PART E - TECHNICAL SPECIFICATION

E1. DESCRIPTION OF THE WORKS

E1.1 SCOPE OF WORK

E1.1.1 Background

An audit of lifting equipment at the Metropolitan Dams and the Shoalhaven area was carried out in August 2006 by Transfield Services to identify work to bring these assets up to AS2550 requirements. One of the recommendations was the installation of access platforms and ladders, for maintenance and inspection purposes, on several of the cranes that did not have them.

E1.1.2 Purpose

Installation of access platforms and ladders at various cranes located within the Metropolitan Dams for maintenance and inspection purposes in Accordance with AS 2250 at the following locations:

- Avon Dam Lower Discharge Valve House (WD0004CR13865)
- Nepean Dam Lower Discharge Valve House (WD0005CR13845)
- Nepean Dam Wall (WD0005CR178)
- Cordeaux Dam Upper Scour Valve House (WD0003CR1313)
- Cordeaux Dam Lower Discharge Valve House (WD0003CR1216)
- Woronora Dam (Parkel 3T Crane 390)
- Broughton Pass Chlorine Shed (WT002CR6736)
- Bendeela Pipeline Surge Tank top trolley (WM0BPLR04)
- Kangaroo Pipeline Surge Tank top trolley
- At various Survey Locations

E1.1.3 Location

Nepean Dam is located on the Nepean River, near Bargo, approximately 100 km southwest of Sydney.

Avon Dam is located on the Avon River, near Bargo, approximately 100 km southwest of Sydney.

Woronora Dam is located on the Woronora River, near Waterfall, approximately 40 km south of Sydney.

Cordeaux Dam is located on the Cordeaux River, off Picton Road, approximately 70 km south of Sydney.

Broughton Pass is located on the Cataract River, between Appin and Wilton, approximately 65 km southwest of Sydney.

The Bendeela and Kangaroo Pipelines are located in the Kangaroo Valley south of Sydney.

E1.1.4 Work to be carried out by Contractor

The scope of work to be executed under the Contract is broadly described in this clause. The full scope of work can only be determined by reference to all documentation, including engineering drawings, forming this Contract.

1. For the concept/design, supply (fabrication) and installation of access platform and ladders for overhead cranes, for maintenance and inspection purposes, at:

   a Avon Dam Lower Discharge Valve House (WD0004CR13865)

   b Nepean Dam Lower Discharge Valve House (WD0005CR13845)

   c Nepean Dam Wall (WD0005CR178)

   d Cordeaux Dam Upper Scour Valve House (WD0003CR1313)

   e Cordeaux Dam Lower Discharge Valve House (WD0003CR1216)

   f Woronora Dam (Parkel 3T Crane 390)

   g Broughton Pass Chlorine Shed (WT002CR6736)

   h Bendeela Pipeline Surge Tank top trolley (WM0BPLR04)

   I Kangaroo Pipeline Surge Tank top trolley

   J At various Survey Locations

   (Refer Appendix for pictures)

   in accordance with AS 1657: “Fixed Platforms, walkways, stairways and ladders – Design, construction and installation”, AS 2550 Safe Use of Cranes, hoists and winches and in accordance with Australian Standard AS4902 General conditions of contract for design and construct and AS 1418: Cranes, hoists and winches.

2 Modify existing platforms, walkways and ladders, as required, as per the requirements of AS 1657, AS 2550, AS 1418 and NSW WorkCover requirements.

3 Supply of all labour, equipment and materials to carry out the above scope of work.

4 Supply and installation of self closing gates at the top of each ladder in accordance with AS 1657, AS 2550 and AS 1418.

5 The contractor is to carry out all design work in accordance with AS 1657, AS 2550, AS 1418.

6 Establishment and demobilisation of staff and equipment on site.

7 Apply protective coatings, painting or hot dip galvanise, all new platforms and ladders as per existing platforms and ladders at each location and NSW Heritage Requirements, as specified in this specification,.

8 All works will be undertaken in accordance Heritage Office, Department of Planning to ensure the heritage values are not compromised. (Heritage Office requirements will be provided by the SCA)

9 Supply of “As Built” Drawings incorporating existing equipment.

10 Site-check all dimensions and elevations.

11 Removal of all redundant steelwork, all waste material and rubbish from the work areas and SCA property in accordance with SCA requirements.

