



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **CPPHSA4003A Assess household water use**

**Release: 1**

## **CPPHSA4003A Assess household water use**

### **Modification History**

Not Applicable

### **Unit Descriptor**

<b>Unit descriptor</b>	<p>This unit of competency specifies the outcomes required to collect and analyse information on household water use and provide advice on ways to improve water efficiency and conservation in the home.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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### **Application of the Unit**

<b>Application of the unit</b>	<p>This unit of competency supports the work of home sustainability assessors engaged in assessing household water use and providing advice on ways to improve water efficiency and conservation in the home.</p>
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### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

Not Applicable

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and organise the assessment.	<p>1.1 <i>Need for assessing water use</i> in a <i>residential building</i> is clarified with <i>client</i>.</p> <p>1.2 <i>Effective communication strategies</i> are employed to assist in establishing rapport with client and in responding to client questions and concerns.</p> <p>1.3 Assessment is planned in line with <i>commonwealth, state or territory, and local government legislation and regulations, and industry ethical and conduct standards</i>.</p> <p>1.4 <i>Issues</i> relating to state and territory legislation and regulations and industry ethical and conduct standards are identified and clarified with client.</p> <p>1.5 Plan is established for the assessment in line with enterprise practice and client requirements.</p> <p>1.6 Potential <i>hazards</i> are identified to ensure risks are suitably managed.</p> <p>1.7 Assessment activities are planned to ensure they do not compromise the health and safety of self and others.</p> <p>1.8 <i>Assessment documentation</i> is prepared in a manner consistent with enterprise practice.</p> <p>1.9 <i>Tools, equipment and other requirements</i> for the assessment are identified and arrangements are made to ensure their availability on day of assessment.</p> <p>1.10 Client is advised of <i>information that should be obtained prior to assessment</i> and <i>details of assessment</i> are confirmed.</p> <p>1.11 Authority to proceed is obtained from client prior to commencement and reconfirmed as appropriate during the assessment.</p>
Gather data on household water use and costs.	<p>2.1 <i>Information</i> to be gathered on household water use and costs is confirmed.</p> <p>2.2 <i>Information on household water use and costs</i> is collated.</p> <p>2.3 <i>Information on internal water services</i> is gathered from resident, and from measurements and observations made during inspection of the residence.</p> <p>2.4 <i>Information on external water services</i> is gathered from resident, and from measurements and observations</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>made during inspection of the residence.</p> <p>2.5 <b><i>Information on behaviour and preferences of household members that impact on water use</i></b> is gathered from resident, and from observations made during inspection of the residence.</p> <p>2.6 Information is verified for accuracy and recorded using the relevant <b><i>data collection tool</i></b>.</p>
Analyse data on household water use, costs and emissions.	<p>3.1 Information is analysed to identify key <b><i>characteristics of household water use, costs and emissions</i></b>.</p> <p>3.2 Government rebates and other assistance programs related to improving efficiency of household water use are identified.</p> <p>3.3 <b><i>Options for improving efficiency of water use and reducing costs and emissions</i></b> are evaluated.</p> <p>3.4 Cost of options for improving household water efficiency is estimated in line with enterprise procedures.</p> <p>3.5 Estimated water, emissions and cost savings generated from improving household water efficiency are estimated in line with enterprise procedures.</p>
Assess opportunities for rainwater harvesting, greywater use and other water conservation measures on the property.	<p>4.1 <b><i>Sources of technical advice on incorporating rainwater harvesting, greywater technologies and other water conservation measures in residential buildings</i></b> are identified.</p> <p>4.2 <b><i>Advantages and disadvantages of rainwater harvesting, greywater technologies and other water conservation measures</i></b> are identified.</p> <p>4.3 Rainwater harvesting, greywater technologies and other water conservation measures suitable for use in residential buildings are identified.</p> <p>4.4 Government rebates and other assistance programs for incorporating rainwater harvesting, greywater technologies and other water conservation measures in residential buildings are identified.</p> <p>4.5 Opportunities for rainwater harvesting, greywater technologies and other water conservation measures are <b><i>evaluated</i></b>.</p> <p>4.6 Estimates of cost of installing rainwater harvesting, greywater technologies and other water conservation measures are produced and associated impact on household</p>

