

Tree Translocation - Station Hill, Phase 2 Enabling Works

Method Statement

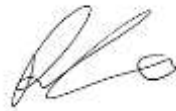
Date: March 2020

Client Name: S H Reading Master LLP

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Prepared by	Checked & Approved by
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1. Introduction

- 1.1. Waterman Infrastructure and Environment Ltd. (WIE) have been instructed by S H Reading Master LLP to provide advice and guidance in relation to the translocation of 7 trees growing on the southern boundary of the Temporary Events Space, off Station Hill in central Reading (hereafter referred to as the 'Site').
- 1.2. SH Reading Master LLP are intending to submit a planning application for enabling works at the Site. The enabling works would comprise the removal of the existing Temporary Events Space and underlying material, understood to be demolition spoil generated by the past demolition of the Western Tower and associated retail units. As part of these works, there is a need to remove the trees located in a raised planting bed within the southern part of the Site. The trees are identified as trees T1 to T7 on **Drawing 1**. To avoid the total loss of the trees, S H Reading Master LLP have indicated that they would like to translocate the trees to an alternative location. This would either be into temporary planters so they can be utilised in the temporary landscaping of the site during the redevelopment or stored off-site (such as in a nursery), or alternatively planted off-site.
- 1.3. An arboricultural survey of the Site was undertaken by WIE on 1st October 2019 and the findings of that survey in relation to the trees to be translocated are summarised in **Table 1**.
- 1.4. At the time of the tree survey, trees T1 to T6 were found to be in a good structural and physiological condition. Tree T7 was found to be in poor condition showing advanced signs of stress and decline. As such it is recommended that T7 should not be considered for translocation and should instead be removed for reasons of sound arboricultural management.

Table 1: Summary of tree survey findings.

Tree Ref.	Species	Height (m)	Stem diameter (mm)	Canopy Spread (m)				First significant branch height / direction	Avg. Canopy Height (m)	Age	Physiological Condition	Structural Condition
				N	E	S	W					
T1	Silver Birch (<i>Betula pendula</i>)	10.0	145	1.5	1.0	1.0	1.0	2.0 (N)	2.0	SM	Good	Good
T2	Field Maple (<i>Acer campestre</i>)	8.0	150	1.5	1.5	1.5	1.5	1.5 (N)	1.5	SM	Good	Fair
T3	Silver Birch (<i>Betula pendula</i>)	10.0	145	1.0	1.0	1.5	1.0	1.5 (E)	1.0	SM	Good	Good
T4	Field Maple (<i>Acer campestre</i>)	8.0	145	1.5	1.5	1.5	1.5	2.0 (N)	2.0	SM	Good	Good
T5	Silver Birch (<i>Betula pendula</i>)	10.0	155	1.0	1.5	1.0	1.0	1.5 (W)	1.5	SM	Good	Good
T6	Field Maple (<i>Acer campestre</i>)	8.0	155	1.5	1.5	1.5	1.5	1.5 (E)	1.5	SM	Good	Good
T7	Silver Birch (<i>Betula pendula</i>)	10.0	140	1.5	1.0	1.0	1.0	2.0 (N)	2.0	SM	Poor	Poor

- 1.4 A check carried out on the 2nd October 2019 of the Reading Borough Council on-line registry¹ has indicated that none of the trees present on the Site are afforded protection through the provisions of a TPO and no part of the Site is located within a Conservation Area. Assuming that this position has not changed, there are therefore no legal constraints to the proposed works.
- 1.5 This Method Statement sets out a methodology which should be followed to provide the greatest opportunity for the trees to survive this translocation.

¹ Reading Council. (2019). TPO directory. Accessed 02/10/2019: <http://www.reading.gov.uk/trees>.



Photograph 1: View of the trees to be translocated.

2. Assumptions and Limitations

- 2.1. This Method Statement has been written on the assumption that the condition of the trees is still the same as that recorded during the tree survey. Should the condition of the trees have deteriorated since the tree survey was undertaken, they may no longer be suitable candidates for translocation.
- 2.2. Although the translocation of trees of this size is feasible, a significant amount of root volume will be lost in order to minimise the size of the temporary planter. The planting of the trees in a

temporary planter will also restrict future root growth, and whilst the methodologies set out in this Method Statement provide the best chance of success, as the trees are living organisms, there is no guarantee that the trees will survive.

