



**An Roinn Talmhaíochta,
Bia agus Mara**
Department of Agriculture,
Food and the Marine

Society of Irish Foresters Field Day –

Bark beetles and Irish Forestry

20th September 2024 – Lough Key Forest Park



Bark beetles and Irish Forestry - Current issues

- 1. Background – bark beetles and Ireland’s Protected Zone status**
- 2. *Pseudips mexicanus* Monterey pine engraver findings**
- 3. Log imports from Scottish PFA (*Dendroctonus micans* & *Ips cembrae*).**
- 4. *Ips typographus* Eight toothed spruce bark beetle in the UK**
- 5. Preparedness**

1. Bark beetles and Ireland's PZ status

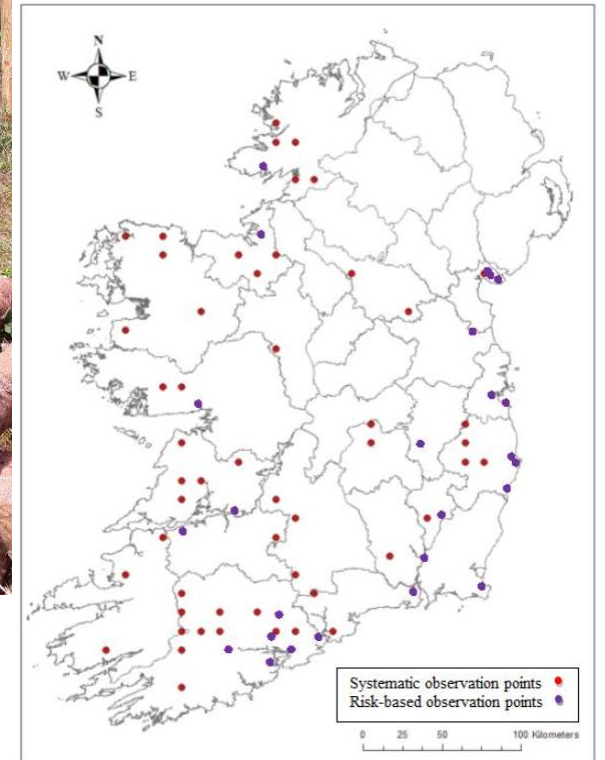
Ireland is a Protected Zone (PZ) for six coniferous bark beetles present in other parts of the EU.

Their absence in Ireland is demonstrated through annual surveys over the last three decades.

As a result, special requirements apply to the movement of coniferous wood into Ireland from EU and third countries including GB.





Untreated wood with bark attached cannot be imported unless it comes from an officially designated Pest Free Area

A number of non-regulated coniferous bark beetles are already present in Ireland and are routinely found in the course of our surveys and inspections.



Bark beetle Observation Points

1. Bark beetles and Ireland's PZ status

Species Name	Common Name	Pest of...	Present in...	Image
Ips typographus	Eight-Toothed Spruce Bark Beetle	Picea - Spruce	Continental Europe and GB	
Dendroctonus micans	European Spruce Bark Beetle or Great Spruce Bark Beetle	Picea - Spruce	Continental Europe and GB	
Ips cembrae	Large Larch Bark Beetle	Larix - Larch	Continental Europe and GB	
Pseudips mexicanus	Monterey Pine Engraver	Pinus - Pine	Ireland	

Ips cembrae
Large Larch Bark Beetle

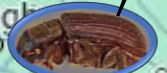


Andrews

Edinburgh



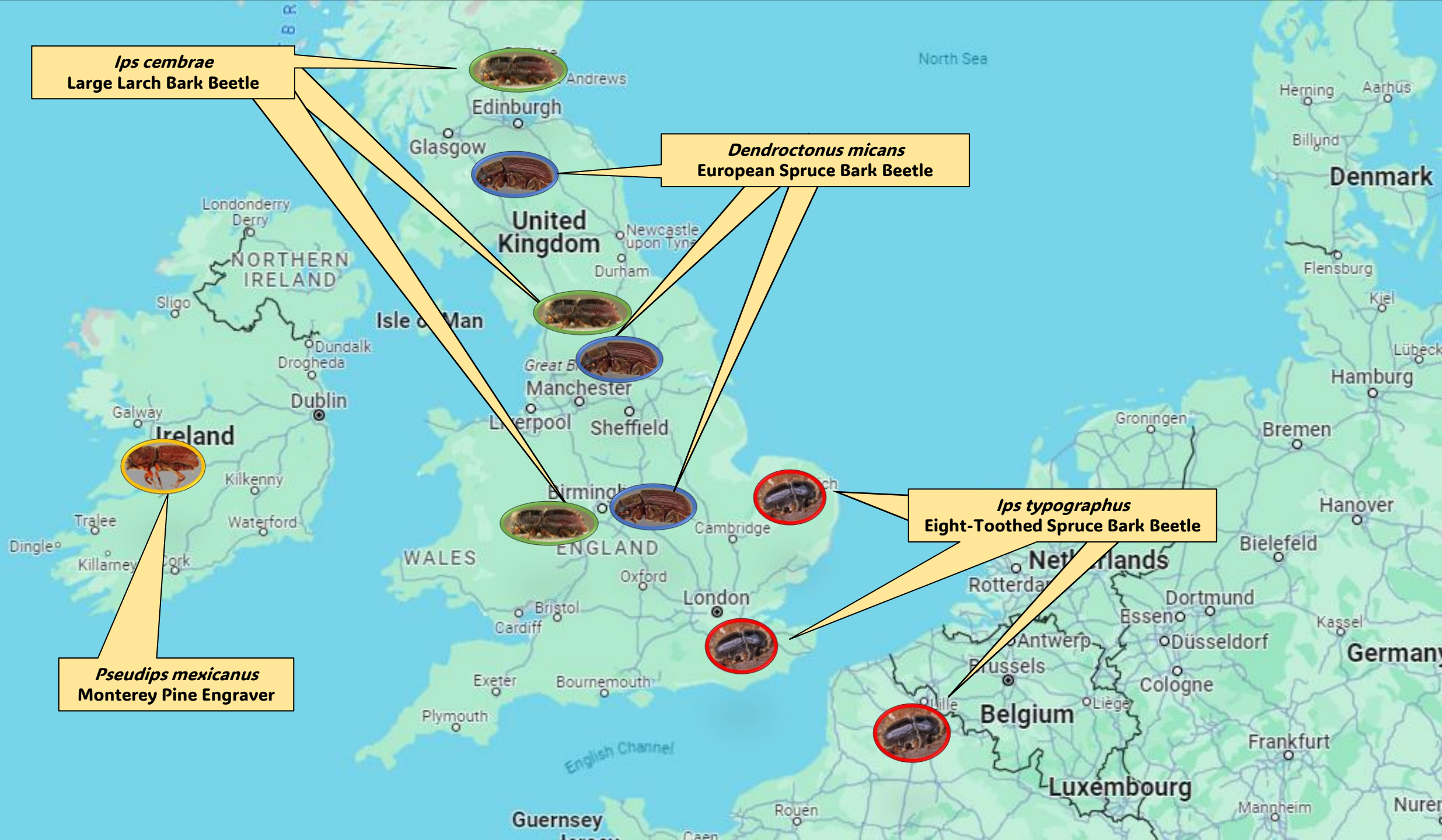
Dendroctonus micans
European Spruce Bark Beetle



