



ROOT INVESTIGATION SUMMARY

SITE REF

Sparth House
185 Manchester Road
Rochdale
OL11 3QY

ISSUE DATE

19.06.2026

SEED REF

2179-RIS-V1-A

CLIENT

Artal Ltd

ARBORICULTURAL CONSULTANCY

SEED-ARB.CO.UK

OVERVIEW

This summary document is prepared by SEED Arboriculture Ltd following root investigation using air excavation at Sparth House, 185 Manchester Road, Rochdale, OL11 3QY, the “Site”.

This document is provided as a standalone Root Investigation Summary prepared by SEED Arboriculture Ltd on behalf of Artal Ltd, the “Client”.

The purpose of the root investigation is to confirm the presence, spread and size of roots within the areas to be impacted by proposed development works at the Site. The investigation focused on three trenches positioned within the Root Protection Areas (RPAs) of the trees shown on drawing 11610-SK02-A supplied by the client. The plan included the position of trees with their corresponding identifying number and included sycamore, cypress and ash trees located along the southern and eastern site boundaries.

Air excavation is a non-invasive, non-damaging method of inspecting tree roots. Air excavation uses an air tool and highly compressed air, which displaces the soil around tree roots, enabling inspection. The compressed air does not sever or damage the tree roots, unlike mechanical and physical forms of excavation (such as digging).



Image 1 – Air excavation in operation

INVESTIGATION LIMITATIONS

Air excavation was conducted to the maximum practicable depth across all three trenches. The dense, matted nature of the roots prevented displaced soil from being removed from the excavations, therefore limiting the maximum excavation depth. Wet ground conditions further compounded this limitation. As a

result, investigation depths were constrained to between 450mm and 550mm depending on location. Should confirmation of root presence at greater depth be required, vacuum excavation is recommended.

Notwithstanding the above, the achieved depths are not considered to represent a material limitation to the conclusions of this investigation. The majority of tree roots are concentrated in the upper soil profile, where water, oxygen and nutrients are most readily available. On this basis, the depths achieved across all three trenches are considered sufficient to provide a reliable assessment of root presence and distribution within the new pit locations.

ROOT INVESTIGATION FINDINGS

Root investigation by compressed air excavation was carried out on 12th June 2026, supervised by Sam Selwyn (Arboricultural Consultant) from SEED Arboriculture Ltd.

Three trenches were excavated in the locations illustrated in **Figure 1** below to correspond with the areas of proposed works within the Root Protection Areas of the retained trees subject to investigation.

Significant roots (> 20mm diameter) have been recorded where found and are summarised in the tables below.

