreporting is likely due to non-mandatory reporting. However, there have been recent efforts to strengthen surveillance through national programmes and international collaboration, including the development of harmonised monitoring systems, diagnostic networks, and data collection tools. Peru and Ecuador have formally incorporated NWS into notifiable disease frameworks and begun structured prevalence studies and national monitoring ([IAEA and FAO, 2017](#)).

Currently, there are limited coordinated eradication programmes within South America. Most countries rely instead on localised control measures, such as treatment of individual cases, prophylactic insecticide use and farm-level husbandry practices to reduce wound exposure ([IAEA and FAO, 2017](#)).

Hazard characterisation

NWS myiasis (*Cochliomyia hominivorax*) occurs when gravid female flies lay eggs on wounds, broken skin, or mucous membranes of warm-blooded animals, including the nostrils, ears, eyes, mouth, genitalia, and the umbilicus of newborn animals ([WOAH, 2013](#), [USDA, 2025a](#)). Virtually any wound may attract NWS, from tick and insect bites to castration wounds. The navel of newborn animals and the vulval and perineal regions of their mothers are particularly susceptible to infestation, especially when traumatised ([WOAH, 2013](#)).

Within 12 to 24 hours, larvae (commonly known as maggots) emerge from the eggs and immediately begin to feed ([WOAH, 2013](#)). As they feed on host fluids and underlying tissues, the damage caused by their hook-like mouthparts enlarges and deepens the wound. The odour, serum and blood emitted by the infested wound can attract further female NWS flies and other myiasis fly species that also lay their eggs; the result is additional myiasis and increasing damage. Severe infestations can lead to host death within 7 to 14 days if untreated ([USDA, 2025a](#)).

All living warm-blooded animals, including birds and humans, can be infested by NWS, but it occurs most often in wild and domestic mammals. Unlike many other species of 'blow flies' (family *Calliphoridae*), female NWS flies will lay eggs only on living animals because NWS larvae do not feed on dead tissue or carrion ([USDA, 2025a](#)). Figure 2 provides an overview of the screwworm life cycle, including mating, oviposition, larval development, pupation and adult emergence.

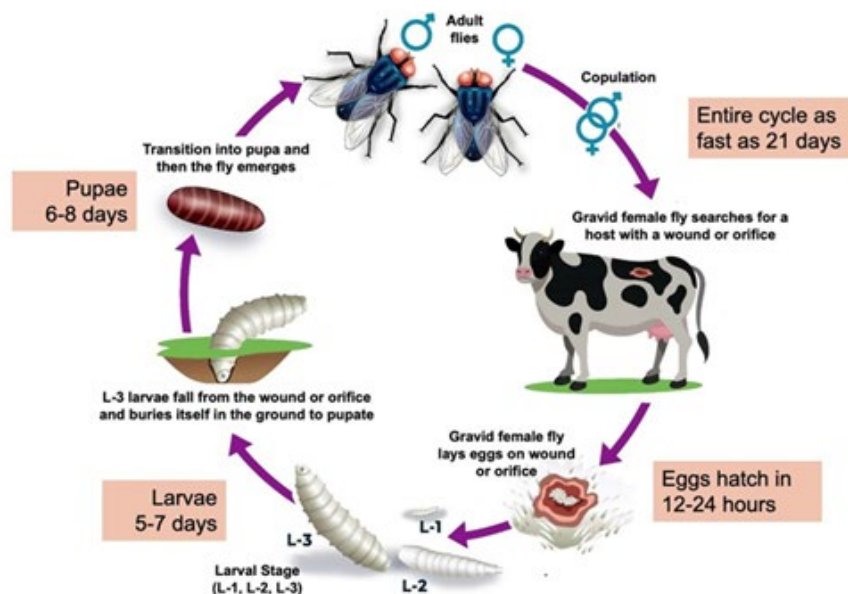


Figure 2. Life cycle of NWS ([APHIS, 2025](#)).

Alt text: Life cycle of New World Screwworm, showing adult mating, egg laying on wounds or mucous membranes, larval development in living tissue, pupation after mature larvae leave the host, and adult emergence.

Scope

The assessment focuses on the likelihood of NWS introduction through the importation of an infested live mammal, as this is the most common route by which NWS is introduced into non-infested areas, both locally and internationally ([Wainwright et al., 2024](#)). It does not consider the likelihood of introduction associated with the mechanical movement of adult NWS flies. Although such movement is theoretically possible, given that adult female flies can survive for up to 30 days ([WOAH, 2013](#)), there is limited evidence that it contributes significantly to NWS spread compared with the movement of infested animals. Furthermore, there are insufficient data on the frequency of fly transport to allow the pathway to be robustly assessed.

Mammalian species considered in this risk assessment include cats, dogs and horses because these are the main species which have been imported into Great Britain from South America and the USA in the last 5 years (January 2021 to May 2026). There have been no livestock imports during this period, except for 2 domestic pig imports from the USA in 2023 (source: IPAFFs database). Between 1986 and 2019, dogs and horses were also the species associated with most NWS cases imported into the USA ([Wainwright et al., 2024](#)). Both commercial and non-commercial cat and dog movements are assessed.

Commercial movements are governed by the “Balai regime”, including the Trade in Animals and Related Products Regulations 2011, which implemented the Balai Directive (92/65/EC). These movements include groups of more than 5 cats, dogs or ferrets; cats,

dogs and ferrets moved for a change of ownership or rehoming, including rescue animals; and pet animals that cannot meet the Pet Travel Regulation requirement to travel within 5 days of their owner or the owner's representative. Other movements, including movements of 5 or fewer cats, dogs or ferrets, are considered non-commercial and are governed by the Pet Travel rules under Assimilated Regulation (EU) 576/2013 (Defra and APHA, 2025).

The risk assessment focuses on trade with NWS-endemic countries in South America, specifically Brazil and Argentina, due to the very low number of live mammal imports from other South American countries during the last 5 years (source: IPAFFs database). It also considers trade with the USA, following the confirmation of NWS in Texas and New Mexico in June 2026 ([USDA, 2026a](#)). While NWS has also been reported throughout Central America and parts of the Caribbean ([UNDRR, 2025](#)), these areas are not considered in the risk assessment due to limited trade in live mammals with Great Britain in the last 5 years, with no livestock imports.

This assessment does not evaluate the likelihood of NWS establishing in Great Britain. Instead, it assesses the likelihood of a NWS egg, larva or pupa associated with an imported infested animal surviving to adulthood under climatic conditions in Great Britain. As this would be highly dependent on seasonal temperatures, this question is addressed separately from the likelihood of NWS introduction in the second half of the document.

The uncertainty and risk level definitions used in the risk assessment can be found in Appendix A. Raw IPAFFs data on all live mammal imports from the Americas from 2021 to 2026 can be found in Appendix B.

Risk question

Q1. What is the likelihood of NWS eggs, larvae or pupae being introduced into Great Britain through the importation of a single live mammal from Brazil, Argentina or the USA?

Q2. What is the likelihood of at least one NWS egg, larva or pupa from an imported infested animal surviving to adulthood under climatic conditions in Great Britain?

Key assumptions

There is compliance with all legal requirements for export of live animals to Great Britain, including any pre-export requirements in the British model export health certificates.

There is compliance with any legal reporting requirements for NWS in the countries included in this risk assessment.

As companion animals, cats, dogs and horses will be closely monitored by their owners and taken to a veterinarian for treatment if they exhibit any clinical signs of disease or infestation.