12 “Touch-up” with paint or Cold Gal any steelwork modified on site.

13 Make good any surfaces or equipment, civil or structural, damaged during the installation and modification phases of the project.

14 All workmanship and materials shall comply with relevant Australian Standards and controlling authorities, including the NSW Heritage Office if applicable.

15 The contractor is to ensure that no damage occurs to any existing equipment, civil structures and structural steel during the installation phase of the project.

16 Accept responsibility for all erection procedures including the provision of all necessary guying, temporary bracing and the like, so as to ensure the safety of the structure under all conditions of wind, seismic and erection loads occurring during the construction period to the satisfaction of the SCA representative.

17 The contractor shall provide shall provide safe access to SCA equipment during the installation phase of the project.

E1.1.5 Work to be carried out by Others

Not Applicable.

E1.1.6 Access

Keys to access the various locations will be provided by the SCA for the project duration.

E1.1.7 Shutdowns

Contractor is to provide a program to carry out the specified work and advise commencement and completion dates.

E1.2 Standards

All works shall comply with this Specification, all relevant Australian Standards and Codes of Practice Manuals. Particular attention is drawn to:

AS 2550	Safe Use of Cranes, hoists and winches
AS 1418	Cranes, hoists and winches

AS 1657	Fixed Platforms, walkways, stairways and ladders – Design, construction and installation
AS 1554	Structural steel welding
AS1100.101	Technical drawing – General Principles and amendments
AS1101.201	Graphical symbols for mechanical engineering drawing

E1.3 DESIGN

The design and construction of this project shall be in accordance with Australian Standard AS1657: “Fixed Platforms, walkways, stairways and ladders – Design, construction and installation”.

The principal, prior to commencement of any fabrication, shall approve all concept/designs.

All workshop drawings are to be approved/endorsed by the SCA prior to any fabrication, installation and modifications work commencing.

E1.4 SPECIFICATION OF EQUIPMENT

As advised by the Contractor. All platforms and ladders shall be in accordance with requirements of AS 1418, AS 2550 and AS 1657

E1.5 SAFE WORK PLAN AND SITE INDUCTION

The contractor shall submit a comprehensive safe work plan and environmental management plan for SCA review/endorsement prior to commencing any site work.

Personnel assigned for this contract shall undergo general and site specific induction by the SCA prior to commencement of site work.

SCA procedure 0604 Water Safety Procedure shall be applicable when working on or near water.

E1.6 MATERIALS

E1.6.1 Steelwork

All steelwork shall be in accordance with requirements of AS 1657, AS 1418 and AS 1554.

E1.6.2 Masonry Anchors

Where hold bolts do not exist ladder and platforms supports are to be secured to concrete with Dynaset or Chemset stainless steel masonry anchors in accordance with the manufacturers instructions and AS 3600: Concrete Structures. Minimum size of anchor to be M16 diameter. Unless specified otherwise grout and packing to be 20 mm thick minimum between the concrete and the fixing brackets.

E1.6.3 Concrete

1.6.3.1 All civil work shall be designed and constructed in accordance with Australian Standard AS 3600: Concrete Structures.

1.6.3.2 Workmanship and materials shall comply with Australian Standard AS 3600: Concrete Structures.

1.6.3.3 Formwork shall comply with Australian Standards AS 3610: Formwork for concrete.

1.6.3.4 For those surfaces of existing concrete against which new concrete is to be placed, cut/scabble the concrete surface back to expose the coarse aggregate and cleaned with air before air prior to apply new concrete.

1.6.3.5 Any concrete repair shall be in accordance with industry standards and as agreed to by the SCA representative.

1.6.3.6 All grout shall be applied in accordance with the manufactures data sheets.

E1.6.4 Steelwork

1.6.4.1 All ladders, walkways and stairways materials shall be in accordance with AS 1657: “Fixed Platforms, walkways, stairways and ladders – Design, construction and installation”.

1.6.4.2 All structural steelwork shall be designed, fabricated and erected in accordance with AS4100: Steel Structures and AS1170: Structural Design Actions.