Ips typographus
Eight-Toothed Spruce Bark Beetle



Pseudips mexicanus
Monterey Pine Engraver



2. Monterey pine engraver in Co. Clare



A non-European bark beetle – regulated as a Union Quarantine Pest.

Detected in the course of 2023 DAFM Forest Health surveys.

Findings made in bark beetle traps in coniferous forest plantations near Cratloe, Co. Clare.

Considered a secondary pest.

No evidence of damage has been observed or reported.

2. Monterey pine engraver - Actions

Contingency Plan activated.

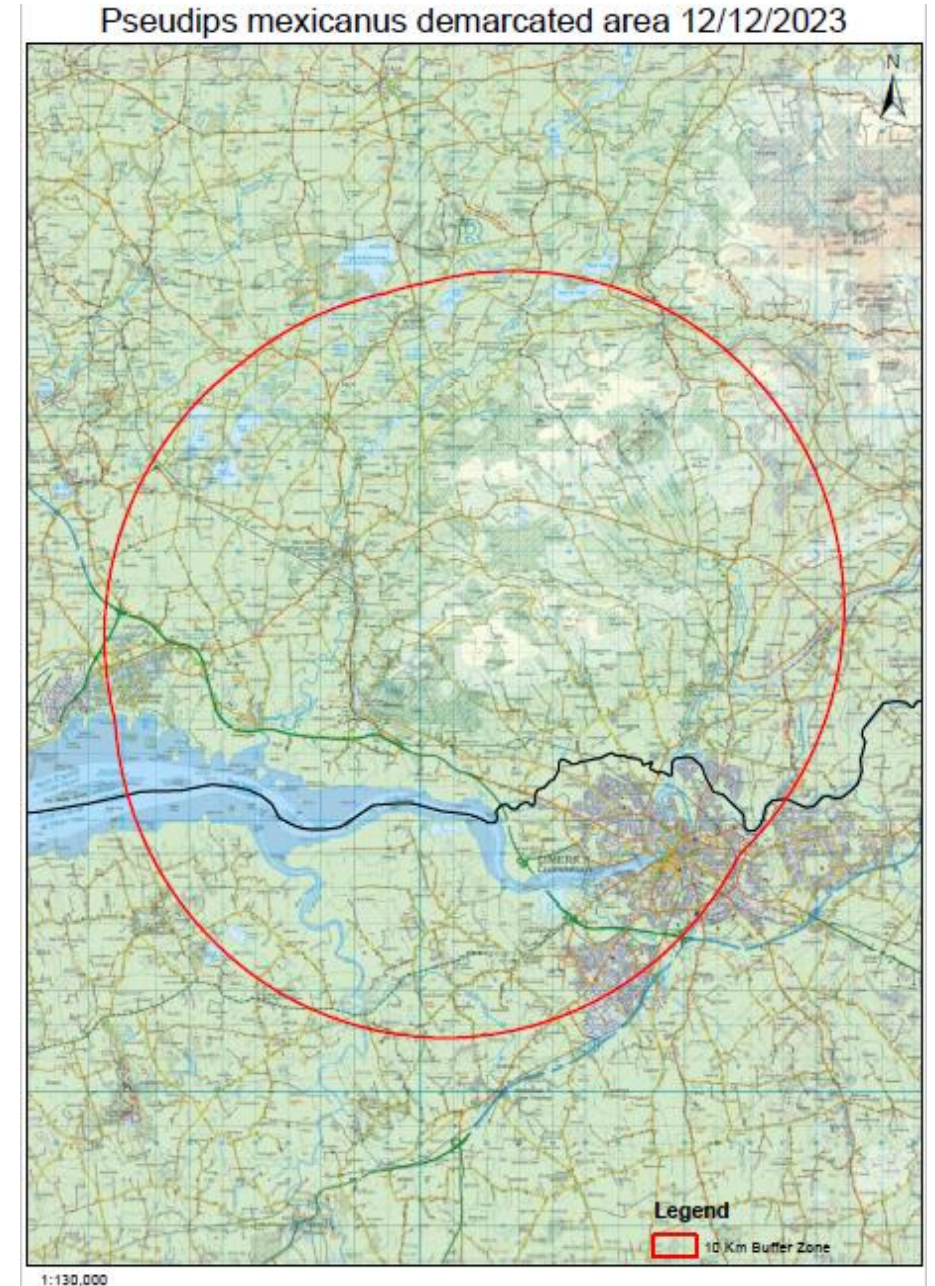
Demarcated area 10km radius around the traps where beetles were found.