Live animals exported to Great Britain from the USA, Brazil or Argentina will arrive by direct flight. While available data does not capture whether the animals arrived by direct flight, all commercially imported live animals imported from the USA, Brazil and Argentina have arrived by air travel between 2021 and 2026 (source: IPAFFs database). It is also the quickest way for a live animal to enter Great Britain, with direct flight times of 7-12 hours, compared with an estimated 10-20 days by sea ([Joury, 2020](#), [Caledonian Travel, 2026](#), [TravelMath, 2026](#)). Consequently, air transport is likely to present the highest risk pathway, as the short transit time provides less opportunity for a recently infested animal to develop clinical signs that could be detected before entry into Great Britain.

That all live cats and dogs are exported to Great Britain within 24 hours of pre-export checks. While horses must be exported within 24 hours of pre-export checks, commercial and non-commercial movements of cats and dogs may occur within 48 hours and 10 days of those checks, respectively. ([GBHC655 EQU-X](#), [GBHC640](#), [GB Pet Health Certificate](#)).

It is uncertain exactly how soon these animals are exported following the checks. Therefore, a 24-hour interval was assumed as a conservative worst-case scenario, as this is unlikely to provide sufficient time for clinical signs of NWS infestation to develop or become apparent if they were not evident at the time of inspection ([WOAH, 2013](#)). While non-commercially imported cats and dogs may be exported up to 10 days after these checks, providing a greater opportunity for infestation to occur, it also provides a greater opportunity for any infestation acquired during this period to become clinically apparent and be detected prior to export. Consequently, only infestations occurring within 24 hours of export are assumed likely to remain undetected.

Imported live mammals or their wounds will not have been prophylactically treated for NWS with any kind of insecticide or larvicide, as this is not currently a mandatory requirement for export to Great Britain from infested areas.

Entry assessment

Figure 3 shows the risk pathways by which NWS could be introduced into Great Britain through the importation of a live infested mammal from Brazil, Argentina or the USA. Individual pathways are summarised in Table 1. As the pathways are broadly similar across the animal species considered, they are assessed collectively and the risk scores apply to all species unless otherwise stated.

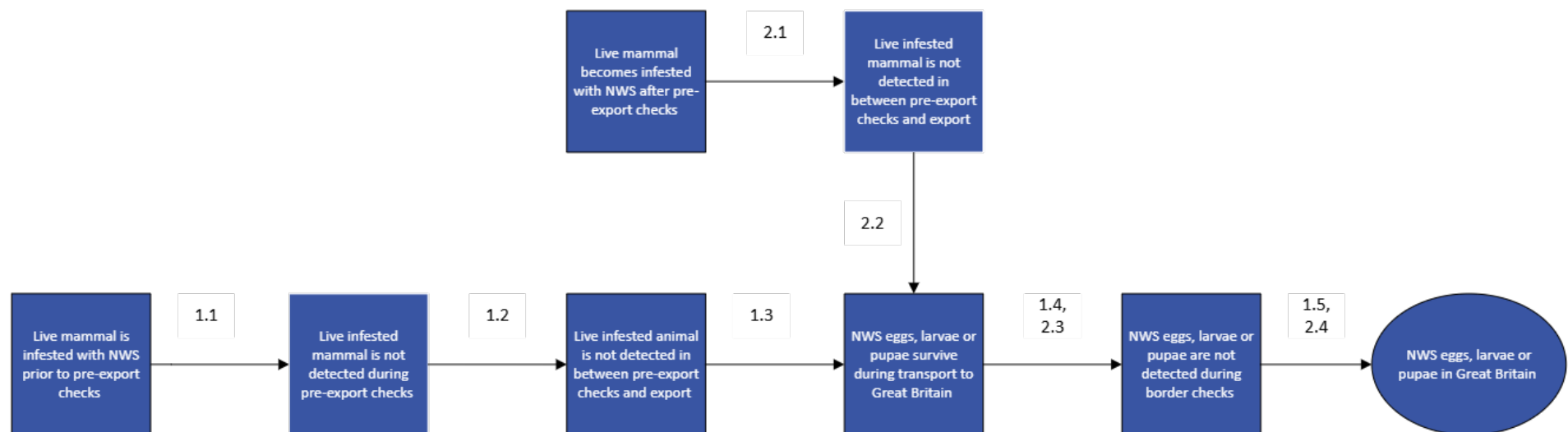


Figure 3. Risk pathway diagram for the introduction of NWS eggs, larvae or pupae into Great Britain through the importation of a live mammal from Brazil, Argentina or the USA.

Alt text: Risk pathway diagram showing how New World Screwworm eggs, larvae or pupae could be introduced into Great Britain through the importation of an infested live mammal from Brazil, Argentina or the USA, including infestation before or after pre-export checks, survival during transport, and non-detection at the border.

Table 1. Summary of risk pathways for the introduction of NWS eggs, larvae or pupae into Great Britain through the importation a live mammal from Brazil, Argentina or the USA.

Risk pathway	Description	Stages considered
R1	1. Likelihood that a live mammal is infested with NWS before pre-export checks and carries NWS eggs, larvae or pupae into Great Britain	1.1, 1.2, 1.3, 1.4, 1.5
R2	2. Likelihood of a live mammal becoming infested with NWS after pre-export checks and carrying NWS eggs, larvae or pupae into Great Britain	2.1, 2.2, 2.3, 2.4

1.1 Likelihood of a live mammal being infested with NWS before pre-export checks

This step assesses the likelihood that a cat, dog or horse in the general population of the exporting country is infested with NWS prior to any selection for export or pre-export veterinary checks.

USA

As of 29 June 2026, NWS has only been reported in the US states of Texas and New Mexico, with the overall number of confirmed cases remaining low. Between the 3 and 29 June 2026, 27 confirmed cases were reported ([USDA, 2026a](#)). Most cases have occurred in domestic livestock in Texas, including cattle, sheep and goats. There have been no confirmed cases in cats or horses, and only one confirmed case in a dog, which was reported in New Mexico ([USDA, 2026a](#)).

It is possible that there are additional undetected cases. However, the level of undetected spread, if any, is likely to be low, as NWS-infested animals often present with distinct clinical signs, such as pain or discomfort (see Step 1.2) ([WOAH, 2013](#)). This supports early detection, especially among closely supervised companion animals, such as cats, dogs and horses. Detection may be more challenging in feral or free-roaming animals. However, the USDA has implemented a suite of control measures to detect, contain and eradicate NWS, such as quarantine and treatment of infested animals, movement restrictions and surveillance ([USDA, 2026b](#)). The latter includes passive surveillance throughout both states, with NWS being a legally notifiable disease in the USA ([Wainwright et al., 2024](#)). It also includes active clinical surveillance within and around each IZ ([WOAH, 2026](#), [USDA, 2026b](#)). Limited information is available about the active surveillance in place. However, the USDA's response is based on the strategies and actions outlined in the NWS Response Playbook and is likely to include, as a minimum, official veterinary examination and prophylactic treatment of any livestock animals moved out of the IZ ([USDA, 2026b](#)).

