

Plant health management standard

General requirements for plant growers and suppliers

FINALISED VERSION 1.0

Published 24th JANUARY 2019

Document 3.0 of the Plant Health Assurance Scheme

Version	Amendment Details	Date
1.0	Plant health management standard (published standard)	24/1/19

Table of Contents

1. Introduction.....	1
2. Scope	1
2.1 Normative references.....	1
2.1.1 Informative references	2
3. Terms and definitions	2
4. General requirements: plant health management and <i>control</i> measures.....	4
4.1 Plant Passports, <i>Phytosanitary Certificates</i> and <i>Forest Reproductive Material regulations</i>	4
4.1.1 Plant Passports	4
4.1.2 <i>Phytosanitary Certificates</i>	5
4.1.3 <i>Forest Reproductive Material</i> (FRM) Regulations.....	5
4.1.4 Notifiable <i>pest interceptions</i> or <i>outbreaks</i>	5
4.1.5 Other statutory requirements	5
4.2 Plant health policy	5
4.3 Plant health responsibility	5
4.4 <i>Pest Risk Analysis</i>	6
4.5 Supply chain management	6
4.6 Plant health hygiene and housekeeping.....	6
4.6.1 Growing media and soil	6
4.6.2 Weed management	6
4.6.3 Water usage.....	6
4.6.4 Cleaning and sterilisation	6
4.6.5 Waste <i>treatment</i> and disposal	6
4.6.6 Wider environment (including landscape plantings within the <i>site</i>).....	7
4.6.7 Visitors	7
4.7 Plant health controls.....	7
4.7.1 Goods in	7
4.7.2 Traceability (chain of custody).....	7
4.7.3 <i>Treatment</i> and mitigation.....	7
4.7.4 Dispatch	7
4.7.5 Complaints, issues and returns.....	7
4.8 Monitoring and ongoing plant health assessment	7
4.8.1 Self-assessment, review and continual improvement	8
4.9 Training and recognition.....	8
4.9.1 Plant health competencies	8
4.9.2 Legislation and keeping up-to-date	8

4.9.3 Information sharing	8
4.9.4 Other relevant training	8

1. Introduction

Plant health is a major issue for the whole of the plant supply chain. This *plant health management standard* is intended to assist businesses and organisations in the development of a consistent plant health management system and their responsibilities within the plant supply chain.

Figure 1: Generalised elements of the supply chain



Plant supply chain – production and trade activities covered by this standard

This *standard* and its requirements were developed for UK businesses and organisations but also can relate to international markets. Therefore, this *standard* has the potential to be used internationally, subject to adherence with the statutory requirements for each country.

The overarching aim of this *standard* is to provide the management protocols required to improve plant health management systems for the plant supply chain. Based on the International Plant Protection Convention's framework for pest risk analysis, the *standard* sets out the requirements for a plant health management system, including periodic reviews for the continual improvement of management actions.

This *standard* assists a business or organisation to achieve an Appropriate Level of Protection by demonstrating systems for:

- Adherence to statutory obligations relating to plant health
- *Pest risk analysis* and due diligence to reduce and control pests (see example in appendix 1)

2. Scope

This document specifies the requirements expected from the plant supply chain to raise, purchase and supply healthy stock both nationally and internationally. It covers procurement, propagation material, storage and maintenance of plants awaiting sale, planting by growers or landscapers and resale or delivery to the end customer. It includes regular review to identify potential improvements in the management system. The *standard* is applicable to businesses of all sizes and scales that produce and trade plant material for the UK ornamental horticulture, landscape and forestry sectors.

The *standard* sets out plant health management requirements in the following sections:

- Management and responsibilities
- Plant health hygiene and housekeeping
- Plant health controls
- Monitoring and ongoing plant health assessment
- Recognition, competence and training

2.1 Normative references

The following referenced documents and resources are indispensable for the application of this *standard* for the UK.

