RISK ASSESSMENT SUMMARY SHEET

Updated: March 2019

Australian blackwood (*Acacia melanoxylon*)

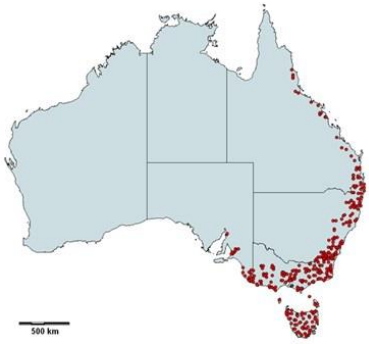
- Native to southern Australia; introduced in 1808 as an ornamental.
- Fast growing with seeds that can remain viable for >50 years as well as reproducing via suckers.
- GB climate is generally unsuitable.
- Causes forestry problems elsewhere.

History in GB

First recorded in south Devon (Blackpool Sands) in 1959 where a colony still persists. It has been introduced into public and private parks and gardens as an ornamental and is still supplied by a small number of nurseries.

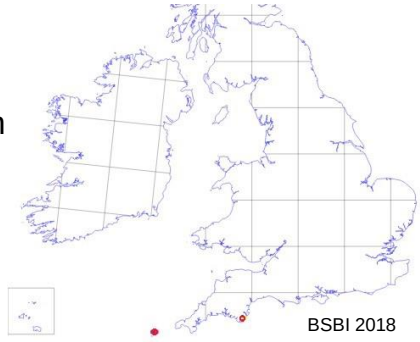
Native Distribution

Endemic to southern Australia and Tasmania.



GB Distribution

Established on cliffs in Devon and in woods on Tresco (Isles of Scilly)



Impacts

<u>Environmental (minimal)</u>

- Displacement of native vegetation
- Phytotoxic to some native grass and crop species in Spain
- Unlikely to establish because of climatic constraints

<u>Economic (minimal)</u>

- Has invaded commercial forests elsewhere
- Expensive to control

<u>Social (minimal)</u>

- None known

Introduction pathway

Grown as an ornamental in a few parks in GB and is sold in a very few specialist nurseries

Spread pathway

<u>Natural (slow)</u> - Seed falls near to parent tree and vegetative spread is over short distances

<u>Human-aided (slow)</u> – Spread to new sites is mostly via deliberate planting

Summary

	Response	Confidence
Entry	VERY LIKELY	HIGH
Establishment	VERY LIKELY	HIGH
Spread	VERY SLOW	HIGH
Impact	MINIMAL	MEDIUM
Overall risk	LOW	MEDIUM

RISK ASSESSMENT COVERING PAGE - ABOUT THE PROCESS

It is important that policy decisions and action within Great Britain are underpinned by evidence. At the same time it is not always possible to have complete scientific certainty before taking action. To determine the evidence base and manage uncertainty a process of risk analysis is used.

Risk analysis comprises three component parts: risk assessment (determining the severity and likelihood of a hazard occurring); risk management (the practicalities of reducing the risk); and risk communication (interpreting the results of the analysis and explaining them clearly). This tool relates to risk assessment only. The Non-native Species Secretariat manages the risk analysis process on behalf of the GB Programme Board for Non-native Species. During this process risk assessments are:

- Commissioned using a consistent template to ensure the full range of issues is addressed and maintain comparable quality of risk and confidence scoring supported by appropriate evidence.
- Drafted by an independent expert in the species and peer reviewed by a different expert.
- Approved by the NNRAP (an independent risk analysis panel) only when they are satisfied the assessment is fit-for-purpose.
- Approved by the GB Programme Board for Non-native Species.
- Placed on the GB Non-native Species Secretariat (NNSS) website for a three month period of public comment.
- Finalised by the risk assessor to the satisfaction of the NNRAP and GB Programme Board if necessary.

