

**Family:** *Cupressaceae*

**Taxon:** *Cupressus x leylandii*

**Synonym:** *Callitropsis x leylandii* (A. B. Jacks. & Dallim. **Common Name:** Leyland-cypress  
*x Cupressocyparis leylandii* (A. B. Jacks. & D  
*x Cuprocyparis leylandii* (A. B. Jacks. & Dall.

Questionnaire :	current 20090513	Assessor:	Patti Clifford	Designation: L
Status:	Assessor Approved	Data Entry Person:	Patti Clifford	WRA Score -7
101	Is the species highly domesticated?		y=-3, n=0	y
102	Has the species become naturalized where grown?		y=1, n=-1	n
103	Does the species have weedy races?		y=1, n=-1	n
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"		(0-low; 1-intermediate; 2-high) (See Appendix 2)	Low
202	Quality of climate match data		(0-low; 1-intermediate; 2-high) (See Appendix 2)	Low
203	Broad climate suitability (environmental versatility)		y=1, n=0	y
204	Native or naturalized in regions with tropical or subtropical climates		y=1, n=0	n
205	Does the species have a history of repeated introductions outside its natural range?		y=-2, ?=-1, n=0	y
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205	n
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)	n
303	Agricultural/forestry/horticultural weed		n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed		n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed		n=0, y = 1*multiplier (see Appendix 2)	n
401	Produces spines, thorns or burrs		y=1, n=0	n
402	Allelopathic		y=1, n=0	
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	
405	Toxic to animals		y=1, n=0	n
406	Host for recognized pests and pathogens		y=1, n=0	
407	Causes allergies or is otherwise toxic to humans		y=1, n=0	n
408	Creates a fire hazard in natural ecosystems		y=1, n=0	
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0	
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0	y

411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets	y=1, n=0	
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	
602	Produces viable seed	y=1, n=-1	
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	y
705	Propagules water dispersed	y=1, n=-1	
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	
801	Prolific seed production (>1000/m2)	y=1, n=-1	
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: L

