

# 2004

## BENCHMARK REPORT



42,937...52,110...17,551...256,419...3,878...  
1,105,669...87,447...14,925...11,949...17,23...  
2,111,756...42.93...11,949...137,227...67,942...  
46,591...37,179...137,227...67,942...14,925...  
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46,591...37,179...137,227...67,942...14,925...  
1,105,669...87,447...14,925...11,949...17,23...

security

refurbishments

grounds

maintenance

energy





H i g h e r   E d u c a t i o n   F a c i l i t y   M a n a g e m e n t   A s s o c i a t i o n   o f   S o u t h e r n   A f r i c a

Dear HEFMA Colleagues

**Re: 2004 Benchmark Report**

It is indeed a privilege and my pleasure to present to you the inaugural HEFMA 2004 Benchmarking Report. This report is the culmination of a significant team effort between HEFMA and TEFMA (the Tertiary Education Facilities Management Association from Australasia). Our TEFMA colleagues truly went the extra mile to make this report possible. It all started during the 2004 HEFMA conference in Livingstone, Zambia, where Andrew Frowd and Brian Phillips from Australia delivered papers on the TEFMA benchmarking project. This inspired the delegates to such an extent that it was resolved that HEFMA should embark on a similar project. During my visit to the 2004 TEFMA Conference in Hobart, Tasmania, I met Brian Fenn who runs the TEFMA benchmarking project. It was agreed not to reinvent the wheel but to base the HEFMA project on the TEFMA model. We decided to start small and for the first year only benchmark five operational areas, namely building maintenance, grounds maintenance, cleaning and waste management, energy and security.

Brian Fenn adapted the well developed TEFMA questionnaire to include only the abovementioned fields. My first job was to finalize the contact list of HEFMA participants. This proved to be no small job and I quickly realized that the restructuring of the higher education sector in South Africa caused a lot of uncertainty amongst our members. After finalizing the contact list, the survey questionnaire was sent out to twenty-three higher education institutions in South Africa, of which eighteen confirmed receipt. In an effort to allow for the most possible survey returns, it was decided to postpone the final return date three times. After much prompting from myself, seven institutions returned their survey forms to Brian in Australia for processing. The result has been this very well compiled and professional report. The report is accompanied by a very sleek computerized data analysis tool running on Microsoft Access. Well done Brian and team, you did an excellent job!

This report contains the results of the seven participating institutions in tabular and graphical formats, as well as the results from three minor surveys as provided by four of the seven participating institutions. The three minor qualitative surveys include strategic asset management, space management and environmental sustainable development.

A big word of thanks to the seven participating institutions who have made this first report possible; to Brian Fenn for his hard work that went into the questionnaires and processing, and whom, together with Geoff Dennis, inspired me to keep on motivating our local institutions to participate; to Brian Phillips and Andrew Frowd for their original guidance and motivation; and to Reenen, Ferdi and Stan for keeping me going when participation seemed to dwindle.

The Australasian benchmarking project started out humbly and has since grown into an FM industry leading annual publication. It is my hope that our own HEFMA benchmarking initiative will gain the same recognition as our Australasian colleagues. We will endeavor to publish this report annually towards the end of each year, and to grow it with each new issue. The 2005 survey will kick off in April 2006. May our benchmarking project go from strength to strength and become the industry leader benchmarking publication in Southern Africa.

Best regards,

Marcel Theron  
**Director: Information Services**  
**HEFMA**  
December 2005

## 2004 HEFMA Benchmark Report

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## List of Participating HEFMA Institutions (7)

Rhodes University  
University of Kwazulu-Natal  
University of Pretoria

University of South Africa  
University of Stellenbosch  
University of the Free State

Vaal University of Technology

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### General Notes and Qualifications:

***Schedule of respondents.*** Your institutional representative has been issued with a "*Cheat Sheet*" that identifies survey participants, the names of which have been excluded from the main body of the main report for confidentiality reasons.

***HEFMA Data Analysis Tool.*** Your institutional HEFMA representative has been provided with the password for the HEFMA data analysis tool. The tool can be downloaded from the following website [https://fileshare.qut.edu.au/password/fenn/fs-share-1/HEFMA\\_Tool\\_Setup.zip](https://fileshare.qut.edu.au/password/fenn/fs-share-1/HEFMA_Tool_Setup.zip). If you experience problems downloading the files please contact Brian Fenn at [keystroke@optusnet.com.au](mailto:keystroke@optusnet.com.au)

***Survey Guidelines.*** Guidelines and definitions for completing the survey are provided on pages 13-16. Note that additional explanatory notes were embedded into the actual 2005 survey data collection form.

***Survey Errors and Improvements.*** As this is the first HEFMA benchmark survey undertaken some inconsistencies in the way participants interpret the survey definitions and collect and compile data is expected. If you find any errors in this report, or wish to submit suggestions for improving future surveys, please contact Brian Fenn at [keystroke@optusnet.com.au](mailto:keystroke@optusnet.com.au)



Institution	General Statistical Data							
	CBD Suburban or Rural Campus	Gross Floor Area Total Campus (GFA)	Useable Floor Area Total Campus (UFA)	UFA/GFA	ARV Buildings	Replacement Cost of Buildings	Total EFTSU	GFA provided per EFTSU
	3a	4	5	6	7a	9	10	11
	Type	m²GFA	m²UFA	%	R	R/m²GFA	No.	m²/EFTSU
1	Suburban	175,287	131,135	74.8%	R 671,912,000	R 3,833	5,088	34.5
2	Suburban	457,057	261,632	57.2%	R 2,525,870,683	R 5,526	17,205	26.6
3	Suburban	786,542	484,072	61.5%	R 4,249,212,756	R 5,402	30,347	25.9
4	Suburban	290,000	119,690	41.3%	R 1,638,000,000	R 5,648	19,987	14.5
5	Suburban	110,586	81,205	73.4%	R 597,000,000	R 5,399	7,900	14.0
6	Suburban	135,000	101,225	75.0%	R 651,074,000	R 4,823	11,322	11.9
7	Open Dist Learn	366,878	234,802	64.0%	R 1,992,264,180	R 5,430	101,232	3.6
Mean				60.3%		R 5,287		21.3