Contact made with all forest owners impacted

Restrictions on harvesting and movement of pine in the demarcated area. Development of protocols to enable movement and harvesting of pine in the demarcated area is underway to facilitate processing of pine.

Communications – notified to European Commission and MS, UK, forest owners in the demarcated area, the forestry sector including exporters

Webpage and communications updates - Technical notice, FAQs, Maps, pest Fact Sheet.



2. Monterey pine engraver - Actions/developments 2024

Follow-up intensive surveys detected a single adult beetle in a dead pine tree very close to one of the traps.

National trap network established and surveyed. No wider findings

Forest Owner Information Day 18th April 2024

Change to taxonomy (2024)



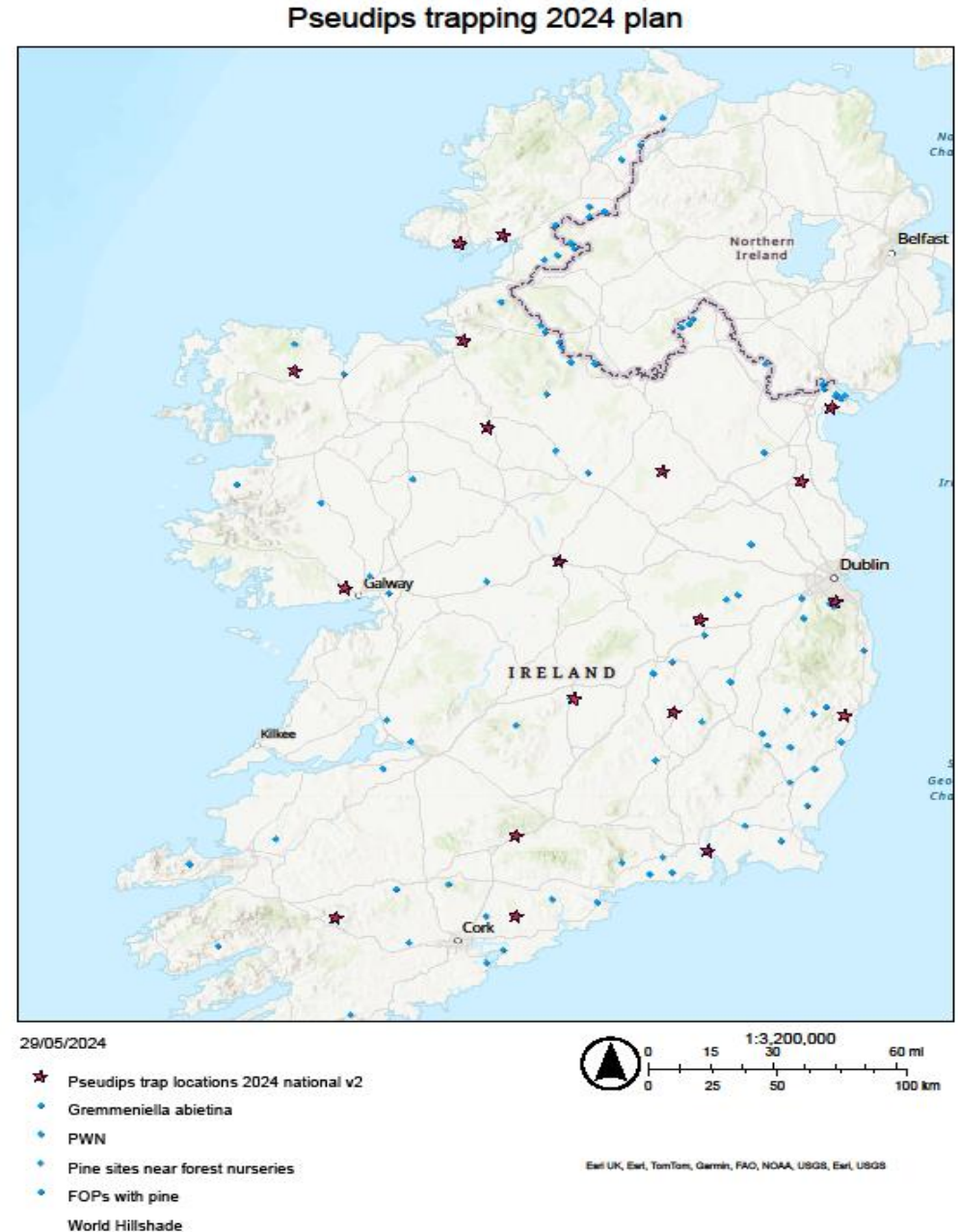
2. Monterey pine engraver - Actions

Trapping Programme 2024

New national (below) trap network for *Pseudips mexicanus*.

One round of national surveys complete. No wider findings.

A second round of National trapping in October 2024.



2. Monterey pine engraver - Actions

Trapping Programme 2024

Local trap network for *Pseudips mexicanus*.

5 rounds of trapping complete.

