Supplement 1. Sources of information on wood properties, tree mass and taper values used to predict tree sway frequencies.

Table S1. Mean values of modulus of elasticity (E_g) and density (ϱ_g) of green wood taken from the literature. The range of values found is given in square brackets.

Tree species	E_g (GPa)	ϱ_g (kg/m^3)	References
Corsican pine (*Pinus nigra*)	8.70 [7.00-10.40]	657 [609-705]	[1]
Douglas-fir (*Pseudotsuga menziesii*)	9.83 [8.30-10.40]	583 [450-673]	[1,2]
Lodgepole pine (*Pinus contorta*)	6.90 [6.40-7.40]	487 [380-593]	[1,2]
Norway spruce (Picea abies)	6.23 [6.10-6.30]	598 [497-800]	[1,3]
Red pine (*Pinus resinosa*)	8.80	410	[2]
Scots pine (*Pinus sylvestris*)	7.33 [7.00-7.70]	700 [625-800]	[1,3]
Sitka spruce (*Picea sitchensis*)	7.53 [7.90-8.90]	447 [330-529]	[1,2]
White spruce (*Picea glauca*)	7.40	466 [370-561]	[2,4]
Red maple (*Acer rubrum*)	9.60	524 [490-558]	[2,5]
Shagbark hickory (*Carya ovata*)	10.80	649 [640-658]	[2,5]
Lime (*Tilia europaea*)	11.70	530	[6]
Red oak (*Quercus rubra*)	9.90 [9.30-10.50]	665 [560-865]	[2,5]
Sugar maple (*Acer saccharum*)	10.70	560	[2]

Table S2. Mean values of tree taper and the ratio of crown mass to stem mass (Wc/Ws) obtained from the literature. The range of values found is given in square brackets.

Tree species	Taper	Wc/Ws	References
Corsican pine (*Pinus nigra*)	0.85	0.34 [0.17-0.51]	[7–9]
Douglas-fir (*Pseudotsuga menziesii*)	0.97	0.16 [0.12-0.18]	[10–12]
Lodgepole pine (*Pinus contorta*)	0.83	0.33 [0.26-0.41]	[10,13,14]
Norway spruce (*Picea abies*)	0.90	0.32 [0.12-0.50]	[3,15,16]
Red pine (*Pinus resinosa*)	0.81	0.22 [0.12-0.31]	[10,17,18]
Scots pine (*Pinus sylvestris*)	0.90	0.29 [0.28-0.30]	[3,13,19]
Sitka spruce (*Picea sitchensis*)	0.84	0.50 [0.19-0.74]	[10,19–21]
White spruce (*Picea glauca*)	0.91	0.33	[10,22]
Red maple (*Acer rubrum*)	0.67 [0.59-0.74]	0.22 [0.16-0.29]	[10,23,24]
Shagbark hickory (*Carya ovata*)	0.76 [0.69-0.83]	0.39	[5,23,24]
Lime (*Tilia europaea*)	0.84 [0.79-0.90]*	0.18 [0.17-0.20]	[23–25]
Red oak (*Quercus rubra*)	0.75 [0.72-0.79]	0.32	[5,23,24]
Sugar maple (*Acer saccharum*)	0.79	0.18	[10,24]

*taper data for European beech (*Fagus sylvatica*) were used as no data could be found for *Tilia europaea*

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