Institution	Maintenance Services							
	Admin & Prof Staff Salaries & On-costs	Trade Staff Wages & On- costs	Total Staff Salaries/wages & On-costs	Materials & Contracts	Total Maintenance Expenditure	Area Maintained from Central Funds	Cost of Maintenance per m² (GFA)	Cost of Maintenance per EFTSU
	16	17	18	19	20	21	22	22a
	R	R	R	R	R	m²GFA	R/m²GFA	R/EFTSU
1	R 1,946,000	R 5,838,000	R 7,784,000	R 6,164,000	R 13,948,000	175,287	R 79.57	R 2,741
2	R 2,256,600	R 3,201,900	R 5,458,500	R 17,242,300	R 22,700,800	457,057	R 49.67	R 1,319
3	R 3,682,000	R 2,800,000	R 6,482,000	R 14,200,000	R 20,682,000	786,542	R 26.29	R 682
4	R 2,365,000	R 3,160,829	R 5,525,829	R 4,990,028	R 10,515,857	131,659	R 79.87	R 526
5	R 1,638,138	R 3,388,098	R 5,026,236	R 7,286,112	R 12,312,348	110,586	R 111.34	R 1,559
6	R 939,960	R 881,352	R 1,821,312	R 2,843,500	R 4,664,812	135,000	R 34.55	R 412
7	R 109,331	R 10,933,177	R 11,042,508	R 31,108,476	R 42,150,984	366,878	R 114.89	R 416
Mean			R 32,097,877		R 84,823,817		R 47.23	R 924

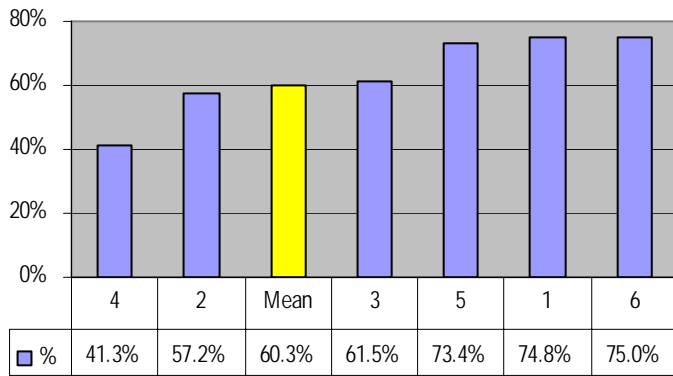
Institution	Cleaning & Waste Management Services									
	In-house Wages & On- costs	Cleaning Materials	Cleaning Contracts			Total Cleaning Expenditure	Area Cleaned from Cent Funds	Cost of Cleaning Buildings	Total Cost Cleaning \$/GFA	Total Cost Cleaning \$/EFTSU
			Building	Non-Building						
				Gen Waste	Contaminat e					
	49	50	50a	50b	50c	51	52	52a	53	54
	R	R	R	R	R	R	m²GFA	R/m²GFA	R/m²GFA	R/EFTSU
1	R 2,100,000	R 192,606	R 0	R 0	R 0	R 2,292,606	175,287	R 13.08	R 13.08	R 451
2	R 7,097,513	R 3,727,201	R 2,359,599	R 2,766,070	R 1,076,438	R 15,950,383	457,057	R 28.85	R 34.90	R 927
3	R 932,000	R 1,056,000	R 7,680,000	R 1,380,000	R 150,000	R 11,048,000	380,000	R 25.44	R 29.07	R 364
4	R 549,400	R 163,491	R 1,850,501	R 239,769	R 26,641	R 2,803,161	119,690	R 21.42	R 23.42	R 140
5	R 1,183,581	R 490,417	R 2,205,525	R 217,493	R 18,320	R 4,097,016	110,586	R 35.08	R 37.05	R 519
6	R 1,558,464	R 848,000	R 0	R 0	R 0	R 2,406,464	135,000	R 17.83	R 17.83	R 213
7	R 19,964	R 100,000	R 13,514,000	R 530,000	R 450,000	R 14,163,964	366,878	R 37.16	R 38.61	R 140
Mean						R 38,597,630		R 24.68	R 28.02	R 420

Institution	Energy Consumption/Expenditure							
	Annual Consumption in Gigajoules	Annual Cost of Energy Purchased	Total GFA services with energy	Energy Consumption per m <sup>2</sup>	Energy Consumption per EFTSU	Energy Cost per m <sup>2</sup> (GFA)	Energy Cost per EFTSU	Average Cost per kWhr
	58	59	60	61	62	63	64	65
	GJ	R	m <sup>2</sup> GFA	GJ/m <sup>2</sup> GFA	GJ/EFTSU	R/m <sup>2</sup> GFA	R/EFTSU	cents/kWhr
1	68,196	R 3,920,981	175,287	0.39	13.4	R 22.37	R 771	20.7
2	176,736	R 15,781,047	457,056	0.39	10.3	R 34.53	R 917	32.1
3	294,366	R 9,671,398	631,282	0.47	9.7	R 15.32	R 319	11.8
4	105,252	R 8,279,863	119,690	0.88	5.3	R 69.18	R 414	28.3
5	54,611	R 4,379,275	110,586	0.49	6.9	R 39.60	R 554	28.9
6	35,122	R 2,982,929	135,000	0.26	3.1	R 22.10	R 263	30.6
7	209,410	R 12,970,493	366,878	0.57	2.1	R 35.35	R 128	22.3
Mean				0.45	8.0	R 27.64	R 490	22.1