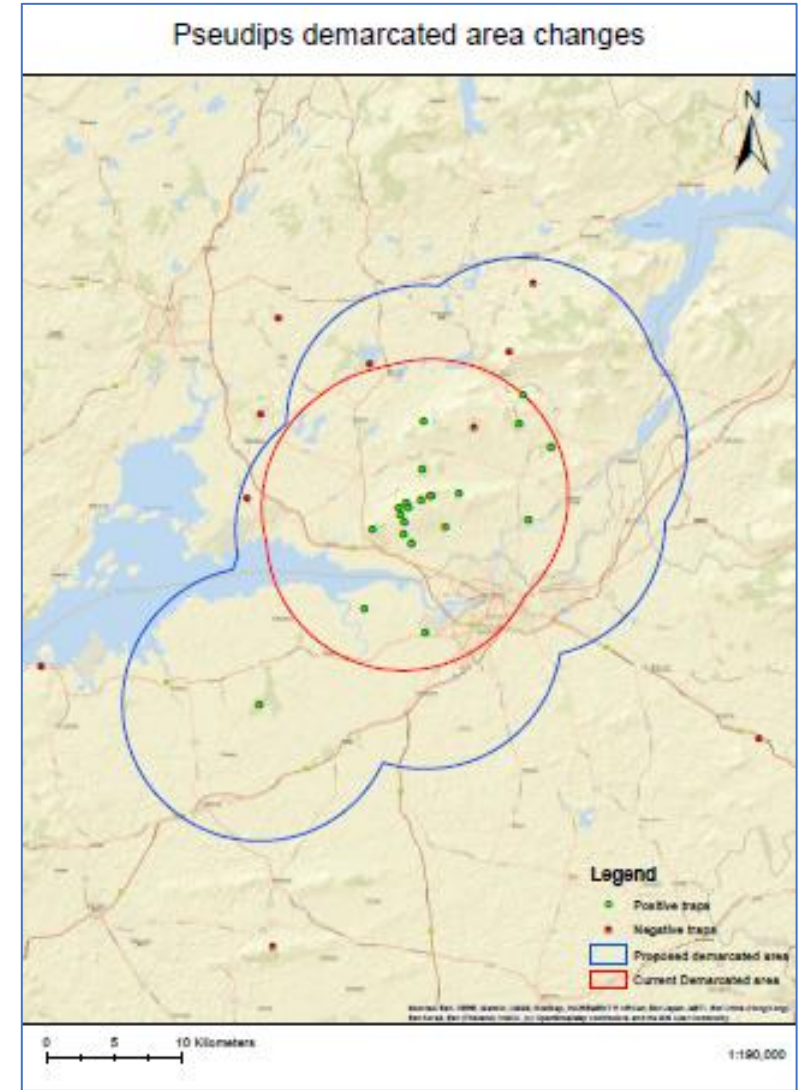
Trap findings within the demarcated area both in Co. Clare and Co. Limerick.

Findings in one trap outside the demarcated area approximately 7km to the south-west in Co. Limerick.

Local trap findings necessitate an increase of the demarcated area (see map – red boundary moved out to blue boundary).

All communications data being updated. Affected owners are being contacted by the Department.

Still no breeding population or evidence of damage has been detected.



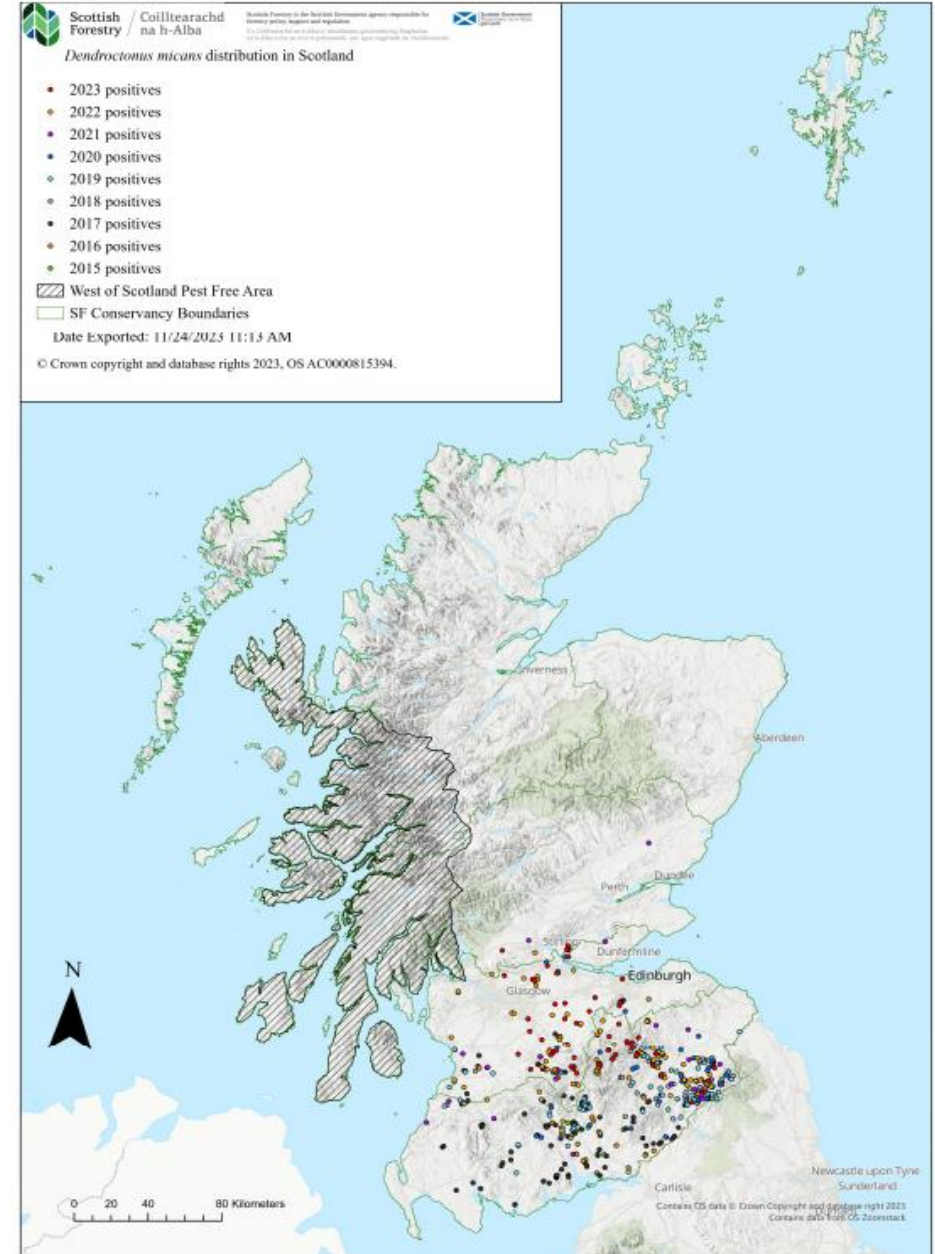
3. Log imports from Scottish Pest Free Area (PFA)

The Scottish Pest Free Area is maintained by the GB Plant Health Authorities. Established 2005. Enables trade of coniferous logs with bark from Scotland to Ireland.

