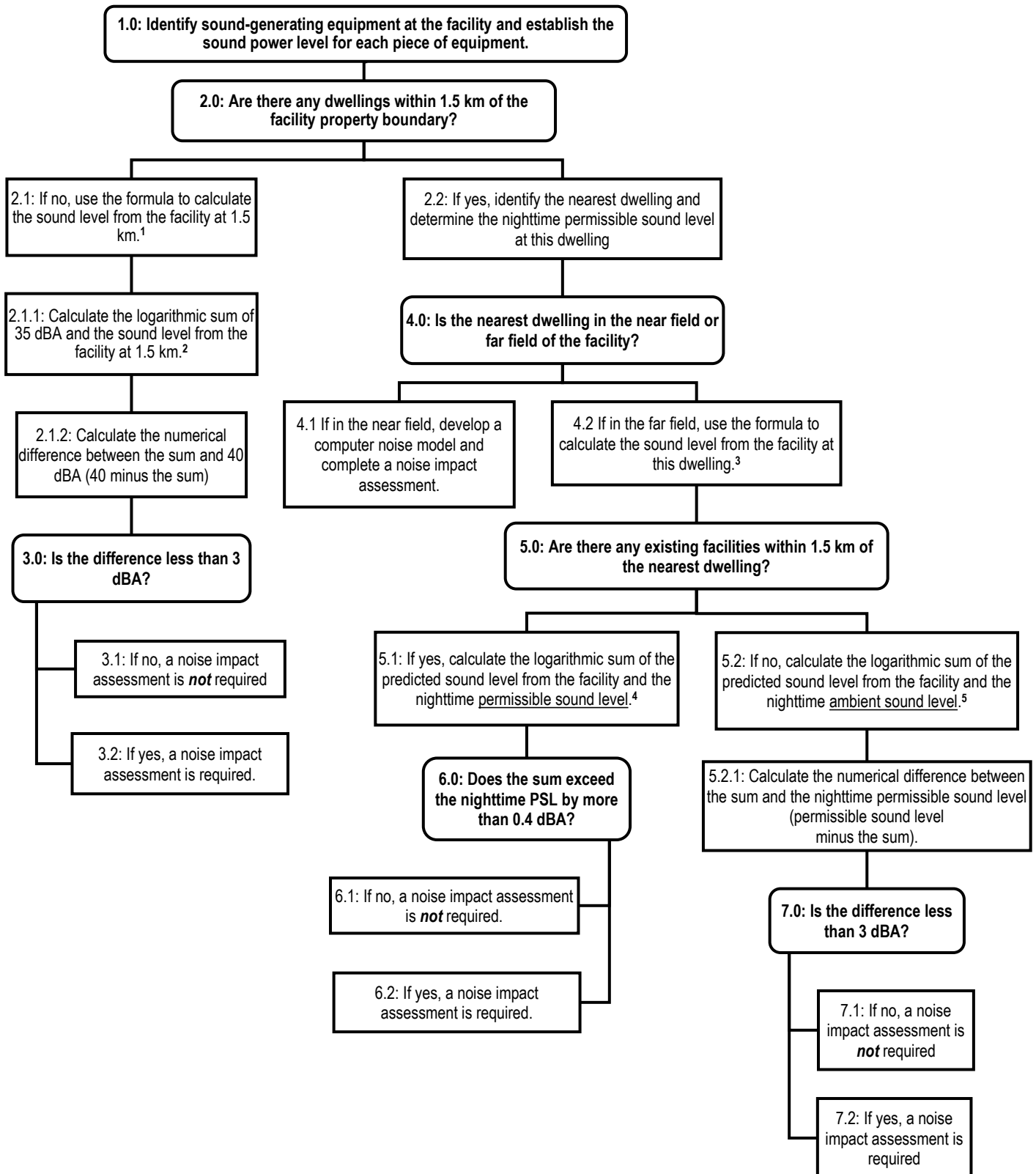


## Appendix 9 – Noise impact assessment flowchart

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 ( $L_w$ ):

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

$$L_p = L_w - 20 \log_{10}(R) - 11 \text{ (assuming full sphere radiation)}$$

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 ( $L_{p1}, L_{p2}$ ):

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