



ANNEX F

Typical Tree Transplantation Specification



GENERAL REQUIREMENTS FOR TREE TRANSPLANTATION WORKS

1. SUBMISSION OF METHOD STATEMENTS

- 1.1 The Contractor shall make his own arrangements for the transportation of trees. The Contractor shall submit the method statement for tree transplantation to the Project Manager/ET/IEC for review without objection prior to the commencement of any works. The method statements shall outline the method, sequencing, time of operations and the location and type of machinery to be used for various transplantation operations.
- 1.2 The Contractor shall allow the tree transplanting works in his programme of Works in such a way that the root pruning to the approved size of rootball shall commence as early as possible so as to ensure maximum fibrous root growth before the transplanting operations.
- 1.3 The Contractor shall take all necessary precautions to ensure that no damage is done to the tree during all processes of transplanting.
- 1.4 Transplanting operations shall be timed so as to enable transplanting of the trees direct to the areas of proposed planting. No lifting and transplanting operations shall commence until either the receptor sites or the holding nursery are fully prepared as specified. Any tree lifted must be transplanted and watered on the same day.
- 1.5 Trees shall be lifted carefully to avoid damage to roots and to obtain the approved size of rootball. Roots shall be cut free of ground, not pulled, using a suitable implement to give a clean cut. The rootball should be properly wrapped before lifting. Also trees should not be lifted by the trunk, as this can cause serious trunk injury but by its rootball which should be properly prepared and wrapped.
- 1.6 All trees to be transplanted shall be wrapped and protected to prevent mechanical damage during lifting and transportation. They shall also be protected against excessive sunlight, wind and drought. Care shall be taken in packing to prevent overheating with its resultant loss of foliage.
- 1.7 Trees transplanted direct to the receptor sites are to be planted in accordance with the contract-specific requirements unless otherwise proposed in the Contractor's method statement and reviewed without objection by the Project Manager.
- 1.8 The Contractor shall be responsible for all the necessary application for the Temporary Traffic Arrangement for the transplantation works.

2. PREPARATION OF TRANSPLANTED TREES

- 2.1 The contractor shall follow contract-specific requirements of the preparation works for tree transplanting works, including the rootball size, depth of root ball, root ball preparation period, pruning requirement and recipient site for tree transplanting.

3. PLANTING AT RECEPTOR SITE

- 3.1 The Contractor shall be responsible for identifying and verifying tree recipient sites in relation to the proposed works before the tree transplantation. Where a tree recipient site is found unsuitable, the Contractor shall submit an alternative proposal to the Project Manager for review without objection. Once the underground utilities verification is complete, associated protective measures such as the provision of

root barrier to any transplanted trees which is in close proximity to existing utilities shall be provided to avoid any potential damages.

- 3.2 Prior to the lifting of the trees, tree pits at their receptor sites shall be already prepared and agreed on site.
- 3.3 After settlement the top of the root collar shall be level with the surrounding ground level. Backfill in layers, each layer being firmly consolidated to eliminate air pockets. The backfilling materials proposed by the Contractor shall be reviewed without objection by the Project Manager.
- 3.4 Add fertilizer to the backfilling materials at the rate agreed by the Project Manager. Alternatively, liquid fertilizer may be use as reviewed without objection by the Project Manager. Fertilizer shall be thoroughly mixed with the backfilling materials. Hormone powder may be applied to the rootball and alginates and polymer gels mixed into the backfilling materials in accordance with the manufacturer's instructions if reviewed without objection by the Project Manager.
- 3.5 Securing and supporting measures for the transplanted trees shall be submitted by the Contractor and reviewed without objection by the Project Manager.

4. POST TRANSPLANTING/ ESTABLISHMENT WORK

- 4.1 The transplanted trees shall be maintained immediately after transplanting works, from existing location and subsequent Establishment Period for 1 year. Such maintenance shall include all measures necessary to establish and maintain all the transplanted trees in an acceptable vigorous and healthy growing condition until the expiry of the Establishment Period.
- 4.2 Immediately after transplanting, the base of all the transplanted trees shall be well watered, using enough water to thoroughly soak the rootball.
- 4.3 Backfill of soil mix to form ground level to match adjacent landform and apply hydroseeding according to the contract-specific requirements.
- 4.4 Firming up of the transplanted trees and the supporting materials shall be undertaken as necessary during the period and particularly after heavy rain and/or wind.
- 4.5 Root activator, if instructed, shall be applied regularly according to manufacturer's recommendations.
- 4.6 Rootball shall be kept free of weeds at all times.

***Specific EM&A Requirements:**

- In accordance with the EM&A Manual, the ET shall carry out checking of the contractor's operations during the construction period, which in this case would be the transplanting works. The ET shall also report on the Contractor's compliance, and the report shall be counter signed by IEC.
- In accordance with the EM&A Manual, the ET shall carry out checking of the planting works during the 12-month Establishment Period after tree transplantation and report on the Contractor's compliance, and the report shall be counter signed by IEC.
- Following the 12-month Establishment Period for transplanted trees, monitoring of the long-term management of planting works will be carried out by ET or maintenance agency for compliance for a period up to 10 years after completion of the construction works.