In recent years regulated beetles have been found close to the PFA. These include *Dendroctonus micans* and *Ips cembrae*. *Ips typographus* was also found near Grangemouth Port in 2023 (to the east of PFA).

Concern has intensified in Ireland over the risk of introducing PZ bark beetles with log imports.

Ongoing close engagement with Scottish Forestry to ensure integrity of PFA is maintained and the island of Ireland remains free of the PZ beetles.



3. Log imports from Scottish Pest Free Area (PFA)

Amendment to the Scottish PFA announced February 2024 following agreement with Scottish Forestry authorities

Press release

Minister Hackett welcomes new restrictions on exports of spruce timber from Scotland

From [Department of Agriculture, Food and the Marine](#)
Published on 7 February 2024
Last updated on 8 February 2024

35km buffer from findings of *D. micans*, with an additional 10km to be added in 12 months-time.

Annex B
Dated August 2023

Draft map showing possible boundary for different buffer radii following easily identifiable geographic features. Note this is not an agreed boundary but for illustration purposes.



Maintenance of the Scottish PFA

- Maintained by GB Plant Health Authorities based on ISPM 4 on Maintenance of a PFA
- Site inspections for timber due to be traded to the island of Ireland
- Pheromone lures located at timber handling sites
- Billet traps located in and around the PFA
- Bi-annual aerial surveillance



Maintenance of a Pest Free Area

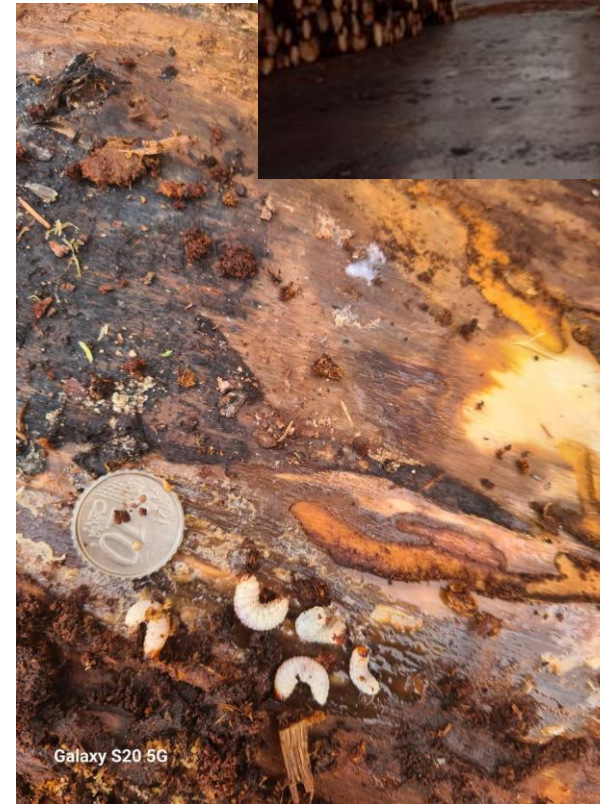
The west of Scotland
pest-free area for
Dendroctonus micans,
Ips cembrae and
Ips sexdentatus

2021 - 2026


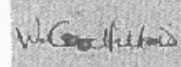

Reviewed;	23 rd March 2022	Reviewed;	4 th April 2023
Review Date;	March 2024	Review Date;	March 2025

DAFM Inspection of imported logs

- All consignments “routed” with Revenue
- Engagement with Importers and Port Authorities on shipping schedules
- Documentary, Identity and Plant Health Checks of consignment
- ISPM 31 and DAFM SOP log inspections
- Location and identification of Bark Beetles
- Clearance with Revenue for onward movement
- Port trap surveillance



		ex 9406 10 00		
40.	► M9 Wood of conifers (Pinopsida) ◀	4401 11 00 4401 21 00 ex 4401 40 10 ex 4401 40 90 ex 4403 11 00 ex 4403 21 10 ex 4403 21 90 ex 4403 22 00 ex 4403 23 10 ex 4403 23 90 ex 4403 24 00 ex 4403 25 10 ex 4403 25 90 ex 4403 26 00 ex 4404 10 00 4406 11 00 4406 91 00 4407 11 10 4407 11 20 4407 11 90 4407 12 10 4407 12 20 4407 12 90 4407 19 10 4407 19 20 4407 19 90 4408 10 15 4408 10 91 4408 10 98 ex 4416 00 00 ex 9406 10 00	(a) The wood is bark-free; or (b) official statement that the wood originates in areas known to be free from <i>Ips duplicatus</i> Sahlbergh; or (c) a mark 'Kiln-dried', 'KD' or another internationally recognised mark put on the wood or on its packaging in accordance with current commercial usage to prove that it has undergone kiln-drying to below 20 % moisture content, expressed as a percentage of dry matter, at time of manufacture, achieved through an appropriate time/temperature schedule.	(a) Greece (b) Ireland (c) United Kingdom ► M4 (Northern Ireland) ◀

