



# Introduction



## A little About Me....

- Daniel Docking – Technical Manager for the Property Care Association
- Nearly 20 years in invasive and amenity weed management
- Research author and consultation expertise

# What Are Invasive Plants?

## What Is An Invasive Plant – The Definition

- A non-native plant has been introduced outside their natural range
- Its propagules can spread quickly and causes harm to the environment, economy or human health.
- Invasive plant are a subset of non-native plants that dominate landscapes and disrupt ecosystems.

## Key Points

- Non-native + Causing harm = Invasive non-native plant.
- Only a small proportion of non-native plants are invasive.
- Harm can be environmental, economic or health-related.



# Why Invasive Plants Matter In Horticulture



## The wider environment

- Over 50% of the UK's flora is now non native
- The vast majority of non native plants are not invasive
- A small number cause disproportionate environmental and economic harm

## Why invasive plants matter to the horticulture trade

- Advice given at point of sale influences long term outcomes
- Early decisions can prevent costly problems later
- Customer confidence is built on trusted, informed guidance
- The trade plays a key role in prevention, not just supply

# A Question For You

*Which invasive or problematic plant generates the most questions or issues from your customers?*

- Bamboo
- Buddleia
- Virginia creeper
- Laurel
- Something else

Please add your thoughts in the chat or text box.  
We will return to these at the end during the Q&A.



# When Do Problems Start?



## Why problems often start at supply and not through neglect

- Plants are usually purchased and planted in good faith
- Growth behaviour is often underestimated
- Long-term impacts are rarely visible at point of sale
- Early advice strongly influences future outcomes

# Introduction To Knotweed

**Scientific name:** *Reynoutria japonica* (Japanese knotweed).

- Native to Japan, China, and Korea where it grows on volcanic slopes and riverbanks.
- Part of a balanced ecosystem in native range – controlled by a specialist psyllid insect *Aphalara itadori*.
- Introduced to UK in 1850s by German botanist Philipp Franz von Siebold.
- Japanese Knotweed won the gold medal in the 1857 Utrecht Flower Show.
- Exhibited at Crystal Palace in London.
- First wild record: Maesteg, South Wales (1886).



# Reframing Structural Risks

## Reframing structural risk

- Perception of Japanese knotweed risk has changed
- Evidence review completed by PCA and RICS in 2018 (<https://peerj.com/articles/5246>)
- Assessed plant behaviour and structural interaction
- Combined literature review, field data and case studies
- Showed structural damage risk is often overestimated

# Capacity To Cause Structural Damage

**Table 4** Summary data of damage linked to each of the different plant classes included in the survey.

|                    | Plant damage to house                     |  |                      | Plant damage to walls                     |  |                      | Plant damage to paving                    |  |                      |
|--------------------|---|--|----------------------|---|--|----------------------|---|--|----------------------|
|                    | Plants linked to damage, % of occurrences | Plants linked to damage, % of total properties | Average damage score | Plants linked to damage, % of occurrences | Plants linked to damage, % of total properties | Average damage score | Plants linked to damage, % of occurrences | Plants linked to damage, % of total properties | Average damage score |
| <i>F. japonica</i> | 0%<br>0/18                                | 0%<br>0/68                                     | 0                    | 11%<br>2/18                               | 3%<br>2/68                                     | 0.029                | 33%<br>6/18                               | 9%<br>6/68                                     | 0.176                |
| <i>B. davidii</i>  | 68%<br>42/62                              | 62%<br>42/68                                   | 0.75                 | 79%<br>49/62                              | 72%<br>49/68                                   | 1.529                | 73%<br>45/62                              | 66%<br>45/68                                   | 0.824                |
| Trees              | 33%<br>2/6                                | 3%<br>2/68                                     | 0.132                | 67%<br>4/6                                | 6%<br>4/68                                     | 0.235                | 50%<br>3/6                                | 4%<br>3/68                                     | 0.176                |
| Woody climbers     | 75%<br>3/4                                | 4%<br>3/68                                     | 0.103                | 75%<br>3/4                                | 4%<br>3/68                                     | 0.044                | 0%<br>0/4                                 | 0%<br>0/68                                     | 0                    |

**In summary:**

The risk of Japanese Knotweed causing structural damage is potentially no greater than that of trees, and less likely than Buddleia.