WRA Score -7

## Supporting Data:

101	2006. Adams, R.P./Rushforth, K./Trimble, S.N.. The origins of Leylands's cypress ( <i>xcupressocyparis Leylandii</i> ) based on DNA data. <i>Phytologia</i> . 88: 1-8.	[Is the species highly domesticated? Yes] <i>Cupressus x leylandii</i> is a putative, spontaneous hybrid between <i>Chamaecyparis nootkatensis</i> and <i>Cupressus macrocarpa</i> . In 1888, some seeds obtained from Ch. <i>Nootkatensis</i> ( <i>Nootka cypress</i> ) growing at Leighton Hall in the United Kingdom, were sown and six of the plantlets raised differed in foliage from the others. Mr. C. J. Leyland, took the 6 plantlets (called clones in some literature) and planted these at his home in Haggerston Castle. These plantlets were later described as intergeneric hybrids, <i>xCupressocyparis leylandii</i> Dallimore. In 1911, Capt. J.M. Naylor planted seeds from a <i>C. macrocarpa</i> tree that grew in proximity to a Ch. <i>Nootkatensis</i> tree. Two plants were unusual and re-planted, these plants became known as "Leighton Green" and "Naylor's blue. A series of the cultivars are derived from Ch. <i>Nootkatensis</i> and <i>C. macrocarpa</i> trees and as sports on older cultivars. [ <i>C. xleylandii</i> is only known from cultivation; propagation by cuttings]
102	2012. WRA Specialist. Personal Communication.	[Has the species become naturalized where grown? No] No evidence.
103	2012. WRA Specialist. Personal Communication.	[Does the species have weedy races? No] No evidence.
201	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"? 0 - Low] <i>Cupressus x leylandii</i> is a hybrid that arose from spontaneous intergeneric crossings between <i>Cupressus macrocarpa</i> ( <i>Monterey cypress</i> -native to Monterey, California) and <i>Chamaecyparis nootkatensis</i> ( <i>Alaska cedar</i> - native to United States - Alaska, Washington, Oregon, California; Canada - British Columbia).
202	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Quality of climate match data? 0 - Low] <i>Cupressus x leylandii</i> is a hybrid that arose from spontaneous intergeneric crossings between <i>Cupressus macrocarpa</i> ( <i>Monterey cypress</i> -native to Monterey, California) and <i>Chamaecyparis nootkatensis</i> ( <i>Alaska cedar</i> - native to United States - Alaska, Washington, Oregon, California; Canada - British Columbia).
203	1994. Gilman, E.F./Watson, D.G.. <i>x Cupressocyparis leylandii</i> Leyland cypress Fact sheet ST-671. USDA Forest Service, <a href="http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf">http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf</a>	[Broad climate suitability (environmental versatility)? Yes] USDA Hardiness Zones: 6-10A.
203	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Broad climate suitability (environmental versatility)?] Climatic amplitude (estimates) - Altitude range: 0 - 350 m - Mean annual rainfall: 450 - 1800 mm - Rainfall regime: bimodal; uniform - Dry season duration: 0 - 6 months - Mean annual temperature: 6 - 15°C - Mean maximum temperature of hottest month: 13 - 24°C - Mean minimum temperature of coldest month: 2 - 12°C - Absolute minimum temperature: > -20°C
203	2012. Missouri Botanical Garden. Kemper Center for Home Gardening PlantFinder - <i>Cupressus x leylandii</i> . Missouri Botanical Garden, <a href="http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a161/x-cupressocyparis-le">http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a161/x-cupressocyparis-le</a>	[Broad climate suitability (environmental versatility)? Yes] USDA Hardiness Zones: 6-10.
204	2007. Randall, R.. Global Compendium of Weeds - <i>X Cupressocyparis leylandii</i> ( <i>Cupressaceae</i> ). <a href="http://www.hear.org/gcw/species/cupressocyparis_leylandii/">http://www.hear.org/gcw/species/cupressocyparis_leylandii/</a>	[Native or naturalized in regions with tropical or subtropical climates? No] No evidence of naturalization.
205	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Does the species have a history of repeated introductions outside its natural range? Yes] Introduced to: Belgium, France, Germany, Hungary, Ireland, Italy, Netherlands, Poland, Spain, Switzerland, United Kingdom, Korea, Republic of, Canada, British Columbia, United States - Alabama, California, Georgia, New Jersey, New York, North Carolina, Oregon, South Carolina, Texas, Washington, Australia, New South Wales, South Australia, Tasmania, Victoria, New Zealand.