1 Name and address of exporter [REDACTED]		3 PHYTOSANITARY CERTIFICATE No UK/GR/2024 [REDACTED]	
2 Declared name and address of consignee [REDACTED]		4 Plant Protection Organisation of UNITED KINGDOM to the Plant Protection Organisation of REPUBLIC OF IRELAND	
6 Declared means of conveyance SEA FREIGHT		5 Place of origin UNITED KINGDOM (SCOTLAND)	
7 Declared point of entry WICKLOW			
8 Distinguishing marks, number and description of packages, name of produce Botanical name of plant: 2 9m Sitka Spruce Sawlogs Sitka spruce (<i>Picea sitchensis</i>)			
10 This is to certify that the plants, plant stock, or other regulated articles described here have been inspected and are found to comply to appropriate phytosanitary standards and are considered to be free from the pests, diseases and other organisms specified by the importing country and/or conform with the current phytosanitary requirements of the importing country, including those for regulated non-plant organisms.			
11 Additional information Consignment complies with (EU) Commission Implementing Regulation 2019/2072, Annex X, 3(a), 4(b), 41(b), 42(b), 43(b) & 44(b)			
12 Treatment: NONE		13 Additional information	
13 Additional information NONE		14 Duration and signature	
15 Date		16 Date	
17 Additional information HIGH CLASIAIG: GR NR 7070-1080		18 Additional information	
18 Additional information		Place of Issue: EDINBURGH Stamp of Organisation Date: July 2024 Authorised Officer: Name: William Goodfellow Signature:  	

13/9 PH/1120/1
No financial liability will be accepted for any errors which shall attach to the Phytosanitary Certificate or to any of its officers or representatives.

Year	No. of imports	Total tonnage
2020	73	125,850
2021	135	222,387
2022	74	112,750
2023	69	100,025
2024 (to end July)	34	48,550



Imported logs are processed at Irish sawmills. Very significant reliance on the GB market. Ireland also exports round logs to GB. Imported logs represents 2% of all logs, or 4% of all sawlogs processed.

Irish Produced Logs

	2023	pulp	pallet	sawlog	Total
Private		420	915	1050	2385
Coillte		538	924	1294	2756
Total		958	1839	2344	5141
		19%	36%	46%	100%

COFORD Forecast figures for 2023 (,000 m3)

3. *Ips cembrae* in Scottish Pest Free Area (PFA)

- *Ips cembrae* is considered a secondary forest pest, breeding in logs, wind - blown stems and dying trees.
- *Ips cembrae* has been introduced into areas where *Larix* spp. are planted (mainland UK, Netherlands, Sweden), and to date has behaved there in the same way as in its natural range (EPPO).

It has also been observed to occasionally breed in species when there is a limited availability of larch hosts.

- It is considered a much less damaging pest than *Ips typographus* and presents a much lower risk to protected zones (EPPO).



3. *Ips cembrae* in Scottish Pest Free Area (PFA)

From Scottish Forestry document: Plan for the West of Scotland conifer bark beetle pest free area (March 2024).

“Occasional pheromone trap interceptions in the PFA (followed up with intensive ground surveys), and both pheromone trapping and wider environment findings across Scotland, show that populations appear not to have moved into the PFA”

Ips cembrae first found in traps in PFA in 2022. No breeding population detected has been detected. Export of larch logs to Ireland was stopped in 2022.

In 2023, 27 *Ips cembrae* caught in five traps across the PFA – see map.

Finding of three adults in a trap in a Cork port in August 2024.

Issuance of Phytosanitary Certificates paused pending investigations.



4. *Ips typographus* eight toothed spruce bark beetle in Great Britain

Outbreak Site 2018

- In November 2018, several adult *Ips typographus* beetles were found at a Forest Observation Point in bait logs near Ashford, Kent.
- This was the first finding of the beetle in the UK wider environment – Source thought to be natural dispersal across the channel from France.
- Initial surveys of Norway spruce at the outbreak site showed that a breeding population was present.
- The affected stand was felled in January 2019 and traps were set up on-site to capture beetles emerging from leaf litter.
- Delimiting 1km and 50km surveys were carried out.
- Demarcated area (DA) introduced - the movement of susceptible tree material such as spruce wood, bark and branches restricted.

4. *Ips typographus* eight toothed spruce bark beetle in Great Britain

Last 5/6 years

- Since the 2018 discovery, the Forestry Commission have been investigating hundreds of suspect sites across the UK
- Aerial and ground surveillance techniques are used, targeting spruce trees displaying signs of deteriorating health that are vulnerable to infestation
- Over 750 sites have been investigated and samples taken - adult beetles, larvae & eggs from breeding galleries are sent for identification
- There are currently 44 eradication sites (since 2018) in the southeast of England
- Due to further findings, the DA has been extended – findings attributed to continued incursions from northern France and Belgium.
- *Ips typographus* is currently subject to eradication measures in the DA.

