APPENDIX 10.2

Underwater Noise Model results

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PTS	Permanent Threshold Shift, the component of hearing absolute threshold shift for a given listener is increased through noise exposure that shows no recovery with time after the apparent cause has been removed.
SEL	Sound Exposure Level, a measure of the sound exposure in decibels. On this scale 0db corresponds to a steady sound pressure whose root mean square frequency-weighted sound pressure equals the reference pressure (1µPa underwater), persisting for a reference time of 1 second. Sound Exposure level can be applied to single events, as well as to noise of a continuing character.
SPL	Sound Pressure Level, at a given point is defined as SPL = $10\log10(p_{rms}/p_{ref})2$
TTS	Temporary Threshold Shift, the component of hearing absolute threshold shift for a given listener is increased through noise exposure that shows a recovery with time after the apparent cause has been removed. Recovery usually occurs within a period ranging from seconds to hours.

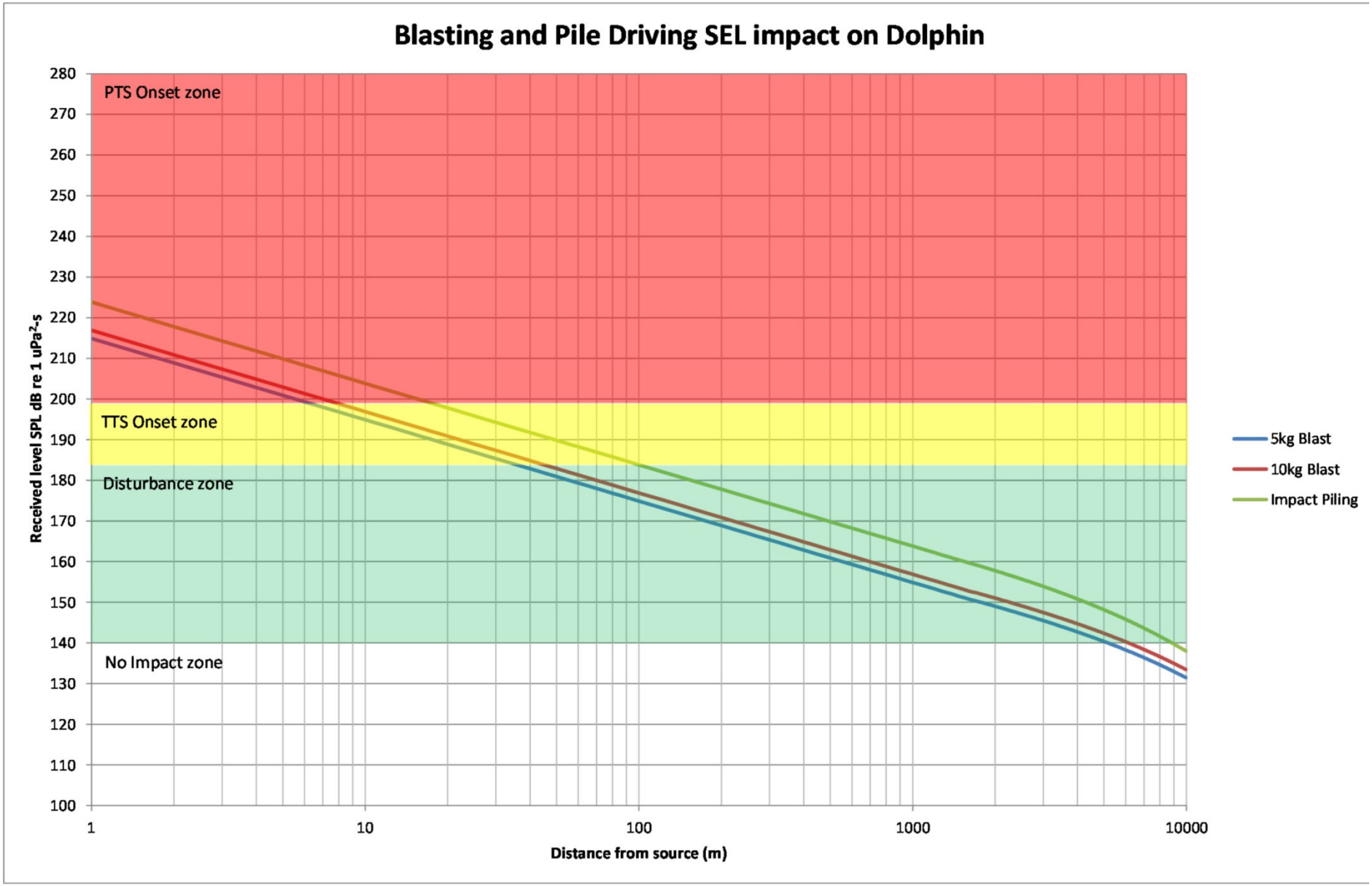

Figure 1 - Blasting and Pile Driving SEL impact on Dolphin