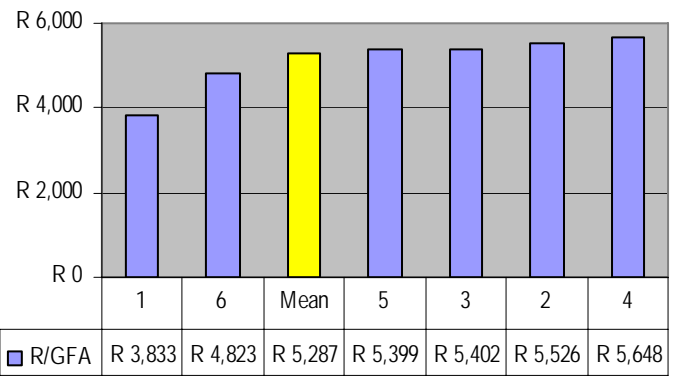
Institution	Security						
	Security Staff Salaries/wages & On-costs	Expenditure on Security Contracts	Other Security Costs	Total Security Expenditure	GFA under Security Patrol	Cost of Security per m <sup>2</sup> (GFA)	Cost of Security per EFTSU
	75	76	77	78	79	80	81
	R	R	R	R	m <sup>2</sup> GFA	R/m <sup>2</sup> GFA	R/EFTSU
1	R 2,162,302	R 776,461	R 128,977	R 3,067,740	175,287	R 17.50	R 603
2	R 5,519,278	R 1,320,652	R 320,000	R 7,159,930	457,057	R 15.67	R 416
3	R 5,429,675	R 9,012,801	R 812,879	R 15,255,355	786,542	R 19.40	R 503
4	R 4,746,546	R 1,572,164	R 150,000	R 6,468,710	150,000	R 43.12	R 324
5	R 2,650,000	R 1,850,000	R 10,000	R 4,510,000	110,586	R 40.78	R 571
6	R 350,000	R 5,500,000	R 1,000,000	R 6,850,000	135,000	R 50.74	R 605
7	R 19,167,010	R 5,231,611	R 244,050	R 24,642,671	366,878	R 67.17	R 243
Mean				R 43,311,735		R 23.87	R 472

Institution	Grounds Maintenance					Building Operating Costs			
	Staff Salaries/wage s & On-costs	Materials & Contracts	Total Grounds Maintenance Expenditure	Hectares <u>actively</u> Maintained	Maintenance Expenditure per Hectare	Total Operating Costs	Operating Costs per m <sup>2</sup> (GFA)	Operating Costs per EFTSU	Operating Costs as % of ARV
	68	69	70	71	72	108	109	110	110a
	R	R	R	Ha	R/Hectare	R	R/m <sup>2</sup> GFA	R/EFTSU	% ARV
1	R 3,310,000	R 950,000	R 4,260,000	140.0	R 30,429	R 23,229,327	R 133	R 4,566	3.5%
2	R 3,709,143	R 2,673,437	R 6,382,580	139.0	R 45,918	R 61,592,160	R 129	R 3,580	2.4%
3	R 1,127,000	R 7,922,606	R 9,049,606	280.0	R 32,320	R 56,656,753	R 86	R 1,867	1.3%
4	R 381,400	R 1,406,179	R 1,787,579	100.0	R 17,876	R 28,067,591	R 214	R 1,404	1.7%
5	R 2,829,718	R 1,048,223	R 3,877,941	432.0	R 8,977	R 25,298,639	R 227	R 3,202	4.2%
6	R 1,038,204	R 818,000	R 1,856,204	78.0	R 23,797	R 16,904,205	R 125	R 1,493	2.6%
7	R 5,169,582	R 1,896,000	R 7,065,582	97.0	R 72,841	R 93,928,112	R 255	R 928	4.7%
Mean			R 27,213,910		R 23,280		R 123	R 2,305	2.0%

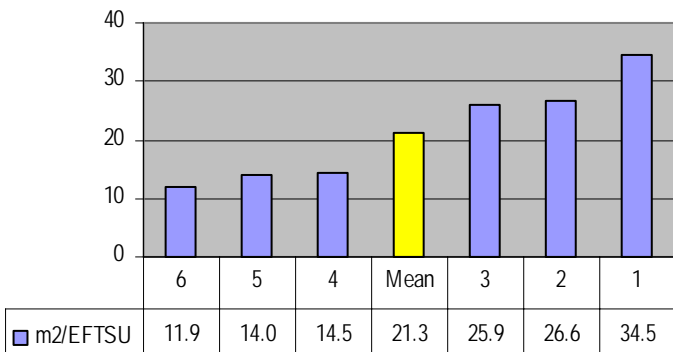
### Building Efficiency (UFA/GFA)



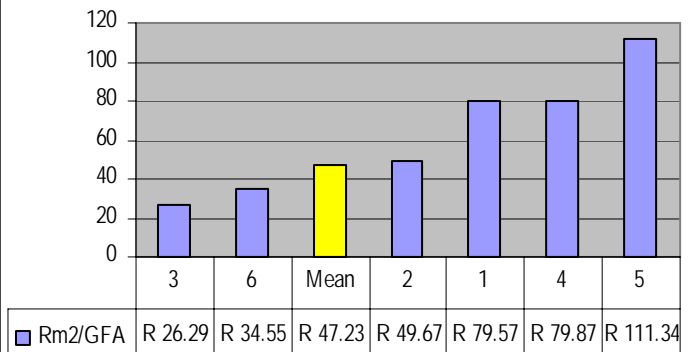
### Asset Replacement Cost (R/m2GFA)