ELEMENT	PERFORMANCE CRITERIA
	water efficiency and costs is determined in line with enterprise procedures.
Report outcomes of water use assessment.	<p>5.1 Results and recommendations, along with supporting evidence, are collated and documented in line with enterprise and client requirements.</p> <p>5.2 Estimated cost of proposed recommendations, associated reductions in household water costs and emissions, and improvements in household water efficiency are documented in line with enterprise procedures.</p> <p>5.3 Results and recommendations, including estimated costs and improvements in household water efficiency, are explained to client in line with enterprise, legislative and client requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to interact with clients from diverse social, economic and cultural backgrounds
- decision-making and problem-solving skills to make recommendations based on analysis of household water use
- literacy skills to:
  - complete standard forms
  - generate business correspondence
  - interpret water accounts
  - prepare reports
  - read and interpret a variety of texts, including legislation, regulations, and codes of conduct and ethical standards
- numeracy and data analysis skills to:
  - extract and interpret data from water accounts and interpret water plans and tariff structures
  - read, calculate and interpret water meter data
- planning, organising and scheduling skills to undertake work-related tasks, such as collecting data required for assessing household water use and costs

## REQUIRED SKILLS AND KNOWLEDGE

- research skills to identify and locate documents, reports and information on key matters associated with water use, such as:
  - ratings of appliances
  - water consumption of appliances
  - use of rainwater harvesting, greywater technologies and other water conservation measures
- technology skills to enter data and use the functions of water use calculators and general purpose software packages
- time-management skills to complete assessment tasks in a time and cost efficient manner

## Required knowledge

- commonwealth, state or territory, and local government legislation and regulations impacting on household water use and management related to:
  - anti-discrimination and equal employment opportunity
  - consumer protection, fair trading and trade practices
  - employment and industrial relations
  - environment protection
  - health
  - household rainwater harvesting, greywater use and other water conservation and restriction measures
  - occupational health and safety (OHS)
  - privacy
  - water restrictions
- government rebates and other assistance programs related to improving water efficiency in residential buildings
- greenhouse gas emissions:
  - relationship between water use and greenhouse gas emissions
  - ways of reducing greenhouse gas emissions through improving water efficiency
- household internal and external water services
- household water use:
  - trends in household water consumption and factors impacting on those trends
  - sustainable domestic water use
  - units of measurement
  - water bills
  - water consumption
  - water restrictions
  - water tariffs
- impact of attitudes, behaviour and preferences of household members on water use
- options for improving efficiency of household water use:

**REQUIRED SKILLS AND KNOWLEDGE**

- behaviour change
- internal and external water services
- leak detection
- water efficient gardening practices
- rainwater harvesting, greywater technologies and other water conservation measures:
  - criteria for assessing feasibility
  - rebates and other forms of financial support
  - system risks
  - types and features of systems
- sources of information on water measuring tools:
  - types
  - uses
- sources of data on domestic water use and cost:
  - water bills
  - water meters
- water efficiency and labelling standards (WELS)

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	This unit of competency could be assessed by conducting an assessment of water use in a residence that involves collecting and analysing information on household water use and providing advice on ways to improve water efficiency.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular, the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> <li>• collect and analyse information on household water use and on ways to improve water efficiency in the home</li> <li>• assess opportunities for incorporating rainwater harvesting, greywater technologies and other water conservation measures in a residential building</li> <li>• comply with OHS requirements when conducting household water assessment</li> <li>• apply knowledge of: <ul style="list-style-type: none"> <li>• trends in household water use and costs</li> <li>• ways of gathering information on household water use and costs</li> <li>• ways to improve household water efficiency.</li> </ul> </li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment of essential underpinning knowledge may be conducted in an off-site context and is to comply with relevant regulatory and Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> <li>• data collection tools</li> <li>• relevant codes, standards and government regulations</li> <li>• access to residential buildings for conducting an assessment of water use</li> <li>• technology suitable for generating reports</li> <li>• technical reference library with current publications on: <ul style="list-style-type: none"> <li>• Australian climatic zones</li> <li>• greywater technologies and other water conservation measures</li> <li>• manufacturers' product information on domestic</li> </ul> </li> </ul>