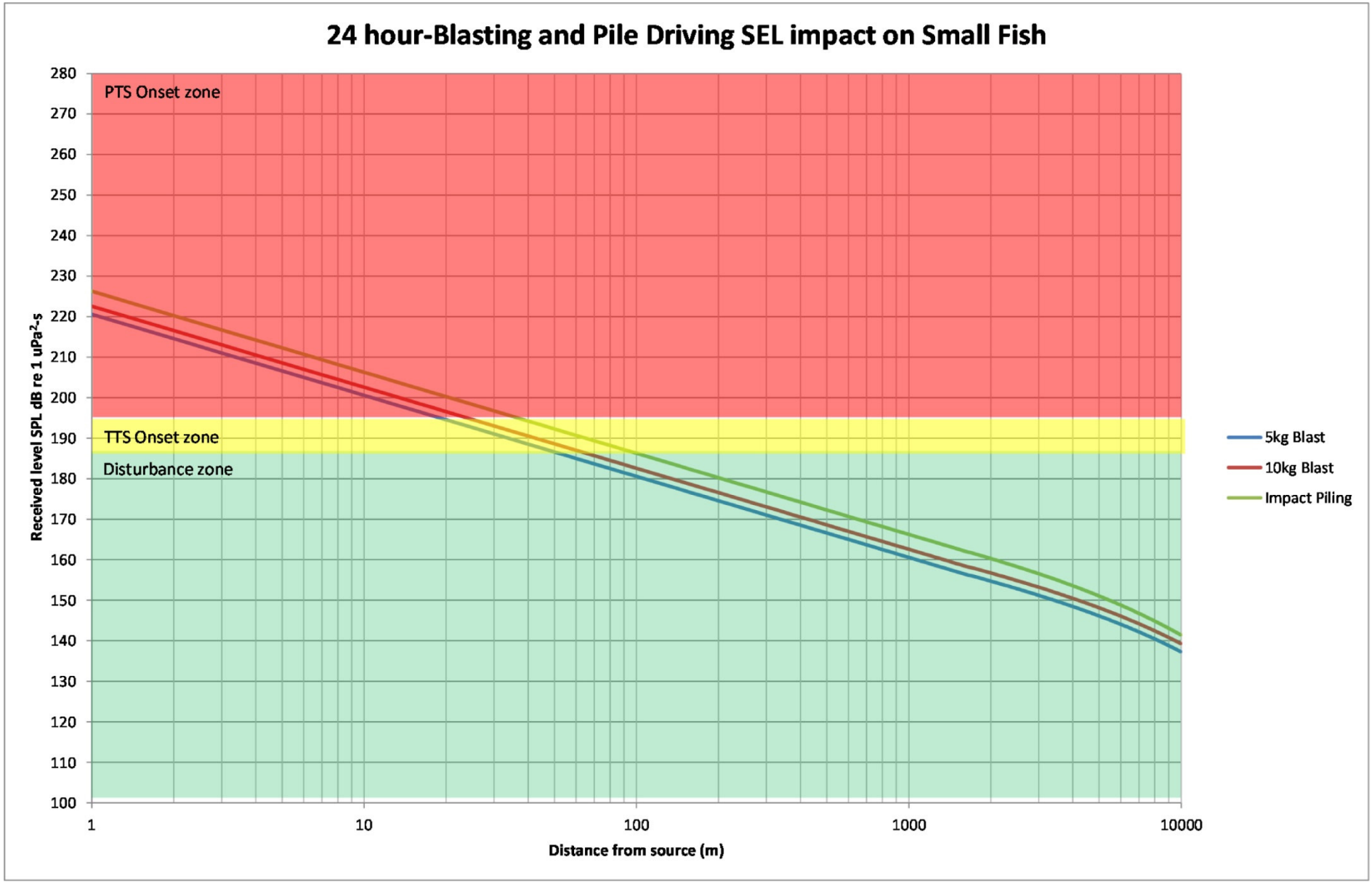

Figure 2 - 24 hour-Blasting and Pile Driving SEL impact on Small Fish

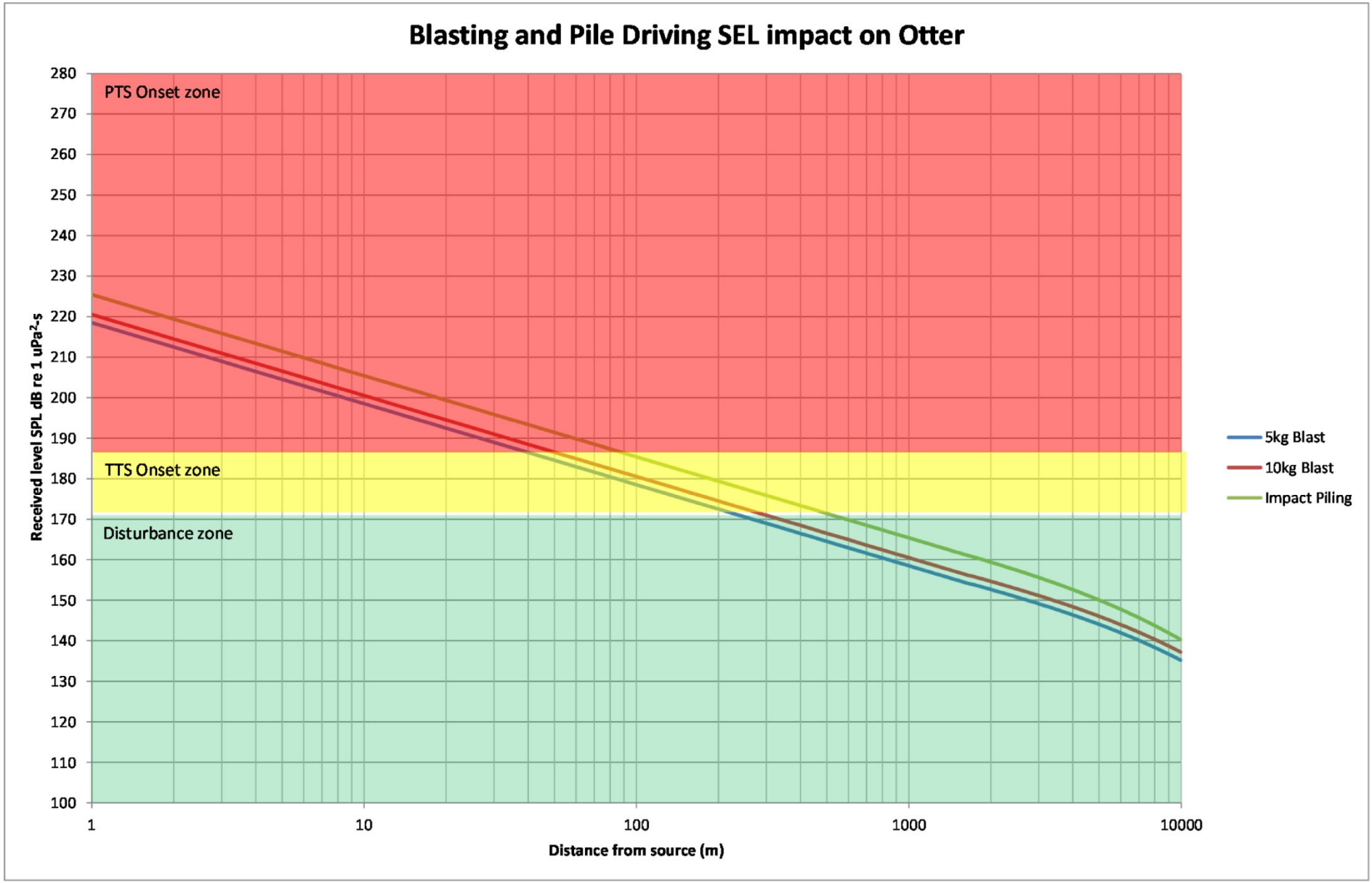

Figure 3 - Blasting and Pile Driving SEL impact on Otter

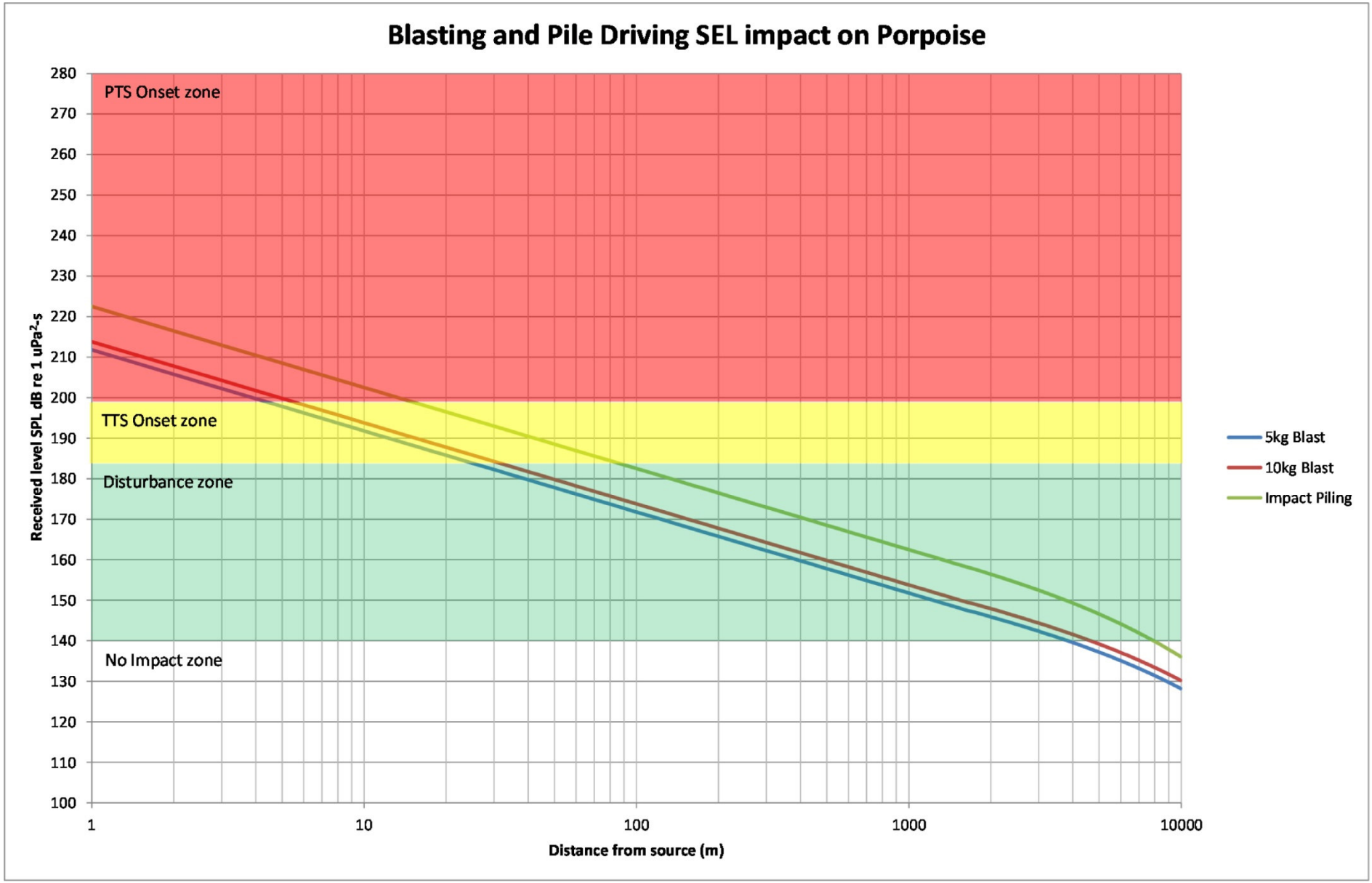

Figure 4 - Blasting and Pile Driving SEL impact on Porpoise

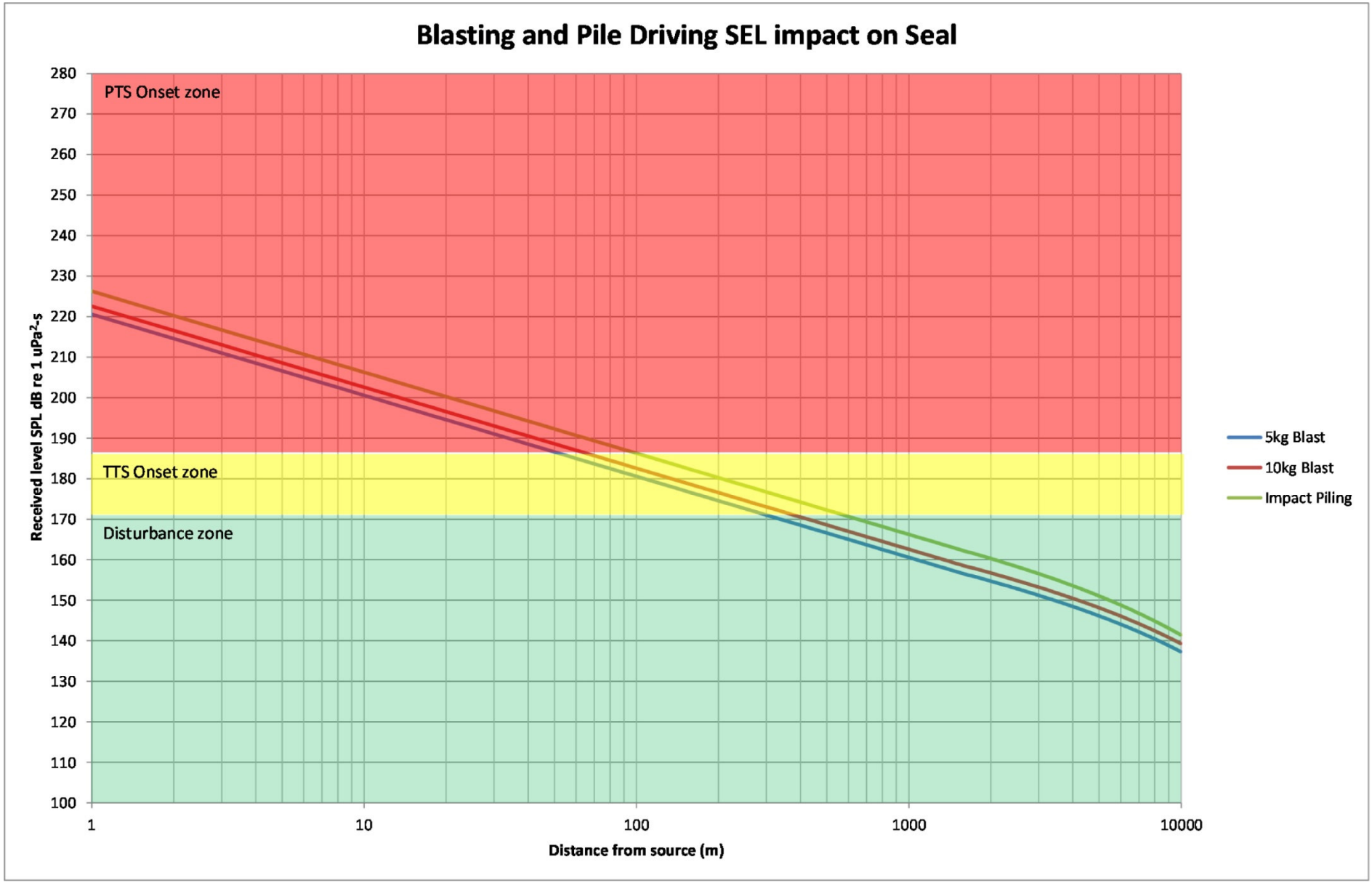