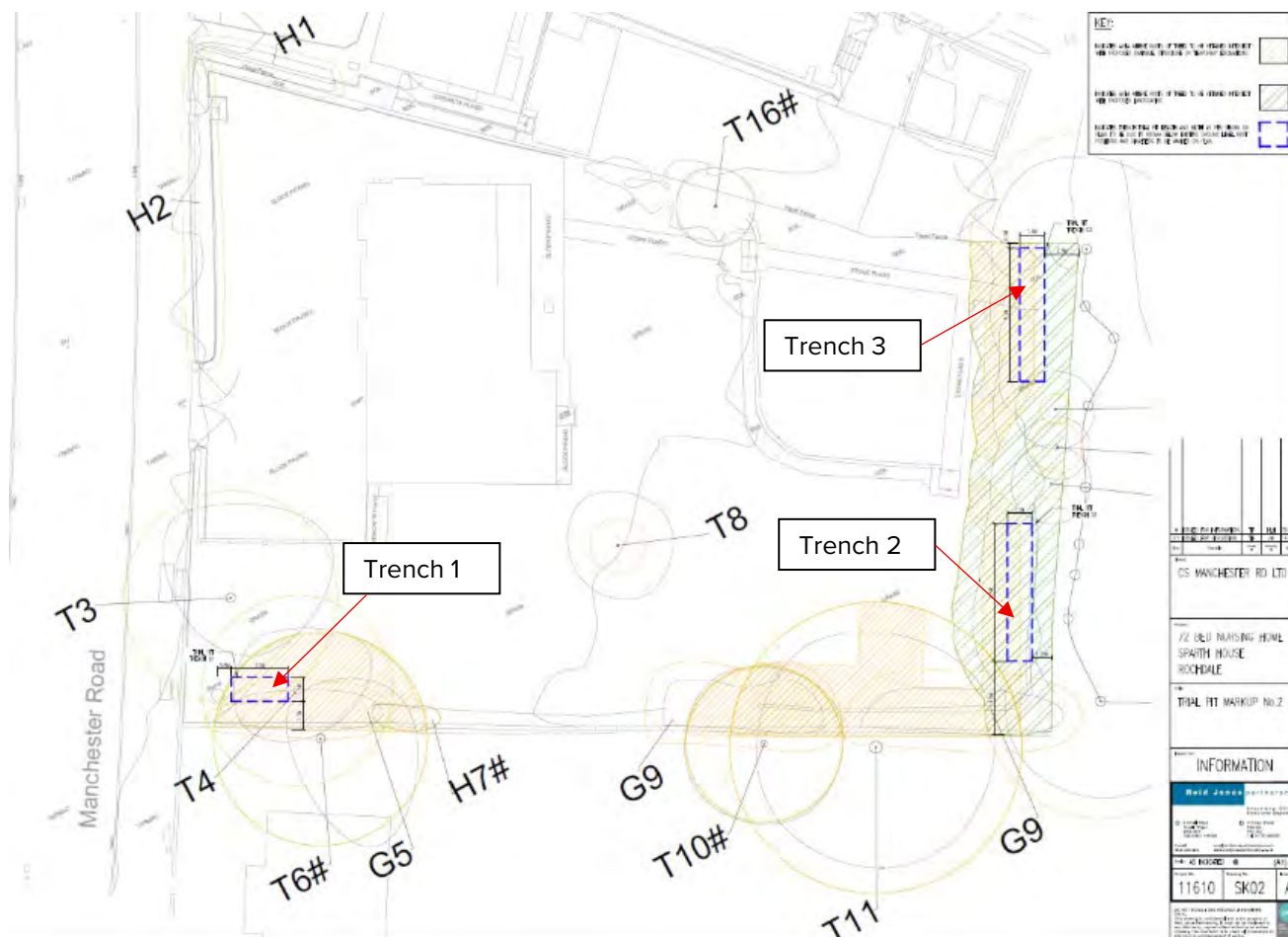


Figure 2 - Root investigation trench location plan. Blue dashed lines indicate the new pit locations.

Trench 1

Location: Southern Site boundary.

Positioned: Western end of the trench 2.7m from the western boundary fence and 1.7m from the southern boundary wall.

Dimensions: 2900mm in length and 600mm wide.



Trench 2

Location: Eastern boundary running north to south. Positioned 4.5m from the southern boundary wall and 1.25m from the eastern boundary gravel board fence.

Dimensions: 5.8m in length and 600mm wide.



Trench 3

Location: Eastern boundary running north to south. Positioned 0.3m from the northern boundary fence and 2.1m from the eastern boundary gravel board fence.

Dimensions: 8.2m in length and 600mm wide.



Trench 3 was further broken down into two sections (A & B) due to the distinct change in root density and surfaces (grass and hard standing).

Section A: southern section, 4m in length, excavated to an average depth of 450mm, adjacent to the cypress tree.

Section B: northern section, excavated to c. 550mm depth, positioned under made ground and existing hard standing.

The final excavated areas for all three trenches are illustrated in **Table 1** below.