301	2007. Randall, R.. Global Compendium of Weeds - X <i>Cupressocyparis leylandii</i> (Cupressaceae). <a href="http://www.hear.org/gcw/species/cupressocyparis_leylandii/">http://www.hear.org/gcw/species/cupressocyparis_leylandii/</a>	[Naturalized beyond native range? No] No evidence of naturalization.
302	2007. Randall, R.. Global Compendium of Weeds - X <i>Cupressocyparis leylandii</i> (Cupressaceae). <a href="http://www.hear.org/gcw/species/cupressocyparis_leylandii/">http://www.hear.org/gcw/species/cupressocyparis_leylandii/</a>	[Garden/amenity/disturbance weed? No] No evidence of invasiveness.
303	2007. Randall, R.. Global Compendium of Weeds - X <i>Cupressocyparis leylandii</i> (Cupressaceae). <a href="http://www.hear.org/gcw/species/cupressocyparis_leylandii/">http://www.hear.org/gcw/species/cupressocyparis_leylandii/</a>	[Agricultural/forestry/horticultural weed? No] No evidence of invasiveness.
304	2007. Randall, R.. Global Compendium of Weeds - X <i>Cupressocyparis leylandii</i> (Cupressaceae). <a href="http://www.hear.org/gcw/species/cupressocyparis_leylandii/">http://www.hear.org/gcw/species/cupressocyparis_leylandii/</a>	[Environmental weed? No] No evidence of invasiveness.
305	2008. Starr, F./Starr, K./Loope, L.L.. New plant records from the Hawaiian Archipelago. Bishop Museum Occasional Papers. 100: 44-49.	[Congeneric weed? No ] <i>Cupressus macrocarpa</i> has naturalized on East Maui, Haleakala Ranch, where it is spreading in pastures and gulches from plantations.
305	2012. California Invasive Plant Council. <i>Cupressus macrocarpa</i> (Monterey cypress). <a href="http://www.cal-ipc.org/ip/management/plant_profiles/Cupressus_macrocarpa.php">http://www.cal-ipc.org/ip/management/plant_profiles/Cupressus_macrocarpa.php</a>	[Congeneric weed? No ] <i>Cupressus macrocarpa</i> is considered moderately invasive in California. However no mention of control efforts or environmental impacts.
401	1994. Gilman, E.F./Watson, D.G.. x <i>Cupressocyparis leylandii</i> Leyland cypress Fact sheet ST-671. USDA Forest Service, <a href="http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf">http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf</a>	[Produces spines, thorns or burrs? No] Trunk/bark/branches: grow mostly upright and will not droop; not particularly showy; should be grown with a single leader; no thorns.
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2010. Nickrent, D.. The parasitic plant connection. Department of Plant Biology, Southern Illinois University, Carbondale <a href="http://www.parasiticplants.siu.edu/index.html">http://www.parasiticplants.siu.edu/index.html</a>	[Parasitic? No] Cupressaceae
404	2012. WRA Specialist. Personal Communication.	[Unpalatable to grazing animals? Unknown]
405	2004. Perry, J.E./Richard, P.. Nursery plants that may be harmful to Camelids. The Camelid Quaterly. <a href="http://www.llamas-alpacas.com/ccq/editorials/webpages/CQ1204PoisonousPlants.pdf">http://www.llamas-alpacas.com/ccq/editorials/webpages/CQ1204PoisonousPlants.pdf</a>	[Toxic to animals? No] It has been demonstrated that <i>Cupressus x leylandii</i> is not toxic to Camelids.
405	2012. National Center for Biotechnology Information. PubMed. <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	[Toxic to animals? No] No evidence.
405	2012. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Toxic to animals? No] No evidence.
406	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Host for recognized pests and pathogens?] "Leyland cypress is usually considered to be very healthy. However, <i>Seiridium cardinale</i> , generally the most severe of the fungal cankers attacking a wide range of cypress species, is becoming more apparent in Europe, North America and Australasia. Although Leyland cypress is considered more resistant to the disease, with possible clonal differences, it is not immune and caution is required in site selection, avoiding areas where the disease is endemic."
407	2012. National Center for Biotechnology Information. PubMed. <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	[Causes allergies or is otherwise toxic to humans? No] No evidence.