1.6.4.3 All structural steel bolted connections shall be made with 2 off bolts (M16 minimum) and shall be to Australian Standards AS1252: High Strength Steel Bolts, associated nuts and washers for structural engineering and AS1111.1: ISO metric hexagon bolts and screws minimum grade 8.8. Nuts shall be in accordance with Australian Standard AS1112: ISO metric hexagon nuts minimum grade 8.8. Washers shall be in accordance with Australian Standard AS1237: Plain washers for Metric Bolts, screws and nuts for general purposes – General Plan and Tolerances. Bolts, nuts and washers shall be galvanised in accordance with Australian Standard AS1214: Hot-dip galvanised coatings on threaded fasteners (ISO metric coarse threads series).

E1.6.5 Grating

All grating shall be in accordance with AS1657 and to match existing grating at the various locations on site.

E1.7 FABRICATION

E1.7.1 Welding and Post Weld Heat Treatment

All fabrication shall be in accordance with requirements of AS 1657, AS 1418 and AS 1554.

All welds and heat affected zones shall be cleaned of all slag and shall be smoothly finished so as to be free of surface cracks, roughness, undercut, crevices and sharp

edges, and surfaces shall be uniformly cleaned by mechanical or hand finishing or sanding to achieve a uniform, smooth finish, free of discolouration due to staining, heat tint or dark oxide layers.

E1.7.2 Steelwork

1.7.2.1 The design, ladders, walkways and stairways shall be in accordance with AS 1657: “Fixed Platforms, walkways, stairways and ladders – Design, construction and installation” were practical.

1.7.2.2 All structural steelwork shall be designed, fabricated and erected in accordance with AS4100: Steel Structures and AS1170: Structural Design Actions.

Additionally all design, fabrication and erection shall comply with the minimum r equirements of the relevant Statutory Authorities.

1.7.2.3 Workmanship and materials shall comply with Australian Standard AS4100: Steel Structures.

1.7.2.4 Welding shall comply to Australian Standard AS1554: Structural Steel Welding – Welding of Steel Structures, Part 1 Category SP (Structural Purpose). Welding shall be carried out by qualified experienced welders in accordance with AS1554.1.

1.7.2.5 Fabrication shall comply with Australian Standard AS4100: Steel Structures.

1.7.2.6 Erection and installation of steelwork shall be carried out in accordance with Australian Standards AS4100: Steel Structures and AS3828: Guidelines for the erection of Building Steelwork. Structures shall be maintained in safe and stable condition during all phases of erection

1.7.2.7 All structural steel bolted connections shall be made with 2 off bolts (M16 minimum) and shall be to Australian Standards AS1252: High Strength Steel Bolts, associated nuts and washers for structural engineering and AS1111.1: ISO metric hexagon bolts and screws minimum grade 8.8. Nuts shall be in accordance with Australian Standard AS1112: ISO metric hexagon nuts minimum grade 8.8. Washers shall be in accordance with Australian Standard AS1237: Plain washers for Metric Bolts, screws and nuts for general purposes – General Plan and Tolerances. Bolts, nuts and washers shall be galvanised in accordance with Australian Standard AS1214: Hot-dip galvanised coatings on threaded fasteners (ISO metric coarse threads series).

1.7.2.8 All steelwork etc. is to be fabricated off-site.

1.7.2.9 On-site welding, grinding and oxy-cutting is permissible in the nominated areas at the discretion of SCA personnel, SCA procedural document “Procedure 0617 Undertaking Hot Work” which specifies the procedures and precautions to be taken prior, during and after hot work.

1.7.2.10 Industrial fall arrest systems and devices when required are to be in accordance with AS1891: Industrial Fall Arrest Systems and devices – harness and ancillary equipment Parts 1 to 4.

1.7.2.11 All materials to be used in the work shall be new and in good condition. Material that is deformed or otherwise permanently damaged shall not be used.

1.7.2.12 All metalwork shall be free from rust, pitting, laminations and other defects which will either impair the structural capacity of the member or the quality of the protective coating system.

1.7.2.13 In addition to the general requirements, and except where otherwise specified and/or shown, fabrication shall conform to the methods and recommendations set out in AS4100: Steel Structures or AS1664.

1.7.2.14 All members shall be fabricated true to shape and size with out distortion and with all necessary provisions for handling, field splicing, field welding and the like. The welding of “off-cuts” or short lengths of members to make up the required length of a member is not permitted.

E1.8 PROTECTIVE COATING

E1.8.1 Protective Treatment of Steelwork

All steelwork requiring painting shall be painted in accordance with Protective Coating Specification PCS 105 Part A and PCS Parts B&C System EPU-3 and manufacture’s requirements. Refer Appendices for details.