Final excavation	Photograph
Trench 1: Excavated to a final maximum depth of c. 450mm. Two significant roots (>20mm diameter) observed; 75% of root mass estimated below 15mm diameter.	 [Photo 1 of 21]
Trench 2: Excavated to an average depth of c. 450mm. Dense fibrous root growth observed at 400mm depth. Six roots observed; five exceeding 20mm diameter.	 [Photo 2 of 21]

Trench 3 - Section A: Excavated to a maximum depth of 450mm.

Eight roots were observed (10–24mm diameter), largely associated with the adjacent cypress tree.

Trench 3 - Section B: Excavated to c. 550mm depth. Approximately six observable roots averaging 5mm diameter, fibrous in nature, under made ground and existing hard standing.



[Photo 3 of 21]

Images and a summary of the root investigation are provided in **Table 2** below.

Orange spray lines on the ground indicate the significant roots greater than 20mm in diameter.

Trench 1 - Feature	Photograph
Trench 1 – Root 1 Starts at the eastern end of the trench. Root depth 130mm. Root diameter 10mm. Species: cypress. Positioned 5.2m from the boundary fence on the northern side of the trench and 5.0m on the southern side. <i>Below 20mm threshold — recorded for completeness.</i>	 [Photo 4 of 21]
Trench 1 – Root 2 Root depth 100mm. Root diameter 28mm. Species: cypress. Positioned 4.7m from the boundary fence on the northern side of the trench and 4.8m on the southern side.	 [Photo 5 of 21]

Trench 1 – Root 3

Root depth variable along length; observed range approximately 100- 160 mm, averaging c. 130mm.

Root diameter 43mm.

Species: sycamore.

Follows the entire length of the trench.



[Photo 6 of 21]

Trench 2 - Feature

Photograph

Trench 2 – Root 1

Root depth 300mm.

Root diameter 53mm.

Species: sycamore (identified by bark appearance and direction of growth, north-east to south-west).

Positioned 8.8m from the southern boundary wall on the western side of the trench and 9.8m on the eastern side.



[Photo 7 of 21]

Trench 2 – Root 2

Root depth 300mm.

Root diameter 30mm.

Species: sycamore (estimated).

Positioned 8.8m from the southern boundary wall on the western side and 9.0m on the eastern side.



[Photo 8 of 21]

Trench 2 – Root 3

Root depth 270mm.

Root diameter 24mm.

Species: sycamore (estimated).

Positioned 8.7m from the southern boundary wall on the western side and 8.5m on the eastern side.



[Photo 9 of 21]

Trench 2 – Root 4

Root depth 250mm.

Root diameter 47mm.

Species: sycamore.

Positioned 8.0m from the southern boundary wall on the western side and 8.5m on the eastern side.



[Photo 10 of 21]

Trench 2 – Root 5

Root depth 220mm.

Root diameter 24mm.

Species: ash (identified by bark appearance).

Positioned 6.9m from the southern boundary wall on the western side and 7.8m on the eastern side.



[Photo 11 of 21]

Trench 2 – Root 6

Root depth 200mm. Root diameter 15mm.

Species: ash (identified by bark appearance).

Positioned 5.4m from the southern boundary wall on the western side and 4.9m on the eastern side.

Below 20mm threshold — recorded for completeness.



[Photo 12 of 21]

Trench 3 - Feature

Photograph

Trench 3 (Section A) – Root 1

Root depth 100mm.

Root diameter 10mm.

Species: cypress.

Below 20mm threshold — recorded for completeness.



[Photo 13 of 21]

Trench 3 (Section A) – Root 2

Root depth 120mm.

Root diameter 10mm.

Species: cypress.

*Below 20mm threshold —
recorded for completeness.*



[Photo 14 of 21]

Trench 3 (Section A) – Root 3

Root depth 100mm. Root diameter 10mm.

Species: cypress.

Positioned 4.8m from the northern boundary gate on the western side and 5.1m on the eastern side.