Common misconceptions about risk assessments

The risk assessments:

- Consider only the risks (i.e. the chance and severity of a hazard occurring) posed by a species. They do not consider the practicalities, impacts or other issues relating to the management of the species. They also only consider only the negative impacts of the species, they do not consider any positive effects. They therefore cannot on their own be used to determine what, if any, management response should be undertaken.
- Are advisory and therefore part of the suite of information on which policy decisions are based.
- Are not final and absolute. They are an assessment based on the evidence available at that time. Substantive new scientific evidence may prompt a re-evaluation of the risks and/or a change of policy.

Period for comment

Once placed on the NNSS website, risk assessments are open for stakeholders to provide comment on the scientific evidence which underpins them for three months. Relevant comments are collated by the NNSS and sent to the risk assessor for them to consider and, if necessary, amend the risk assessment. Where significant comments are received the NNRAP will determine whether the final risk assessment suitably takes into account the comments provided.

To find out more: published risk assessments and more information can be found at http://www.nonnativespecies.org/index.cfm?pageid=143

GB NON-NATIVE ORGANISM RISK ASSESSMENT SCHEME

Name of organism: *Acacia melanoxylon* R. Br. (Australian Blackwood)
Author: Kevin J. Walker
Risk Assessment Area: Great Britain (England, Scotland, Wales and their islands)

Version: Draft 1 (*June 2017*), Draft 2 (*May 2018*), Draft 3 (*June 2018*)
Signed off by NNRAP: *June 2018*
Approved by Programme Board: *June 2019*
Placed on NNSS website: *to be completed*

EU CHAPPEAU	
QUESTION	**RESPONSE**
1. In how many EU member states has this species been recorded? List them.	Belgium (CABI, 2014) France (CABI, 2014) Italy (CABI, 2014) Portugal (http://invasoras.pt/en/gallery/acacia-melanoxylon-en/) Spain (Sanz-Elorza et al., 2001) United Kingdom (Preston et al, 2002)
2. In how many EU member states has this species currently established populations? List them.	Belgium (CABI, 2014) France (CABI, 2014) Italy (CABI, 2014) Portugal (http://invasoras.pt/en/gallery/acacia-melanoxylon-en/) Spain (Sanz-Elorza et al., 2001) United Kingdom (Preston et al., 2002)
3. In how many EU member states has this species shown signs of invasiveness? List them.	Spain (Sanz-Elorza et al., 2001) Portugal (http://invasoras.pt/en/gallery/acacia-melanoxylon-en/)
4. In which EU Biogeographic areas could this species establish?	Unknown
5. In how many EU Member States could this species establish in the future [given current climate] (including those where it is already established)? List them.	Belgium France Italy Portugal Spain United Kingdom
6. In how many EU member states could this species become invasive in the future [given current climate] (where it is not already established)?	Unknown

SECTION A – Organism Information and Screening		
Stage 1. Organism Information	**RESPONSE** **[chose one entry, delete all others]**	**COMMENT**
1. Identify the organism. Is it clearly a single taxonomic entity and can it be adequately distinguished from other entities of the same rank?	Yes	*Acacia melanoxylon* is a long-lived, fast-growing, nitrogen-fixing evergreen tree that can grow to 15m in cultivation, with cream-yellow flowers in small axillary racemes (Costermans, 1985). The leaves are of two types; the adult leaves are lanceolate and slightly curved whereas the juvenile leaves are 2-pinnate; intermediates also occur. The long seeds pods are often curved or distorted. *A. melanoxylon* is similar to *A. falciformis* (Hickory Wattle) which is also grown for ornament in the British Isles and occurs with it in woods on Tresco (Isles of Scilly). It differs in having undivided adult leaves and inflorescences in the leaf axils and also in terminal panicles. *A. dealbata* (Mimosa) is the most frequently planted *Acacia* in the British Isles but differs in having 2-pinnate leaves and bright yellow flowers.
2. If not a single taxonomic entity, can it be redefined? (if necessary use the response box to re-define the organism and carry on)	N/A	
3. Does a relevant earlier risk assessment exist? (give details of any previous risk assessment)	No	