Figure 5 - Blasting and Pile Driving SEL impact on Seal

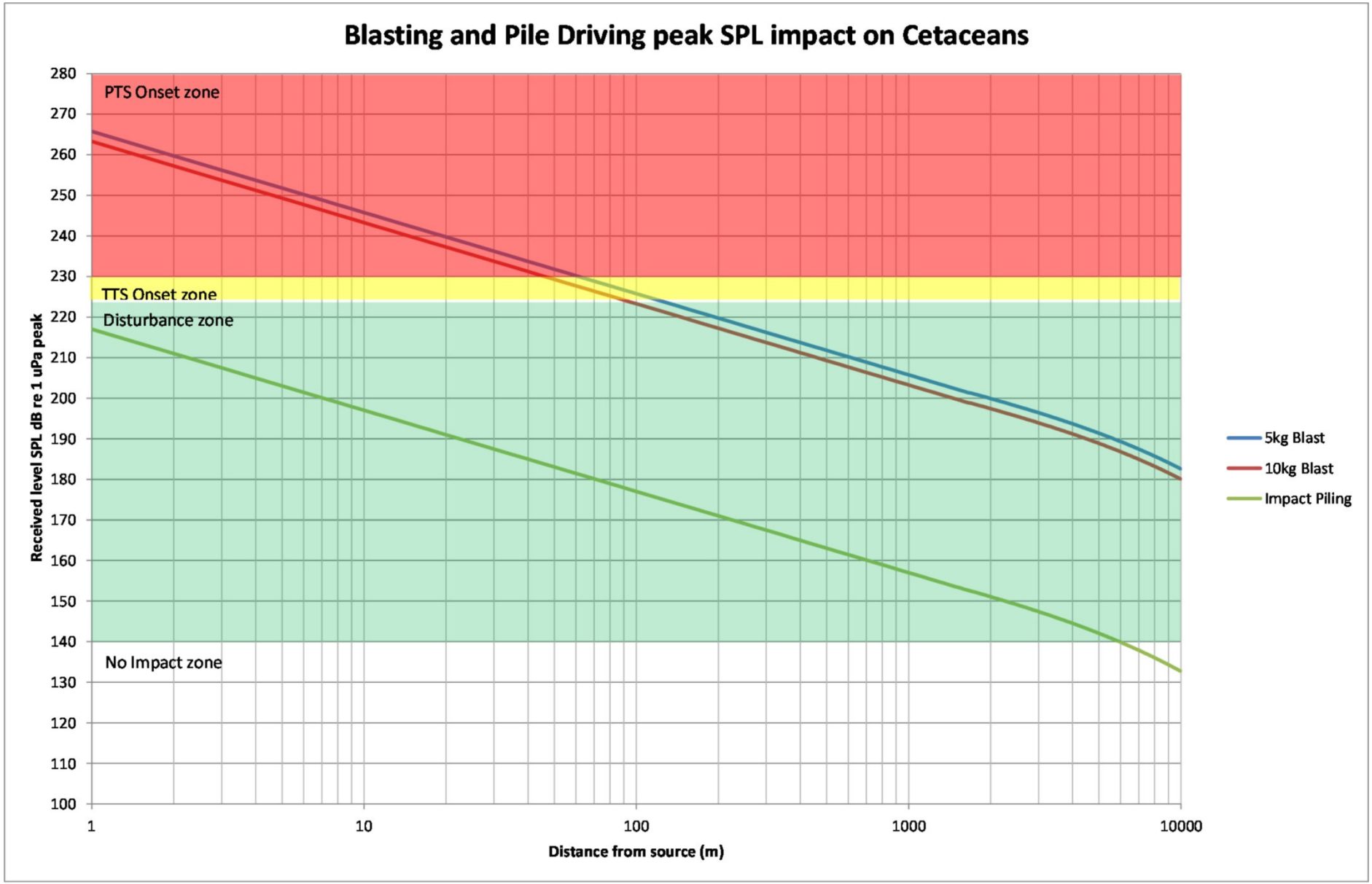

Figure 6 - Blasting and Pile Driving peak SPL impact on Cetaceans

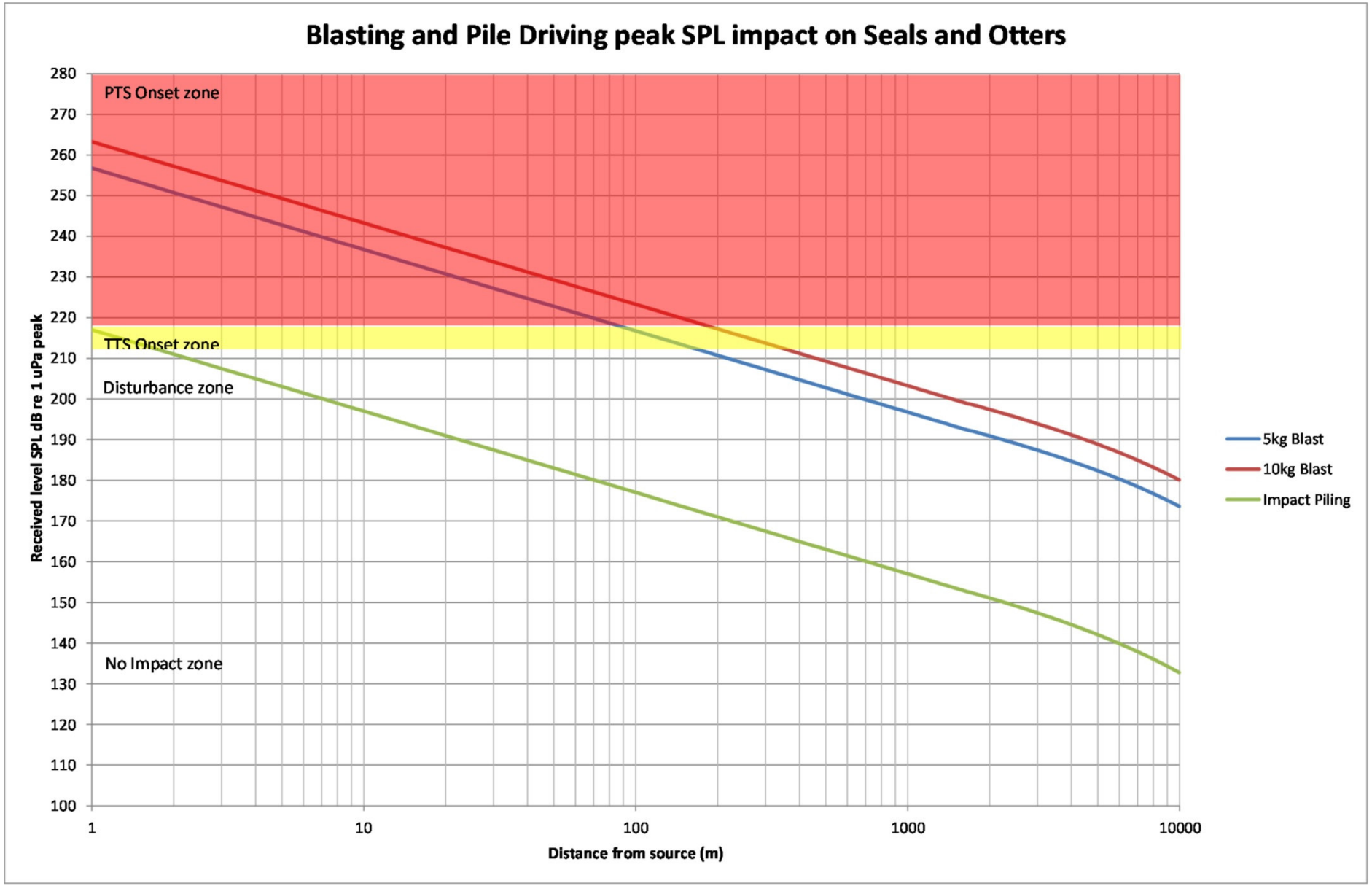

Figure 7 - Blasting and Pile Driving peak SPL impact on Seals and Otters

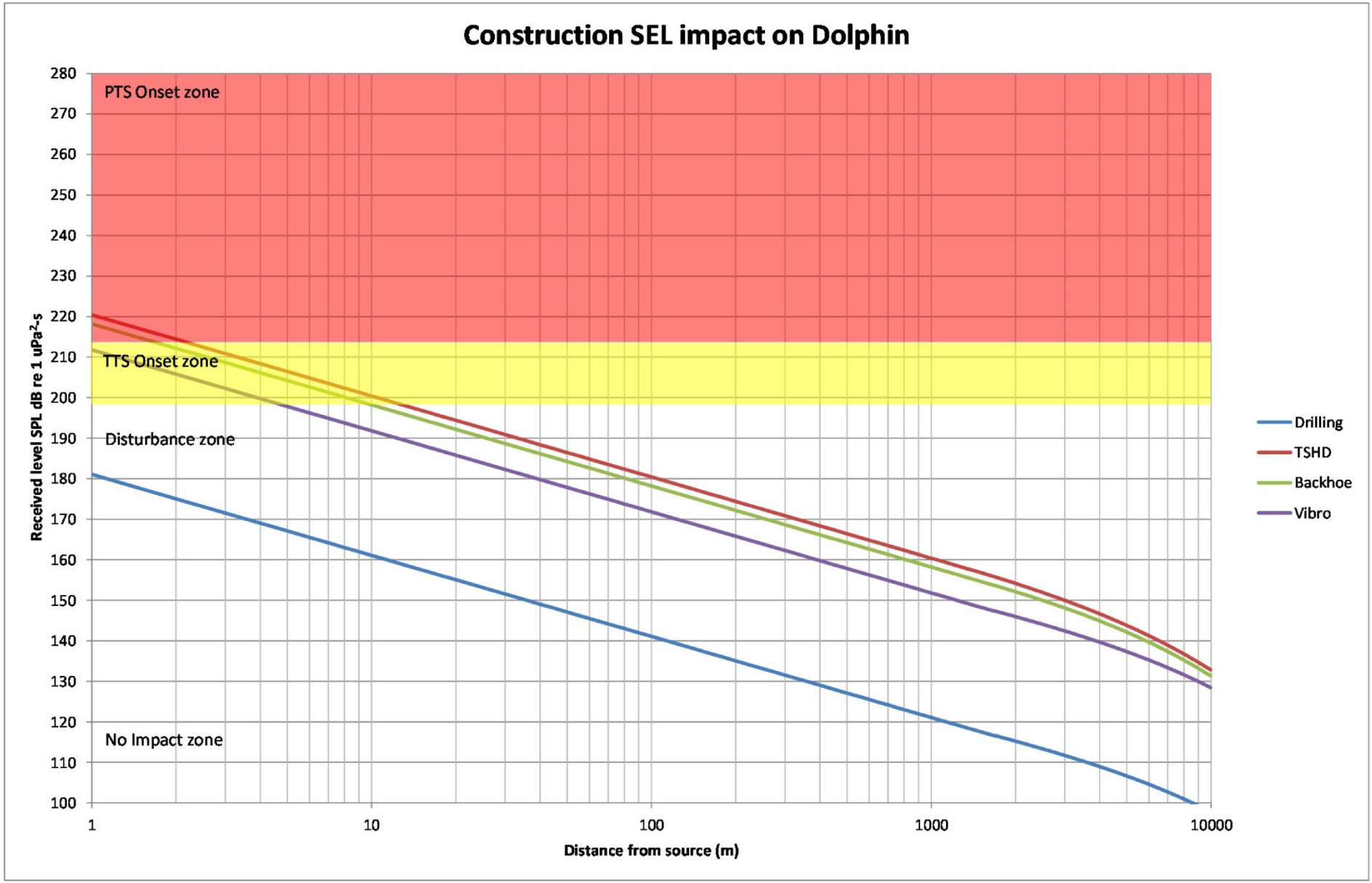

Figure 8 - Construction SEL impact on Dolphin

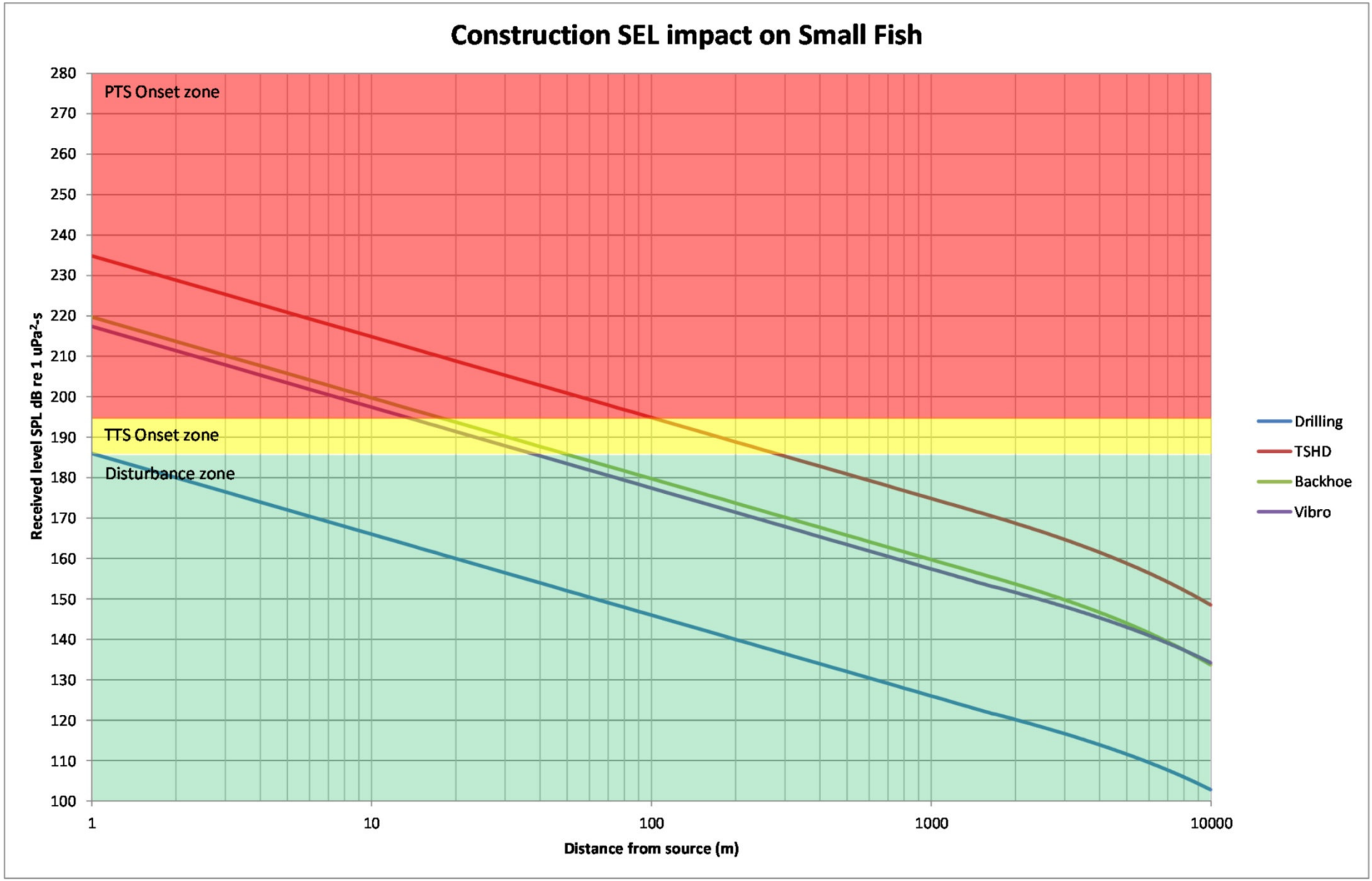