All steelwork requiring galvanising shall be “hot dipped” galvanised after prefabrication to Australian Standards AS1627: Metal Finishing – Preparation for treatment of surfaces, AS4680: Hot-dip galvanised coatings on ferrous articles and AS4792: Hod-dip galvanised(zinc) coatings on ferrous hollow sections applied in a continuous , or specialised process.

Touch Up Galvanising

Repair welds, cuts, abrasions or damaged areas of galvanised surfaces shall be repaired by the contractor by the application of two coats of “Cold Gal” or equivalent in accordance with the manufacturer’s data sheet.

E1.9 INSTALLATION

E1.9 Hot Work

No Hot Work (grinding, welding, thermal or oxygen cutting or heating (Oxy-acetylene or LPG) or any other related heat or spark-producing operation of any kind shall be undertaken on site without the specific approval by the SCA.

Refer to attached Sydney Catchment Authority SCA procedural document “Procedure 0617 Undertaking Hot Work” which specifies the procedures and precautions to be taken prior, during and after hot work.

E1.10 TESTING

Not applicable.

E1.11 ASSET INFORMATION REQUIREMENTS

The Contractor shall provide all asset information detailed below that is required by the Principal's asset and document management systems. This information will assist ongoing asset management, maintenance and upgrade works.

E1.11.1 Information To Be Collected

Drawings

The Contractor shall notify the Principal of the nature and number of plans and drawings to be provided under this contract. The Principal will then supply drawing number sequences for new drawings, *.TIFF files for existing drawings and a drawing registration sheet or database to the Contractor for entry of all drawing details necessary for registration in the Principal's Records Management System. The Contractor shall then proceed with development of drawings that must:

- be on the drawing border and title block supplied by the Principal
- be in electronic format (AutoCAD)
- use the Principal's asset/ equipment identification codes
- be submitted to the Principal for acceptance prior to construction
- be fully compiled and not contain external references in final versions.

The Contractor shall provide a full set of final drawings on CD-ROM. Two (2) full sets of drawings in hardcopy format shall be provided by the Contractor. The Contractor shall provide a price for the supply of this information in the tender pricing schedules.

Maintenance Plans and Schedules (if applicable)

The Contractor shall provide all operational, maintenance job plans and inspection requirements necessary for the ongoing management of the asset/equipment. This information is to provide task details for job plans for:

- maintenance works and inspections
- operational tests and inspections.

The Contractor shall also provide recommended schedules indicating when the works are to be undertaken. The SCA will provide existing job plan details and schedules for modification as required.

Spare Parts and Tools (if applicable)

The Contractor shall provide a list of recommended spare parts, and details of their current supplier(s), and details of alternate suppliers that can provide the same or equivalent spare part. The Contractor shall enter these details to the spreadsheet/database supplied by SCA.

A report from the spreadsheet/database can be used to satisfy Section 9 of the Operations & Maintenance Manual.

Reports (if applicable)

Where a report/s are to be provided as a specific deliverable, the report will be subject to a review process by the Principal. Two (2) weeks are to be allowed for the Principal to review the report/s and return comments. The Contractor shall make allowances for the review process to be followed.

The Contractor shall provide two (2) hardcopies and one electronic copy of each report. Electronic files are to be provided on CD-ROM in Adobe PDF format, however the information contained on the disc must be in a format that will allow for:

simple navigation through all sections of the report (by way of bookmarks)

full text searching for words and phrases.

E1.11.2 Manuals (if applicable)

Operations and maintenance manuals shall be supplied by the contractor, or modified by the contractor for existing manuals for systems and equipment to guide operators and maintainers, and to ensure compliance with manufacturer's specifications and recommendations. To ensure manuals are complete and easy to read, the following standard format shall be provided by the Contractor.

The Manual must provide sufficient information for all modes of operation and maintenance of all the equipment supplied/ installed by the contractor.

The following must not be presented in the Manual:

- information which is irrelevant to the equipment supplied by the contractor
- operating and maintenance instructions that are of a general nature and do not specify the relevance of the information to the equipment actually supplied/ installed.

Simple presentation of one or more manufacturer's proprietary manuals in a binder will not normally be considered acceptable.

The format of the Manual shall follow the SCA's O & M Manual template (a copy of which shall be made available free of charge to the contractor).