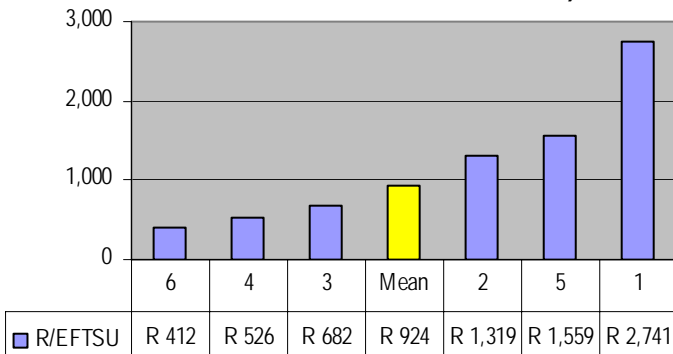
### Space/EFTSU



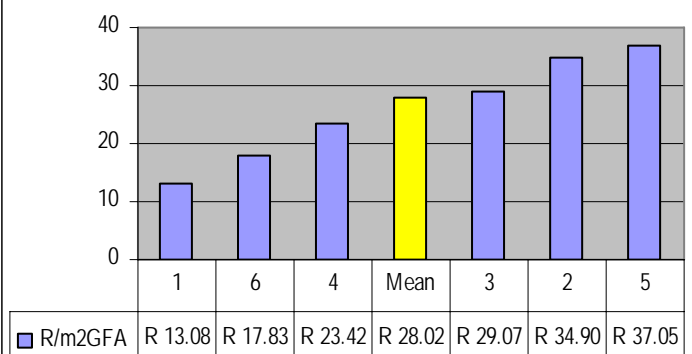
### Maintenance Costs (R/m2GFA)



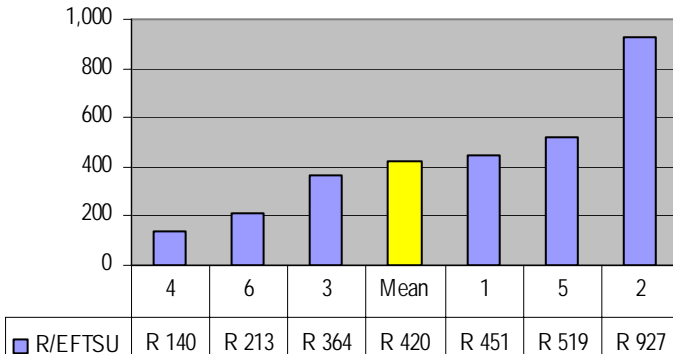
### Maintenance Costs (R/EFTSU)



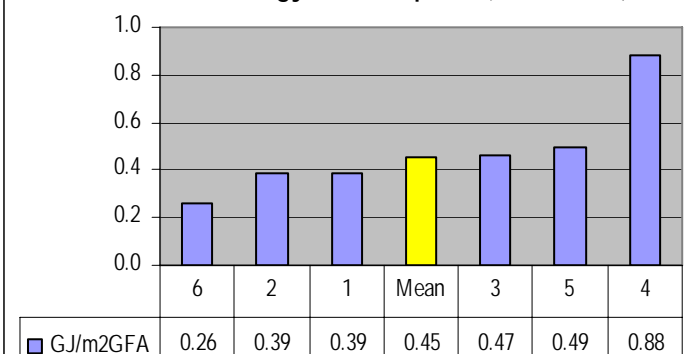
### Cleaning Costs (R/m2GFA)