407	2012. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Causes allergies or is otherwise toxic to humans? No] No evidence.
408	2012. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems? Unknown] Only cultivated.
409	1994. Gilman, E.F./Watson, D.G.. x <i>Cupressocyparis leylandii</i> Leyland cypress Fact sheet ST-671. USDA Forest Service, <a href="http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf">http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf</a>	[Is a shade tolerant plant at some stage of its life cycle?] Tree grows in part shade, part sun; full sun.
409	2003. Tenenbaum, F.. Taylor's encyclopedia of garden plants. Houghton Mifflin Harcourt, New York, NY	[Is a shade tolerant plant at some stage of its life cycle?] Full sun or partial shade.
409	2012. Missouri Botanical Garden. Kemper Center for Home Gardening PlantFinder - <i>Cupressus x leylandii</i> . Missouri Botanical Garden, <a href="http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a161/x-cupressocyparis-le">http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a161/x-cupressocyparis-le</a>	[Is a shade tolerant plant at some stage of its life cycle?] Full sun.
410	1994. Gilman, E.F./Watson, D.G.. x <i>Cupressocyparis leylandii</i> Leyland cypress Fact sheet ST-671. USDA Forest Service, <a href="http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf">http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf</a>	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Soil tolerances: clay; loam; sand; acidic; alkaline; well-drained.
410	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Soil descriptors - Soil texture: light; medium; heavy - Soil drainage: free - Soil reaction: acid; neutral; alkaline - Special soil tolerances: infertile
411	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Climbing or smothering growth habit? No] <i>Cupressus leylandii</i> is a vigorous hybrid tree growing to 18-21 m
412	2012. Missouri Botanical Garden. Kemper Center for Home Gardening PlantFinder - <i>Cupressus x leylandii</i> . Missouri Botanical Garden, <a href="http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a161/x-cupressocyparis-le">http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a161/x-cupressocyparis-le</a>	[Forms dense thickets?] Planted as fast-growing hedges and windbreaks.
412	2012. WRA Specialist. Personal Communication.	[Forms dense thickets? Unknown] Only known from cultivation.
501	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Aquatic? No] Terrestrial; tree.
502	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Grass? No] Tree; Cupressaceae.
503	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Nitrogen fixing woody plant? No] Cupressaceae.
503	2010. www.nationmaster.com. Encyclopedia Nitrogen fixation. Nationmaster.com, <a href="http://www.nationmaster.com/encyclopedia/Nitrogen-fixation">http://www.nationmaster.com/encyclopedia/Nitrogen-fixation</a>	[Nitrogen fixing woody plant? No] Cupressaceae.
504	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] Tree; woody.
601	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Evidence of substantial reproductive failure in native habitat? NA] Only known in cultivation.
602	1926. Jackson, A.B./Dallimore, W.. A new hybrid conifer. Bulletin of Miscellaneous Information (Royal Gardens, Kew). 1926: 113-115.	[Produces viable seed? ] According to Jackson and Dalimore (1926), the F1 hybrids ( <i>Cupressus x leylandii</i> ) were fertile and produced F2 hybrids. An attempt at making hybrids from the F2 hybrids was unsuccessful.
602	2006. Hinesley, L.E./Blazich, F.A./Derby, S.A.. Rooting softwood cuttings of Leyland cypress outdoors under shade. Propagation. 51: 394-395. <a href="http://www.sna.org/Resources/Documents/06_resprocsec08.pdf">http://www.sna.org/Resources/Documents/06_resprocsec08.pdf</a>	[Produces viable seed? ] <i>Cupressus x leylandii</i> is a sterile hybrid. Leyland cypress is propagated vegetatively by stem cuttings.