4. If there is an earlier risk assessment is it still entirely valid, or only partly valid?	No	
5. Where is the organism native?		Tasmania and Southern Australia (Queensland, New South Wales, Victoria).
6. What is the global distribution of the organism (excluding Great Britain)?		*Acacia melanoxylon* has been introduced to eastern Asia (Bhutan, China, India, Japan, Pakistan, Sri Lanka, Thailand), much of Africa, North and South America, Iberia, northwest Europe, Western Australia and New Zealand.
7. What is the distribution of the organism in Great Britain?		*Acacia melanoxylon* was first recorded in South Devon (Blackpool Sands) in 1959 where a small colony still persists with other ornamentals in woodland on a coastal cliff (Lousley, 1961; Smith et al., 2016). When originally discovered the colony was flowering and appeared to be spreading from seed, with seedlings with the distinctive juvenile leaves in evidence. It has also been recorded in woodland on Tresco and St Mary's (Isles of Scilly) where it was first recorded in 1971 and appears to be regenerating by seed, with seedlings reported (French et al., 1999; Parslow & Bennallick, 2017).
8. Is the organism known to be invasive (i.e. to threaten organisms, habitats or ecosystems) anywhere in the world?	Yes	*Acacia melanoxylon* is a fast growing tree which can tolerate a wide range of environmental conditions and fruits prolifically producing very-long lived seeds that can remain viable in the soil for >50 years. The optimal temperature for

		germination is 25°C but it can occur within the range 15-35°C. It produces seeds from a young age and germinates readily following disturbances such as fires. It also spreads very effectively via root suckers. It has been reported as invasive species in South Africa, Argentina, USA (Hawaii, California), Portugal, Spain and New Zealand (CABI, 2014)
9. Describe any known socio-economic benefits of the organism in the risk assessment area.		*Acacia melanoxylon* produces high quality timber for furniture and wood turning products. It has also been used to improve soils (through nitrogen-fixation), as a shelterbelt on agricultural land, and as an ornamental tree in landscaping and home gardens. More rarely it has been used in the suppression of forest weeds, and for firewood and forage for livestock.
Stage 2. Screening Questions		
10. Has this risk assessment been requested by the GB Programme Board? (If uncertain check with the Non-native Species Secretariat)	Yes If yes, go to section B (detailed assessment) If no, got to 10	

SECTION B – Detailed assessment

PROBABILITY OF ENTRY

Important instructions:

- Entry is the introduction of an organism into GB. Not to be confused with spread, the movement of an organism within GB.
- For organisms which are already present in GB, only complete the entry section for current active pathways of entry or if relevant potential future pathways. The entry section need not be completed for organisms which have entered in the past and have no current pathways of entry.

QUESTION	RESPONSE [chose one entry, delete all others]	CONFIDENCE [chose one entry, delete all others]	COMMENT
1.1. How many active pathways are relevant to the potential entry of this organism? (If there are no active pathways or potential future pathways respond N/A and move to the Establishment section)	very few	high	*Acacia melanoxylon* has been introduced for ornament in private and public parks and gardens, such as Tresco Abbey on the Isles of Scilly, where a number of *Acacia* species have been planted (Parslow & Bennallick, 2017). Given the suboptimal climate in GB it is unlikely to be planted for timber, soil improvement or landscaping.
1.2. List relevant pathways through which the organism could enter. Where possible give detail about the specific origins and end points of the pathways. For each pathway answer questions 1.3 to 1.10 (copy and paste additional rows at the end of this section as necessary).	Ornamental planting		*Acacia melanoxylon* can be purchased from a small number of nurseries in southern GB (4 listed on the RHS Plant Finder, 10 May 2018) and is likely to be planted for ornament in the gardens of large houses and estates.
Pathway name:	Ornamental planting		
1.3. Is entry along this pathway intentional (e.g. the organism is imported for trade) or accidental (the	intentional	very high	*Acacia melanoxylon* is only ever likely to be intentionally introduced to GB as an ornamental