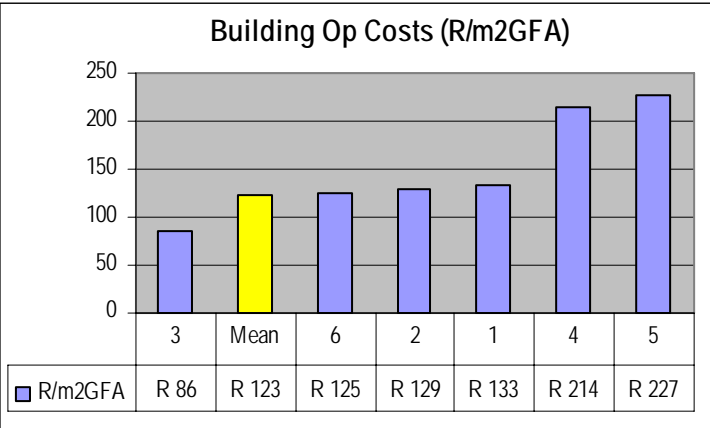
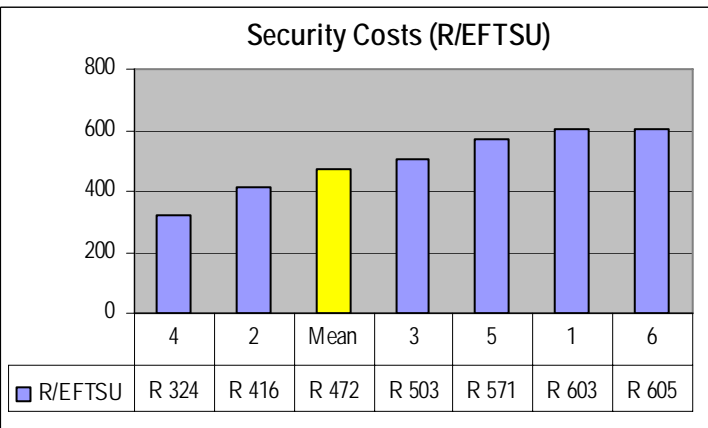
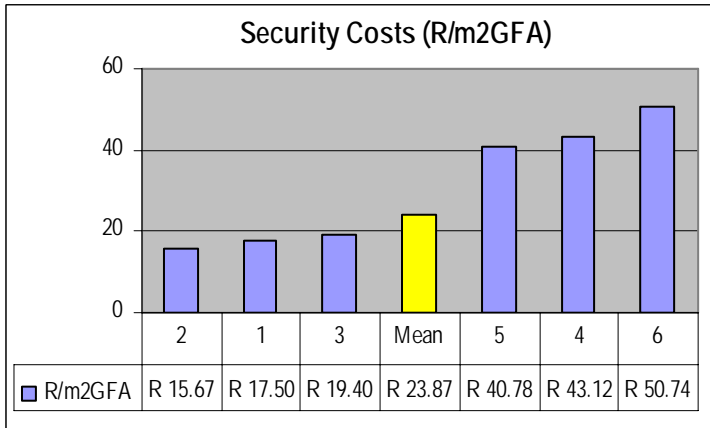
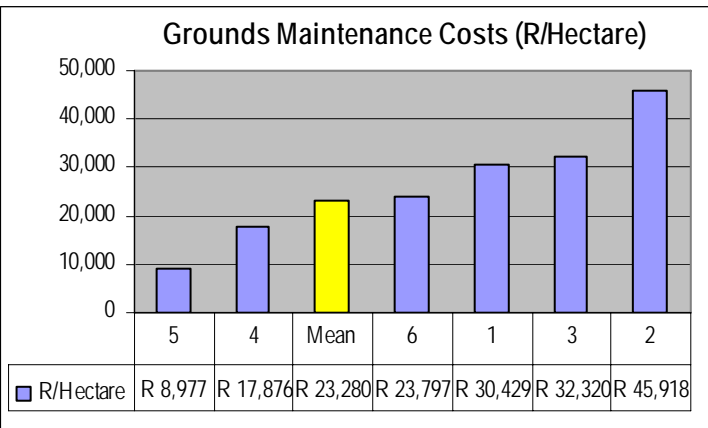
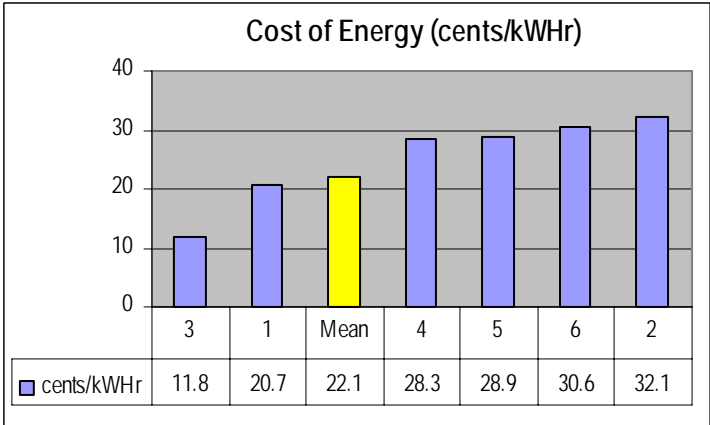
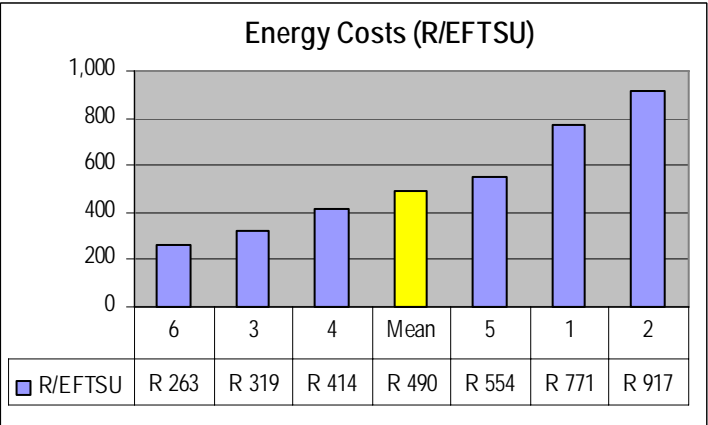
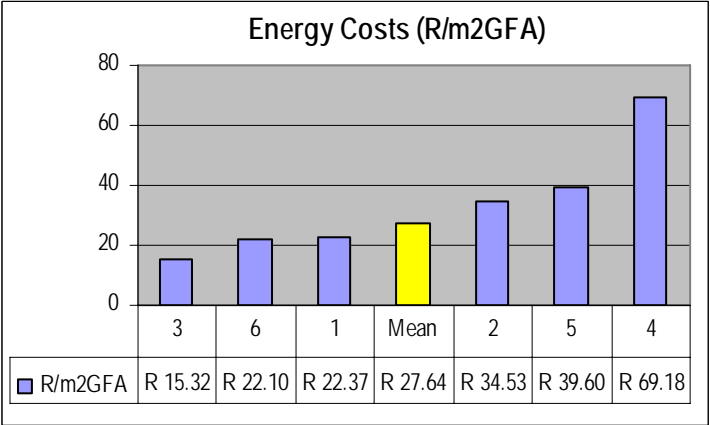
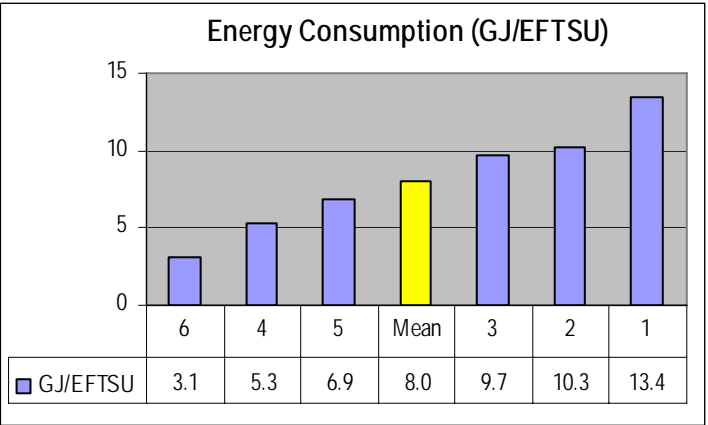