The low prevalence of NWS in the USA's cat, dog or horse population is further supported by fly surveillance. Since April 2026, the USDA has been monitoring over 100 NWS-specific traps and 7,500 insect traps positioned along the southern border of Texas, Arizona, New Mexico and California ([USDA, 2026d](#)). The USDA has also positioned fly traps in and around each 20 km IZ. Despite this, no wild NWS flies have been detected since the traps were deployed ([USDA, 2026a](#), [USDA, 2026d](#)). While NWS flies have been reported to disperse up to 300 km ([Hightower and Alley, 1965](#)), this is considered exceptional ([Mayer and Atzeni, 1993](#)). Under favourable conditions, such as high host densities, the dispersal distance for most flies is estimated to be <3 km, increasing to 23 km under less favourable conditions ([Mayer and Atzeni, 1993](#)).

The number of confirmed cases has continued to increase since the first report on 3 June 2026, and it remains unclear how soon the NWS outbreak in the USA will be contained and eradicated. It also remains unclear whether NWS will successfully overwinter in the USA. Prior to its eradication, southern states such as Texas and New Mexico were among the few areas capable of supporting year-round NWS activity because of their warmer winter temperatures ([Gutierrez and Ponti, 2014](#)). However, based on the evidence available at the time of this assessment, including the low number of confirmed cases, the control measures and surveillance in place, and the absence of NWS detections from the USDA fly-trapping programme, the likelihood of a cat, dog or horse from the general population being infested with NWS is considered to be at the lower end of **Very Low**, with Low uncertainty.

Brazil and Argentina

In South America, NWS is endemic and generally active throughout the year, particularly during the summer months ([IAEA and FAO, 2017](#)). The parasite has been reported in numerous animal species in Brazil and Argentina, including cats, dogs and horses ([IAEA and FAO, 2017](#), [Costa-Júnior et al., 2019](#)). However, no prevalence estimates were identified for these species. Information regarding NWS surveillance activities is also limited, including whether NWS is legally notifiable in both countries.

Studies from neighbouring Uruguay suggest that NWS prevalence in livestock populations is relatively low. A 2006 survey estimated the prevalence of NWS myiasis in domestic sheep and cattle at 5.7% and 3.4%, respectively ([Marques, Fernandez and Iriarte, 2020](#)), while a survey conducted between 2017 and 2020 estimated a NWS prevalence of 4.36% in feral swine ([Altuna et al., 2021](#)). In the absence of species-specific data, it is assumed that companion animals such as cats, dogs and horses are generally subject to closer observation than livestock or feral animals. Consequently, infestations in these species may be identified and treated more rapidly, reducing the duration of active infestation and potentially lowering the prevalence within the general population at a given time. While there are insufficient data to quantify this effect, it is reasonable to expect that prevalence in closely monitored companion animals would generally be no higher than that reported in livestock and feral species.

Considering the relatively low prevalence estimates reported in neighbouring Uruguay and the likelihood that infestations in cats, dogs and horses are identified and treated more rapidly, the likelihood of a cat, dog or horse from the general population being infested with NWS at any given time is assessed as **Very Low**, with High uncertainty. The high uncertainty reflects the absence of species-specific prevalence data for cats, dogs and horses in Brazil and Argentina, together with the limited information available regarding NWS surveillance in both countries.

1.2 Likelihood that a live infested mammal is not detected during pre-export checks

Commercial imports

Live animals commercially imported into Great Britain must be individually examined by an Official Veterinarian (OV) within 24 hours (horses) or 48 hours (cats and dogs) prior to export to certify that they are free from clinical signs of disease ([GBHC655 EQU-X](#), [GBHC640](#)).

NWS infestation is typically associated with characteristic and often obvious clinical signs. Infested wounds commonly become enlarged, suppurative and malodorous. The distinctive odour released from the wound is highly attractive to gravid female NWS flies, which may lay additional batches of eggs. Egg masses, arranged in a characteristic shingle-like pattern, may be visible on close inspection. By approximately three days after hatching, large numbers of larvae, often exceeding 200 individuals and ranging from 2 mm to 1.5 cm in length, may be visible within the wound. Secondary bacterial infections are common and can result in substantial tissue damage, with wounds reaching more than 3 cm in width and up to 20 cm in depth. Co-infestation with other myiasis-causing fly species may also occur. As larvae mature, they may be observed leaving the wound to pupate ([WOAH, 2013](#)).

Infestations may be more difficult to detect where wounds are concealed, located in body cavities, or have only a small external opening. This is particularly relevant for infestations affecting the nostrils, anus, prepuce or vaginal region. Similarly, wounds located beneath dense hair or fur may be less readily observed. Nevertheless, NWS infestations are commonly associated with marked behavioural changes, including discomfort, restlessness, lethargy, depression and social isolation. Affected animals may also exhibit reduced appetite and, in livestock, decreased production. Without treatment, death may occur within 1 to 2 weeks due to toxicosis or secondary bacterial infection ([WOAH, 2013](#)). The presence of these clinical and behavioural signs reduces the likelihood of an infested animal remaining undetected during a veterinary examination.

The clinical signs associated with NWS develop following larval invasion and feeding of living tissue, which begins after egg hatch ([Wainwright et al., 2024](#)). Consequently, infestations acquired shortly before the pre-export examination may be more difficult to detect, particularly in feral animals that are less amenable to handling and thorough examination, because the characteristic signs associated with larval feeding may not yet have developed. Detection in these circumstances would depend largely on identification of the wound itself or the presence of eggs, which may be overlooked owing to their small size (approximately 0.762 mm) ([Wainwright et al., 2024](#)). While this scenario cannot be excluded, it is considered unlikely, as NWS eggs typically hatch within 12 to 24 hours of being laid. Therefore, for an infestation to remain clinically unapparent at the time of examination, egg laying would generally need to have occurred within the preceding 12 to 24 hours. In the USA, cats, dogs and horses are closely examined for NWS infestation

before export, even if this means having to sedate them (APHIS, personal communication, 2026).

In addition to the general clinical examination requirements, export health certificates for live equids require the animals to be examined for "obvious signs of ectoparasites" within 24 hours prior to export ([GBHC655 EQU-X](#)). It is unclear how comprehensive this examination is likely to be. If the veterinarian examines less visible areas of the body, such as the mane, pubic region or inner ears, the likelihood of detecting a subtle or concealed infestation may be further increased. However, this cannot be assumed with certainty.

The USA belongs to Sanitary Group C, whereas Brazil and Argentina belong to Sanitary Group D ([Defra, 2026](#)). Consequently, horses exported from these countries must also be kept in isolation under veterinary supervision for the 30 days immediately preceding export. Although this supervision is primarily intended to identify signs of infectious disease, it would be expected to increase the likelihood of detecting an NWS infestation should one occur during this period ([GBHC655 EQU-X](#)).

Given the distinctive clinical and behavioural signs associated with NWS infestation, the likelihood of a commercially imported cat, dog or horse with NWS not being detected during pre-export checks is assessed as being at the lower end of **Very Low**, with Low uncertainty.

These assessments are further supported by Great Britain's recent trade history with Brazil and Argentina, where NWS is endemic ([Altuna et al., 2021](#)). Between 2021 and 2025, Great Britain imported numerous live animals from these countries, including 1,114 horses from Argentina and almost 700 cats and dogs from Brazil (source: IPAFFS database). No cases of NWS associated with these imports have been reported. While this may partly reflect the low prevalence of NWS infestation among cats, dogs and horses, it is nonetheless consistent with a very low likelihood of an infested animal entering Great Britain undetected.