organism is a contaminant of imported goods)? (If intentional, only answer questions 1.4, 1.9, 1.10, 1.11)			species.
1.4. How likely is it that large numbers of the organism will travel along this pathway from the point(s) of origin over the course of one year? Subnote: In your comment discuss how likely the organism is to get onto the pathway in the first place.	very unlikely	high	*Acacia melanoxylon* is rarely planted in GB and possibly only in the very mildest parts of the country (extreme southwest England) due to its sensitivity to frost. It is a relatively expensive plant to purchase and is only supplied by a few specialist nurseries.
1.9. How likely is the organism to be able to transfer from the pathway to a suitable habitat or host?	unlikely	medium	Escapes of *Acacia melanoxylon* from plantings are unlikely due to the suboptimal climatic conditions for seed production and growth in GB. At the two sites where it has been reported in the wild it appeared to have been regenerating by seed, with seedlings and juveniles present although it is not known if these were just small suckers from planted specimens.
1.10. Estimate the overall likelihood of entry into GB based on this pathway?	very likely	very high	Planting for ornament is the only likely pathway of entry.
End of pathway assessment, repeat as necessary.			
1.11. Estimate the overall likelihood of entry into GB based on all pathways (comment on the key issues that lead to this conclusion).	very likely	very high	*Acacia melanoxylon* is very rarely planted for ornament in the GB although its availability from ornamental suppliers suggests that there is demand for it and that it is still being planted in private parks and gardens

PROBABILITY OF ESTABLISHMENT

Important instructions:

- For organisms which are already well established in GB, only complete questions 1.15 and 1.21 then move onto the spread section. If uncertain, check with the Non-native Species Secretariat.

QUESTION	RESPONSE	CONFIDENCE	COMMENT
1.12. How likely is it that the organism will be able to establish in GB based on the similarity between climatic conditions in GB and the organism's current distribution?	very likely	high	In its native range *Acacia melanoxlyon* is confined to cool and warm humid oceanic climates with high rainfall (750-1500 mm), mild to warm summers (23-26°C) and mild, relatively frost-free winters (1-10°C) (Costermans, 1985; CABI, 2014). Consequently, much of the climate of the British Isles is unlikely to be suitable except from mild, relatively frost-free areas along the southwestern seaboard. The climate here is similar to parts of northwest Spain where *A. melanoxylon* is well established and invasive (Hernández et al., 2014).
1.13. How likely is it that the organism will be able to establish in GB based on the similarity between other abiotic conditions in GB and the organism's current distribution?	likely	high	In its native range *Acacia melanoxylon* grows best in swampy podzols and alluvia in mountainous regions. However, it can tolerate a very wide range of abiotic conditions and so could potentially become established within relatively mild, frost free regions of GB.
1.14. How likely is it that the organism will become established in protected conditions (in which the environment is artificially maintained, such as wildlife parks, glasshouses, aquaculture facilities, terraria, zoological gardens) in GB? Subnote: gardens are not considered protected conditions	very unlikely	high	*Acacia melanoxylon* is very unlikely to be introduced to protected locations.

1.15. How widespread are habitats or species necessary for the survival, development and multiplication of the organism in GB?	very isolated	high	Suitable conditions of *Acacia melanoxylon* only likely to occur in the extreme southwest of England, in areas free from frost, with humid microclimates and high insolation (e.g. woodlands on south-facing coastal slopes).
1.16. If the organism requires another species for critical stages in its life cycle then how likely is the organism to become associated with such species in GB?	NA	NA	
1.17. How likely is it that establishment will occur despite competition from existing species in GB?	likely	low	The extent to which native or other non-native species would outcompete *A. melanoxylon* in GB habitats is unknown although its behaviour elsewhere in its introduced range suggests that it is likely to establish despite competition from other plant species.
1.18. How likely is it that establishment will occur despite predators, parasites or pathogens already present in GB?	likely	low	As 1.17
1.19. How likely is the organism to establish despite existing management practices in GB?	likely	low	Existing management practices such as burning or clearfelling may promote rather than hinder the establishment of *Acacia melanoxylon*.
1.20. How likely are management practices in GB to facilitate establishment?	likely	medium	*Acacia melanoxylon* is known to regenerate following fire, logging and other soil disturbance (Guldenhuys et al., 1986; Cronk & Fuller, 1995; Weber, 2003); such activities are widespread in coastal regions of the southwest of GB and so could facilitate establishment by stimulating germination.
1.21. How likely is it that biological properties of the organism would allow it to survive eradication campaigns in GB?	very likely	high	*Acacia melanoxylon* produces very long-lived seeds which can survive for over 50 years in the soil (Searle, 1996); it also spreads very effectively via suckers. Both these traits would make it very difficult to control where well established.
1.22. How likely are the biological characteristics of the organism to facilitate its establishment?	likely	medium	The likelihood of establishment is likely to be high due to fast growth, long longevity (over 200