4. *Ips typographus* eight toothed spruce bark beetle in Great Britain

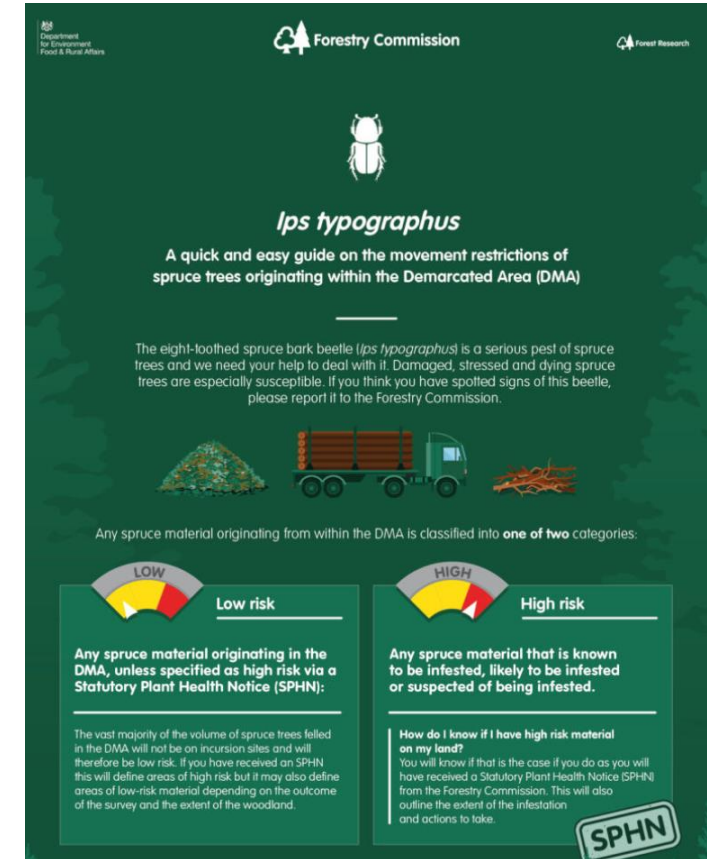
Outbreak sites

- Once *Ips typographus* is confirmed to be breeding at a site it is labelled an “eradication site”.
- Sanitation felling to remove spruce must be undertaken at eradication sites. Inspectors will visit the site to assess the severity of the infestation and outline a timescale for operations.
- Host wood material can only be moved under licence to an approved facility.
- Trapping for 3 years after harvesting to “soak up” any beetles left.
- Traps are checked fortnightly to monitor the efficacy of eradication actions. The approach is effective, with *Ips typographus* now officially declared eradicated from the first outbreak site found in 2018.
- Supports for forest owners. (Reconstitution etc).

4. *Ips typographus* eight toothed spruce bark beetle in Great Britain

Ongoing Response

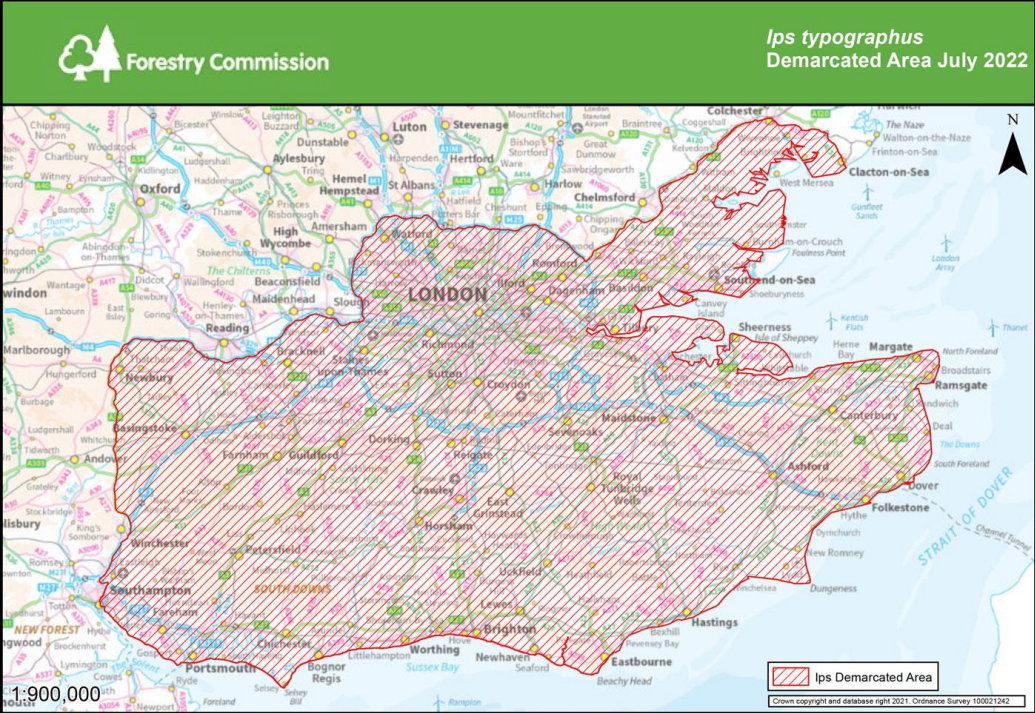
- Policy objective to eradicate *Ips typographus* from the UK
- Sanitation measures ensure that discovered breeding populations do not get a chance to develop and spread.
- UK wide trapping programme - traps established at forest observation points, new suspect sites and at points of entry such as ports.
- Continued UK wide aerial and ground surveys – Scotland trap findings 2023 near port of Grangemouth, eastern Scotland – hitchhiker on cargo?
- FC encouraging landowners to proactively remove spruce in the DA where it is at most risk of *Ips typographus* infestation, and replant with non-susceptible tree species.



4. Ips typographus eight toothed spruce bark beetle in Great Britain

Demarcated Area

- The Ips typographus demarcated area was extended again in June 2024.



4. *Ips typographus* eight toothed spruce bark beetle in Great Britain

- *Ips typographus* found in Sitka Spruce in Great Britain for the first time –
- On 25-07-24 the Forestry Commission announced:



- The finding of *Ips typographus* on a small number of cut and fallen Sitka spruce trees in close proximity to infested Norway spruce trees on a site in West Sussex marks the first time the beetle has been discovered on this species. There is no evidence of spread within the UK and the recent outbreaks are most likely due to natural dispersal of the pest from mainland Europe.
- The circumstances of this finding concerns dead and fallen Sitka spruce where overall the Sitka spruce is generally growing very poorly.

4. *Ips typographus* eight toothed spruce bark beetle in Great Britain

Long distance aerial dispersal of *Ips typographus* as a pathway

- *Ips typographus* in GB – attributed to ‘blow over’ from continental Europe rather than to trade.
 - favourable weather conditions and very high source population densities.

- **How far could the beetle blow?**

A recent paper (Inward et al, 2024) indicates that *Ips typographus* dispersed into England in 2021 and 2022 from high population densities on the continent and beetles could have penetrated **160km** into England in a large-scale dispersal event in June 2021. Modelling suggests that the beetle population **could have dispersed over 400km** in June 2021.

- **How is DAFM responding?**

- Liaison with UK counterparts
- Enhanced trapping and surveillance along risk areas – east and south east coast
- Identification of stressed host trees
- Monitoring weather patterns and responding to weather events that may aid long distance dispersal

5. Preparedness

Horizon scanning PRAU

Close engagement with UK Plant Health Authorities

Enhanced National trapping network *Ips typographus* focus (public & private estate). Monitoring and early detection are key.