ISPM 5: Glossary of phytosanitary terms: International Standards for phytosanitary measures, FAO, International Plant Protection Convention, 2017

Pest Risk Analysis for quarantine pests: FAO International plant protection convention, 2017 ¹

Protecting Plant Health: A plant biosecurity strategy for Great Britain: Welsh Government, Forestry Commission and Scottish Government; April 2014²

Tree Health Resilience Strategy: Building the resilience of our trees, woods and forests to pests and diseases; Department for Environment Food and Rural Affairs; May 2018³

In the UK the **Plant Health Information Portal** provides the latest guidance produced by Government regarding plant passporting and phytosanitary certificates. The portal provides up-to-date information on pest and diseases together with changes in risk and statutory requirements for the movement of plant material ⁴

Regulation (EU) 2016/2031 of the European Parliament of the Council of 26 October 2016 on protective measures against pests of plants⁵

Other documents may be relevant normative references in other countries.

2.1.1 Informative references

The following references are useful for this *standard* but may not apply to everyone.

BS 3936-1 Nursery Stock Specification for Trees and Shrubs, British Standards Institute, most up to date version to be used

Forest Reproductive Material - Regulations controlling seed, cuttings and planting stock for forestry in Great Britain, Forestry Commission, most up to date version to be used

BS 8545 Trees: From Nursery to Independence in the Landscape, British Standards Institute, most up to date version to be used

3. Terms and definitions

For the purposes of this document the following terms and definitions apply. Many of the definitions are as defined by the International Standards for Phytosanitary Measures (ISPM) 5 – Glossary of Phytosanitary Terms 2016. For the purposes of this *standard* and practical application, deviations from the ISPM definitions *standard* are indicated by italics and square brackets.

[appropriate level of protection (ALOP): *the level of protection deemed appropriate by the company establishing a sanitary or phytosanitary measure to protect, human, animal or plant life or health within its territory. This concept is also referred to as the **acceptable level of risk**. (Source SPS Agreement). For the purpose of this standard we apply ALOP principles to individual sites.]*

consignment: A quantity of plants, plant products or other articles being moved from one country to another and covered, when required, by a single phytosanitary certificate [or plant passport]. *[In this*

¹ https://www.ippc.int/static/media/files/publication/en/2017/05/ISPM_11_2013_En_2017-05-25_PostCPM12_InkAm.pdf

²

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/307355/pb14168-plant-health-strategy.pdf

³

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/710719/tree-health-resilience-strategy.pdf

⁴ <https://planthealthportal.defra.gov.uk/>

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R2031&from=EN>

standard a consignment may be composed of one or more commodities or lots and could also be from one location to another within a country (whether inter or intra business)].

consignment in transit: A consignment which passes through a country without being imported, and that may be subject to phytosanitary measures [*for the purpose of this standard, this definition is also used for plants that are grown and traded within the same country if it passes through an area that may be subject to phytosanitary measures*].

containment: Application of phytosanitary measures in and around an infested area to prevent spread of a pest

control (of a pest): Suppression, containment or eradication of a pest population.

devitalisation: A procedure rendering plants or plant products incapable of germination, growth or further reproduction

eradication: Application of phytosanitary measures to eliminate a pest from an area [or a site].

[Forest Reproductive Material Regulations: Regulations controlling seed, cuttings and planting stock for forestry in Great Britain].

[goods in: the receipt of a consignment or consignment in transit by a business].

growing medium: Any material in which plant roots are growing or intended for that purpose.

host pest list: A list of pests that infest a plant species, globally or in an area.

host range: Species capable, under natural conditions, of sustaining a specific pest or other organism.

incursion: An isolated population of a pest recently detected in an area, not known to be established, but expected to survive for the immediate future.

infestation (of a commodity): Presence in a commodity of a living pest of the plant or plant product concerned. Infestation includes infection.

interception (of a pest): the detection of a pest during inspection or testing of a consignment [or consignment in transit]. [*Finding of a pest at or very soon after arrival on site or if on site for some time that period must have been when the climatic conditions or biology of the pest would not have caused it to spread beyond the original point of introduction*].

monitoring: An official ongoing process to verify phytosanitary situations.