### Cleaning Costs (R/EFTSU)

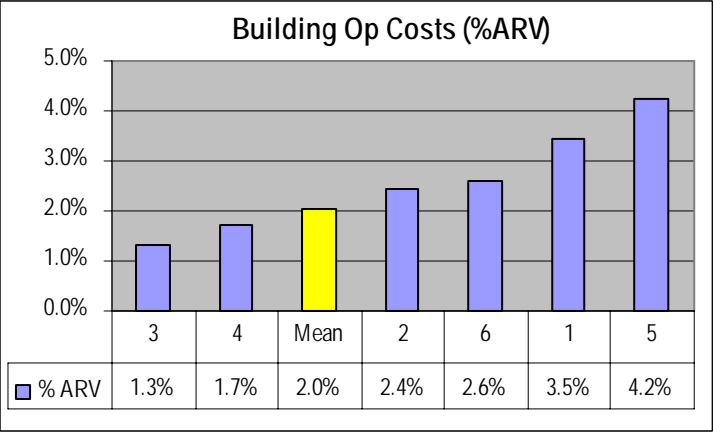
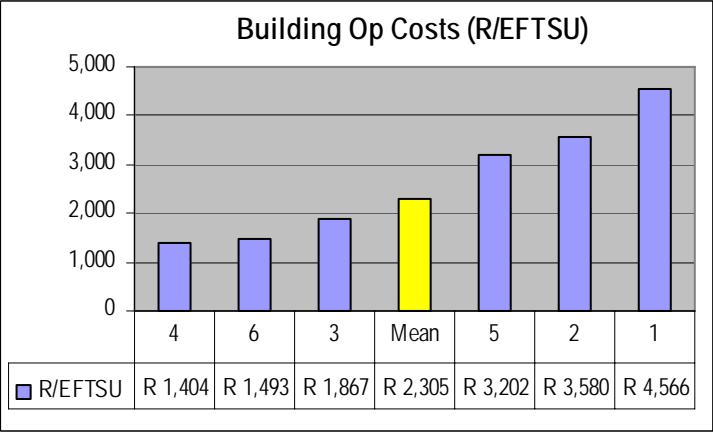


### Energy Consumption (GJ/m2GFA)









# Strategic Asset Management (SAM)

## Background to Assessment Tool:

The self-assessment tool below is based on the 1999 benchmarking work of Professor Ken McKinnon in collaboration with Brian Fenn at Queensland University of Technology. Its purpose is to measure, using a range of criteria, the extent to which an institution has embraced strategic asset management principles. A high score is indicative of an institution that has developed, documented and implemented comprehensive plans across all FM functional areas. These plans are regularly reviewed and have institutional support.

**Completing the form:** Consider each plan (eg capital). Ask yourself "Do I have a Capital Plan?". If the answer is "no" then award yourself a score of 3 points. If you do have a plan consider the extent to which it has been developed and endorsed and supported by your institution. Based on your self-assessment award yourself a score of 3, 6, 9, 12 or 15 points.

2004 HEFMA Benchmark Survey					
Strategic Asset Management					
<p><b>Note:</b> indicate your scores below by deleting the four scores in each line that <u>don't</u> apply (eg if you wish to award yourself "12" for "Capital Development" please delete 3, 6, 9 and 15 and so on) - see example</p>	Compliance with Statement				
	Plan does not exist or is yet to be considered	Partial/draft plan exists, is undergoing further development and is yet to be implemented	Plan exists but is basic, requires further refinement or is only partially implemented	Plan is well developed, is fully documented and regularly reviewed and updated	Comprehensive plan exists, is fully documented, implemented and regularly reviewed. Plan has institutional support
<b>Plan</b>					
Capital Development	3	6	9	12	15
					= /15
<b>Facilities Management:</b>					
Property & Security	1	2	3	4	5
Cleaning and Waste removal	1	2	3	4	5
Environmental Management	1	2	3	4	5
Minor Works, alterations & additions	1	2	3	4	5
Management of utilities	1	2	3	4	5
					= /25
<b>Maintenance:</b>					
Preventive Maintenance	1	2	3	4	5
Corrective Maintenance	1	2	3	4	5
Deferred and Backlog Maintenance	1	2	3	4	5
Condition Assessments/Facilities Audits	1	2	3	4	5
					= /20
<b>Disposal &amp; Adaptation</b>					
	1	2	3	4	5
					= /5
<b>SAM - TOTAL</b>					= /65
<b>SELF EVALUATION</b>					
Score	Rating				
>60	Best Practice				
50-59	Good Practice				
40-49	Average Practice				
30-39	Below Average Practice				
<30	Poor Practice				