			years), prolific seed production, seed survival in the soil, high germinability, effective vegetative spread (via suckers) and wide ecological amplitude.
1.23. How likely is the capacity to spread of the organism to facilitate its establishment?	likely	medium	The seeds of *Acacia melanoxylon* are thought to be mainly dispersed by birds (attracted by their large red funicles) (Dean et al., 1996) and possibly also by water.
1.24. How likely is the adaptability of the organism to facilitate its establishment?	very likely	medium	*Acacia melanoxylon* is able to grow under a wide range of climatic and biotic conditions in both dry and wet soils although optimum conditions are slightly acidic, saturated soils in humid areas that are relatively free from frosts. This adaptability is likely to aid its establishment in GB which is climatically suboptimal.
1.25. How likely is it that the organism could establish despite low genetic diversity in the founder population?	likely	low	The genetic diversity of introduced populations is unknown although its ability to establish elsewhere in Europe would suggest that this is not an issue for successful establishment. .
1.26. Based on the history of invasion by this organism elsewhere in the world, how likely is to establish in GB? (If possible, specify the instances in the comments box.)	likely	medium	Iberian populations offer the closest comparison to GB (in terms of climate) and the behaviour of *A. melanoxylon* there suggests that conditions are favourable, at least in mild, frost-free areas, although in Spain and Portugal introduction has occurred on a much bigger scale for commercial forestry (Hernandez et al., 2014)
1.27. If the organism does not establish, then how likely is it that transient populations will continue to occur? Subnote: Red-eared Terrapin, a species which cannot re-produce in GB but is established because of continual release, is an example of a transient species.	likely	medium	*Acacia melanoxylon* continues to be planted for ornament on a small-scale in GB and so it is likely that transient populations will continue to occur in the rare event of it escaping from parks and gardens or plantings in wild locations.
1.28. Estimate the overall likelihood of establishment (mention any key issues in the comment box).	very likely	medium	*Acacia melanoxylon* is already established in the wild in GB although it is possibly only surviving

			at present rather than self-regenerating. The climate over most of GB would appear to be suboptimal and so it seems unlikely to become widely established under current climatic conditions.

PROBABILITY OF SPREAD

Important notes:

- Spread is defined as the expansion of the geographical distribution of a pest within an area.

QUESTION	RESPONSE	CONFIDENCE	COMMENT
2.1. How important is the expected spread of this organism in GB by natural means? (Please list and comment on the mechanisms for natural spread.)	minimal	medium	Natural spread of *Acacia melanoxylon* is likely to be limited as most seeds are likely to fall close to parents and vegetative spread will only occur over short distances. A small amount of seed is likely to be dispersed further by birds.
2.2. How important is the expected spread of this organism in GB by human assistance? (Please list and comment on the mechanisms for human-assisted spread.)	minor	medium	The main pathway of introduction is likely to be deliberate planting for ornamental purposes, although this assessed as 'minor' due to the very low frequency of planting in GB.
2.3. Within GB, how difficult would it be to contain the organism?	with some difficulty	medium	It would be relatively easy to eradicate *Acacia melanoxylon* from GB by selectively felling trees in the woodlands where it occurs on the Isles of Scilly and in South Devon. The main difficulty would be treating any regrowth from the buried seedbank, which can be very long-lived, or from suckering roots missed during control operations.
2.4. Based on the answers to questions on the potential for establishment and spread in GB, define the area endangered by the organism.	Humid coastal woodlands and scrub in southwest England	medium	Frost-free areas with high insolation and humid microclimates along southwestern coastlines.
2.5. What proportion (%) of the area/habitat suitable for establishment (i.e. those parts of GB were the species could establish), if any, has already been colonised by the organism?	0-10	high	Only recorded from single woodlands in the Isles of Scilly and in South Devon.
2.6. What proportion (%) of the area/habitat suitable for establishment, if any, do you expect to have been invaded	0-10	very high	It is unlikely to be planted or spread to additional sites over the next five years.