602	2011. Armitage, J.. The fertility of Leyland cypress. The Plantsman. <a href="http://www.rhs.org.uk/Plants/RHS-Publications/Journals/The-Plantsman/2011-issues/December/The-fertility-of-Leyland-cypress">http://www.rhs.org.uk/Plants/RHS-Publications/Journals/The-Plantsman/2011-issues/December/The-fertility-of-Leyland-cypress</a>	[Produces viable seed? ] James Armitage (2011) did a survey of the relevant literature on the fertility of <i>Cupressus x leylandii</i> and there is a lack of consensus. The few experiments producing seeds from <i>C. x leylandii</i> were possibly invalidated by the presence of nearby <i>Cupressus</i> species. Conifer experts consulted were unable to provide a definitive answer.
602	2012. Kew Royal Botanic Gardens. Leyland cypress x <i>Cupressocyparis leylandii</i> . <a href="http://apps.kew.org/trees/?page_id=142">http://apps.kew.org/trees/?page_id=142</a>	[Produces viable seed? No ] Like many hybrids, <i>leylandii</i> is sterile, as its parents are too genetically dissimilar for it to produce its own seeds. Flowers are rarely produced and even then are not always that noticeable, while its cones are also small and infrequent.
602	2012. Missouri Botanical Garden. Kemper Center for Home Gardening PlantFinder - <i>Cupressus x leylandii</i> . Missouri Botanical Garden, <a href="http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a161/x-cupressocyparis-le">http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a161/x-cupressocyparis-le</a>	[Produces viable seed? ] Seed produced is viable, but may not be true to the mother plant.
603	2012. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2012. WRA Specialist. Personal Communication.	[Self-compatible or apomictic? Unknown]
605	2009. Williams, C.G.. Conifer reproductive biology. Springer, New York	[Requires specialist pollinators? No] Conifer pollination is anemophilous. [distributed by wind]
606	1994. Gilman, E.F./Watson, D.G.. x <i>Cupressocyparis leylandii</i> Leyland cypress Fact sheet ST-671. USDA Forest Service, <a href="http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf">http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf</a>	[Reproduction by vegetative fragmentation? No] Propagation is from cuttings of side growths.
606	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Reproduction by vegetative fragmentation? No] Propagation has been by cuttings, giving rise to a number of clones, the more distinguishable of which have been given cultivar names (including Leighton Green, Haggerston Grey, Naylor's Blue and Castlewellan Gold). Cuttings have been widely distributed within the world's temperate zones.
701	2006. Hinesley, L.E./Blazich, F.A./Derby, S.A.. Rooting softwood cuttings of Leyland cypress outdoors under shade. Propagation. 51: 394-395. <a href="http://www.sna.org/Resources/Documents/06resprocsec08.pdf">http://www.sna.org/Resources/Documents/06resprocsec08.pdf</a>	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] Propagation is by stem cuttings. [Question as to whether seeds are viable.]
702	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Propagules dispersed intentionally by people? Yes] Introduced to: Belgium, France, Germany, Hungary, Ireland, Italy, Netherlands, Poland, Spain, Switzerland, United Kingdom, Korea, Republic of, Canada, British Columbia, United States - Alabama, California, Georgia, New Jersey, New York, North Carolina, Oregon, South Carolina, Texas, Washington, Australia, New South Wales, South Australia, Tasmania, Victoria, New Zealand.
703	2012. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No] No evidence of produce contamination.
704	1926. Jackson, A.B./Dallimore, W.. A new hybrid conifer. Bulletin of Miscellaneous Information (Royal Gardens, Kew). 1926: 113-115.	[Propagules adapted to wind dispersal? Yes] "Seeds about 5 on each scale, flattened, including the conspicuous wing broadly ovate in outline, with tubercles like those of <i>C. macrocarpa</i> , about 1/5 in. in their widest diameter."
704	2000. Greeves. United States Patent Greeves Patent Number 11,217. Patent Development Services Inc., <a href="http://www.google.com/patents?hl=en&amp;lr=&amp;vid=USPATPP11217&amp;id=56YEAAAEEBAJ&amp;oi=fnd&amp;dq=cupressus+x+leylandii+%2B+%22seed%22&amp;printsec=abstract#v=onepage&amp;q=cupr">http://www.google.com/patents?hl=en&amp;lr=&amp;vid=USPATPP11217&amp;id=56YEAAAEEBAJ&amp;oi=fnd&amp;dq=cupressus+x+leylandii+%2B+%22seed%22&amp;printsec=abstract#v=onepage&amp;q=cupr</a>	[Propagules adapted to wind dispersal? Yes] The <i>Cupressus x leylandii</i> variety named Grellive produces samaras. This variety would have wind-dispersed seed. The seed is not true to the parent plant.
704	2012. Kew Royal Botanic Gardens. Leyland cypress x <i>Cupressocyparis leylandii</i> . <a href="http://apps.kew.org/trees/?page_id=142">http://apps.kew.org/trees/?page_id=142</a>	[Propagules adapted to wind dispersal?] Like many hybrids, <i>leylandii</i> is sterile, as its parents are too genetically dissimilar for it to produce its own seeds. Flowers are rarely produced and even then are not always that noticeable, while its cones are also small and infrequent.
705	2006. Hinesley, L.E./Blazich, F.A./Derby, S.A.. Rooting softwood cuttings of Leyland cypress outdoors under shade. Propagation. 51: 394-395. <a href="http://www.sna.org/Resources/Documents/06resprocsec08.pdf">http://www.sna.org/Resources/Documents/06resprocsec08.pdf</a>	[Propagules water dispersed? ] <i>Cupressus x leylandii</i> is a sterile hybrid. Leyland cypress is propagated vegetatively by stem cuttings.