	<p>appliances</p> <ul style="list-style-type: none"> <li>• rainwater harvesting</li> <li>• water rating schemes for appliances</li> <li>• water use and measurement.</li> </ul>
<b>Method of assessment</b>	<p>Assessment methods must:</p> <ul style="list-style-type: none"> <li>• satisfy the endorsed Assessment Guidelines of the CPP07 Property Services Training Package</li> <li>• include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application</li> <li>• reinforce the integration of employability skills with workplace tasks and job roles</li> <li>• confirm that competency is verified and able to be transferred to other circumstances and environments.</li> </ul>
<b>Guidance information for assessment</b>	<p>This unit could be assessed on its own or in combination with other units relevant to the job function, for example:</p> <ul style="list-style-type: none"> <li>• CPPHSA4001A Assess household energy use</li> <li>• CPPHSA4002A Assess household waste generation and management</li> <li>• CPPHSA4004A Assess thermal performance of existing residences using non-rating tools and techniques.</li> </ul> <p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>Assessment processes and techniques should, as far as is practical, take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating

conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>Need for assessing water use</i></b> may include assessment for:	<ul style="list-style-type: none"> <li>• determining water profile</li> <li>• opportunities for reducing water use and improving water efficiency</li> <li>• legislative, regulatory and compliance purposes</li> <li>• providing building design advice.</li> </ul>
<b><i>Residential building</i></b> refers to:	<ul style="list-style-type: none"> <li>• any building categorised as Class 1, 2, 4 and 10a of the Building Code of Australia or in accordance with jurisdictional requirements.</li> </ul>
<b><i>Client</i></b> may include:	<ul style="list-style-type: none"> <li>• builder</li> <li>• community organisation</li> <li>• construction manager</li> <li>• government agency</li> <li>• house owner</li> <li>• landlord</li> <li>• property developer</li> <li>• property manager</li> <li>• real estate agent</li> <li>• tenant</li> <li>• water authority.</li> </ul>
<b><i>Effective communication strategies</i></b> may include:	<ul style="list-style-type: none"> <li>• active listening</li> <li>• being non-judgemental</li> <li>• exploring problems</li> <li>• expressing an individual perspective</li> <li>• providing sufficient time for questions and responses</li> <li>• providing summarising and reflective responses in conflict situations</li> <li>• using appropriate words, behaviour and posture</li> <li>• using clarifying, summarising questions</li> <li>• using clear and concise language</li> <li>• using culturally appropriate communication</li> <li>• using plain English</li> <li>• using verbal and non-verbal communication.</li> </ul>
<b><i>Commonwealth, state or territory, and local government legislation and regulations, and industry ethical and conduct standards</i></b> may include:	<ul style="list-style-type: none"> <li>• environment protection</li> <li>• ethical behaviour</li> <li>• fair trading and consumer protection: <ul style="list-style-type: none"> <li>• confidentiality</li> <li>• conflict of interest</li> <li>• duty of care</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• non-discriminatory practices</li> <li>• privacy</li> <li>• residential tenancies</li> <li>• OHS</li> <li>• water and water management</li> <li>• water use assessment: <ul style="list-style-type: none"> <li>• accreditation</li> <li>• assessment procedures</li> <li>• certification</li> <li>• documentation.</li> </ul> </li> </ul>
<b>Issues</b> may include:	<ul style="list-style-type: none"> <li>• basis for need to conduct water use assessment</li> <li>• information required by assessor from client</li> <li>• information that assessor is required to document</li> <li>• objectives of assessment.</li> </ul>
<b>Hazards</b> may include:	<ul style="list-style-type: none"> <li>• appliances: <ul style="list-style-type: none"> <li>• electrocution</li> <li>• faults</li> </ul> </li> <li>• biological waste: <ul style="list-style-type: none"> <li>• black water</li> <li>• greywater</li> </ul> </li> <li>• confined spaces</li> <li>• electricity</li> <li>• harassment, bullying and/or violence involving co-workers or customers</li> <li>• hazardous substances: <ul style="list-style-type: none"> <li>• allergens</li> <li>• asbestos</li> <li>• chemicals</li> <li>• fibres</li> <li>• fumes</li> <li>• insulation</li> </ul> </li> <li>• heat: <ul style="list-style-type: none"> <li>• burns</li> <li>• scalds</li> </ul> </li> <li>• manual handling: <ul style="list-style-type: none"> <li>• carrying</li> <li>• lifting</li> <li>• pulling</li> <li>• pushing</li> </ul> </li> <li>• machinery, including powered and non-powered</li> </ul>