by the organism five years from now (including any current presence)?			
2.7. What other timeframe (in years) would be appropriate to estimate any significant further spread of the organism in Great Britain? (Please comment on why this timeframe is chosen.)	20	medium	20 years given the rarity of planting and spread.
2.8. In this timeframe what proportion (%) of the endangered area/habitat (including any currently occupied areas/habitats) is likely to have been invaded by this organism?	0-10	medium	*Acacia melanoxylon* is unlikely to spread in the future.
2.9. Estimate the overall potential for future spread for this organism in Great Britain (using the comment box to indicate any key issues).	very slowly	very high	As above.

PROBABILITY OF IMPACT

Important instructions:

- When assessing potential future impacts, climate change should not be taken into account. This is done in later questions at the end of the assessment.
- Where one type of impact may affect another (e.g. disease may also cause economic impact) the assessor should try to separate the effects (e.g. in this case note the economic impact of disease in the response and comments of the disease question, but do not include them in the economic section).
- Note questions 2.10-2.14 relate to economic impact and 2.15-2.21 to environmental impact. Each set of questions starts with the impact elsewhere in the world, then considers impacts in GB separating known impacts to date (i.e. past and current impacts) from potential future impacts. Key words are in bold for emphasis.

QUESTION	RESPONSE	CONFIDENCE	COMMENTS
2.10. How great is the economic loss caused by the organism within its existing geographic range **excluding GB**, including the cost of any current management?	moderate	medium	*Acacia melanoxylon* can have negative economic impacts where it invades the understorey of commercial forestry (e.g. *Eucalyptus* and pine plantations) and due to the high cost of control (Geldenhuys, 1986; Hernandez et al., 2014). However, in South Africa it is generally viewed as a positive species within commercial forestry due to its high timber value and the services it performs such as acting as a nurse tree during the restoration of native vegetation.
2.11. How great is the economic cost of the organism **currently** in GB **excluding management** costs (include any past costs in your response)?	minimal	very high	No costs known.
2.12. How great is the economic cost of the organism likely to be **in the future** in GB **excluding management** costs?	minimal	high	The economic costs of are likely to be minimal as it is unlikely to invade commercial forestry plantations and large-scale control is unlikely to be necessary due to climatic constraints.
2.13. How great are the economic costs **associated with managing** this organism **currently** in GB (include any past costs in your response)?	minimal	very high	No costs known.

2.14. How great are the economic costs **associated with managing** this organism likely to be **in the future** in GB?	minimal	high	Costs of management (eradication, control) are likely to be minimal assuming no further planting or spread.
2.15. How important is environmental harm caused by the organism within its existing geographic range **excluding GB**?	moderate	high	The direct environmental damage caused by *Acacia melanoxylon* in Iberia, South Africa and Chile includes displacement of native vegetation (due to competition for water and light) (Rutherford et al., 1986; Weber, 2003), increased windthrow (disturbance) in native forests (Geldenhuys (1986), and changes to nutrient cycling (Weber, 2003). It has also been shown to be phytotoxic to some native grass and crop species in Spain (Hussain et al., 2011a,b).
2.16. How important is the impact of the organism on biodiversity (e.g. decline in native species, changes in native species communities, hybridisation) **currently** in GB (include any past impact in your response)?	minimal	very high	The impact of the organism in GB is unknown but is likely to be minor due to its rarity and the artificial nature of the habitats where it is currently established.
2.17. How important is the impact of the organism on biodiversity likely to be in the **future** in GB?	minimal	high	The environmental impacts are likely to be minimal assuming no further planting or spread.
2.18. How important is alteration of ecosystem function (e.g. habitat change, nutrient cycling, trophic interactions), including losses to ecosystem services, caused by the organism **currently** in GB (include any past impact in your response)?	minimal	high	Ecosystem changes are likely to be minimal assuming no further planting or spread.
2.19. How important is alteration of ecosystem function (e.g. habitat change, nutrient cycling, trophic interactions), including losses to ecosystem services, caused by the organism likely to be in GB in the **future**?	minimal	high	Ecosystem changes are likely to be minimal in the future assuming no further planting or spread.
2.20. How important is decline in conservation status (e.g. sites of nature conservation value, WFD classification) caused by the organism **currently** in GB?	minimal	high	None of the established populations have affected conservation sites.