Copies of Manuals (if applicable)

The Contractor shall provide two (2) hardcopies and one electronic copy of each manual. The electronic copy of the manual/s is to be provided on a CD-ROM in Microsoft Word format (based on the SCA's template provided).

Appendices, engineering drawings, schematics, diagrams, photographs, etc are not to be embedded in the main body of the electronic manual. These files are to be provided separately on the CD-ROM and a hot-link placed in the body of the manual.

All manuals will be subject to a review process by the Principal. The Contractor shall make allowances for the review process to be followed.

E1.11.3 Location & Equipment Labels (if applicable)

To facilitate field identification and asset auditing the Contractor shall label the asset locations, and equipment installed at those locations. The inscriptions for the labelling shall be in accordance with the Principal's asset/equipment coding system. The Contractor shall provide a list of asset location and equipment labels and durable label types to the Principal for approval prior to manufacture and installation. The Contractor is advised to review existing labelling types prior to selecting an approach.

Label types selected by the Contractor are to be appropriate for the asset/equipment group and consider:

- internal/ external applications
- external weathering due to sun, wind and rain
- easy visibility from normal access paths.

Equipment number labelling is to be permanently and securely fixed *ON* the asset/equipment in a conspicuous position so that identification is clearly visible and still possible in the event that the asset/equipment is moved to another location.

Location code labelling is to be permanently and securely fixed *ADJACENT TO* the asset/equipment.

The Contractor is to provide a price for asset/equipment labelling in the tender pricing schedules.

All other labelling requirements shall be in accordance with the relevant Australian Standard or Code of Practice.

E1.12 ENVIRONMENTAL REQUIREMENTS

E1.12.1 Noise Specifications

The Contractor shall comply with the Sydney Catchment Authority Corporate Instruction No. 831 - "Noise Control".

On site noise during the installation period shall be in accordance with OH&S and local government requirements.

E1.13 DOCUMENTATION PROVIDED BY THE PRINCIPAL (SCA)

The following documentation will be provided to the successful tenderer within five (5) working days of the letter of acceptance. Should these documents be required for the purposes of tendering, Tenderers may inspect the documents during the tendering period at the SCA's Head Office Reception Desk on Level 2, 311 High Street (Penrith) by making arrangements with the Contract Officer (see the front page of this Invitation to Tender for contact details).

All information provided and details of the SCA assets shall be treated with strict confidentiality.

All documents supplied under this Contract are not to be copied and shall be returned to the SCA in conjunction with the final deliverables.

E1.13.1 Technical Documentation (if applicable)

Procedure 0617 Undertaking Hot Work	SCA procedural document which specifies the procedures and precautions to be taken prior, during and after hot work
Procedure 0604 Water Safety Procedure	SCA procedure shall be applicable when working on or near water

E1.13.2 Asset Information Documentation

Registration of New Assets and Updating of Asset Information – CD2004/00137	Details the procedure that shall be used for the registration of new assets, and the updating of asset information.
Asset Identification – Part 1 Codification – CD2004/00038	This procedure shall be used to determine the codification and labelling of all assets affected by any asset alterations.
Procedure for creating & modifying BWD drawings - D2005/03065	This procedure shall be used to govern the review and approval of plans and drawings supplied to the Principal as part of this contract.
Development of Manuals from External Providers – SAP-BWD-ALL-014	This procedure shall be used to develop all Technical Manuals (including O&M Manuals) that are supplied to the Principal as part of this contract.
Review of Reports and Manuals – CD2004/00165	This procedure shall be used to govern the review and approval process for all reports and manuals to be delivered under the contract.

E1.14 ACCEPTANCE CRITERIA

The following criteria are to be satisfied before the Principal will consider work under this contract to be complete:

- Installation of access platforms and ladders for inspection and maintenance purposes in accordance with AS 1657, AS 2550, *AS 1418* and NSW WorkCover requirements.
- Supply of all final plans and drawings (Work As Executed)

Appendices

Figure 3: Woronora Dam (Parkel 3T Crane390)

Figure 4: Broughton Pass Chlorine Shed (WT0002CR6736)

Figure 5: Avon Dam Lower Discharge valve house (WD0004CR13865)

Figure 6: Nepean Dam Lower Discharge valve house (WD0005CR13845)

Figure 7: Cordeaux Dam Upper Scour valve house (WD0003CR1313)

Figure 8: Nepean Dam crane on dam wall (WD0005CR178)

Figure 9: Cordeaux Dam and Lower Discharge valve house (WD0003CR1216)

Figure 10: Bendeela Pipeline Surge Tank Top Trolley (WM0BP1LR04)

E2. OHS&R

E2.1 General Requirements

(a) The Occupational Health and Safety Act 2000 requires that employers and employees ensure the health, safety and welfare of persons in the workplace. The Contractor is required to observe all statutory/regulatory safety requirements and to provide for the protection of persons and property as part of the Contract.

