

## **SECTION R2**

### **Clearing and Grubbing-Up**

#### **R2 01 Scope**

The work covered by this Section of the Specification consists in the furnishing of all equipment and labor and in performing all operations in connection with demolition, clearing and grubbing-up including right-of-way areas and borrow areas, subject to the terms and conditions of the Contract, and in strict accordance with this Section of the Specification and the directions of the Engineer's Representative.

The Contractor shall demolish, break up and remove all buildings, structures and superficial obstructions on the Site in the way of or otherwise affected by the Works. He shall clear each part of the Site at times and to the extent required or approved by the Engineer's Representative.

Underground structures and chambers shall be demolished to the depths shown on the Drawings. They shall be properly cleaned out and filled with suitable material, as defined in Clause R5 02-4 and compacted in compliance with Clause R5 11-4. Disused soil and surface water drains within 90cm of formation level shall be removed and trenches shall be backfilled in accordance with Clause R421.

Subject to the provisions of Clause 34 of the Conditions of Contract all materials arising from site clearance which are surplus to or unsuitable for use in the Works shall become the property of the Contractor and shall be disposed of by him either off the Site to his tip, or if agreed by the Engineer's Representative, on the Site in an approved manner.

#### **R2 02 Cleaning**

The roadway and borrow areas outside the standard right-of-way width shall be cleared of all trees, hedges, stumps, bush, existing structures, fences, mud-walls, debris from scarifying and removal of existing pavements, or other rubbish, except for such trees, or other vegetation designated on the Drawings, or directed by the Engineer's Representative, for preservation. The Contractor shall perform no clearing operations until he receives specific instructions in writing from the Engineer's Representative as to the performance of this work. Trees or shrubs outside roadway excavations or elsewhere to be left in place shall be protected from injury during construction operations.

Bushes undergrowth, small trees the trunks of which are less than 30cm in girth at 90cm above ground level, tree stumps less than 10cm diameter and hedges shall be uprooted and burnt or otherwise disposed of.

#### **R2 03 Grubbing -up**

1. In roadway excavation areas all stumps and roots shall be completely removed and all structures walls, or other objectionable matter other than soil shall be removed within a depth of at least 60cm below formation level and side slopes and within a depth of at least 30cm below bank slopes. Any parts of structures below these levels shall be cleared out walls and floors punctured in order to prevent retention of water and the whole filled solidly with approved material and compacted to the satisfaction of the Engineer's Representative. Ail stump and holes shall be backfilled with approved material and compacted

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to the same density as the surrounding material.

2. Borrow areas and excavation areas from which fill material will be taken shall be grubbed-up to remove all heavy grass, weeds or other vegetable growth, and all stumps, roots or other objectionable matter removed completely to exclude such matter from the materials to be used in construction.

3. Embankment areas shall be grubbed free from heavy grass, weeds or other vegetable matter to sufficient depth to enable a minimum depth of 90cm of filling from formation level, or to suit such depth of filling as otherwise directed by the Engineer's Representative to suit the material and site conditions.

All stumps and roots shall be completely removed and all structures and walls treated as outlined in Clause R203-1. All stump and root holes shall be backfilled with approved material and compacted to the same dry density as that of the surrounding material.

4. All stumps within the right-of-way, but outside the excavation or embankment area, shall be removed to a depth of at least 30cm below the original ground surface and the stump holes backfilled with approved material so that the ground surface will be uniform.

5. Where any material below the natural ground level under embankment or below formation level in cuttings is required to be excavated, it shall be removed to such depth and over such areas as are shown on the Drawings or as the Engineer's Representative shall direct.

The presence of short grass with up to only 10cm of topsoil in areas under embankment, except when removed under Clause R2 03-3 above, will not necessitate removal and replacement with compacted backfilling unless directed by the Engineer's Representative. Any removal, without instructions from the Engineer's Representative of up to 10cm of such topsoil in embankment areas and backfilling to original ground level and compacting in accordance with Section RS will be deemed to be included under this item and the quantity will be excluded from excavation or filling measurement.

6. Topsoil as defined in Clause R5 02-4 and its removal to any specified depth for retention for later use as a surface soil for seeding and the growth of grass will only occur when shown on the Drawings or directed by the Engineer's Representative. The site clearance shall include the removal of any sterile-salt layer.

### **R2 04 Disposal**

All materials arising from site clearance and grubbed-up matter shall be disposed of as directed by the Engineer's Representative.

### **R2 05 Payment**

Payment will be made for works in this Section in accordance with the measurement of the appropriate items in the Bill of Quantities and shall constitute full compensation for furnishing all equipment and labor and for performing all operations necessary to complete the work in accordance with this Section of the Specification.