- 2.3. It is considered that there is a greater potential for the long-term survival of the trees if they are relocated to a site where they can be given a permanent planting location in the ground.
- 2.4. Due to the risks associated with the project, it is recommended that the works are undertaken by a specialist contractor with previous experience of moving trees of similar sizes and in similar locations.
- 2.5. To maximise the chance of success, it is recommended that the works are undertaken during the winter months (September to March inclusive). Whilst it is possible to undertake the works outside of these months, the risk of failure increases. To mitigate this increased risk, a larger root ball may be required, levels of aftercare will also increase and costs are likely to be significantly higher.
- 2.6. The works should be timed to avoid the bird nesting season. If this is not possible, it will be necessary for an ecologist to undertake a nesting bird check immediately before (within 24 hours) of vegetation removal / relocation. If active nests are identified, some or all of the works may need to be delayed until the young birds have fledged,

3. Methodology

Translocation to Temporary Containers

- 3.1. In advance of the proposed work taking place, a meeting should be held on site between a representative of S H Master LLP and the appointed contractor to assess the extent of the root growth of the trees. It is recommended that an Airspade investigation of the root morphology is undertaken at this time.
- 3.2. To maximise the chances of success, the size of the root ball should be governed by the root morphology of the trees, and therefore the size of the temporary planters should be selected based on the size of the root ball, and not *vice-versa*. The meeting should be held far enough in advance of the proposed works to allow time for suitably sized planters to be secured or fabricated if necessary. For the purposes of this Method Statement, it is assumed that a root ball with a diameter of between 1.5 -2m will be sufficient. Assuming square planters will be used, it is therefore likely that they will need to have sides of approximately 2m.
- 3.3. If the trees are to be kept on-site, the root balls should be contained within an Airpot inside the temporary ornamental planters and therefore the planters need to be big enough to allow a small void between the outer edge of the root ball and the container sides. If the trees are to be transferred to a nursery, the trees can be stored in the Airpots with no need for an external container.
- 3.4. Airpots are designed to enhance healthy root development and maximise soil aeration. Additional oxygen in the growing medium leads to healthy bacteria and better nutrient release. At the same time the shape of the Airpot wall eliminates root circling and encourages the development of a mass of healthy fibrous roots. The additional roots mean better take up of nutrients and water leading to healthier and more robust trees.

- 3.5. The temporary planters should incorporate sufficient drainage to avoid the planting medium becoming waterlogged.



Figure 1: Trees growing in Airpots.

- 3.6. The depth of the root ball will also be assessed during the initial site visit, but again, it is assumed that a depth of approximately 0.6m should be sufficient.
- 3.7. Unless it needs to be retained for another reason, the retaining wall to the north of the trees should be removed prior to excavating the root balls. This should be undertaken using hand tools to avoid damage to the tree roots where it is adjacent to the root balls.
- 3.8. Care should be taken to avoid unnecessary damage to the tree roots during the excavation of the root balls. Therefore, the excavations required should be undertaken using an Airspade (a compressed air lance). This will allow the roots of the tree to be exposed without damage. They can then be pruned back to the outer edge of the root ball using an appropriate, clean and sharp pruning device (such as secateurs).
- 3.9. Once the root ball has been exposed and the roots cut, a hessian sheet should be slid below the root ball and used to wrap and secure it in place with temporary straps. The straps should be strong enough to support the weight of the tree when lifted, and should be wide enough to avoid cutting into the root ball.
- 3.10. The tree can then be lifted from its current position into the waiting container. The lifting device should be secured to the straps securing the root ball. Under no circumstances should the tree be lifted by straps attached to or through the trunk.
- 3.11. Once seated in the container, the hessian sacking should be removed and the Airpot wrapped around the outside of the root ball and secured². Any resultant voids should be back filled with a suitable compost.