	<p>equipment</p> <ul style="list-style-type: none"> <li>• skin penetrating injuries: <ul style="list-style-type: none"> <li>• knives</li> <li>• sharps</li> <li>• syringes</li> </ul> </li> <li>• work environment: <ul style="list-style-type: none"> <li>• access</li> <li>• animals</li> <li>• dust</li> <li>• floor surfaces</li> <li>• lighting</li> <li>• noise</li> <li>• pollen</li> <li>• temperature</li> <li>• trips and falls</li> <li>• working alone</li> <li>• working at heights</li> <li>• ventilation.</li> </ul> </li> </ul>
<b><i>Assessment documentation</i></b> may include:	<ul style="list-style-type: none"> <li>• building details</li> <li>• building plans and specifications</li> <li>• checklists</li> <li>• client details</li> <li>• company promotional materials</li> <li>• contact details</li> <li>• existing water bills</li> <li>• photographic evidence</li> <li>• risk assessment</li> <li>• site details</li> <li>• water meter readings.</li> </ul>
<b><i>Tools, equipment and other requirements</i></b> may include:	<ul style="list-style-type: none"> <li>• bucket</li> <li>• calculator</li> <li>• clipboard</li> <li>• clock</li> <li>• compass</li> <li>• digital camera</li> <li>• flow meter</li> <li>• ladder</li> <li>• personal protective equipment (PPE): <ul style="list-style-type: none"> <li>• dust masks</li> <li>• eye protection</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• headwear</li> <li>• gloves</li> <li>• overalls</li> <li>• safety shoes and work boots</li> <li>• tape measure</li> <li>• thermometer</li> <li>• timer</li> <li>• torch.</li> </ul>
<b><i>Information that should be obtained prior to assessment</i></b> may include:	<ul style="list-style-type: none"> <li>• appliances: <ul style="list-style-type: none"> <li>• age</li> <li>• capacity</li> <li>• number</li> <li>• type</li> </ul> </li> <li>• household members: <ul style="list-style-type: none"> <li>• number</li> <li>• age</li> </ul> </li> <li>• water accounts: <ul style="list-style-type: none"> <li>• billing history</li> <li>• plans</li> <li>• tariffs</li> </ul> </li> <li>• water reduction, reuse and recycling strategies currently in place: <ul style="list-style-type: none"> <li>• greywater collection and use</li> <li>• water tanks</li> <li>• other water conservation strategies.</li> </ul> </li> </ul>
<b><i>Details of assessment</i></b> may include:	<ul style="list-style-type: none"> <li>• address of residence</li> <li>• assessor name and contact details</li> <li>• cost of assessment</li> <li>• date and time of assessment</li> <li>• duration of assessment.</li> </ul>
<b><i>Information</i></b> may include:	<ul style="list-style-type: none"> <li>• age, type and operation of appliances</li> <li>• behaviour and preferences of household members that impact on water use</li> <li>• water costs</li> <li>• water use</li> <li>• water services: <ul style="list-style-type: none"> <li>• internal water services</li> <li>• external water services.</li> </ul> </li> </ul>
<b><i>Information on household water use and</i></b>	<ul style="list-style-type: none"> <li>• analysis of water meter readings:</li> <li>• conventional meters</li> </ul>