# Buddleja davidii



## General Overview:

- Introduced as an ornamental but now a common structural weed across UK towns and cities.
- Frequently seen growing on brickwork, retaining walls, gutters, and railway infrastructure.
- Thrives in dry, nutrient-poor soils and establishes from seed in mortar joints and roof tiles.
- Each mature plant produces up to three million wind-borne seeds, easily spreading between properties.
- Causes expansive root pressure and worsens freeze-thaw damage in masonry.

# Buddleja davidii

## Identification:

- **Growth:** Woody, multi-stemmed shrub (2–4 m) however often smaller if self-seeded on walls, chimneys or hardstanding.
- **Leaves:** Opposite, lance-shaped, grey-green above, silvery beneath.
- **Flowers:** Long cone-shaped clusters (June–October), usually purple, sometimes white or pink.
- **Stems:** Green and slightly ridged when young; becoming woody, hollow and brittle with age.
- **Typical sites:** Everywhere.



# Buddleja davidii

## Impacts:

- Roots widen cracks, causing spalling masonry and displaced pointing.
- Decaying roots may create voids allowing damp ingress.
- Dense thickets obstruct boundary inspections and maintenance access.

## Management:

- Remove seedlings early. Stop it from being able to spread.
- Cut and treat mature stem before flowering. Repeat and monitor for at least 4 years.
- Record locations in general maintenance schedules.

# Buddleja davidii



## Legislation:

- **Not listed** under the Invasive Alien Species (Enforcement and Permitting) Order 2019.
- **Not included** on Schedule 9 of the *Wildlife and Countryside Act 1981*.

# Invasive Bamboos

## General Overview:

- Introduced as ornamental plants and became popular in the late 90's due to garden makeover shows.
- Spread aggressively through underground roots.
- Can form dense thickets, suppressing native plants.
- Cause amenity value loss by spreading into lawns, flower beds, hedges.
- Roots can exploit cracks, lift patios and damage hard surfaces.
- Mostly urban environment concerns, with very little impacts in the wider environment
- Concerns mirror Japanese knotweed in terms of impact.



# Invasive Bamboos

## Running bamboos (Leptomorphs):

- Spread aggressively via long, lateral roots.
- Travel several metres from original planting.
- High risk of spreading into neighbouring land.

## Clumping bamboos (Pachymorphs):

- Roots grow in tight, circular clusters.
- Expansion is slower and more contained.
- Still spread over time if unmanaged.
- “Non-invasive” labels are misleading — both can cause issues.

# Invasive Bamboos

## Impacts:

- Root systems extend several metres laterally, spreading beneath hard surfaces and boundaries.
- Structural impacts: lifting patios, cracking walls, damaging drains and fences.
- Ecological effects: displaces native flora, particularly along riverbanks and gardens.
- Mismanagement risk: cutting or shallow excavation stimulates regrowth.

## Management:

- Herbicide treatment in late summer. Cut stems in winter. Repeat process with at least 4 years of monitoring.
- Excavate root systems in full or install vertical root barriers (>1 m deep).
- Seek professional, competent contractor if this plant begins to become out of control.

# Invasive Bamboos



## Legislation:

- **Not listed** under the Invasive Alien Species (Enforcement and Permitting) Order 2019.
- **Not listed** on Schedule 9 of the *Wildlife and Countryside Act 1981*.
- Landowners **may** face civil liability for allowing spread onto neighbouring property via The Anti-Social behaviour, Crime and Policing Act 2014.

# Rhododendron ponticum



## General Overview:

- Introduced in the 18th century for ornamentals and game cover.
- Now widespread across the UK – thrives on acidic, shaded, or damp soils and particularly an issue in woodlands.
- Forms dense thickets up to 5 m tall that suppress native vegetation.
- Spreads by seed and layering (stems rooting where they touch soil).
- Difficult to eradicate – vigorous regrowth from cut stumps.

