

# Construction Noise Impact Assessment

**Site:** 44 Pagham Road, West Sussex

**Development:** Construction of new bungalow

**Plant Assessed:** 5-tonne excavator (Hitachi), 3-tonne dumper

## 1. Scope and Standards

This assessment considers the temporary noise impact arising from construction activities associated with the proposed bungalow build at the above site.

The assessment has been undertaken with reference to:

- BS 5228-1:2009+A1:2014
- BS 4142:2014+A1:2019 (for context only)

Construction noise is typically assessed under **BS 5228**, which provides empirical sound levels for plant and guidance on prediction methods.

## 2. Site Context

The site at 44 Pagham Road is located within a predominantly residential area. The nearest noise-sensitive receptors are:

- Adjacent residential properties along Pagham Road
- Rear garden boundaries of neighbouring dwellings

For the purposes of this assessment, the **closest receptor distance is assumed to be approximately 10–15 metres** from the working area.

## 3. Plant and Sound Levels

Typical sound power levels (L<sub>WA</sub>) for the plant are as follows (based on BS 5228 databases):

| Plant                  | Sound Power Level (L <sub>WA</sub> ) |
|------------------------|--------------------------------------|
| 5T Excavator (Hitachi) | 100 dB                               |
| 3T Dumper              | 101 dB                               |

## 4. Noise Prediction

Using standard propagation calculations (hemispherical spreading):

**Predicted free-field noise levels at 10–15m:**

- Excavator: ~65–70 dB LAeq
- Dumper: ~66–71 dB LAeq

**Combined worst-case level (both operating simultaneously):**

- Approximately 72–74 dB LAeq
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## 5. Assessment of Impact

Typical daytime background noise levels (LA90) in suburban residential areas are:

- ~45–55 dB LA90 (daytime)

Therefore, construction noise will be:

- **Approximately +20 to +25 dB above background**

Under **BS 5228 guidance**, this level of exceedance is:

- Noticeable and potentially intrusive, but
  - **Acceptable for temporary construction activities**, provided:
    - Works are **time-limited**
    - **Best practicable means (BPM)** are implemented
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## 6. Duration and Nature of Works

- Activities involving the excavator and dumper will be:
  - **Short-term and intermittent**
  - Primarily during:
    - Site clearance
    - Foundation excavation
    - Material movement

Estimated duration:

- **1–3 weeks of highest noise activity**
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## 7. Mitigation Measures (Best Practicable Means)

To minimise noise impact, the following measures will be implemented:

### Plant Management

- Use of **modern, well-maintained equipment**
- All plant fitted with **effective silencers**
- Engines switched off when not in use

### Site Layout

- Plant positioned **as far from neighbouring boundaries as practicable**
- Use of **existing structures or materials as acoustic screening where feasible**

### Operational Controls

- No unnecessary revving or idling
- Drop heights minimised when loading materials
- Avoid simultaneous operation of multiple noisy plant where possible

### Working Hours

- Works restricted to:
  - **08:00 – 18:00 Monday to Friday**
  - **08:00 – 13:00 Saturdays**
  - No work on Sundays or Bank Holidays

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## 8. Compliance Statement

While predicted construction noise levels exceed the prevailing background sound level, this is:

- **Temporary in nature**
- **Commonplace for residential construction**
- **Acceptable under BS 5228**, subject to BPM

Given the limited duration and implementation of mitigation measures, the works are **not expected to result in significant adverse impact**.

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## 9. Conclusion

The use of a 5-tonne excavator and 3-tonne dumper at 44 Pagham Road will generate temporary increases in noise levels at nearby residential receptors.

However:

- The works are **short duration**
- Noise levels are **typical for construction activity**
- **Best practicable means will be employed**

Accordingly, the construction phase is considered **acceptable in acoustic terms** and compliant with relevant guidance.