2.21. How important is decline in conservation status (e.g. sites of nature conservation value, WFD classification) caused by the organism likely to be in the **future** in GB?	minimal	high	Impacts on conservation value are likely to be minimal assuming no further planting or spread.
2.22. How important is it that genetic traits of the organism could be carried to other species, modifying their genetic nature and making their economic, environmental or social effects more serious?	minimal	low	*Acacia melanoxylon* grows with at least six other introduced *Acacia* species on the Isles of Scilly (*A. dealbata, A. falciformis, A. longifolia, A. saligna, A. verticillata*) (Parslow & Bennallick, 2017) but the potential for genetic exchange (through hybridisation, introgression) would appear to be low.
2.23. How important is social, human health or other harm (not directly included in economic and environmental categories) caused by the organism within its existing geographic range?	minimal	high	None known.
2.24. How important is the impact of the organism as food, a host, a symbiont or a vector for other damaging organisms (e.g. diseases)?	minimal	high	None known.
2.25. How important might other impacts not already covered by previous questions be resulting from introduction of the organism? (specify in the comment box)	NA	high	None known.
2.26. How important are the expected impacts of the organism despite any natural control by other organisms, such as predators, parasites or pathogens that may already be present in GB?	minimal	medium	No natural enemies have been reported on *Acacia melanoxylon* and so the impacts are as stated above.
2.27. Indicate any parts of GB where economic, environmental and social impacts are particularly likely to occur (provide as much detail as possible).	[insert text + attach map if possible]	medium	As stated above the impacts of *Acacia melanoxylon* are likely to be minimal given the rarity of introduction and climatic restrictions. The only areas that the species is likely to occur in the future is in coastal areas in the extreme south and west of England.

RISK SUMMARIES			
	RESPONSE	**CONFIDENCE**	**COMMENT**
Summarise Entry	very likely	high	*Acacia melanoxylon* has already been introduced to GB for ornamental purposes.
Summarise Establishment	very likely	high	*Acacia melanoxylon* is already established in two sites in GB but is unlikely to become more widely established due to the rarity of introduction and climatic limitations.
Summarise Spread	very slowly	high	*Acacia melanoxylon* appears to spread very slowly by suckers in GB; seed dispersal may occur but again this is only likely to have occurred very close to parent trees.
Summarise Impact	minimal	medium	The overall impact is likely to be minimal given the rarity of introduction and lack of spread.
Conclusion of the risk assessment	low	medium	

Additional questions are on the following page ...

ADDITIONAL QUESTIONS - CLIMATE CHANGE			
3.1. What aspects of climate change, if any, are most likely to affect the risk assessment for this organism?	Reduced frequency of ground frosts	low	A reduction in ground frosts during warmer winters may increase the climate space for *Acacia melanoxylon* in southern and western coastal regions. Higher temperatures during the summer may also improve overall growth and seed production.
3.2. What is the likely timeframe for such changes?	20 years	low	These changes are only likely to take place over many decades due to the slow growth and longevity of individual trees.
3.3. What aspects of the risk assessment are most likely to change as a result of climate change?	Increase in establishment	low	Climate change is likely to increase the establishment and regenerative ability of *Acacia melanoxylon* in GB.
ADDITIONAL QUESTIONS - RESEARCH			
4.1. If there is any research that would significantly strengthen confidence in the risk assessment please summarise this here.	Regenerative ability	high	Research is needed to assess levels of regeneration on the Isles of Scilly, including the extent to which *Acacia melanoxylon* is spreading by suckers and/or seed.

Please provide a reference list on the following page ...

REFERENCES:

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