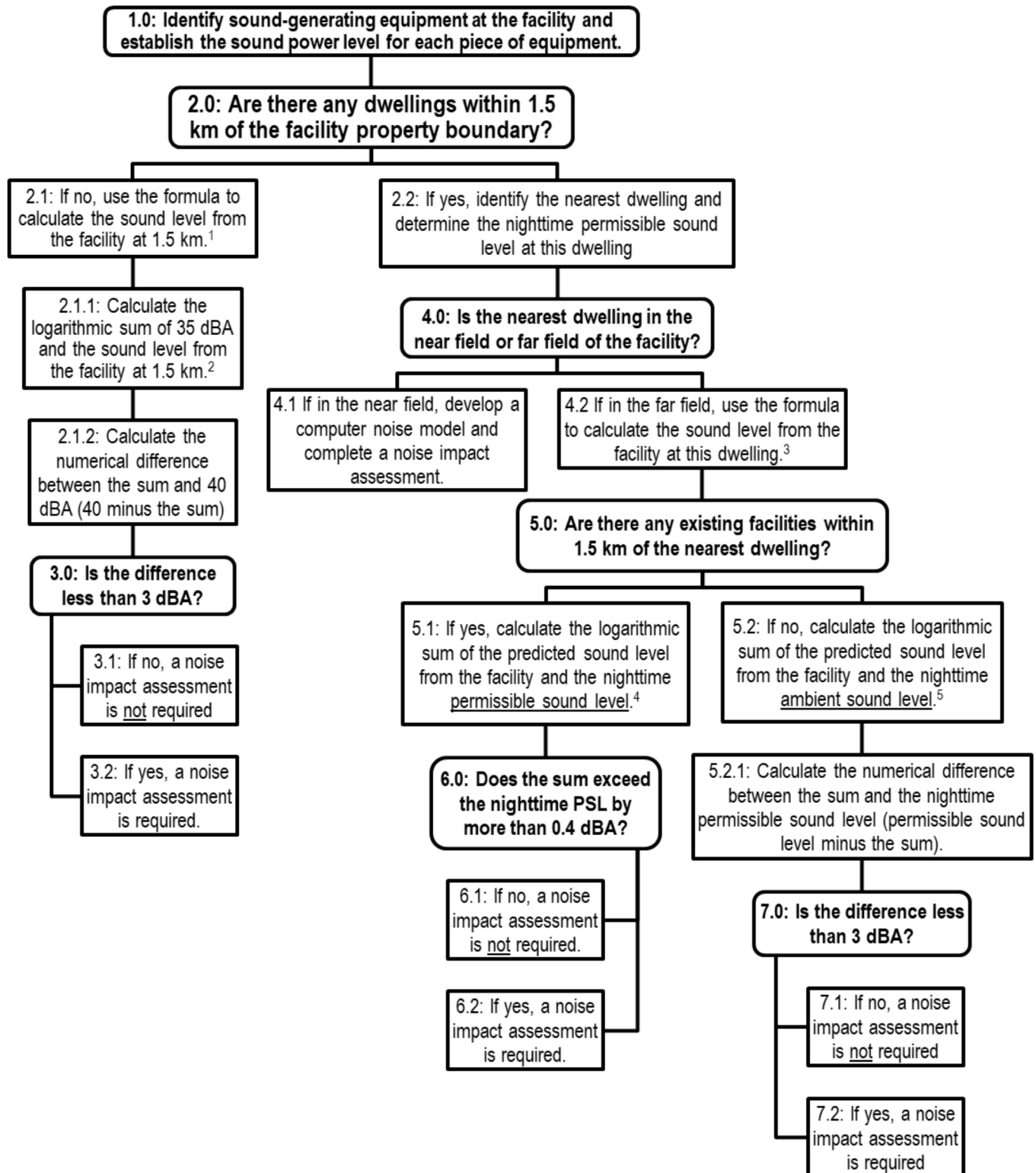


Appendix 9 – Noise impact assessment flowchart

The noise impact assessment flowchart is a tool that provides objective criteria for determining if a noise impact assessment is required for a facility before it commences operations. A noise impact assessment flowchart may be utilized to determine if a noise impact assessment is required for a facility that is exempt from filing a Rule 007 application or that is eligible to file to a checklist application under Rule 007. For other types of facilities, a noise impact assessment must be filed.



Notes for noise impact assessment flowchart:

1, 3:

Formula to calculate sound pressure level (L_p) based on sound power level (L_w):

$$L_p = L_w - 20 \log_{10}(R) - 5 \text{ (assuming half sphere radiation)}$$

$$L_p = L_w - 20 \log_{10}(R) - 8 \text{ (assuming full sphere radiation)}$$

Formula to calculate sound pressure level (L_{p2}) at a distance R_1 based on sound pressure level (L_{p1}) at a distance R_2 :

$$L_{p2} = L_{p1} - 20 \log_{10} \left(\frac{R_1}{R_2} \right)$$

R : distance between sound source and noise receptor in metres

L : sound level in dBA

2, 4, 5:

Formula to add two sound pressure levels (L_{p1}, L_{p2}):

$$L_{p,sum} = 10 \log_{10} \left(10^{\frac{L_{p1}}{10}} + 10^{\frac{L_{p2}}{10}} \right)$$