705	2012. Kew Royal Botanic Gardens. Leyland cypress x <i>Cupressocyparis leylandii</i> . <a href="http://apps.kew.org/trees/?page_id=142">http://apps.kew.org/trees/?page_id=142</a>	[Propagules water dispersed? ] Like many hybrids, <i>leylandii</i> is sterile, as its parents are too genetically dissimilar for it to produce its own seeds. Flowers are rarely produced and even then are not always that noticeable, while its cones are also small and infrequent.
705	2012. WRA Specialist. Personal Communication.	[Propagules water dispersed? Unknown]
706	2006. Hinesley, L.E./Blazich, F.A./Derby, S.A.. Rooting softwood cuttings of Leyland cypress outdoors under shade. Propagation. 51: 394-395. <a href="http://www.sna.org/Resources/Documents/06/resprocsec08.pdf">http://www.sna.org/Resources/Documents/06/resprocsec08.pdf</a>	[Propagules bird dispersed? No] <i>Cupressus x leylandii</i> is a sterile hybrid. Leyland cypress is propagated vegetatively by stem cuttings.
706	2012. Kew Royal Botanic Gardens. Leyland cypress x <i>Cupressocyparis leylandii</i> . <a href="http://apps.kew.org/trees/?page_id=142">http://apps.kew.org/trees/?page_id=142</a>	[Propagules bird dispersed? No] Like many hybrids, <i>leylandii</i> is sterile, as its parents are too genetically dissimilar for it to produce its own seeds. Flowers are rarely produced and even then are not always that noticeable, while its cones are also small and infrequent.
707	1926. Jackson, A.B./Dallimore, W.. A new hybrid conifer. Bulletin of Miscellaneous Information (Royal Gardens, Kew). 1926: 113-115.	[Propagules dispersed by other animals (externally)? No] "Seeds about 5 on each scale, flattened, including the conspicuous wing broadly ovate in outline, with tubercles like those of <i>C. macrocarpa</i> , about 1/5 in. in their widest diameter."
707	2012. Kew Royal Botanic Gardens. Leyland cypress x <i>Cupressocyparis leylandii</i> . <a href="http://apps.kew.org/trees/?page_id=142">http://apps.kew.org/trees/?page_id=142</a>	[Propagules dispersed by other animals (externally)? No] <i>Cupressus x leylandii</i> is a sterile hybrid. Leyland cypress is propagated vegetatively by stem cuttings.
708	2012. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown]
801	2006. Hinesley, L.E./Blazich, F.A./Derby, S.A.. Rooting softwood cuttings of Leyland cypress outdoors under shade. Propagation. 51: 394-395. <a href="http://www.sna.org/Resources/Documents/06/resprocsec08.pdf">http://www.sna.org/Resources/Documents/06/resprocsec08.pdf</a>	[Prolific seed production (>1000/m2)? No] "Like many hybrids, <i>leylandii</i> is sterile, as its parents are too genetically dissimilar for it to produce its own seeds. Flowers are rarely produced and even then are not always that noticeable, while its cones are also small and infrequent."
801	2012. WRA Specialist. Personal Communication.	[Prolific seed production (>1000/m2)? Unknown]
802	2006. Hinesley, L.E./Blazich, F.A./Derby, S.A.. Rooting softwood cuttings of Leyland cypress outdoors under shade. Propagation. 51: 394-395. <a href="http://www.sna.org/Resources/Documents/06/resprocsec08.pdf">http://www.sna.org/Resources/Documents/06/resprocsec08.pdf</a>	[Evidence that a persistent propagule bank is formed (>1 yr)? ] <i>Cupressus x leylandii</i> is a sterile hybrid. Leyland cypress is propagated vegetatively by stem cuttings.
802	2012. WRA Specialist. Personal Communication.	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown]
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown]
804	1994. Gilman, E.F./Watson, D.G.. x <i>Cupressocyparis leylandii</i> Leyland cypress Fact sheet ST-671. USDA Forest Service, <a href="http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf">http://hort.ufl.edu/database/documents/pdf/tree_fact_sheets/cupleya.pdf</a>	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] <i>Cupressus x leylandii</i> is surprisingly tolerant of severe pruning, recovering nicely from even severe topping (although this is not recommended), even when half the top is removed.
804	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Its uniformity and rate of growth, branchiness and retention of foliage to ground level even with repeated trimming makes Leyland cypress very suitable for hedges and shelterbelts, in appropriate situations. Open-grown trees exhibit phenotypic plasticity in crown form, the extent depending on clone, but which can vary from narrowly columnar to broad conic."
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

## **Summary of Risk Traits**

### **Low Risk Traits**

- Highly domesticated species (cultivated only; propagation by cuttings)
- Not naturalized or invasive elsewhere
- No spines, thorns, burrs (easier management)
- Not toxic
- Not a vine, aquatic species, grass, or geophyte
- Doesn't fix nitrogen
- Doesn't reproduce through vegetative fragmentation
- Limited dispersal mechanisms

### **High Risk Traits**

- Broad environmental tolerance
- Wide soil tolerance
- Wind dispersed pollen
- Tolerates severe pruning