Project	Test project
Project No.	1004
Subject	Outline Rigid Inclusion Settlement Assessment
Client	J Coffey

Document Reference	Status	Revision	Issued	Checked	Approved	Date
1004-RP-001-00	Draft	01	af	an	af	2024-01-16

1   Introduction

This piled raft settlement analysis is undertaken using an AI deep learning algorithm implemented by A2-Tech, trained using a vast dataset of case studies based on the A-squared group's project experience over the past decade. A square raft is considered and the ground model is idealised as a single layer with stiffness (E') linearly increasing with depth.

2   Input

The key input parameters are shown in Figure 1.

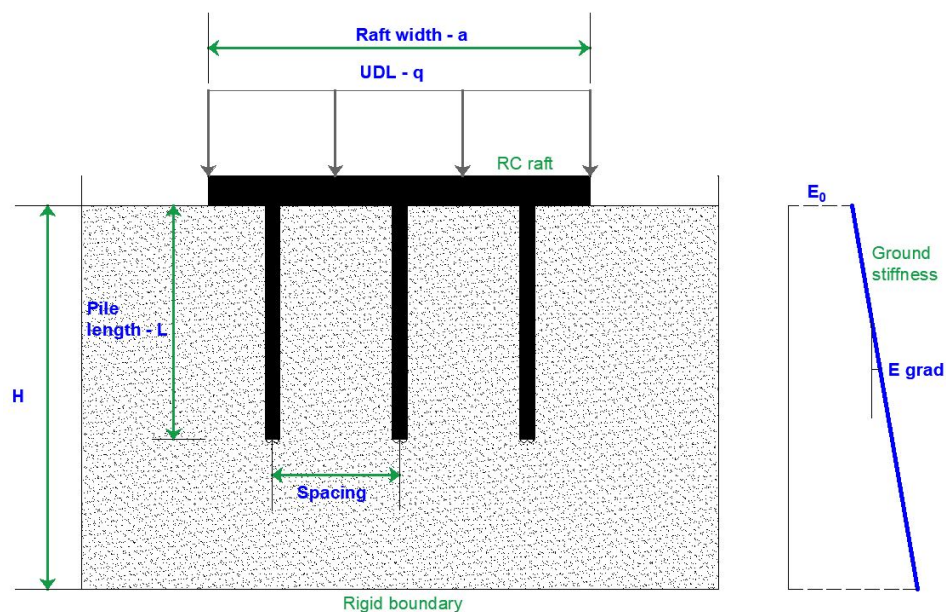
Figure 1: Piled raft scheme indicative sketch - assessment input parameters shown in blue

The selected input values are as follows:

- UDL q: **50 kPa**

- Rigid boundary depth - H: **30 m**

- E'_0 : **40000 kPa**

- E'grad : **3000 kPa/m**

- Pile length - L: **15 m**

- Pile spacing - s: **3 m**

- Raft width - a: **40 m**

3 Output

The predicted maximum piled raft settlement is **5.7 mm**. Figure 2 presents a settlement profile across the piled raft.
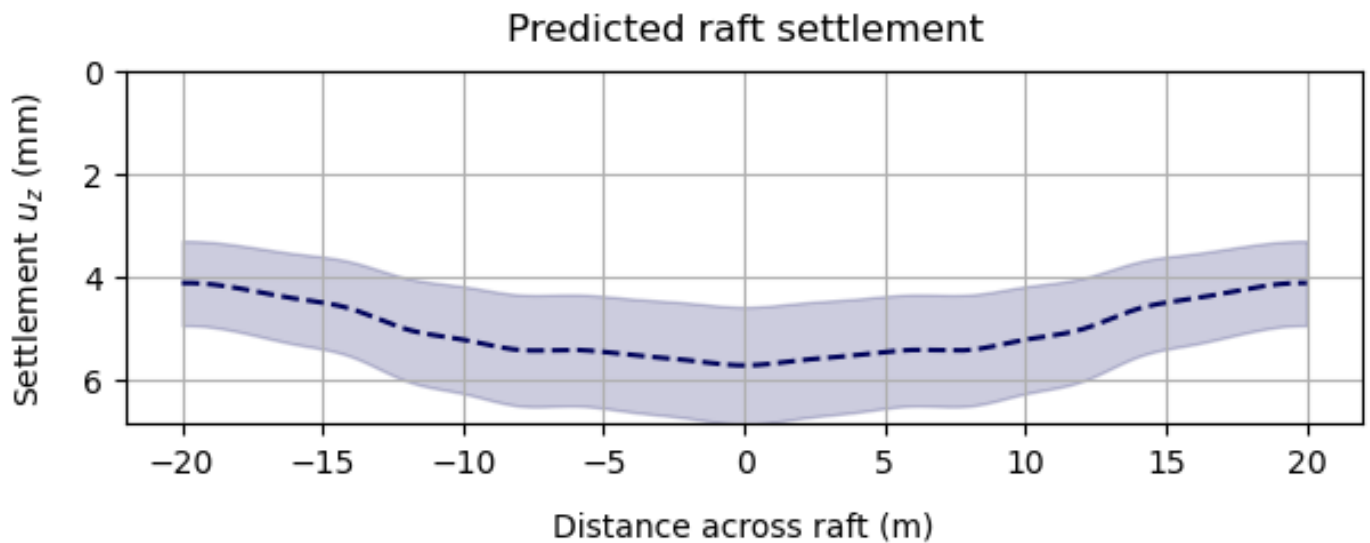

Figure 2: Piled raft settlement profile - the shaded zone indicates the likely range of settlements

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