# Space Management

## Background to Assessment Tool:

The self-assessment tool below is based on the 1999 benchmarking work of Professor Ken McKinnon in collaboration with Brian Fenn at Queensland University of Technology. Its purpose is to measure, using a range of compliance statements, the extent to which an institution has embraced space management principles. A high score is indicative of an institution that has successfully developed and implemented an accurate and well-managed space data-base. Management systems are in place, and space norms used, for allocating space; space utilisation rates are measured; and space is mapped electronically and linked to the FM operational data-base

**Completing the form:** Consider each statement (eg "An accurate and well managed database of space exists and includes information on: type of space"). Self-assess how accurate this statement is considering the five options provided. For example, if you have well developed space database which includes data on "types of space" you should award yourself 4 or 5 points. If you do not have a space database or your space database does not include this type of information, award yourself one point

2004 HEFMA Benchmark Survey										
Space Management										
<b>Note:</b> indicate your scores below by deleting the four scores in each line that don't apply (eg if you wish to award yourself "4" for "Accessibility/Disabled access" please delete 1, 2, 3 and 5 and so on)					<b>Compliance with Statement</b>					
					Institution is yet to develop systems in this area (0%)	Institution at early stages of developing & implementing systems in this area (1-39%)	Statement is only partially true with further work/refinement to system required (40-79%)	Statement is generally true but with some minor exceptions or omissions (80-99%)	Statement is true in all regards (100%)	
<b>Statement</b>										
<i>An accurate and well managed database of space exists and includes information on.</i>										
Types of space					1	2	3	4	5	
Ownership of space					1	2	3	4	5	
Space facilities and attributes					1	2	3	4	5	
Accessibility/Disabled access					1	2	3	4	5	
Condition					1	2	3	4	5	
Building Code compliance/H&S					1	2	3	4	5	
Functionality					1	2	3	4	5	
Safety features & equipment					1	2	3	4	5	= <span style="background-color: #e0ffff; padding: 2px 10px;">/40</span>
<i>All university space is mapped electronically (eg AutoCad) and is linked to the FM operational database</i>					3	6	9	12	15	= <span style="background-color: #e0ffff; padding: 2px 10px;">/15</span>
<i>Space norms used to quantify space needs taking into account student numbers &amp; specialist space needs</i>					3	6	9	12	15	= <span style="background-color: #e0ffff; padding: 2px 10px;">/15</span>
<i>A system for measuring space utilisation rates (eg space utilisation surveys)</i>					3	6	9	12	15	= <span style="background-color: #e0ffff; padding: 2px 10px;">/15</span>
<i>Space is allocated using space allocation/timetabling software (eg Syllabus Plus)</i>					3	6	9	12	15	= <span style="background-color: #e0ffff; padding: 2px 10px;">/15</span>
<b>Space Management - TOTAL</b>										= <span style="background-color: #ffffcc; padding: 2px 10px;">/100</span>
<b>SELF EVALUATION</b>										
Score					Rating					
>90					Best Practice					
81-90					Good Practice					
61-80					Average Practice					
41-60					Below Average Practice					
<41					Poor Practice					

# Environmentally Sustainable Development (ESD)

## Background to Assessment Tool:

TEFMA continuously strives to improve the breadth & quality of its annual benchmarking survey of Australasian institutions. In 2003, a new survey was added, one which considers environmentally sustainable development (ESD). The assessment tool is intuitive & simple to complete. Respondents should read each statement, assess the extent to which it complies with it & award scores accordingly.

**Completing the form:** Consider each statement (eg "An environmental management system exists and is implemented detailing strategies for development in regard to: energy"). Self-assess how accurate this statement is considering the five options provided. For example, if you have well developed environmental management system which details strategies for managing energy you should award yourself 4 or 5 points. If you do not have an environmental management system addressing energy (or are in the process of developing one), award yourself a score of one or two points.

2004 HEFMA Benchmark Survey																			
Environmentally Sustainable Development																			
<p><b>Note:</b> indicate your scores below by deleting the four scores in each line that <u>don't</u> apply (eg if you wish to award yourself "4" for "Energy" please delete 1, 2, 3 and 5 and so on)</p>	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <th colspan="5">Compliance with Statement</th> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Institution is yet to develop systems in this area (0%)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Institution at early stages of developing &amp; implementing systems in this area (1-39%)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Statement is only partially true with minor work/refinement to system required (40-79%)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Statement is generally true but with some minor exceptions or omissions (80-99%)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Statement is true in all regards (100%)</td> </tr> </table>					Compliance with Statement					Institution is yet to develop systems in this area (0%)	Institution at early stages of developing & implementing systems in this area (1-39%)	Statement is only partially true with minor work/refinement to system required (40-79%)	Statement is generally true but with some minor exceptions or omissions (80-99%)	Statement is true in all regards (100%)				
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<p><i>An environmental management system exists and is implemented detailing strategies for development in</i></p> <p>Energy</p> <p>Water</p> <p>Waste</p> <p>Natural Environment</p>	1	2	3	4	5	=	/20												
	1	2	3	4	5														
	1	2	3	4	5														
	1	2	3	4	5														
<p><i>The master plan incorporates strategies for enhancing ecological values.</i></p>	5	10	15	20	25	=	/25												
<p><i>Construction and rehabilitation projects incorporate principles of 'Green Buildings'.</i></p>	4	8	12	16	20			=	/20										
<p><i>The use of space is maximised in existing and planned buildings.</i></p>	4	8	12	16	20	=	/20												
<p><i>There are measures for minimising resource consumption and emissions of transportation to and from the institution by users.</i></p>	3	6	9	12	15			=	/15										
<b>ESD - TOTAL</b>						=	/100												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Self- evaluation:</th> </tr> <tr> <th style="width: 50%;">Score</th> <th>Rating</th> </tr> <tr> <td>&gt;80</td> <td>Best Practice</td> </tr> <tr> <td>66-80</td> <td>Good Practice</td> </tr> <tr> <td>51-65</td> <td>Average Practice</td> </tr> <tr> <td>35-50</td> <td>Below Average Practice</td> </tr> <tr> <td>&lt;35</td> <td>Poor Practice</td> </tr> </table>								Self- evaluation:		Score	Rating	>80	Best Practice	66-80	Good Practice	51-65	Average Practice	35-50	Below Average Practice
Self- evaluation:																			
Score	Rating																		
>80	Best Practice																		
66-80	Good Practice																		
51-65	Average Practice																		
35-50	Below Average Practice																		
<35	Poor Practice																		