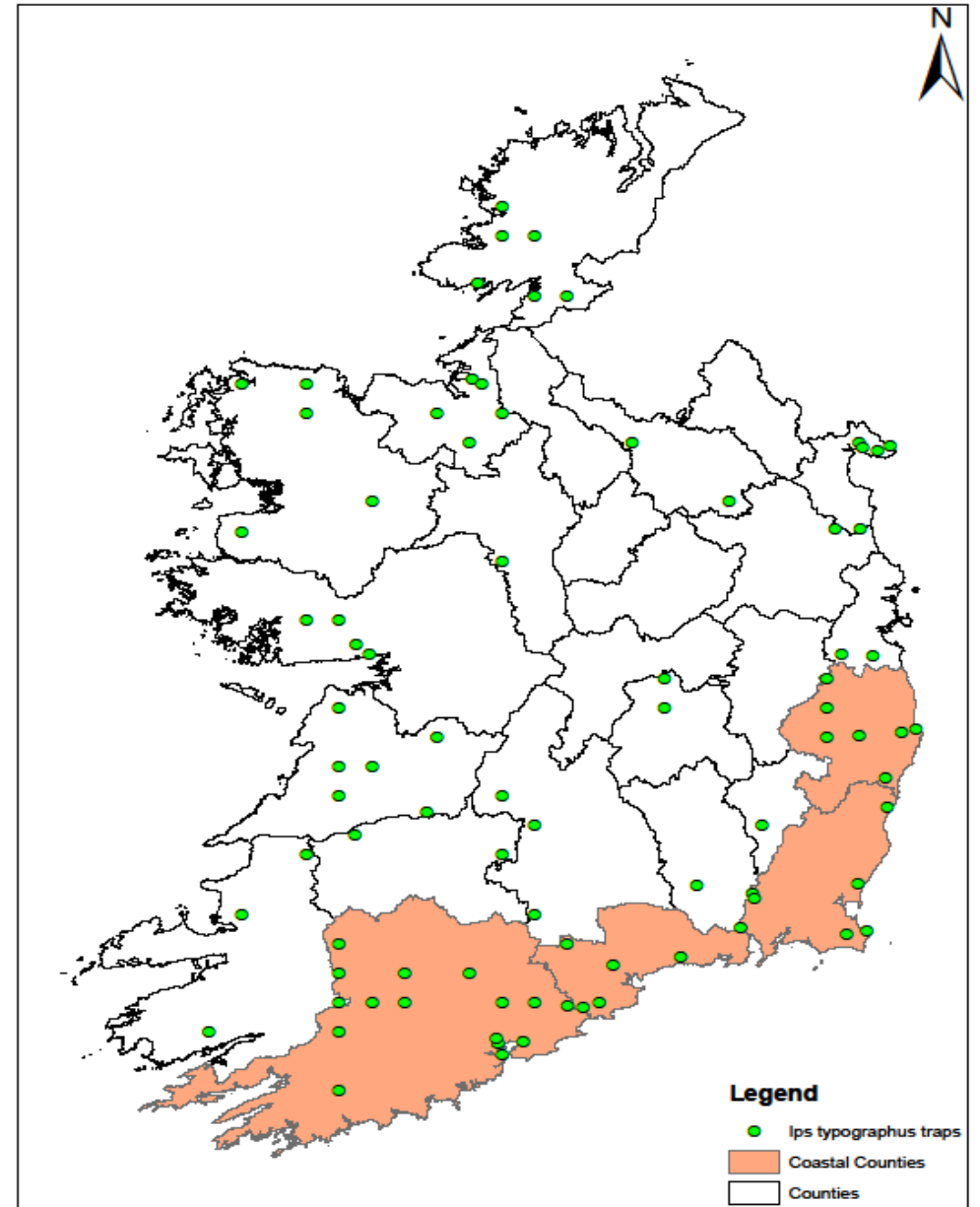
Weather patterns

Promotion and awareness – what to look for! Factsheets and information

Contingency plans

Forest owner supports

Ips typographus trapping network 2024





Bark Beetles Signs and Symptoms



*Bark Beetle Damage at
Landscape Level*



*Bark Beetle Damage at
Stand Level*

Bark Beetles Signs and Symptoms



*Adult beetle
4-5mm*



*Exit Holes on
Tree Stem*



*Larval Galleries Found
Underneath Bark*

Contingency Plans for Bark Beetles

Update

- Legal obligation to publish Contingency Plans for EU Priority Pests in 2023
 - Included public consultation on draft plans in April 2023
- Generic Plant Health Contingency Plan and Priority Pest plans published December 2023
- Contingency Plans for three PZ bark beetles have been circulated for consultation
 - *Ips typographus*
 - *Dendroctonus micans*
 - *Ips cembrae*



PROTECT OUR FOREST HEALTH

KEEP THIS BEETLE OUT

The eight-toothed spruce bark beetle (*Ips typographus*) will kill trees in Irish forests if introduced here. It is widespread in mainland Europe, and has recently been found for the first time in England.

IT MUST BE KEPT OUT

Importation of untreated conifer wood with bark attached is prohibited from all areas overseas except officially recognised Pest Free Areas.

If found or suspected please contact: **Forest Health Section**
Department of Agriculture,
Food and the Marine
3 West Agriculture House
Kildare St. Dublin 2. D02 WK12
forestprotection@agriculture.gov.ie
www.agriculture.gov.ie/forestservice

Cad a dhéanfimid feasta gan adhmáid



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine



Forest Health Web-page

<https://www.gov.ie/en/publication/a8885-forest-health/>

Pest factsheets

<https://www.gov.ie/en/publication/7b101-pest-risk-analysis-unit-plant-pest-risk-register-factsheets/>

DAFM Contingency Plans

<https://www.gov.ie/en/publication/e9755-plant-health-contingency-plans/>

Thank you