*Below 20mm threshold —
recorded for completeness.*



[Photo 15 of 21]

Trench 3 (Section A) – Root 4

Root depth 110mm.

Root diameter 10mm.

Positioned 5.7m from the northern boundary gate on the western side and 5.6m on the eastern side of the trench.

Species: cypress.

Below 20mm diameter threshold — recorded for completeness.



[Photo 16 of 21]

Trench 3 (Section A) – Root 5

Root depth 80mm.

Root diameter 24mm.

Species: cypress (estimated).



[Photo 17 of 21]

Trench 3 (Section A) – Root 6

Root depth 80mm. Root diameter 18mm.

Species: cypress.

Positioned 5.8m from the northern boundary gate on the western side and 5.8 m on the eastern side of the trench.

Below 20mm threshold — recorded for completeness.



[Photo 18 of 21]

Trench 3 (Section A) – Root 7

Root depth 80mm (under grass).

Root diameter 15mm.

Species: cypress.

Positioned 6.1m from the northern boundary gate on the western side and 5.9m on the eastern side of the trench.

Below 20mm threshold — recorded for completeness.



[Photo 19 of 21]

Trench 3 (Section A) – Root 8

Root depth 110mm (under grass).

Root diameter 18mm.

Positioned 7.4m from the northern boundary gate on the western side and 7.5m on the eastern side.

Species: cypress.

Below 20mm threshold — recorded for completeness.



[Photo 20 of 21]

Trench 3 (Section B)

A noticeable reduction in significant roots within section B was observed. c.6 observable roots within the trench.

More fibrous in nature, all under what appears to be made ground and existing hard surfacing. Given the direction of growth, roots were attributed to the adjacent cypress tree.



[Photo 21 of 21]

Trench 3 (Section B)

The annotation indicates an area with a noticeable reduction in significant roots within section B.

Attributed to the presence of hard surfacing in this area.



INVESTIGATION CONCLUSION

Air excavation across the three trenches revealed a total of eight roots exceeding 20mm diameter within the investigated depths of up to 450mm (Trench 1), 450mm (Trench 2), 450mm (Trench 3 Section A) and 550mm (Trench 3 Section B). The remaining roots recorded in Table 2 were below the 20mm diameter threshold. The precise locations of these roots are recorded in the findings table above, measured from the boundary fence and boundary wall reference points.

The depth of the trenches is not considered to be a significant limitation to the assessment, due to the typical pattern of rooting and the known understanding that the majority of tree roots are present in the upper soil profile due to the availability of water and oxygen. Based on our professional experience and knowledge of root investigations, it would not be expected to find any larger roots at a depth below those found in the assessment.

The largest root observed in Trench 1 (Root 3 at 43mm diameter) was attributed to the directly adjacent sycamore (T4) at the eastern end of the trench. This was based on the roots' direction of growth, bark appearance and relative diameter.

The roots observed in Trench 2 are attributed to offsite mature sycamore and ash trees bordering the eastern boundary, based on the direction of growth and bark appearance.

The roots observed in Trench 3 are attributed to the onsite cypress tree, which is due to be removed. A noticeable reduction in root presence and density was observed in Section B of Trench 3, likely a consequence of the existing hard surfacing restricting root development.

None of the roots found during the investigation are considered to be structural, and the number found in these localised excavations are not considered to be critical to the tree's health or survival. This assessment

is based on the diameter, depth and orientation of the roots observed, none of which exhibited the characteristics of primary structural or transport roots.

Given the location of Trench 1 and its proximity to T4 on drawing 11610-SK02-A, it is considered that root damage resulting from the proposed works in this location would have a detrimental impact on the tree. However, the existing arboricultural reports propose T4 for removal.

Subject to final confirmation of the proposals, root pruning within Trenches 2 and 3 may be acceptable, in accordance with Paragraph 7.2.3 of BS5837:2012, which states *“Roots smaller than 25mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboriculturist, as such roots might be essential to the tree’s health and stability.”*