Non-commercial imports

There is no explicit requirement for non-commercially imported cats and dogs to undergo a clinical examination immediately prior to export, which increases the likelihood of a subtle or concealed NWS infestation being missed ([GB Pet Health Certificate](#)). However, animals must be presented to an OV within 10 days of export for certification of identity, rabies vaccination status and, where applicable, parasite treatment records. Given the conspicuous nature of most NWS infestations, presentation of the animal to the OV would provide an opportunity for obvious signs of infestation to be identified, even in the absence of a formal clinical examination. Therefore, the likelihood of an infested cat or dog not being detected during pre-export checks is assessed as being at the lower end of **Very Low**, with **Low uncertainty**.

While there is no specific provision within the GB Pet Health Certificate that would automatically prevent certification solely on the basis of visible signs of disease or

infestation, veterinarians are required to exercise their professional judgement and would need to consider any relevant professional or regulatory obligations where concerns regarding animal health or welfare are identified. Some airlines might also require evidence of fitness to travel to satisfy IATA Live Animal Regulations. Consequently, detection of a clinically apparent NWS infestation during pre-export certification would be expected to prompt further investigation and/or treatment before export.

1.3 Likelihood that a live infested mammal remains undetected between pre-export checks and export

Infestations most likely to go undetected during pre-export checks are those associated with concealed or subtle wounds, or those that are very recent, particularly those less than 24 hours old. At this stage, eggs may not yet have hatched into larvae and begun feeding on host tissues ([WOAH, 2013](#)).

While horses must be exported within 24 hours of pre-export inspection, commercial and non-commercial cat and dog movements may occur up to 48 hours and 10 days after inspection, respectively ([GBHC655 EQU-X](#), [GBHC640](#), [GB Pet Health Certificate](#)). However, all cats, dogs and horses were assumed to be exported within 24 hours of pre-export checks as a conservative worst-case scenario. Under this assumption, there is limited opportunity for infestations that were undetectable at inspection to progress to a stage at which they become readily detectable before export. While eggs present at the time of inspection may hatch during this period, larvae are unlikely to be visible, as larval development typically requires at least three days before becoming apparent ([WOAH, 2013](#)). Clinical signs, such as wound discharge, inflammation or behavioural changes, may therefore remain absent or subtle. Furthermore, no routine veterinary examinations are undertaken between the pre-export inspection and export. Thus, the likelihood of an infested animal remaining undetected before export is assessed as **Medium**, with Low uncertainty.

1.4 Likelihood that NWS eggs, larvae or pupae survive transport

As obligate parasites ([WOAH, 2013](#)), the survival of NWS eggs and larvae during transport depends primarily on the survival of the host. Although untreated infestations can result in death within 1 to 2 weeks due to toxicity and secondary bacterial infection ([WOAH, 2013](#)), animals that remain undetected during pre-export inspections are unlikely to have infestations advanced enough to cause death during transport. Assuming transport to Great Britain occurs by direct flight (7 to 12 hours), host survival is therefore considered highly likely ([Caledonian Travel, 2026](#), [TravelMath, 2026](#)).

It is also very likely that the eggs or larvae themselves would survive transport within a live host. A single female NWS fly deposits an average of 350 eggs at a time, with subsequent batches laid at 3 to 4 day intervals ([WOAH, 2013](#)). The eggs and resulting larvae are well

adapted for surviving in and around the tissues of their hosts, which provide optimal conditions for growth and survival, such as a temperature close to 37°C, a relative humidity of 50 to 60% and access to nutrients. During laboratory experiments designed to mimic these conditions, egg hatch rates can exceed 92% and larval survival to adulthood can exceed 96% ([Barros et al., 2025](#)).

The mature larvae exit the wound 5 to 7 days after hatching and burrow into the ground to pupate and develop into adults ([WOAH, 2013](#)). If there is no soil available, which is likely to be the case during animal transport, the larvae can still move to a shaded area to pupate, such as underneath bedding material ([USDA, 2025a](#)). Under animal welfare regulations in Great Britain, there is no explicit minimum or maximum temperature at which animals must be kept if being flown into Great Britain ([Assimilated Council Regulation \(EC\) No. 1/2005](#)). However, industry guidelines often recommend temperature limits between 7 and 29°C ([Delta Cargo, 2026](#), [Tailwind Global Pet, 2026](#)). The mature larvae and pupae do not survive well below 10°C but can take days or weeks to die ([Parman et al., 1945](#), [Flitters and Benschoter, 1968](#), [Valdez-Espinoza et al., 2025](#)). Assuming live animals are transported to Great Britain by direct flight, it is therefore likely that they would survive the journey.

Considering the high likelihood of host survival during transport and the suitability of transport conditions, the likelihood of NWS eggs, larvae or pupae surviving transport to Great Britain is assessed as **High**, with Low uncertainty.

1.5 Likelihood that NWS eggs, larvae or pupae are not detected at the border in Great Britain

Commercial imports

On arrival, all commercially imported cats, dogs and horses from non-EU countries are subject to physical, identity and documentary checks at a border control post (BCP) (APHA Border Controls Portal Team, personal communication, 2026).

The physical checks are performed individually on each animal by an OV and aim to assess the health and welfare of the animal, examining its behaviour and external appearance for any signs of ill health. Cats, dogs and horses normally undergo a physical examination, although the extent of the examination would depend on the species and condition of the animal. A thorough physical examination will usually only be performed if concerns are identified during visual inspection, such as visible wounds or lameness. The examination primarily aims to identify any welfare issues, such as injury, or signs of notifiable diseases (excluding NWS myiasis, which is not a notifiable disease in Great Britain under the Animal Health Act 1981 (as amended)). Seriously stressed, aggressive or dangerous animals may be subject to limited physical examination for welfare and health and safety reasons (APHA Border Controls Portal Team, personal communication, 2026).

It should be noted that *Cochliomyia hominivorax* is a specified pathogen under the Specified Animal Pathogens Orders (SAPO). Defra has stated that, in the event of a suspected or confirmed case, the Secretary of State should be notified either through the Animal and Plant Health Agency (APHA) or through the Health and Safety Executive (HSE), which acts as the SAPO licensing authority ([Eagle, 2026](#)).

Infestations most likely to avoid detection before export are those associated with concealed or subtle wounds, or those in the very early stages of development ([WOAH, 2013](#)). Direct flight times from Brazil, Argentina and affected parts of the USA range from 7 to 12 hours ([Caledonian Travel, 2026](#), [TravelMath, 2026](#)). Over this period, little change in the animal's clinical condition is likely to occur. While any eggs present may hatch during transport, the resulting larvae may only recently have begun feeding on host tissues, meaning characteristic clinical signs may not yet be apparent during visual inspection. Unless there are visible signs of ill health, a detailed physical examination is unlikely to be conducted. Therefore, the likelihood that NWS eggs, larvae or pupae associated with a commercially imported animal are not detected during border checks is assessed as **Medium**, with Low uncertainty. This likelihood is higher than that assigned to pre-export checks because border inspections are generally less comprehensive and less specifically focused on detecting NWS infestations.