[origin (original source): The country or place where the plant material was grown, raised, cultured or produced].

outbreak: A recently detected *pest* or pathogen population, including an incursion, or a sudden significant increase of an established *pest* or pathogen population in an area. [*Spread of a pest beyond the original point of introduction*].

pathogen: Micro-organism causing disease.

pathway: Any means that allows the entry or spread of a pest

[Person Responsible: The person or persons within a business with the responsibility for inspecting plants, issuing plant passports and keeping records. Adapted from APHA plant passporting]

pest: Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products.

pest risk analysis: The process of evaluating biological or other scientific and economic evidence to determine whether an organism is a *pest*, whether it should be regulated, and the strength of any phytosanitary measures to be taken against it. [*adapted from the PRA at a national level developed by the International Plant Protection Conventions – see normative references*]

pest risk assessment: Evaluation of the probability of the introduction and spread of a pest and the magnitude of the associated potential economic consequences.

phytosanitary certificate: An official paper document or its official electronic equivalent, consistent with the model certificates of the International Plant Protection Convention (IPPC), attesting that a consignment meets phytosanitary import requirements.

[plant health manager(s): *A person or persons designated by a business with the responsibility for ensuring plant health in the business. In the UK this person is the Person or Persons Responsible for Plant Health and Seeds Inspectorate (PHSI) e.g. for Plant Passporting].*

[plant passport: *Issued by an authorised plant grower/trader/propagator or other professional, the plant passport must accompany material moved within and between Member States including within the UK. Authorisation is provided by the relevant plant health authority in the UK. Plants must leave production nurseries in a healthy condition to prevent the spread of quarantine plant pests and diseases.]*

plant supply chain: See figure 1.

quarantine: Official confinement of regulated articles for observation and research or for further inspection, testing or treatment.

quarantine pest: *A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled. [listed in the Plant Health Order Schedules i.e. enshrined in UK law].*

[regularly: *This is determined by each business/organisation depending on factors such as species and volume handled, location and others, as identified in the pest risk assessments for the species handled by the business/organisation]*

[sampling system: *A methodology that provides a representative sample from the consignment or consignment in transit to assess if pests or pathogens are present. The system itself will depend on the risk assessment together with continual review].*

[site: *A defined area (or areas) managed as a unit for plant health purposes]*

standard: Document established by consensus and approved by a recognised body that provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

test: Official examination, other than visual, to determine if *pests* are present or to identify *pests*.

[third countries: *Countries that are not members of the European Union]*

treatment: Official procedure for the killing, inactivation or removal of *pests*, or for rendering *pests* infertile or for devitalisation.

wood (as a commodity class): Commodities such as round wood, sawn wood, wood chips and wood residue, with or without bark, excluding wood packaging material, processed wood material and bamboo products.

wood packaging material: Wood or wood products (excluding paper products) used in supporting, protecting or carrying a commodity.

4. General requirements: plant health management and control measures

4.1 Plant Passports, Phytosanitary Certificates and Forest Reproductive Material regulations

The business must comply with statutory requirements with regards to the movement and trade in plants and plant material.

4.1.1 Plant Passports

Plant Passport legislative requirements must be followed when plant material is traded between UK businesses or imported from/or exported to EU Member States.

4.1.2 Phytosanitary Certificates

Legislation with respect to *Phytosanitary Certificates* must be followed if plant material is imported from or exported to *third countries*.

4.1.3 Forest Reproductive Material (FRM) Regulations

FRM is controlled by a regulatory system covering 46 tree species and the genus *Populus*. This legislation must be adhered to if appropriate to the business/organisation.

4.1.4 Notifiable pest interceptions or outbreaks⁶

A procedure must be in place to identify and deal with issues assessed as notifiable *pest interceptions* or *outbreaks*⁷.