<p><b>costs</b> may be gathered through:</p>	<ul style="list-style-type: none"> <li>• smart meters</li> <li>• analysis of accounts to show daily, seasonal and trend data on water use and cost</li> <li>• analysis of costs of different water plans and tariff structures.</li> </ul>
<p><b>Information on internal water services</b> may include:</p>	<ul style="list-style-type: none"> <li>• characteristics of internal water services:             <ul style="list-style-type: none"> <li>• age</li> <li>• average daily use</li> <li>• capacity</li> <li>• condition</li> <li>• flow rate</li> <li>• greywater collection and use</li> <li>• leaks and drips</li> <li>• maintenance costs of system</li> <li>• number</li> <li>• suitability for size of household</li> <li>• water efficiency rating</li> <li>• water saving features</li> <li>• water use</li> </ul> </li> <li>• number and type of internal water services:             <ul style="list-style-type: none"> <li>• baths</li> <li>• clothes washing machines</li> <li>• combination washer/dryer machines</li> <li>• dishwashers</li> <li>• hot water circulators</li> <li>• showers</li> <li>• spas</li> <li>• tap equipment</li> <li>• toilets.</li> </ul> </li> </ul>
<p><b>Information on external water services</b> may include:</p>	<ul style="list-style-type: none"> <li>• characteristics of external water services:             <ul style="list-style-type: none"> <li>• age</li> <li>• average daily use</li> <li>• condition</li> <li>• flow rate</li> <li>• greywater collection and use</li> <li>• leaks and drips</li> <li>• maintenance costs of system</li> <li>• number</li> <li>• pipe</li> <li>• placement</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• suitability for size of household</li> <li>• water saving features</li> <li>• water use</li> <li>• number and type of external water services: <ul style="list-style-type: none"> <li>• domestic irrigation and reticulation systems</li> <li>• evaporative coolers</li> <li>• greywater systems</li> <li>• spas</li> <li>• swimming pools</li> <li>• taps and hoses.</li> </ul> </li> </ul>
<b><i>Information on behaviour and preferences of household members that impact on water use</i></b> may relate to:	<ul style="list-style-type: none"> <li>• attitudes of other household members not participating in the assessment process</li> <li>• attitudes to reducing, reusing and recycling water</li> <li>• resident perception of water consumption</li> <li>• gardening practices</li> <li>• inefficient water use: <ul style="list-style-type: none"> <li>• car washing</li> <li>• washing of external surfaces</li> </ul> </li> <li>• medical conditions of household</li> <li>• setting, programming and using timers and other controls</li> <li>• showering times</li> <li>• use of appliances</li> <li>• use of evaporative cooling systems</li> <li>• use of hot water</li> <li>• use of pools and spas.</li> </ul>
<b><i>Data collection tools</i></b> may include:	<ul style="list-style-type: none"> <li>• checklists and forms</li> <li>• graphs</li> <li>• questionnaires</li> <li>• self-assessment forms</li> <li>• software programs</li> <li>• water use calculators.</li> </ul>
<b><i>Characteristics of household water use, costs and emissions</i></b> may include:	<ul style="list-style-type: none"> <li>• comparison of water use and costs with similar households</li> <li>• components of internal and external water use</li> <li>• daily water use and costs</li> <li>• occupant behaviour</li> <li>• seasonal variation in water use and costs</li> <li>• total water consumption and cost</li> <li>• trends in water consumption and costs over time.</li> </ul>
<b><i>Options for improving</i></b>	<ul style="list-style-type: none"> <li>• behaviour and preferences of household members that</li> </ul>