Figure 9 - Construction SEL impact on Small Fish

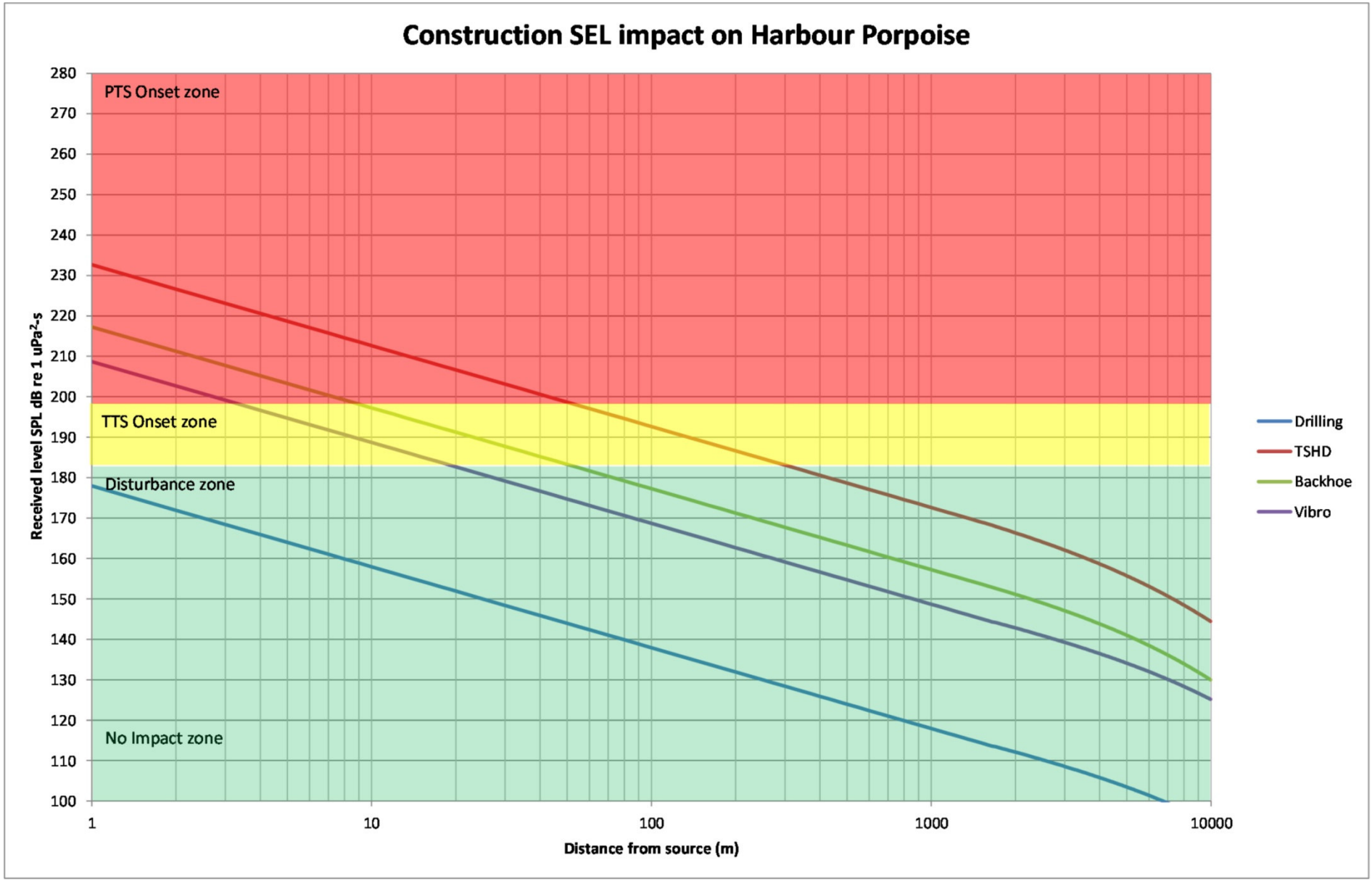

Figure 10 - Construction SEL impact on Harbour Porpoise

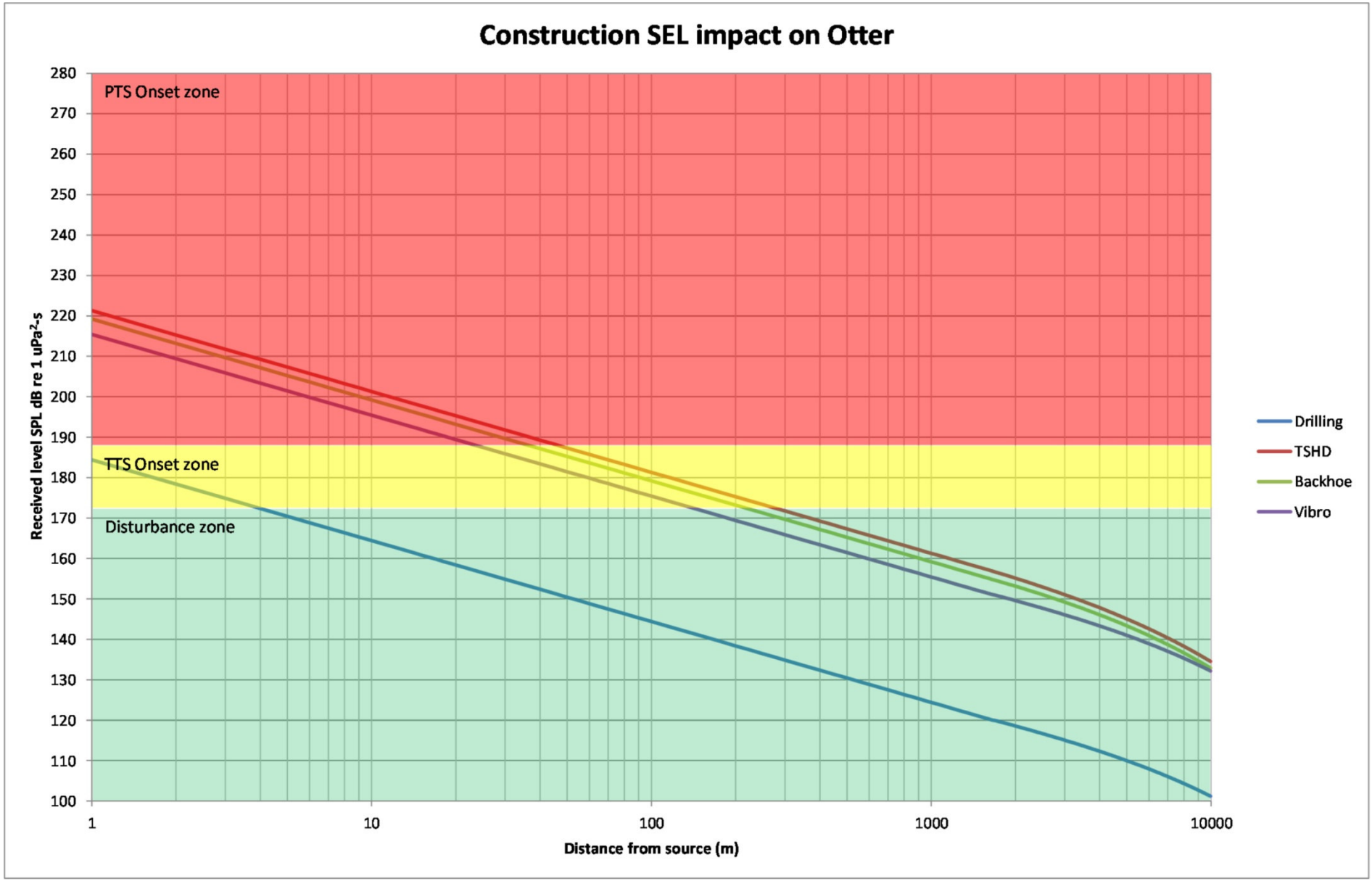

Figure 11 - Construction SEL impact on Otter

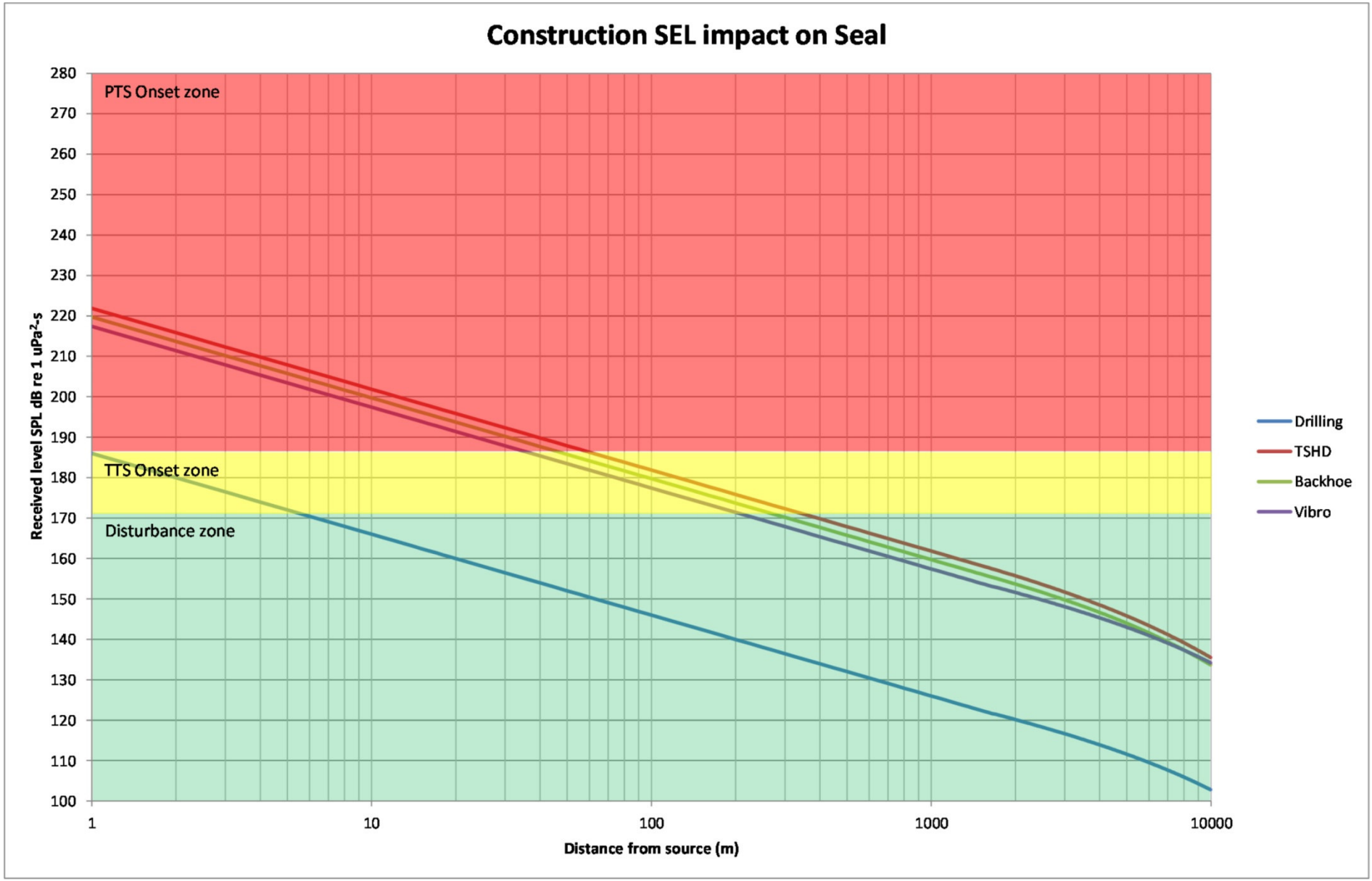

Figure 12 - Construction SEL impact on Seal

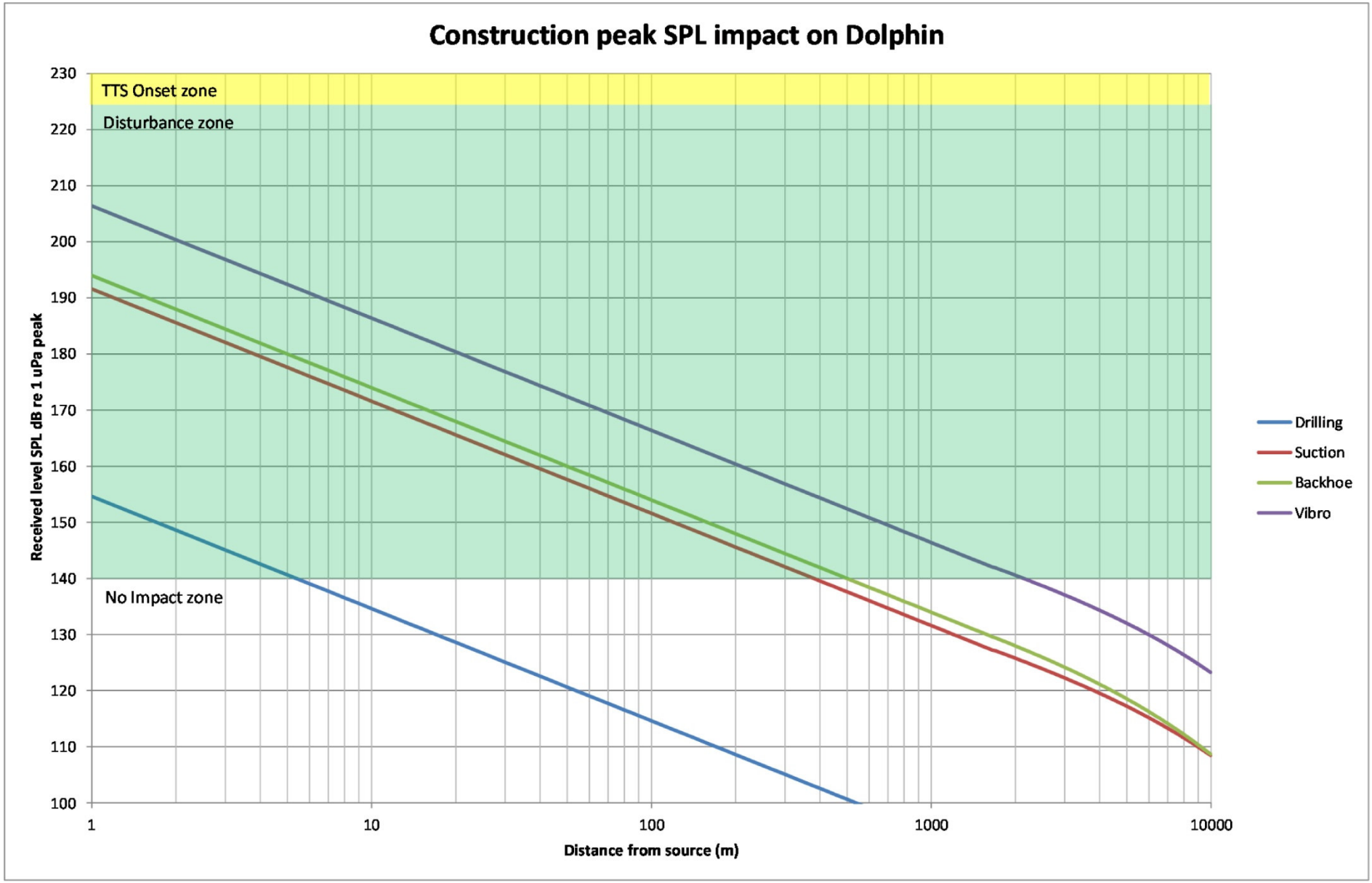

Figure 13 - Construction peak SPL impact on Dolphin