# Rhododendron ponticum

## Identification:

- **Leaves:** Evergreen, leathery, dark-green, 6–18 cm long with rolled edges.
- **Flowers:** Large mauve-purple clusters (May–June), bell-shaped with five lobes.
- **Stems:** Woody, multi-stemmed with reddish-brown bark; forms dense thickets.
- **Height:** Up to 5 m; spreads laterally by layering.
- **Typical sites:** Woodland edges, estate gardens, riverbanks, neglected grounds.



# Rhododendron ponticum

## Impacts:

- Suppresses native flora and alters soil chemistry through acidic litter.
- Releases allelochemicals that inhibit germination of other plants.
- Host for Phytophthora ramorum (sudden oak & larch disease).
- Dense growth obstructs access, sight lines and drainage.

## Management:

- Cut-stump or foliar spray with approved herbicide; repeat until cleared and monitor for up to 6 years.
- Introduce a revegetation plan as natural recovery will take a long time.
- Seek professional, competent contractor if this plant begins to become out of control.

# Rhododendron ponticum



## Legislation:

- **Listed** under Schedule 9 of the Wildlife and Countryside Act 1981. Offences is causing it to grow or spread into the wild.
- Waste arisings disposal **must** comply with the Environmental Protection Act 1990.

# Gunnera



## General Overview:

- *Gunnera tinctoria* – invasive, naturalised in UK.
- *Gunnera manicata* – Brazilian species but often mis-sold.
- *Gunnera* × *cryptica* – hybrid, identified in UK trade, invasive.
- Huge perennial plants, leaves up to 2 m wide.
- Thick, spiny stalks, resemble rhubarb.
- Cone-shaped flower spikes in summer.
- Spread by seed and root fragments.
- Thrive on damp ground, riverbanks, and watercourses

# Gunnera

## Key Considerations:

- *All Gunnera species* and hybrids are prohibited to import, keep, breed, sell, use, exchange, grow, or release into the environment under the Invasive Alien Species (Enforcement and Permitting) Order 2019

## Remediation options:

- Excavation of crowns and roots.
- Systemic herbicide treatment (repeat applications often required).
- Seedbank management is key – prevent plants from setting seed; long-term monitoring needed.



# Other Invasive Plants

Many more invasive plants occur in the UK. Examples include:

- **Virginia creeper** – rapid spread on buildings and boundaries, structural and maintenance issues
- **Montbretia (Crocosmia)** – forms dense stands, spreads via corms, difficult to eradicate
- **Cherry laurel** – aggressive growth, shading and suppression of native species
- **Japanese rose (Rosa rugosa)** – coastal dunes and road verges
- **American skunk cabbage (Lysichiton americanus)** – wetlands, bogs and water margins
- **Floating pennywort (Hydrocotyle ranunculoides)** – aquatic, clogs rivers and waterways



# Duty Of Care In The Horticulture Trade

## Duty of care: applying plant knowledge in practice

- Applies where risks are foreseeable
- Not limited to plants listed in legislation
- Strongly linked to advice given at sale or planting
- Context and location influence risk
- Clear communication supports informed choice



# Legislation – How It Works In Practice



## Legislation and professional responsibility

- Legislation supports, but does not replace, duty of care
- Different laws apply at different stages of plant use
- Some plants are regulated, others rely on professional judgement
- Responsibilities extend beyond sale to transport, planting and disposal
- Understanding intent and impact is as important as compliance

# Legislation

## The Wildlife & Countryside Act 1981:

- Schedule 9 lists invasive species.
- Offence to plant or cause to grow in the wild.
- Key INNPs:
  - *Reynoutria japonica* (Japanese knotweed)
  - *Cotoneaster* spp. (five species)

## Penalties

- Summary conviction – unlimited fines / up to 6 months' imprisonment
- Indictment - unlimited fines / 2 years' imprisonment.



# Legislation



## **The Wildlife and Natural Environment (WANE) Act 2011:**

- Broader and stronger than the WCA 1981.
- Covers all non-native species, not just Schedule 9.
- Creates offences for release and spread without license.

## **Penalties:**

- Summary conviction – unlimited fine / up to 12 months' imprisonment.
- Indictment – unlimited fine / up to 2 years' imprisonment.