The procedure shall include: -

- Inform the local Plant Health Inspector (PHSI) immediately if a notifiable *pest* is suspected
- Isolate and contain the affected plants
- Clearly mark the affected product to ensure that it is not inadvertently moved or sold
- Act on the PHSI's instructions. No *treatment* or disposal action shall take place without the authorisation of the PHSI

The detail of the procedure will be specified in the scheme guidance documents to ensure that detail is kept up-to-date with any changes.

4.1.5 Other statutory requirements

There are other legal requirements, e.g. the statutory notification scheme that involves a legal requirement to notify the Animal and Plant Health Agency (APHA) in advance of the import of certain trees and plants from EU member states.

4.2 Plant health policy

There must be a plant health policy that considers the following elements:

- The business' approach to plant health
- Plant health objectives to include *pest risk analysis*
- Designated person(s) and their responsibilities
- Description of how the business keeps up-to-date with plant health legislation
- Recognition of *quarantined* and / or regulated *pests*
- Commitment to training of relevant staff in plant health procedures
- *Site* housekeeping *standards* to *control* plant health
- Visitor and contractor arrangements

It must be communicated to all relevant staff. The policy must be signed and dated by a senior responsible person and reviewed as part of a continual improvement process at least annually.

4.3 Plant health responsibility

Plant health responsibility within the business shall be clearly defined.

The roles and responsibilities shall include delivering the requirements of this *standard* throughout the business.

⁶

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/673468/for-m-phar3.pdf

⁷ <https://planthealthportal.defra.gov.uk/>

4.4 Pest Risk Analysis

Areas of plant health risk shall be identified and assessed, and specific plans shall be in place to reduce these risks to an *Appropriate Level of Protection* (ALOP). The plans shall detail:

- The extent of *site*
- Susceptible host plants
- Significant *pests*⁸
- *Pathways of pests to*, within and from the *site*
- Potential or level of risk i.e. pest risk assessment
- Current or planned mitigation
- Risk following mitigation
- Acceptable Level of Protection (ALOP) description as applied to the *site*
- Monitoring of the *site*

Reviews of the *pest risk analysis* shall be conducted annually as a minimum and updated, e.g. when a new susceptible plant species is grown / stocked, or a *new pest* risk becomes evident. All reviews must be recorded. See appendix 1 for an example of a *pest risk analysis* process.

4.5 Supply chain management

As part of the *pest risk analysis*, the business shall risk-assess their suppliers and approve those that they deem to have met their plant health requirements. The ordering or purchasing process must detail any specific compliance requirements, and suppliers must be made aware of any *control* measures that are applicable.

4.6 Plant health hygiene and housekeeping

Plant hygiene and housekeeping rules and practices, that have been assessed and developed through the *pest risk analysis* processes, shall be in place. The rules and procedures shall be communicated to all relevant employees. The rules will be dependent on the plants handled and the type of business.

4.6.1 Growing media and soil

In the production or procurement of plants, the business shall demonstrate that the use of growing media and soil have been *assessed* for the potential to harbour and transmit plant *pests*.

4.6.2 Weed management

The business shall assess weeds and volunteer plants for the potential to host and transmit plant *pests*.

4.6.3 Water usage

The business shall assess water sources, irrigation and drainage systems used in the husbandry of plants for the potential to harbour and transmit plant *pests*.

4.6.4 Cleaning and sterilisation

The business shall carry out an assessment of husbandry processes and ensure that safe cleaning and sterilisation practices are implemented.

4.6.5 Waste *treatment* and disposal

All residues or waste materials shall be assessed for the potential to host, harbour and transmit *pests*.

⁸ Significant pests are considered, as a minimum, to be (i) all notifiable pests and (ii) other pests specific to your business – see the UK Plant Health Risk Register for up-to-date pest and host information

4.6.6 Wider environment (including landscape plantings within the site)

The business shall assess the wider environment and its potential impact on the health of plants on the *site*.