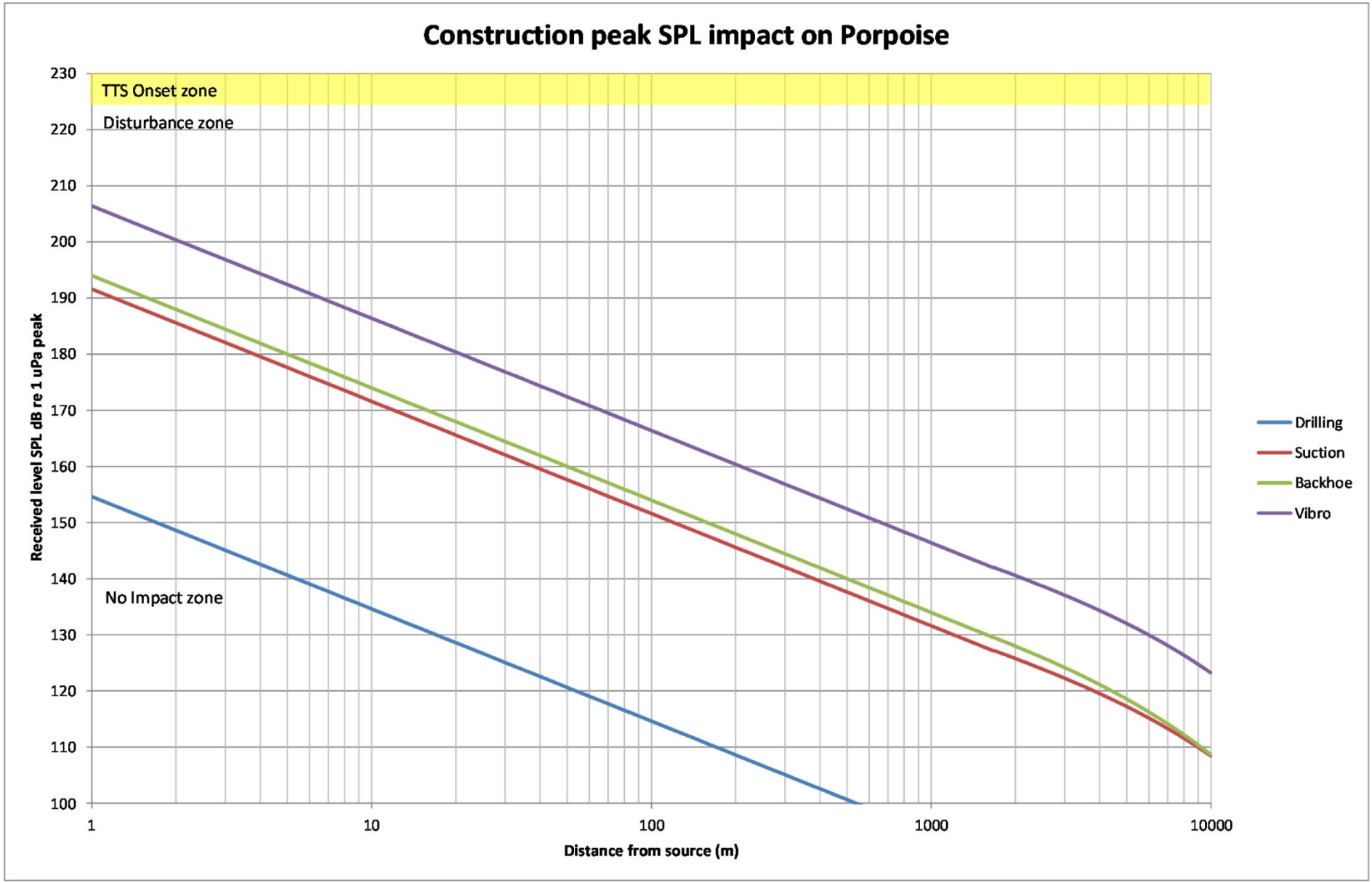

Figure 14 - Construction peak SPL impact on Porpoise

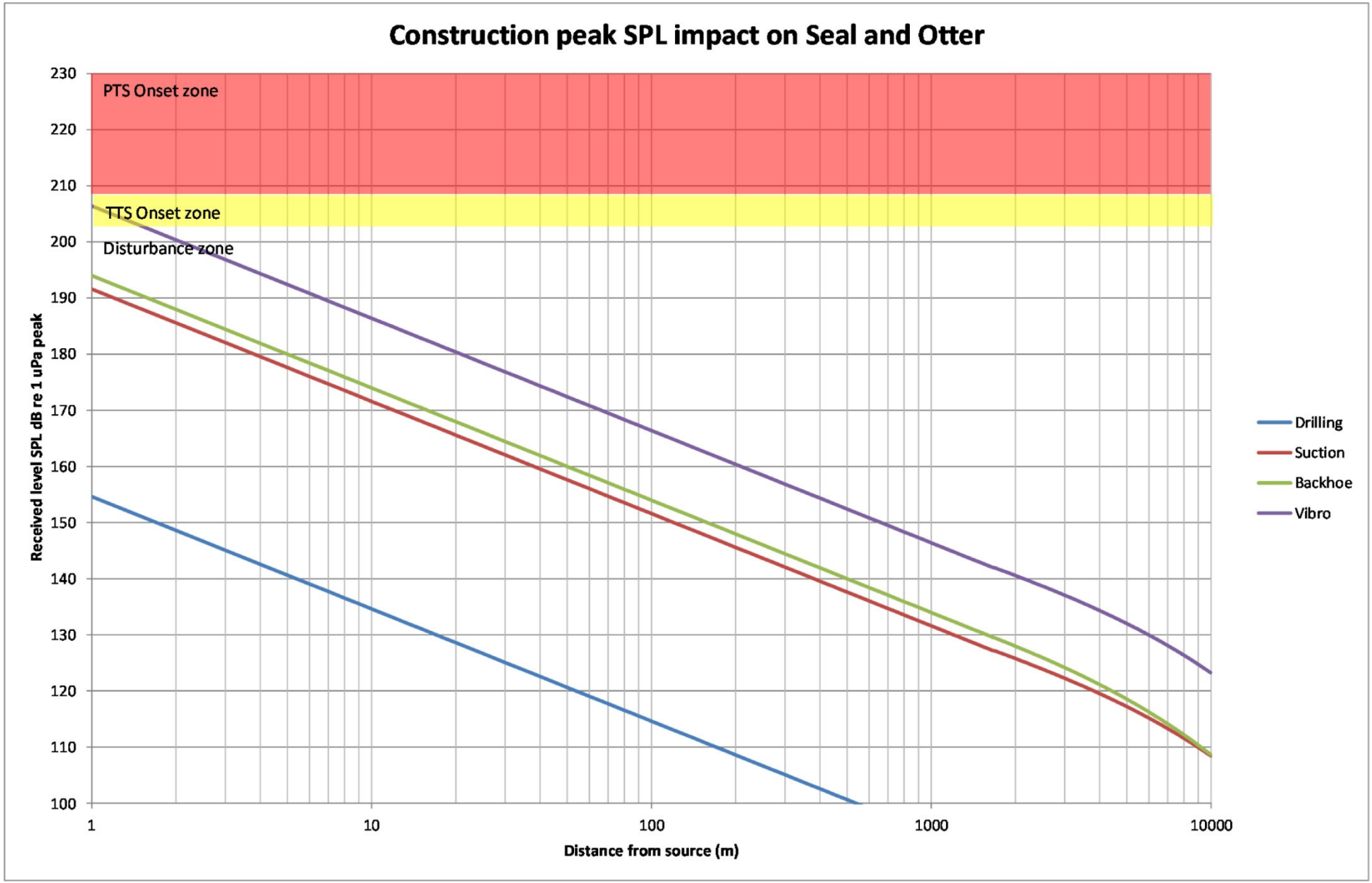

Figure 15 - Construction peak SPL impact on Seal and Otter

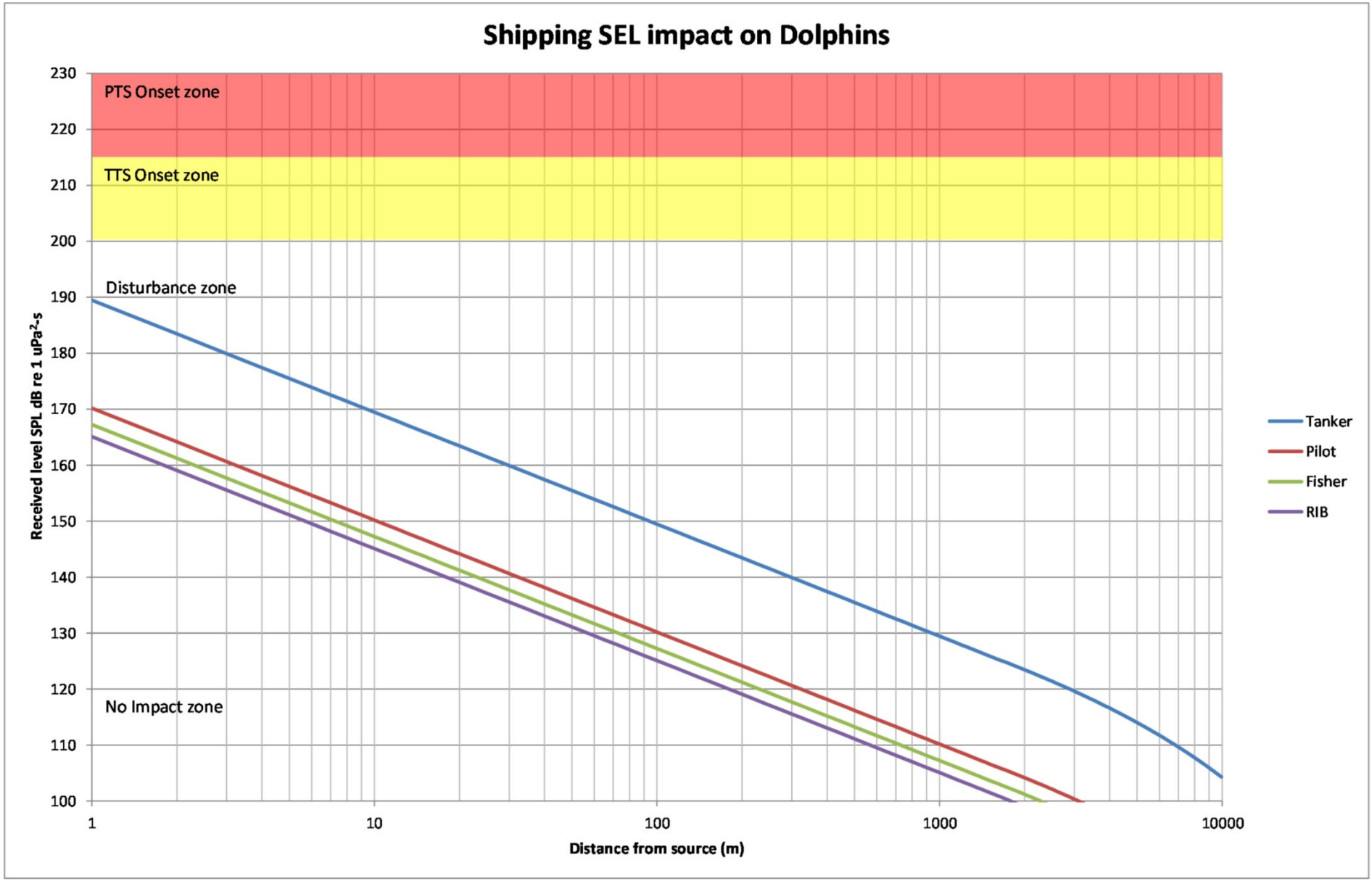

Figure 16 - Shipping SEL impact on Dolphins

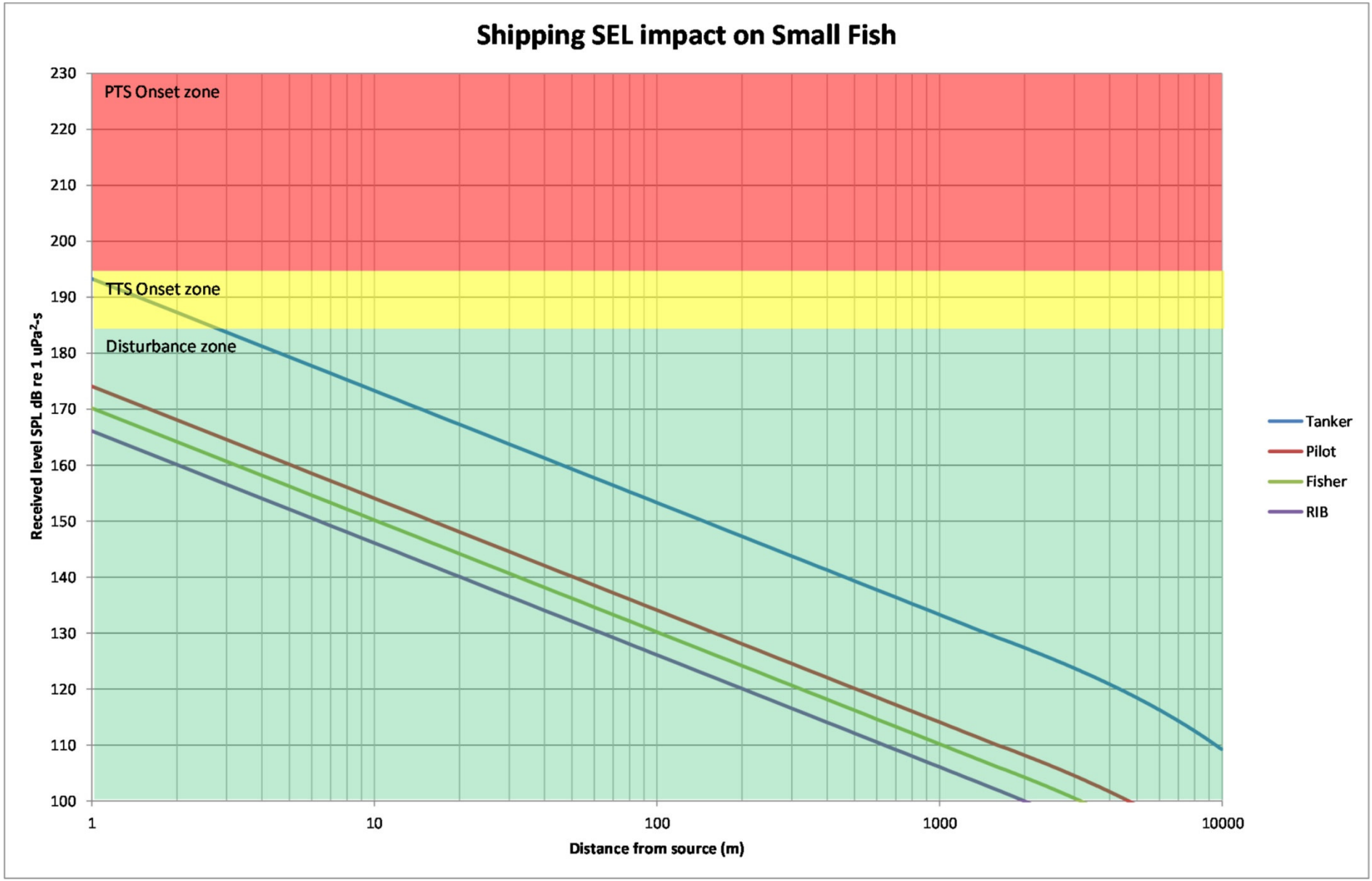

Figure 17 - Shipping SEL impact on Small Fish