# Legislation

## The Wildlife (Northern Ireland) Order 1985:

- Schedule 9 – invasive plants listed.
- Illegal to plant or cause these species to grow in the wild.
- Equivalent to WCA but applies under a separate jurisdiction

## Penalties:

- Summary conviction – up to £5,000 fine & up to 6 months' imprisonment.
- Indictment – unlimited fine & up to 2 years' imprisonment.



# Legislation



## The Invasive Alien Species (Enforcement and Permitting) Order 2019:

- Strictest and most easily enforceable invasive non-native plant legislation.
- Offence to: import, keep, sell, breed, grow, or release.

### Key invasive plants:

- *Heracleum mantegazzianum* (Giant hogweed)
- *Impatiens glandulifera* (Himalayan balsam)
- *Gunnera* spp. (all species & hybrids)

### Penalties:

- Summary conviction – unlimited fines / up to 6 months' imprisonment
- Indictment - unlimited fines / 2 years' imprisonment.

# Legislation

## The Anti-Social behaviour, Crime and Policing Act 2014:

- Powers to tackle anti-social behaviour.
- Community Protection Notices (CPNs) may be issued.
- Often applied to unmanaged Japanese knotweed but applicable to others.
- Breaches: on the spot fine of up to £100 for individuals and £500 for businesses. If the case proceeds to court, failure to comply with the CPN can lead to an unlimited fine for both individuals and businesses.
- Secondary law, not a primary Invasive Plant framework.



# Legislation



## The Environmental Protection Act 1990:

- Defines invasive plant material as controlled waste once disturbed.
- You're responsible for preventing its spread through movement or disposal.
- Applies when handling cut vegetation, arisings, or contaminated tools/equipment.
- Awareness protects you, your company, and the environment.

💡 *It's not about moving soil — it's about stopping spread.*

# Other Legislation

- Wildlife & Countryside Act 1981
- Wildlife & Natural Environment Act 2011 (WANE)
- Invasive Alien Species Order 2019
- Environmental Protection Act 1990
- Waste Management Licensing Regulations 1994
- Anti-Social, Crime & Policing Act 2014
- Hazardous Waste Regulations 2005
- Environment Act 2021
- The Food & Environment Protection Act 1985
- Control Of Pesticides Regulations 1986
- Control Of Substances Hazardous to Health 2002
- OCR (Plant Protection Products) 2012
- Environment Agency Regulatory Position Statement 178.
- Treatment and disposal of invasive non-native plants in Wales :RD58

# Management – Advising Responsibly



## Providing responsible management advice

- Early advice can prevent escalation
- Avoid recommending actions that increase spread
- Set realistic expectations about long-term control
- Management responsibility may sit with the landowner
- Signpost specialist support where appropriate

# When To Call In The Professionals

## Knowing when specialist input is needed


- Infestations extending beyond simple garden settings
- Proximity to buildings, boundaries or sensitive sites
- Situations involving property sales or development
- Where legal or environmental risk may arise



# Module 0

- **Free online learning module**, ideal first step to know more about invasive plants or act as a refresher.
- Covers:
  - Definitions and terminology
  - Legislation and responsibilities
  - Identification of key species
  - Biosecurity and best practice

 *Free. Flexible. Industry-approved. Build your competence at your own pace.*

 **Follow:** *The Invasive Plant Guy* on **Facebook** or Daniel Docking on **LinkedIn** and for updates, insights, and upcoming CPD sessions.

# Other Resources



## Other resources:

- **Invasive Non-Native Species Secretariat (NNS)**
  - Identification sheets
- **PCA Technical Documents:**
  - *Code of Practice for Invasive Non-Native Plants*
  - *Guidance note on the safe use, storage and transport of herbicides*
- **Field guides and books**
  - Identification Guide to the Non-Native Invasive Plants
  - Invasive Bamboos: Their Impact and Management in Great Britain and Ireland
  - Non-Native Weeds & Plants - Practical Management Book

# Final Thought

## Key takeaway

Right plant.  
Right place.  
Right advice.









# Thank You For Listening Q&A Section

-  [pca@property-care.org](mailto:pca@property-care.org)
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