<p><b><i>efficiency of water use and reducing costs and emissions</i></b> may include:</p>	<p>impact on water use:</p> <ul style="list-style-type: none"> <li>• efficient use of appliances</li> <li>• knowledge of leak detection techniques</li> <li>• knowledge of WELS ratings</li> <li>• limit inefficient water use:             <ul style="list-style-type: none"> <li>• car washing</li> <li>• washing of external surfaces</li> </ul> </li> <li>• reduce showering time</li> <li>• use of appliances</li> <li>• use of hot water</li> <li>• use of settings, programming, timers and other controls on appliances and irrigation systems</li> <li>• external water services:             <ul style="list-style-type: none"> <li>• domestic irrigation and reticulation systems:                 <ul style="list-style-type: none"> <li>• check for drips and leaks</li> <li>• check for correct placement of system</li> <li>• check timing and duration of use</li> <li>• undertake regular maintenance</li> <li>• use gardening practices that reduce water usage</li> <li>• use recycled water</li> <li>• use timers and control devices</li> <li>• use substrata (under the mulch) drip irrigation</li> </ul> </li> <li>• evaporative coolers:                 <ul style="list-style-type: none"> <li>• check for drips and leaks</li> <li>• check size of appliances relative to household requirements, as appropriate</li> <li>• maintain appliances</li> <li>• reduce dumping/bleed-off rates</li> <li>• reduce water supply pressure</li> <li>• reset thermostats and timers, where applicable</li> <li>• use discharge water on lawns and grass areas</li> </ul> </li> <li>• spas and spa pools:                 <ul style="list-style-type: none"> <li>• check for drips and leaks</li> <li>• keep spa or spa pool water in correct condition to avoid emptying polluted water</li> <li>• never over-fill a spa pool</li> <li>• use backwash minimisation system</li> <li>• use spa pool cover</li> </ul> </li> <li>• swimming pools:                 <ul style="list-style-type: none"> <li>• check for drips and leaks</li> </ul> </li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>• ensure pool has suitable overhanging pavers or decking to keep splash-out to a minimum</li> <li>• install shade sails and wind covers to minimise evaporation</li> <li>• keep pool water in correct condition to avoid emptying polluted water</li> <li>• never over-fill a pool</li> <li>• use backwash minimisation system</li> <li>• use pool cover</li> <li>• water tank to collect rainfall to top up pool as needed</li> <li>• taps and hoses: <ul style="list-style-type: none"> <li>• check for drips and leaks</li> <li>• install pressure valves</li> <li>• fit flow restrictors</li> </ul> </li> <li>• internal water services: <ul style="list-style-type: none"> <li>• appliances: <ul style="list-style-type: none"> <li>• check for drips and leaks</li> <li>• check size of appliances relative to household requirements, as appropriate</li> <li>• check WELS ratings</li> <li>• consider necessity of having multiple appliances</li> <li>• maintain appliances</li> <li>• replace with appliances that have different cycles</li> <li>• replace with water efficient appliances</li> <li>• set timers, where applicable</li> <li>• use appropriate program settings</li> <li>• use in compliance with manufacturer instructions</li> <li>• use with full loads</li> </ul> </li> <li>• showers, check for: <ul style="list-style-type: none"> <li>• drips and leaks</li> <li>• flow cut-off valves</li> <li>• flow restrictors</li> <li>• low-flow shower heads</li> <li>• shower timers</li> <li>• smart metering of shower use</li> <li>• WELS rating</li> </ul> </li> <li>• tap equipment, check for: <ul style="list-style-type: none"> <li>• drips and leaks</li> <li>• flow regulators</li> </ul> </li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>• tap aerators</li> <li>• valves</li> <li>• WELS rating</li> <li>• toilets, check for: <ul style="list-style-type: none"> <li>• drips and leaks</li> <li>• dual and reduced flush systems</li> <li>• water saving and displacement devices for single flush toilets</li> </ul> </li> <li>• WELS rating</li> <li>• water efficient gardening practices: <ul style="list-style-type: none"> <li>• drought tolerant planting</li> <li>• mulching</li> <li>• replacing lawns</li> <li>• lawn alternatives</li> <li>• composts and manures on soil</li> <li>• rainwater and greywater</li> <li>• water efficient irrigation systems</li> <li>• water efficient watering practices</li> <li>• weeding.</li> </ul> </li> </ul>
<b>Evaluation</b> takes into account:	<ul style="list-style-type: none"> <li>• availability of rebates and other assistance programs</li> <li>• behaviour and preferences of householders</li> <li>• cost</li> <li>• ownership of building</li> <li>• practicality</li> <li>• type of building.</li> </ul>
<b>Sources of technical advice on incorporating rainwater harvesting, greywater technologies and other water conservation measures in residential buildings</b> may include:	<ul style="list-style-type: none"> <li>• architects</li> <li>• building designers</li> <li>• colleagues</li> <li>• consultants</li> <li>• gardeners</li> <li>• government agencies</li> <li>• professional associations</li> <li>• research bodies</li> <li>• supervisors</li> <li>• suppliers of domestic greywater, water harvesting and water conservation technologies</li> <li>• water utilities.</li> </ul>
<b>Advantages and disadvantages of rainwater harvesting, greywater technologies</b>	<ul style="list-style-type: none"> <li>• advantages: <ul style="list-style-type: none"> <li>• availability of financial incentives</li> <li>• higher resale value</li> </ul> </li> </ul>

<b><i>and other water conservation measures</i></b> may include:	<ul style="list-style-type: none"> <li>• isolation for building owners from future water price increases</li> <li>• pre-empt future legislative restrictions or penalties, which may force expensive retrofits to inefficient buildings</li> <li>• reduce total net monthly cost of living</li> <li>• value of building relative to similar conventional building should water costs increase</li> <li>• disadvantages: <ul style="list-style-type: none"> <li>• effort required to understand, apply and qualify for rebates</li> <li>• initial cost</li> <li>• overcapitalising on older buildings.</li> </ul> </li> </ul>
<b><i>Evaluations</i></b> are based on:	<ul style="list-style-type: none"> <li>• climate</li> <li>• cost</li> <li>• location</li> <li>• physical features and ownership of building</li> <li>• practicality</li> <li>• type</li> <li>• user behaviour and preferences.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Home sustainability assessment.
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## Competency field

<b>Competency field</b>	
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