Non-commercial imports

Non-commercially imported pets do not have to enter Great Britain through a BCP. They are subject to checks on arrival, but these are legally delegated to the transport carrier (Pet Checkers) and do not have to be conducted by a qualified veterinarian or veterinary nurse. The checks primarily comprise identity and compliance checks, ensuring that the microchips match the health certificate, with a basic welfare check for obvious lesions or signs of disease. However, the welfare check is not a comprehensive, full-body examination (UK Office for SPS Trade Assurance, personal communication, 2026). They are unlikely to detect any infestations recent or subtle enough to be missed during pre-export examination, especially given that it may be too early still to observe obvious clinical signs. Therefore, the likelihood of NWS eggs, larvae or pupae associated with a non-commercially imported cat or dog not being detected at the border is considered upper **Medium**, with Low uncertainty. This risk is considered upper Medium because the checks do not have to be performed by a qualified veterinary professional and may not include examination of anatomical sites that could harbour an infested wound, such as the inner ear.

2.1 Likelihood of a live mammal becoming infested after pre-export checks

Unlike Step 1.1, which assessed the likelihood that an animal was already infested prior to pre-export checks, this step assesses the likelihood of a new NWS infestation occurring between completion of the pre-export checks and export.

As described above, all cats, dogs and horses were assumed to be exported within 24 hours of pre-export checks as a conservative worst-case scenario. Consequently, there is only a limited period during which an animal could become infested after pre-export checks.

For infestation to occur, a gravid female NWS fly would need to encounter the animal and oviposit on a suitable wound or mucous membrane. In Brazil and Argentina, where NWS is endemic, there is a continuing risk of exposure to NWS flies ([WOAH, 2013](#)). However, the short interval between pre-export checks and export substantially reduces the opportunity for an animal to become infested during this period. Therefore, the likelihood of a live mammal becoming infested with NWS between pre-export checks and export is assessed as **Very Low**, with High uncertainty. The high uncertainty reflects the absence of species-specific data on NWS occurrence in cats, dogs and horses, together with limited information regarding NWS surveillance, including local levels of fly activity in the exporting countries.

In the USA, the likelihood of a live mammal becoming infested during this period is assessed as being at the lower end of **Negligible**, with Low uncertainty. This reflects the short interval between pre-export checks and export. It also reflects the limited evidence of NWS spread described in Step 1.1 as of 29th June 2026, including the small number of confirmed cases, the control measures and surveillance activities in place, and the absence of wild NWS fly detections through the USDA surveillance programme.

2.2. Likelihood that a live mammal infested after pre-export checks remains undetected prior to export

Assuming all live cats, dogs and horses are exported within 24 hours of pre-export checks, there is limited opportunity for an infestation acquired after inspection to become apparent before export. NWS eggs typically hatch within 12 to 24 hours and larvae generally require at least three days to become visible ([WOAH, 2013](#)). Consequently, eggs present at the time of export may not yet have hatched. Any newly hatched larvae are unlikely to be visible before export and are unlikely to have fed sufficiently on host tissues to produce detectable clinical signs. In addition, no routine veterinary inspections are undertaken during this period. Therefore, the likelihood that an animal infested after pre-export checks remains undetected before export is assessed as **High**, with **Low** uncertainty.

2.3. Likelihood that NWS eggs, larvae or pupae survive transport

See step 1.4.

2.4. Likelihood that NWS eggs, larvae or pupae are not detected at the border

See step 1.5.

Final risk score

A full summary of risk scores for each pathway can be found in Appendix C. Overall, the per-animal likelihood of NWS being introduced into Great Britain is assessed as **Very Low** for horses, cats and dogs (commercial and non-commercial) imported from Brazil or Argentina with High uncertainty. The High uncertainty reflects the limited data available on NWS prevalence and surveillance in Brazil and Argentina, where the pest is endemic.

The per-animal likelihood of NWS being introduced into Great Britain through importation of a horse, cat or dog (commercial or non-commercial) from the USA is assessed as **Negligible** with Low uncertainty. This risk score is based on the modified risk matrix given by Gale *et al.* (2014), where the multiplication of two successive Very Low risk scores, particularly those at the lower end of Very Low, results in a Negligible risk score. In this case, there is a Very Low likelihood that a cat, dog or horse in the USA is infested with NWS before pre-export checks in Risk Pathway 1 (Step 1.1) and a Very Low likelihood that an infested animal would not be detected during pre-export checks (Step 1.2), both at the lower end of Very Low. Multiplying both together gives a Negligible risk score for this pathway. When added to the Negligible likelihood that a cat, dog or horse from the USA will become infested in between pre-export checks and export in Risk Pathway 2 (Step 2.1), this gives an overall per-animal likelihood of Negligible.

It should be noted that these risk levels are based on the movement of a single live animal. While the risk level for each movement may be assessed as Negligible or Very Low, there will be a greater likelihood of at least one movement resulting in NWS incursion as the number of movements increases. The risk associated with a single live animal should be aggregated when considering the total number of imports per annum, as described in [Kelly *et al.* \(2018\)](#).

Importantly, the method for aggregating risk assumes that each animal has an equal and independent likelihood of being infested ([Kelly *et al.*, 2018](#)). It also uses quantitative bounds to define each risk level, based on those proposed by the FAO/WHO (2009). For example, a Very Low likelihood is considered an event with an annual probability greater than 0 but less than 10^{-4} , a Low likelihood is considered an event with an annual probability of 10^{-4} to 10^{-3} , and a Medium likelihood is considered an event with an annual probability of 10^{-3} to 10^{-2} . These boundaries are not specific to NWS but using this framework, if the likelihood of NWS incursion associated with importing a single animal is Very Low, the annual risk may increase to Low if 1,000 horses are imported.

Between 2021 and 2025, the mean annual numbers of commercially imported cats, dogs and horses from the USA were 292, 569 and 140, respectively (Table 2). It is not possible

to determine the number of live animals imported from specific US states, as the IPAFFS database records only the consignor's registered address, which may differ from the animal's place of origin (Policy Liaison Team, personal communication, 2026). Nevertheless, based on consignor addresses in Texas and New Mexico, the combined mean annual numbers of commercially imported cats, dogs and horses associated with these states were 37, 73 and 2, respectively (Table 3).

Between 2021 and 2025, the combined mean annual numbers of cats, dogs, and horses commercially imported from Brazil and Argentina were 64, 95, and 331, respectively (Table 4).

There are no data available on the annual number of non-commercially imported cats, dogs and horses imported from the USA, Brazil or Argentina, as these movements do not have to be registered in IPAFFs.

Table 2. Number of live cats, dogs and horses commercially imported from the USA (all states) between January 2021 and December 2025, with the mean annual number for the five-year period(source: IPAFFs database). These data excludes non-commercially imported pet cats and dogs from the USA. Mean averages are rounded to the nearest whole number.

Animal species	2021	2022	2023	2024	2025	Mean annual number
Cats	378	304	283	245	250	292
Dogs	957	645	480	396	366	569
Horses	158	171	107	166	96	140

Table 3. Number of live cats, dogs and horses commercially imported from the USA between January 2021 and December 2025, with the mean annual number for the five-year period where the consignor's state was indicated as Texas or New Mexico (source: IPAFFs database). This data excludes non-commercially imported cats and dogs from the USA. Mean averages are rounded to the nearest whole number.

Animal species	2021	2022	2023	2024	2025	Mean annual number
Cats	56	34	28	39	30	37
Dogs	137	69	66	51	40	73
Horses	1	0	0	2	0	2

Table 4. Number of live cats, dogs and horses commercially imported from Brazil and Argentina between January 2021 and December 2025, with the mean annual number for the five-year period (source: IPAFFs database). This data excludes non-commercially imported pet cats and dogs from both countries. Mean averages are rounded to the nearest whole number.

