

APPENDIX 6 THE SPECIFICATION OF THE WATER DEMAND MODULE

A6.1 Model specification

The module models water demand as follows.

Domestic water demand For each household type, the demand for water is calculated by applying a coefficient for per capita water demand to the estimate of the population within the household type.

$$(A6.1) \quad HTWT_{i,t} = HTPCWT_{i,t} \times HTPOP_{i,t}$$

where the variables have the following meaning:

HTPCWT(i,t)	per capita water consumption for the population in household type i (metered or unmetered) (in physical units)
HTPOP(i,t)	the population in household type i (metered or unmetered)
HTWT(i,t)	water consumption for the population in household type i (metered or unmetered) (in physical units)

Measured non-household demand For each water user, with the exception of domestic use, water demand is calculated by applying an assumption for the water intensity of output to the projected level of output in that group.

$$(A6.2) \quad YWT_{j,t} = YWTC_{j,t} \times Y_{j,t}$$

where the variables have the following meaning:

Y(j,t)	gross output of industry j in year t (in constant prices)
YWT(j,t)	water consumption by industry j in year t (in physical units)
YWTC(j,t)	water consumption per unit of gross output by industry j in year t

A6.2 The Classifications Adopted

The model identifies 28 water users (including households) and two household types:

- Water Users**
- 1 Agriculture
 - 2 Mining and quarrying
 - 3 Food, drink & tobacco
 - 4 Textiles
 - 5 Clothing & leather
 - 6 Wood, paper etc

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- 7 Manufactured fuels
- 8 Chemicals
- 9 Rubber & plastics
- 10 Non-metallic mineral products
- 11 Basic metals
- 12 Metal goods
- 13 Electronics
- 14 Electrical engineering
- 15 Other engineering
- 16 Transport equipment
- 17 Manufacturing nes & recycling
- 18 Electricity, gas & water
- 19 Construction
- 20 Retail and wholesale distribution
- 21 Hotels & catering
- 22 Transport & communcations
- 23 Financial & business services
- 24 Public administration & defence
- 25 Education
- 26 Health & social work
- 27 Waste treatment & miscellaneous services
- 28 Domestic use (households)

Household types

- 1 Unmetered
- 2 Metered