² Airpots are supplied as flexible sheets which can be secured around the root ball.

- 3.12. Finally, a woodchip³ mulch should be laid over the top of the root ball and the root ball should be drenched with a suitable organic fertilizer and bio-stimulant to encourage a beneficial microbial environment in the soil.

Aftercare

- 3.13. Trees growing in the limited space available in a container are more susceptible to stresses caused by lack of moisture and nutrients when compared to open grown trees. Therefore, a significant level of after care is required to ensure the trees establish successfully and to limit the chances of the trees failing.
- 3.14. A suitable automated irrigation system should be installed in each container in order to maintain moisture in the soil. Small amounts of water should be applied frequently, and the system should be monitored to ensure that the levels of water being applied are adequate. Greater volumes of water will need to be applied during prolonged periods of hot weather.
- 3.15. Any remaining woodchip should be removed annually, and a top dressing of new compost should be applied to replenish nutrients lost from the soil. A new layer of woodchip mulch should then be applied.
- 3.16. A drench of suitable organic fertilizers should be applied approximately 4 times per year.
- 3.17. The Airpot should be removed approximately every 2-3 years and the roots pruned as necessary. A new Airpot should then be installed and any voids back filled with suitable compost.
- 3.18. The above will need to continue for as long as the trees are to remain in the containers.

Translocation to a Permanent Planting Site

- 3.19. The process for translocation to a permanent planting site is largely the same as for translocation to a temporary container, with the exception that the finished tree will be planted in the ground and not in a container.
- 3.20. The method for selecting the size of the root ball and lifting the trees is the same as set out above.
- 3.21. The trees should be planted in a suitable area which will provide sufficient space for the trees to develop to maturity and which provides sufficient rooting medium to allow adequate root growth. As a minimum this should be an area equivalent to at least the expected canopy spread of the tree at maturity (for both the silver birch and the field maple the canopy spread at maturity can be 5m in all directions). The trees should not be planted in an area prone to waterlogging or soil desiccation.
- 3.22. The trees should be planted in a planting pit equal in depth to the root ball and with a radius at least 1.5 times bigger than the radius of the root ball. The planting hole should be backfilled with the native soil excavated from the hole. If the planting pits are excavated mechanically, the sides and base should be forked over to allow drainage and root penetration.
- 3.23. The trees should be secured in place with a suitable below ground anchor system such as that shown in Figure 2.
- 3.24. As with the trees in containers, a woodchip⁴ mulch should be laid over the top of the root ball and the root ball should be drenched with a suitable organic fertilizer and bio-stimulant to encourage a beneficial microbial environment in the soil.

³ Bark should not be used as this can remove nutrients from the soil.

⁴ Bark should not be used as this can remove nutrients from the soil.