Country and animal species	2021	2022	2023	2024	2025	Mean annual number
Argentina						
Cat	12	13	8	13	6	10
Dog	17	6	30	14	8	15
Horse	91	196	298	205	354	229
Brazil						
Cat	61	69	69	53	19	54
Dog	124	83	79	63	49	80

Horse	0	0	2	0	0	2
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Likelihood of NWS survival to adulthood in Great Britain

Under optimal conditions, it takes 6 to 8 days for NWS larvae to complete pupation and emerge as adults ([APHIS, 2025](#)). Assuming animals arrive from the USA, Brazil or Argentina by direct flight (7 to 12 hours), this will not be long enough for mature adult flies to emerge ([Caledonian Travel, 2026](#), [TravelMath, 2026](#)). Therefore, any NWS parasites associated with an infested animal are unlikely to have progressed beyond the pupal stage by the time of arrival in Great Britain. The likelihood of an egg, larva or pupa surviving under climatic conditions in Great Britain would be critically dependent on temperature, as the parasite can survive a range of conditions but is intolerant of cold climates ([WOAH, 2013](#)).

Mature larvae emerging from a host at air temperatures below 10°C are unlikely to survive unless they manage to pupate in or on the surface of the soil ([Parman *et al.*, 1945](#), [Valdez-Espinoza *et al.*, 2025](#)). Pupae represent the most cold-tolerant life cycle stage of NWS ([Flitters and Benschoter, 1968](#)). While the pupae can survive for days or weeks below 10°C, survival through to successful adult emergence is unlikely where mean winter temperatures remain below 9°C ([Lindquist and Barrett, 1945](#), [Flitters and Benschoter, 1968](#), [Valdez-Espinoza *et al.*, 2025](#), [Gutierrez and Ponti, 2014](#)). Historically, this has limited the year-round distribution of NWS in the USA to southern regions, including Texas, New Mexico and Florida ([Gutierrez and Ponti, 2014](#)).

In Great Britain, the highest mean air temperatures occur in South East and Central South England ([Met Office, 2026a](#)). Mean monthly air temperatures for the region were calculated from a 30-year dataset (1995–2025), consistent with the standard meteorological approach for deriving long-term climate averages. The raw data is presented in Appendix D. Based on these calculations, mean monthly air temperatures for South East and Central South England between November and March range from 4.8 to 7.9°C (Table 5). While soil temperatures may be somewhat higher than ambient air temperatures and could prolong survival of individual pupae, the available evidence indicates that climatic conditions in even the warmest parts of Great Britain would be unfavourable for pupal survival and development between November and March. This is likely to be especially true in colder areas, such as Scotland ([Met Office, 2026c](#)).

In a bioclimatic chamber designed to simulate winter conditions, Flitters and Benschoter ([1968](#)) reported that pupae buried at a soil depth of 5 cm (a typical burrowing depth) took up to 6 weeks to die. During the study period, the running mean air temperature declined from 11.1°C to 6.5°C. These findings suggest that some pupae may survive for several weeks during winter in Great Britain, especially if conditions are unusually mild. However,

development is likely to be slow, given that pupal development can take up to 60 days at 10 to 15°C ([WOAH, 2013](#)).

Between April and October, mean monthly air temperatures in the warmest parts of Great Britain exceed 9°C (**Table 5**). Although these temperatures are still below the optimum range for NWS development (25-30°C), they are likely to permit pupal survival and eventual adult emergence ([WOAH, 2013](#)). This risk assessment does not consider the likelihood of NWS establishment. However, under laboratory conditions, emergent female flies did not survive to oviposition at ambient temperatures of 12.8°C or below ([Adams and Reinecke, 1979](#)). As mean monthly air temperatures in the warmest parts of Great Britain exceed 12.8°C between June and September, this suggests that daytime temperatures are likely to be most conducive to adult survival to oviposition during these months. However, short periods suitable for adult survival to oviposition might also occur during warm spells at other times of the year.

Overall, the likelihood of at least one egg, larva or pupa surviving to adulthood under climatic conditions in Great Britain between November and March is assessed as **Negligible to Very Low**. The lower end of this range primarily reflects introductions occurring in November or December, when pupae would be exposed to unfavourably low temperatures for the longest duration. There is Medium uncertainty concerning the survival time for NWS pupae at mean temperatures below 9°C. Available evidence suggests that pupae may survive for up to 6 weeks under winter conditions comparable to those reported by Flitters and Benschoter ([1968](#)). However, exact survival times under climatic conditions in Great Britain remain uncertain.

Between April and October, when mean monthly air temperatures exceed 9°C, the likelihood of at least one egg, larva or pupa surviving to adulthood is assessed as **Medium to High** with Low uncertainty. This also reflects the fact that a single infested animal usually carries over 200 eggs or larvae ([WOAH, 2013](#)). While this assessment does not consider establishment, available laboratory evidence suggests that daytime temperatures in Great Britain would be most conducive to adult survival to oviposition between June and September. However, successful oviposition would require at least one adult male and one adult female to survive and mate ([WOAH, 2013](#)).

Table 5. Mean monthly air temperatures in South East and Central South England (1995-2025) ([Met Office, 2026b](#)).

Month	Mean monthly air temperature (°C)
January	4.8
February	5.4
March	7.1
April	9.3
May	12.5
June	15.4
July	17.5
August	17.3
September	14.9
October	11.8
November	7.9
December	5.5

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Appendix A: Risk Terminology and Matrices

The terminology used to define the qualitative likelihoods used in this risk assessment is based on those by EFSA (2006). This is supplemented by expanded descriptions to assist in interpretation and use of the EFSA (2006) terms.

Table 1. Definitions for the qualitative risk terms used in this assessment, based on EFSA (2006)

Risk level	Definition
Negligible	Event is so rare, does not merit consideration
Very low	Event is very rare, but cannot be excluded
Low	Event is rare, but does occur
Medium	Event occurs regularly
High	Event occurs very often
Very high	Event occurs almost certainly

Table 2: Qualitative categories for expressing uncertainty given the available evidence; based on definitions within the literature (EFSA, 2006, Spiegelhalter & Riesch, 2011)

Uncertainty category and definition	Type of information/evidence to support uncertainty category
Low Further information is very unlikely to change our confidence in the probability estimate	Extensive data from peer reviewed studies on this pathogen or strain of pathogen giving similar results e.g. survival time of pathogen in the environment • Expert opinion with a consensus of opinion between experts • Authorised documentation such as transport records, animal movement records etc. which verify timelines • Meteorological information from recognised source • Documentation of veterinary checks of animals on/off premises • Laboratory study information from this outbreak • Epidemiological information from this outbreak
Medium Further information is likely to have an important impact on our confidence in the probability estimate	• Some data from peer reviewed studies on this pathogen or strain of pathogen but the results may be highly variable • Evidence from previous observational studies/surveillance reports/outbreak reports • Individual expert opinion • Some documentation but it may not be accurate or comprehensive • Evidence from observations, personal communications recorded from this outbreak
High Further information is very likely to have an important impact on our confidence in the probability estimate	• Scarce or no data from peer reviewed studies on this pathogen or strain of pathogen • Evidence from unpublished reports, observations, personal communication • Individual non-expert opinion • No documentation available

Table 3. Matrix for the multiplication of two qualitative likelihoods (Gale *et al.*, 2009)

		Results of probability 1					
		Negligible	Very Low	Low	Medium	High	Very High
Results of probability 2	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
	Very Low	Negligible	Very Low	Very Low	Very Low	Very Low	Very Low
	Low	Negligible	Very Low	Low	Low	Low	Low
	Medium	Negligible	Very Low	Low	Medium	Medium	Medium
	High	Negligible	Very Low	Low	Medium	High	High
	Very High	Negligible	Very Low	Low	Medium	High	Very High

Note: when multiplying successive likelihoods together, particularly low likelihoods, the modified matrix given in Gale *et al.* (2014) may be used to improve the estimation of risk by accounting for basic mathematical principles. Under that modified matrix, relevant combinations that would otherwise appear as Very Low are reduced to Negligible.