(b) While working on SCA's premises and work Sites the Contractor shall also comply with SCA's occupational health, safety & rehabilitation (OHS&R) policies and Corporate Instructions as well as SCA directions.

(c) The Contractor shall, at all times, exercise any other necessary and reasonable precautions appropriate to the nature of the Work and the conditions under which the Contract is to be performed for the safety of all persons involved in or affected by that Work.

(d) The Contractor shall prepare a Safe Work Method Statement for all activities associated with the provision of the Works taking into account SCA's Hazard Risk Identification for the Works and the Site in clause F2 to this Contract.

(e) The Contractor shall include in the Safe Work Method Statement as a minimum:

(i) Description of the Work

(ii) Name and qualifications of the person or persons who will supervise the Work

(iii) Name and qualifications of the person or persons who will inspect, approve and supervise methods for the provision of the Work, protective measures, use of plant & equipment

(iv) Potential risks associated with the Work, including without limitation, the risks associated with interfacing with ongoing SCA operations and with any other work persons or contractors on the site/s

(v) What OHS&R training is given to persons involved with the provision of the Works

(vi) All precautions to be taken to protect health and safety

(f) The Contractor shall supply the Safe Work Method Statement to the SCA at least 7 days prior to the performance of those portions of the Contract which are to be performed outside the office environment. The responsibility for the adequacy of the Safe Work Method Statement always remains with the Contractor.

(g) The Contractor shall implement the safe work methods as set out in the Safe Work Method Statement and shall take appropriate measures to ensure they are kept relevant to the carrying out of the Works under the Contract.

E3. ENVIRONMENTAL REQUIREMENTS

E3.1 Noise Specifications

Equipment supplied and installed may need to provide a quiet working environment for SCA operations personnel and others such as nearby residents. The Contractor shall comply with the Sydney Catchment Authority Corporate Instruction No. 831 - "Noise Control".

E3.2 Purchasing

(a) The Contractor shall purchase and use recycled content products where appropriate.

(b) The Contractor shall submit a progress report to the SCA every two months during the Contract Term and a summary report before Completion regarding the purchase of certain materials with details of the total and recycled content tonnages (the "Purchasing Reports").

(c) The Purchasing Reports are to be in the format set out in clause F4.1 below.

E3.3 Waste Management

(a) The Contractor shall recycle and divert from landfill surplus soil, rock and other excavated or demolition materials, wherever this is practical.

(b) The Contractor shall separately collect and stream quantities of waste concrete, bricks, blocks, timber, metals, plasterboard, paper and packaging, glass and plastics and offer them for recycling where practical.

(c) The Contractor shall monitor waste tonnage and record their method and location of disposal and whether or not that location was a place that could lawfully be used as a waste facility for the waste.

(d) The Contractor shall submit to the SCA a progress report every two months and a summary report before Completion regarding the implementation of waste management measures, including the record of waste tonnage and their method and location of disposal (the "Waste Management Report"). All receipts issued by the waste facility need to be supplied to the SCA.

(e) The Waste Management Reports are to be in the format set out in clause F4.2 below.

(f) The SCA promotes use of the recycled paper to protect the environment. The Contractor shall print all documents and reports required by the Authority **on a minimum 50% recycled content paper**. Where it is not practical for the Contractor to use recycled paper for printing of reports and documents, the Contractor shall obtain written approval from the SCA before printing reports or documents on non-recycled paper.

E3.4 Energy Management

(a) All supplied or installed equipment that consumes energy shall be sized appropriately and be the most energy efficient of its class. Appropriate fuel shall be used to minimise overall energy use and greenhouse gas emissions.

(b) Energy star for office equipment and energy ratings for (usually household) appliances can be used where appropriate.

E4. NOT USED