4.6.7 Visitors

The business shall be able to demonstrate how the relevant rules above are communicated and complied with by visitors. Areas that are restricted for plant health reasons shall be clearly delineated and signposted.

4.7 Plant health controls

4.7.1 Goods in

Incoming goods⁹ that have the potential to be infected or harbour *pests*, shall be checked. There shall be a procedure that details who, where, when and how a *consignment* or *consignment in transit* is checked upon receipt. Any *sampling system* used shall be documented.

A procedure must be in place to ensure that suspect plant material is isolated (*quarantined*), and to report findings to the authorities (in line with statutory requirements), suppliers of the material and other parties that could be affected.

4.7.2 Traceability (chain of custody)

Traceability must be provided for all plant material handled. The traceability system shall provide details and sources of the plant material and demonstrate that control measures identified in the PRA are being carried out. It shall allow a *consignment* or *consignment in transit* to be traced back to the *original source*, as well as forward to identify all trade customers to which those plants have been supplied.

4.7.3 Treatment and mitigation

Records of all plant protection *treatments*, whether routine or following an *interception* or *outbreak*, must be kept.

4.7.4 Dispatch

Informed by the *pest risk analysis*, plant material must be checked prior to dispatch for plant health issues.

If a *sampling system* is used, the rationale and methodology shall be documented.

4.7.5 Complaints, issues and returns

There shall be a complaints management procedure for plant health issues. The complaints must be categorised and assessed for continual improvement of the business. Records of any complaints and actions taken shall be reviewed at least annually.

There shall be an assessment that details the scale of the issue and whether it is notifiable (see section 4.1.4) and include, where relevant, traceability both forwards and backwards.

There shall be consideration of any withdrawal or recall or disposal procedures in the assessment.

4. 8 Monitoring and ongoing plant health assessment

Plant material must be *regularly* monitored for plant health issues.

The *pest risk analysis* shall inform the *monitoring and ongoing assessment*. The method of *monitoring* and recording will be dependent on susceptibility of the species handled, the type of business and customers and any plant health risks. *Monitoring* records shall be kept.

⁹ This includes plant material, packaging material and other products that potentially harbour pests.

Unless a *pest* can be immediately and definitively identified as non-*quarantine* it should be treated as if it is a *quarantine pest* (see section 4.1.4).

4.8.1 Self-assessment, review and continual improvement

A review of the *pest risk analysis* of the business *site* (which could be a single area or multiple areas) shall be carried out. This self-assessment must be at least annually and include a review of outbreaks, interceptions and complaints relating to plant health. A record of this self-assessment shall be kept and must detail any non-conformances, applicable requirements and corrective actions. The scale of this review shall be appropriate to the size of business and the performance over the review period.

4.9 Training and recognition

4.9.1 Plant health competencies

There shall be qualified and / or trained personnel responsible for the plant health measures detailed in this *standard*. This requirement will be proportionate to the size and activities of the business and be informed by the *pest risk assessment*.

Training records of internal and external training must be maintained, and evidence of continuing professional development (CPD) to maintain awareness of current plant health issues.

In the absence of formal qualifications, the business or organisation shall carry out an assessment of relevant employees that have a plant health responsibility to demonstrate compliance with this *standard*.

4.9.2 Legislation and keeping up-to-date

The relevant *person(s) responsible* for plant health shall demonstrate how they keep up-to-date with legislation and the latest plant health risks. It is also their responsibility to disseminate this information and knowledge throughout the business.