Appendix B: raw trade data for the Americas

Table 1. Number of live mammals commercially imported from countries in South America between January 2021 and May 2026 (source: IPAFFs database). This data excludes non-commercially imported pet cats and dogs from both countries. Mean averages are rounded to the nearest whole number.

Country of origin and animal species	Number of animals imported by year					
	2021	2022	2023	2024	2025	2026
Antilocapra spp.						
Argentina	0	1	0	0	0	0
Brazil	2	4	0	0	0	0
Panama	0	3	0	0	0	0
Peru	0	1	0	0	0	0
Uruguay	3	0	0	0	0	0
Canis familiaris						
Argentina	29	14	31	16	8	0
Brazil	123	87	77	64	47	13
Chile	1	8	3	2	4	0
Colombia	12	16	13	12	9	3
Ecuador	2	1	0	0	0	0
Falkland Islands	0	0	2	0	2	1
Panama	2	3	1	6	1	0
Peru	25	4	11	10	6	1
Trinidad and Tobago	0	0	0	1	2	1
Uruguay	0	0	0	0	1	0
Equus caballus						
Argentina	188	276	297	204	346	337
Felis catus						
Argentina	13	16	9	13	5	0
Brazil	64	67	69	52	19	4
Chile	5	2	1	0	3	0
Colombia	7	13	12	5	8	3
Panama	1	0	2	2	5	0
Peru	6	2	3	0	2	4
Trinidad and Tobago	0	0	0	1	0	0
Uruguay	0	0	0	0	0	1
Pan troglodytes						
Argentina	0	2	0	0	0	0
Grand Total	483	520	531	388	468	368

Table 2. Number of live mammals commercially imported from countries in Central America and the Caribbean between January 2021 and May 2026 (source: IPAFFs database). This data excludes non-commercially imported pet cats and dogs from both countries. Mean averages are rounded to the nearest whole number.

Country of origin and animal species	Number of animals imported by year					
	2021	2022	2023	2024	2025	2026
Antilocapra spp.						
Panama	0	3	0	0	0	0
Canis familiaris						
Antigua and Barbuda	0	1	2	1	3	1
Bahamas	1	0	0	0	0	0
Barbados	22	20	14	12	4	7
Costa Rica	11	8	8	10	14	7
Cuba	1	0	0	0	0	0
Dominican Republic	0	1	0	0	0	0
El Salvador	0	0	1	0	1	0
Guatemala	0	0	0	0	2	0
Jamaica	2	1	5	7	7	4
Panama	2	3	1	6	1	
St Lucia	0	2	2	23	24	10
St Vincent and the Grenadines	0	0	2	00	3	2
Trinidad and Tobago		0	0	1	2	1
Felis catus						
Antigua and Barbuda	2	6	0	2	0	0
Barbados	0	4	6	7	5	0
Costa Rica	2	2	1	4	6	2
El Salvador	0	0	0	0	0	1
Jamaica	1	0	00	6	3	1
Panama	1	0	2	2	5	0
St Lucia	1	3	5	0	10	2
St Vincent and the Grenadines	0	3	0	0	0	0
Trinidad and Tobago	0	0	0	1	0	0
Grand Total	46	57	49	82	90	38

Table 3. Number of live mammals commercially imported from the USA between January 2021 and June 2026 (source: IPAFFs database). This data excludes non-commercially imported pet cats and dogs from both countries. Mean averages are rounded to the nearest whole number.

Animal species and country of origin	Number of animals imported by year					
	2021	2022	2023	2024	2025	2026
Cats	378	304	283	245	250	73
Dogs	957	645	480	396	366	184
Donkeys	1	16	0	0	0	0
Elephants	2	0	0	0	0	0
Ferrets	3	0	45	28		
Horses	158	171	107	166	96	28
Opposum	0	3	1	10	0	0
Other carnivores	0	5	0	0	0	0
Pigs	0	0	2	0	0	0
Primates	3	6	0	5	0	0
Pronghorns	3	0	0	0	0	0
Rodents	0	0	0	0	1	0
Grand Total	1,505	1,150	918	850	713	285

Appendix C: risk score summaries

The following summaries present the individual pathway estimates and uncertainties in prose. The stage risk scores were combined using the risk matrix in Table 3 of Appendix A. For the overall risk question, the higher of the two pathway estimates was used.

Commercially imported live horses

Risk pathway 1: infestation before pre-export checks

For the USA, the likelihood that a live horse is infested with NWS before pre-export checks is **Very Low**, with **Low** uncertainty. The likelihood that an infested horse is not detected during pre-export checks is **Very Low**, with **Low** uncertainty. The likelihood that it remains undetected between the checks and export is **Medium**, with **Low** uncertainty. The likelihood that NWS eggs, larvae or pupae survive transport is High, with **Low** uncertainty. The likelihood that they are not detected at the border in Great Britain is **Medium**, with

Low uncertainty. The overall estimate for Risk Pathway 1 is Negligible, with **Low** uncertainty.

For Brazil and Argentina, the likelihood that a live horse is infested with NWS before pre-export checks is **Very Low**, with High uncertainty. The likelihood that an infested horse is not detected during pre-export checks is **Very Low**, with **Low** uncertainty. The likelihood that it remains undetected between the checks and export is **Medium**, with **Low** uncertainty. The likelihood that NWS eggs, larvae or pupae survive transport is High, with **Low** uncertainty. The likelihood that they are not detected at the border in Great Britain is **Medium**, with **Low** uncertainty. The overall estimate for Risk Pathway 1 is **Very Low**, with High uncertainty.

Risk pathway 2: infestation after pre-export checks

For the USA, the likelihood that a live horse becomes infested after pre-export checks is Negligible, with **Low** uncertainty. The likelihood that an animal infested after the checks remains undetected before export is High, with **Low** uncertainty. The likelihood that NWS eggs, larvae or pupae survive transport is High, with **Low** uncertainty. The likelihood that they are not detected at the border in Great Britain is **Medium**, with **Low** uncertainty. The overall estimate for Risk Pathway 2 is Negligible, with **Low** uncertainty.

For Brazil and Argentina, the likelihood that a live horse becomes infested after pre-export checks is **Very Low**, with High uncertainty. The likelihood that an animal infested after the checks remains undetected before export is High, with **Low** uncertainty. The likelihood that NWS eggs, larvae or pupae survive transport is High, with **Low** uncertainty. The likelihood that they are not detected at the border in Great Britain is **Medium**, with **Low** uncertainty. The overall estimate for Risk Pathway 2 is **Very Low**, with High uncertainty.

Overall estimate: The combined estimate for Risk Pathways 1 and 2 is Negligible, with **Low** uncertainty, for the USA and **Very Low**, with High uncertainty, for Brazil and Argentina.

