

# Noise Impact Assessment for the Installation of a Solar Photovoltaic System at Birling Manor

Noise Impact Assessment (NIA) typically evaluates potential noise effects on surrounding receptors due to the introduction of a new noise source or change in existing noise levels. For solar PV systems, the primary noise sources are the inverters and transformers, with the potential for some minor noise from associated electrical equipment and maintenance activities.

## Noise Impact Assessment for Installation of Solar PV System

### 1. Introduction

This assessment reviews the potential noise impacts related to the installation and operation of a solar photovoltaic (PV) system.

### 2. Project Description

A solar PV system is proposed, consisting of 52 PV panels, 1 inverter and associated electrical equipment.

### 3. Potential Noise Sources

- Inverters: Convert DC electricity from the PV panels to AC electricity.
- Occasional Maintenance: Activities might include cleaning of panels, equipment checks, and other general tasks.

### 4. Existing Noise Environment

The existing ambient noise level in the area is 30-40dB during the daytime and 20-30dB during the nighttime, as measured at the closest noise-sensitive receptor.

### 5. Predicted Noise Levels

Predicted noise levels at the nearest receptor due to the solar PV system are:

- Inverters: 30dB
- Occasional Maintenance: 50dB

### 6. Noise Standards and Criteria

The local regulations specify that noise increases due to new projects should not exceed 20dB over the existing ambient noise level at any noise-sensitive receptor.

### 7. Impact Evaluation

Comparing the predicted noise levels to the existing noise environment and the regulatory criteria:

- Inverters: Negligible
- Occasional Maintenance: Negligible

### 8. Conclusion

Based on the predicted noise levels and the applicable standards, the solar PV system does not have the potential to cause significant noise impacts on the surrounding receptors.