4.9.3 Information sharing

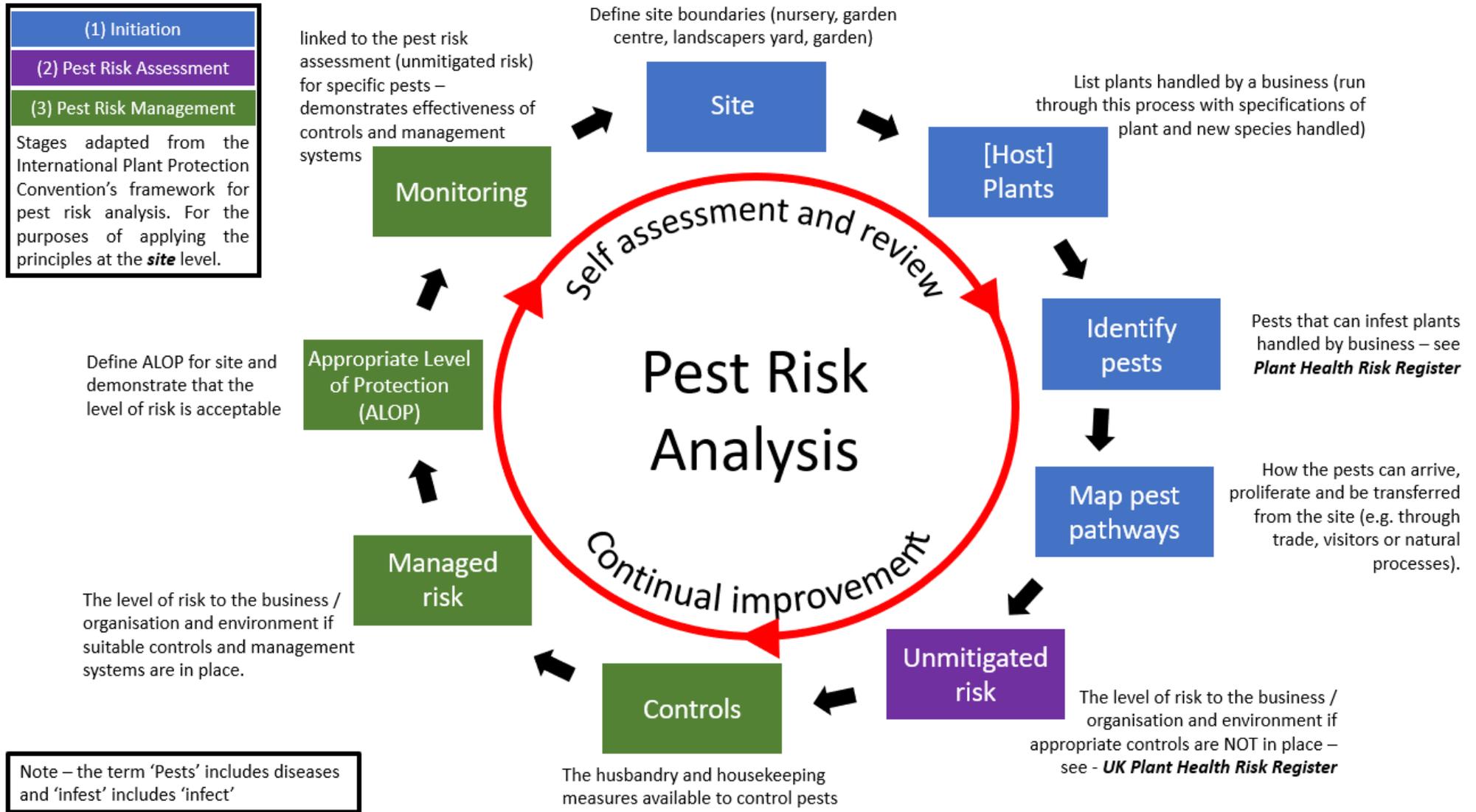
Information and knowledge must be shared within the business to ensure all relevant employees are aware of plant health issues and their management.

The business must be able to demonstrate how employees are made aware of plant health management.

The business must be able to demonstrate that there are processes in place for employees to report any suspected plant health issues to the appropriate member of staff.

4.9.4 Other relevant training

The business must be able to demonstrate that they follow nationally recognised health and safety guidance relating to plant health control measures.



Appendix 1 – Example of a Pest Risk Analysis framework to assist a business or organisation to implement and review their plant health management practices.