For Risk Pathway 1 for the USA, the two successive **Very Low** estimates at Steps 1.1 and 1.2 are considered sufficiently low that their combination results in a Negligible estimate. Further details are provided in the note accompanying Table 3 of Appendix A.

Commercially imported live cats and dogs

The pathway estimates and uncertainty ratings for commercially imported live cats and dogs are the same as those stated above for commercially imported live horses. For the USA, Risk Pathway 1 is Negligible with **Low** uncertainty, Risk Pathway 2 is Negligible with **Low** uncertainty, and the combined estimate is Negligible with **Low** uncertainty. For Brazil and Argentina, Risk Pathway 1 is **Very Low** with High uncertainty, Risk Pathway 2 is **Very Low** with High uncertainty, and the combined estimate is **Very Low** with High uncertainty. The individual step estimates are: Step 1.1, **Very Low** with **Low** uncertainty for the USA and **Very Low** with High uncertainty for Brazil and Argentina; Step 1.2, **Very Low** with

Low uncertainty for all countries; Step 1.3, **Medium** with **Low** uncertainty for all countries; Step 1.4, High with **Low** uncertainty for all countries; Step 1.5, **Medium** with **Low** uncertainty for all countries; Step 2.1, Negligible with **Low** uncertainty for the USA and **Very Low** with High uncertainty for Brazil and Argentina; Steps 2.2 and 2.3, High with **Low** uncertainty for all countries; and Step 2.4, **Medium** with **Low** uncertainty for all countries. For Risk Pathway 1 for the USA, the two successive **Very Low** estimates at Steps 1.1 and 1.2 combine to give a Negligible estimate, as explained in the note accompanying Table 3 of Appendix A.

Non-commercially imported live cats and dogs

The pathway estimates and uncertainty ratings for non-commercially imported live cats and dogs are the same as those stated for commercially imported animals. For the USA, Risk Pathway 1 is Negligible with **Low** uncertainty, Risk Pathway 2 is Negligible with **Low** uncertainty, and the combined estimate is Negligible with **Low** uncertainty. For Brazil and Argentina, Risk Pathway 1 is **Very Low** with High uncertainty, Risk Pathway 2 is **Very Low** with High uncertainty, and the combined estimate is **Very Low** with High uncertainty. The individual step estimates are: Step 1.1, **Very Low** with **Low** uncertainty for the USA and **Very Low** with High uncertainty for Brazil and Argentina; Step 1.2, **Very Low** with **Low** uncertainty for all countries; Step 1.3, **Medium** with **Low** uncertainty for all countries; Step 1.4, High with **Low** uncertainty for all countries; Step 1.5, **Medium** with **Low** uncertainty for all countries; Step 2.1, Negligible with **Low** uncertainty for the USA and **Very Low** with High uncertainty for Brazil and Argentina; Steps 2.2 and 2.3, High with **Low** uncertainty for all countries; and Step 2.4, **Medium** with **Low** uncertainty for all countries. For Risk Pathway 1 for the USA, the two successive **Very Low** estimates at Steps 1.1 and 1.2 combine to give a Negligible estimate, as explained in the note accompanying Table 3 of Appendix A.

Appendix D: Long-Term Average Air Temperature for South East and Central South England

Table 1. Mean monthly air temperature for South East and Central South England (1995-2025)
([Met Office, 2026b](#)).

Mean monthly temp (°C) by month												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1995	5.0	7.0	5.9	9.3	12.0	14.5	18.9	19.6	13.9	13.3	7.9	2.8
1996	4.7	2.7	4.6	8.6	9.3	14.7	16.8	16.7	13.7	11.7	6.0	3.2
1997	1.9	6.5	8.4	8.9	11.9	14.7	16.9	19.4	14.7	10.8	8.6	6.0
1998	5.4	6.5	8.2	8.2	13.7	14.6	15.9	16.5	15.3	10.9	6.0	5.9
1999	6.0	5.1	7.5	9.5	13.3	14.2	18.1	16.9	16.1	10.9	7.7	4.9
2000	4.6	6.4	7.6	8.1	12.7	15.3	15.7	17.2	15.2	10.8	7.2	6.1
2001	3.8	5.0	6.0	8.2	12.6	14.7	17.6	17.4	13.7	13.8	7.2	3.6
2002	5.8	7.4	7.9	9.6	12.1	14.5	16.4	17.4	14.6	10.8	9.2	6.3
2003	4.4	4.2	7.9	9.5	12.2	16.3	17.9	19.2	14.7	9.5	8.7	5.4
2004	5.4	5.4	6.5	9.4	12.4	15.8	16.4	18.0	15.3	11.2	7.8	5.2
2005	6.0	4.2	7.0	9.3	11.7	15.9	17.3	16.6	15.7	13.6	6.3	4.2
2006	4.4	3.7	5.2	9.0	12.6	16.2	20.2	16.9	17.3	13.7	8.5	6.7
2007	7.1	6.4	7.5	11.9	12.7	15.7	16.0	16.0	14.4	11.0	7.4	5.2
2008	6.8	5.6	6.6	8.5	14.0	14.9	16.7	16.6	13.7	10.1	7.5	3.8
2009	2.9	4.3	7.2	10.3	12.6	15.4	16.8	17.3	14.9	11.9	9.3	3.6
2010	1.4	3.5	6.3	9.1	11.0	15.7	18.1	16.1	14.0	10.8	5.9	0.2
2011	4.3	6.4	6.9	12.4	12.7	14.5	15.6	16.2	15.6	12.9	10.0	6.3
2012	6.0	3.7	8.4	7.8	12.6	14.2	15.9	17.2	13.7	10.4	7.1	5.3
2013	3.9	3.1	3.4	7.6	10.7	14.2	18.7	17.5	14.3	12.8	6.7	6.3
2014	6.2	6.7	8.1	10.5	12.5	15.7	18.5	15.8	15.8	13.2	9.0	5.5
2015	4.9	4.1	6.9	9.6	11.7	14.9	16.8	16.5	13.1	11.3	10.0	10.5
2016	5.7	5.4	6.1	8.1	13.0	15.4	17.5	17.8	16.7	11.1	6.4	6.1
2017	3.7	6.4	9.2	9.4	13.5	16.9	17.7	16.4	14.0	12.6	7.0	5.2
2018	6.0	2.9	5.4	10.5	13.7	16.6	19.9	17.5	14.3	11.2	8.4	7.2
2019	3.8	6.6	8.5	9.5	11.8	15.2	18.2	17.6	15.0	11.1	6.7	6.3
2020	6.5	7.0	7.0	10.9	13.1	15.8	16.8	18.8	15.1	11.1	9.1	5.5
2021	3.7	5.4	7.1	6.6	10.6	16.1	17.9	16.3	16.3	12.4	7.4	7.1
2022	4.8	7.1	8.1	9.5	13.3	15.5	19.0	19.5	14.9	13.6	9.8	4.1
2023	5.2	6.2	7.3	8.9	12.7	17.6	16.8	16.9	17.7	13.2	8.0	7.7
2024	4.7	8.2	8.5	10.0	13.7	14.7	17.0	17.9	14.7	12.1	7.9	7.0
2025	3.8	5.1	7.8	10.9	13.8	17.7	19.0	17.9	14.4	11.9	8.9	6.9
Mean:	4.8	5.4	7.1	9.3	12.5	15.4	17.5	17.3	14.9	11.8	7.9	5.5