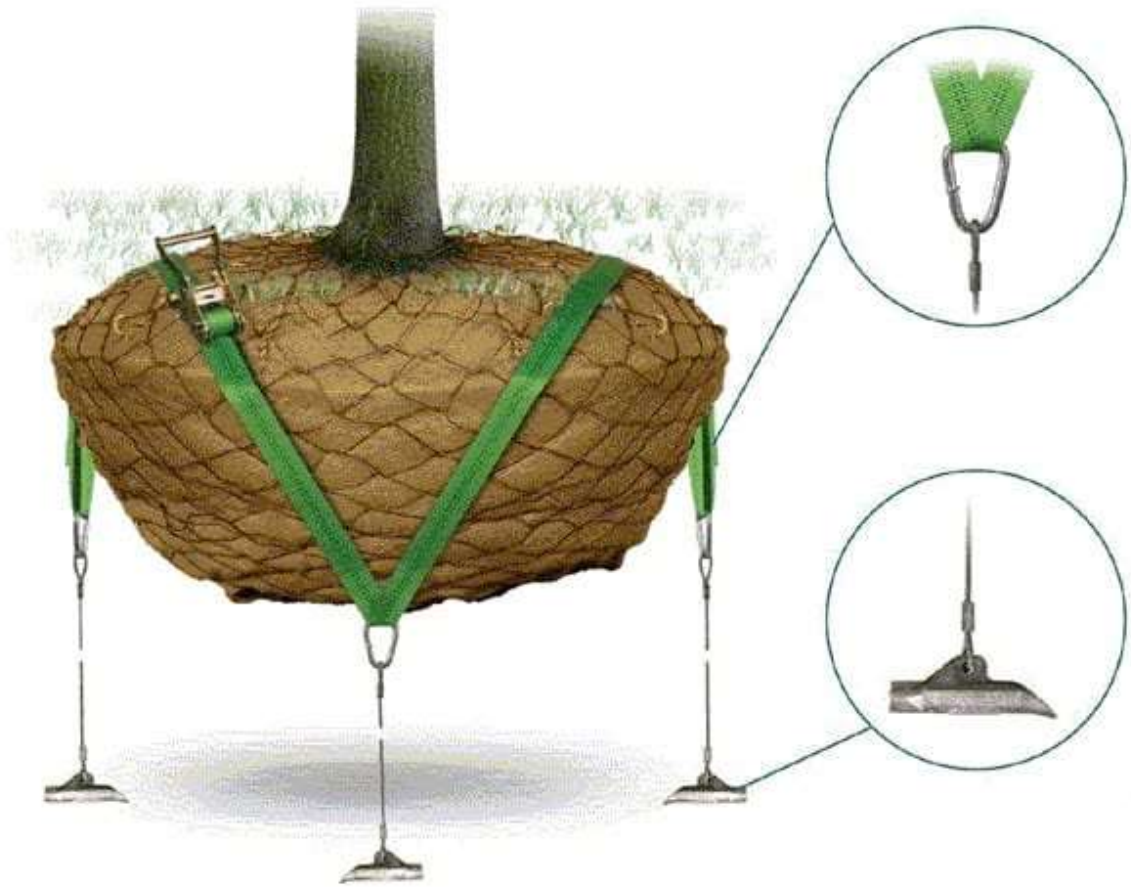


Figure 2: Underground anchor system.

Aftercare

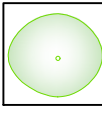
- 3.25. As with the container grown trees, a significant level of aftercare will be required to ensure successful establishment of the trees in their new permanent locations. The aftercare will be the same as that for the container grown trees with the exception of not needing to replace the Airpot and it will only be required until the trees are established and able to support themselves (approximately 3-5 years).

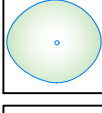


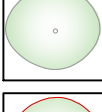
DRAWING 1 – TREE LOCATION PLAN

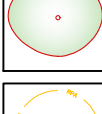
This drawing should not be scaled. Dimensions to be verified on site.
Any discrepancies should be referred to the Engineer prior to work being put in hand.

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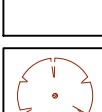
CATEGORY GRADE A
Trees of high quality
- 

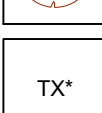
CATEGORY GRADE B
Trees of moderate quality
- 

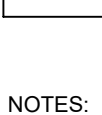
CATEGORY GRADE C
Trees of low quality
- 

CATEGORY GRADE U
Trees unsuitable for retention
- 

ROOT PROTECTION AREAS (RPA)
- 

INDICATIVE EXTENT OF
GROUPED FEATURE
- 

SITE BOUNDARY
- 

TREES REMOVED
- 

TX*
TREE NOT INCLUDED ON
TOPOGRAPHIC SURVEY.
POSITIONS ESTIMATED

NOTES:

ROOT PROTECTION AREA
Root Protection Areas are calculated in accordance with BS5837: 2012. The precise morphology and disposition of roots may not be fully reflected by these areas, particularly where there are hard standings, however they provide a good indication of potential root constraint.

THIS DRAWING SHOULD BE READ IN
CONJUNCTION WITH WATERMAN TREE
SURVEY REPORT

A01	11.10.19	PRELIMINARY ISSUE	MC
Rev	Date	Description	By

Amendments			
Project	STATION HILL READING		
Title	TREE SURVEY		
Client			



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Publisher	Zone	Category	Number	Revision
WIE	SA	77	001	A01