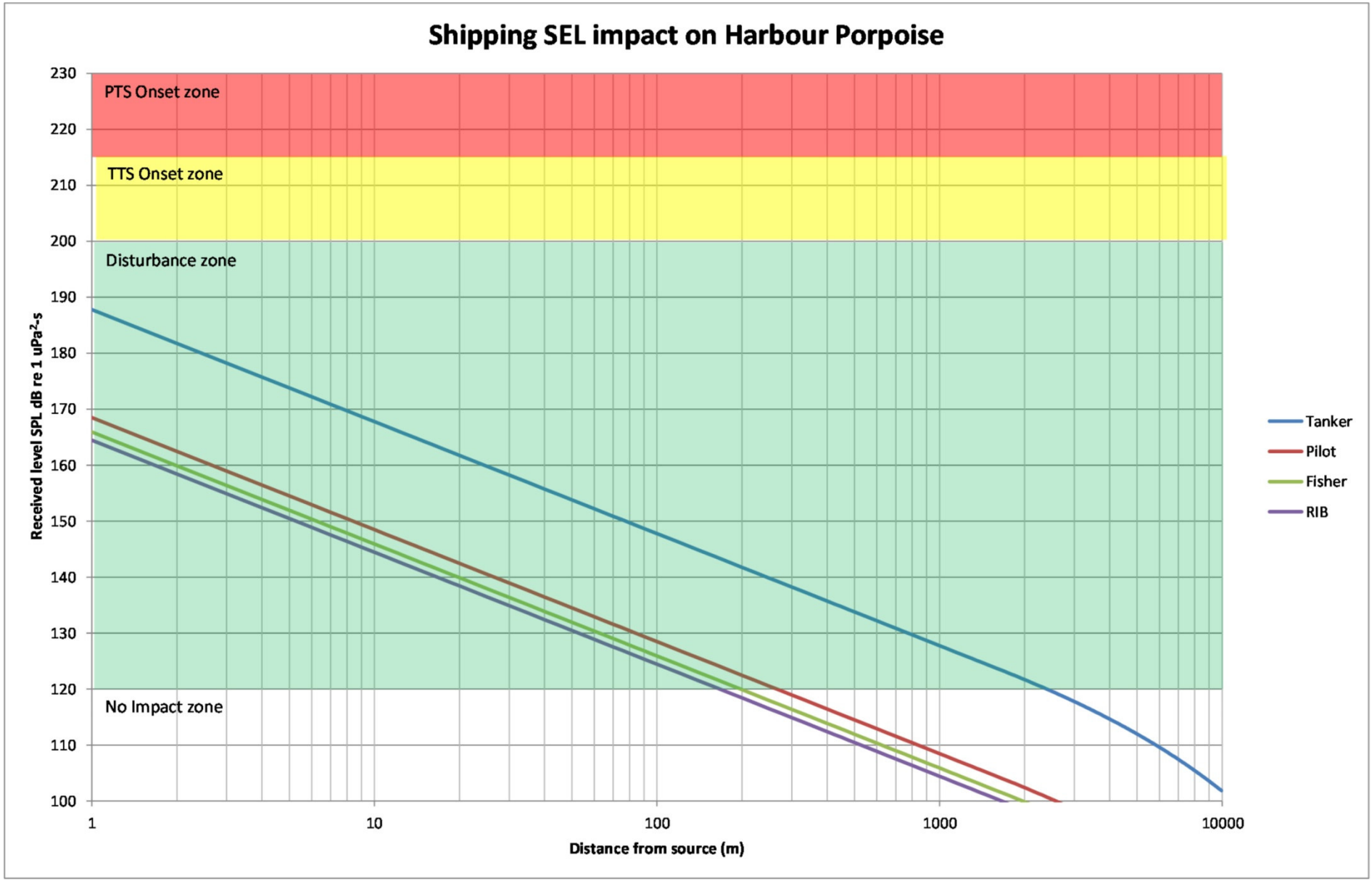

Figure 18 - Shipping SEL impact on Harbour Porpoise

Figure 19 - Shipping SEL impact on Otter

Figure 20 - Shipping SEL impact on Seal

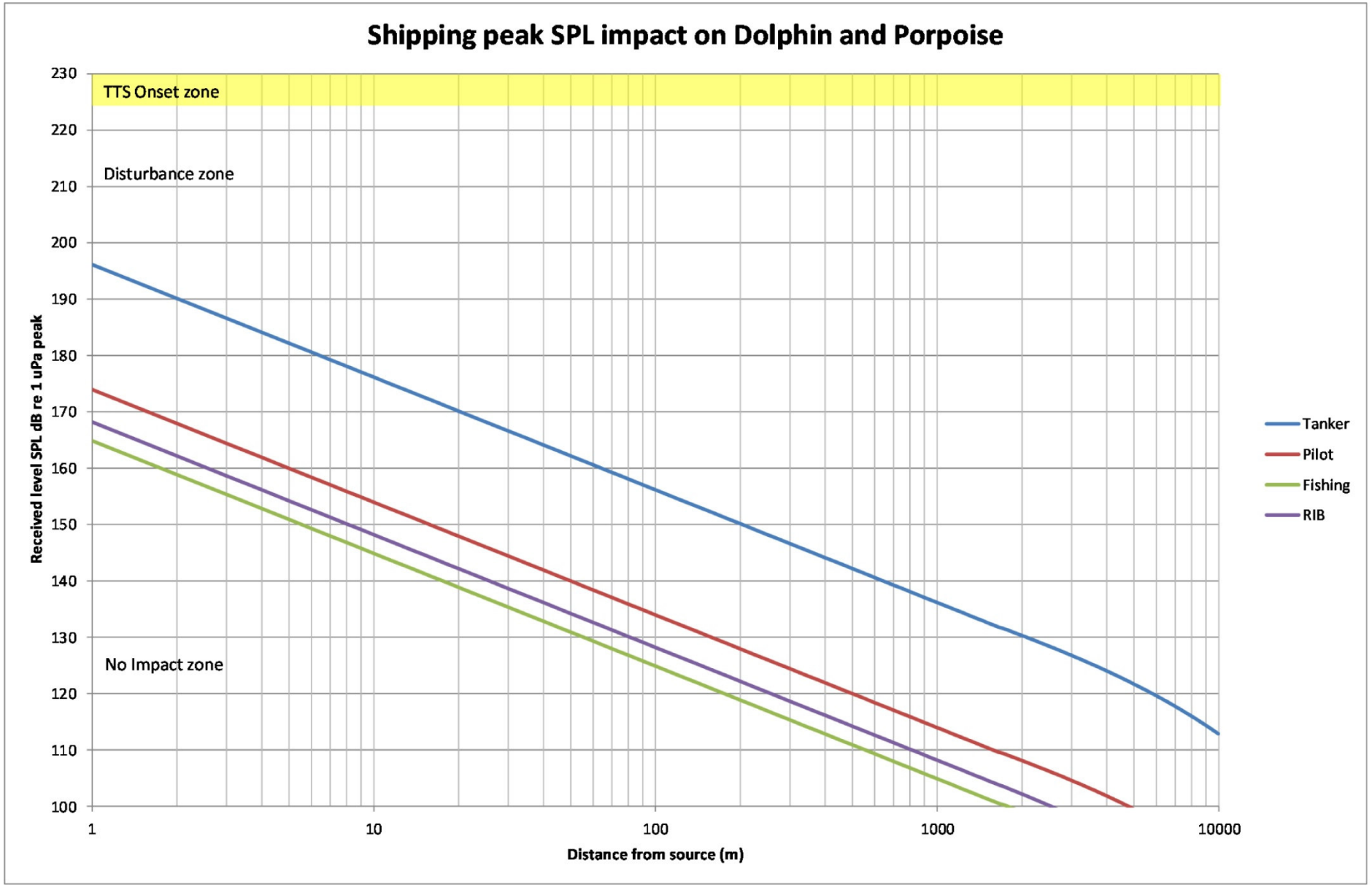

Figure 21 - Shipping peak SPL impact on Dolphin and Porpoise

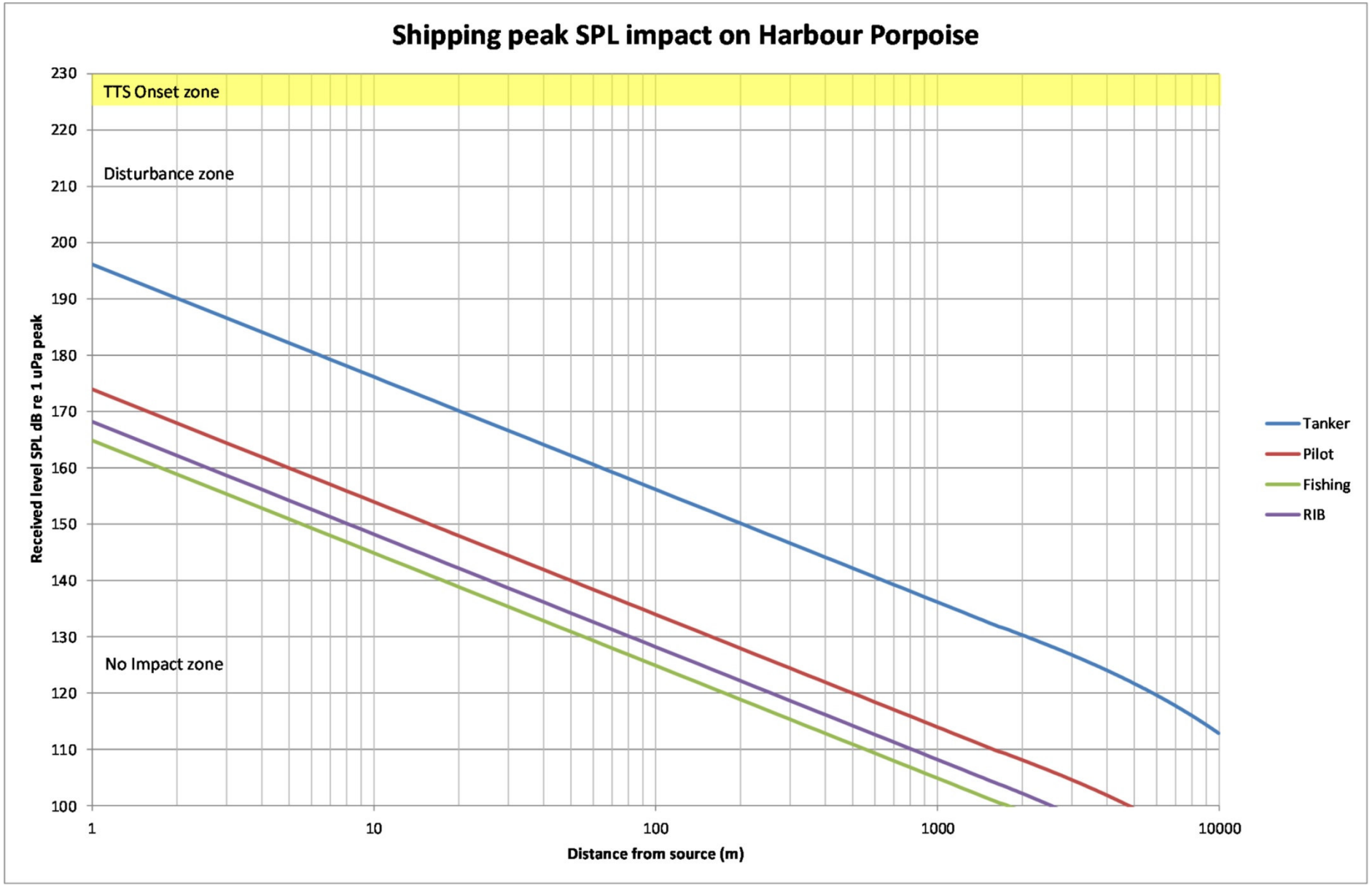

Figure 22 - Shipping peak SPL impact on Harbour Porpoise