## Strategic Asset Management – the RESULTS

Institution	Plan/Sub-plan											2004 Survey Results	SAM Rating
	Capital Development	Property & Security	Cleaning and Waste removal	Environmental Management	Minor Works, alterations/additions	Management of utilities	Preventive Maintenance	Corrective Maintenance	Deferred & Backlog Maintenance	Condition Assessments & Facilities Audits	Disposal & Adaptation		
	Maximum score available (=65)												
	15	5	5	5	5	5	5	5	5	5	5		
2	12	3	3	2	5	3	2	4	4	3	4	45	Good
4	9	3	4	3	5	5	5	4	2	2	3	45	Good
5	3	4	5	4	4	3	4	4	3	2	2	38	Average
3	6	2	2	3	4	4	5	5	2	1	2	36	Average

## Space Management - the RESULTS

Institution	Compliance with Statement												2004 Survey Results	Space Management Rating				
	An accurate & well managed database of space exists & includes information on:								All university space mapped electronically & linked to FM operational database	Space norms are used to quantify space needs	System for measuring space utilisation rates (eg space utilisation surveys) exists	Space allocated using space allocation or timetabling software (eg Syllabus +)						
	Types of space	Ownership of space	Space facilities & attributes	Accessibility & Disabled access	Condition	Building Code compliance/H&S	Functionality	Safety features & equipment										
	Maximum score available (=100)																	
	5	5	5	5	5	5	5	5							15	15	15	15
	5	5	5	5	5	5	5	5							15	15	15	15
2	5	5	4	3	4	5	4	4	12	12	12	12	82	Best				
3	3	4	4	4	2	3	3	3	9	15	9	12	71	Good				
4	1	3	4	3	3	4	4	4	12	9	9	12	68	Average				
5	3	3	4	3	2	3	2	4	3	3	3	3	36	Below Average				

## Environmentally Sustainable Development - the RESULTS

Institution	An environmental management system exists and is implemented detailing strategies for development in regard to:				The master plan incorporates strategies for enhancing ecological values.	Construction and rehabilitation projects incorporate principles of 'Green Buildings'.	The use of space is maximised in existing and planned buildings.	There are measures for minimising resource consumption and emissions of transportation to and from the institution by users.	2004 Survey Results	ESD Rating				
	Energy	Water	Waste	Natural Environment										
	Maximum score available (=100)													
	5	5	5	5							25	20	20	15
4	5	4	5	4	20	12	20	9	79	Good				
5	3	3	5	3	15	8	16	3	56	Average				
2	3	3	3	2	5	8	12	3	39	Below average				
3	2	2	2	1	5	8	12	3	35	Below average				

## Guidelines for Completing the 2004 HEFMA Benchmark Survey

The following table is provided to assist you in completing the data collection for HEFMA's inaugural Benchmark Report. Please read it carefully before you complete the questionnaire so that the data that you provide is more compatible with what is intended. Only in this way will the results of the survey become more useful to you and others in improving your performance gradually over time.

If you have any queries about a particular term or definition used in the survey please contact Brian Fenn ([bkeystroke@optusnet.com.au](mailto:bkeystroke@optusnet.com.au)) for clarification before you fill in the data. The HEFMA Board also appreciates your assistance and feedback about any improvements you may wish to see in future surveys.

### How to handle Cost Recoveries:

Most of us recover costs for many of the services we provide. The simple rule to follow when completing the survey is that the transaction should apply to both sides of the ledger. That is, if you include the cost of the service provided, also include the area to which the service was provided. **Example:** if maintenance staff are used to do minor works, then deduct the value of their labour from your maintenance salaries.

### How to handle FM overhead:

Respondents should apportion management overhead (up to and including the Director of FM or equivalent) to the services provided by the FM Department (Note: this will include the costs of general (internal to FM) support staff in the administrative, financial, HR and IT/computing areas not normally assigned to a specific service area). The general rule is to allocate all relevant costs (direct and indirect) expended on providing a service.

### How to handle Student housing/Student residences:

Survey respondents should exclude Gross Floor Area (GFA) and Useable Floor Area (UFA) data relating to student housing and further exclude from relevant data fields any costs of providing services to student housing facilities (eg if your maintenance or cleaning staff maintain or clean student residences please exclude all costs apportioned to providing such services). If it is not possible to separate these costs then include both the costs and the GFA/UFA serviced.

### How to handle Leased Space:

The preferred way of dealing with leased space (that is space leased by your institution from others) is to include it in column 4 (GFA) and column 5 (UFA). This provides an accurate measure of the space provided per student (GFA/EFTSU). Depending on your lease agreements you may then chose to include or exclude the leased spaces in columns 21, 52, 60 and 79 provided you deal with the associated service costs in a consistent way. For example, if you chose to exclude the leased space from any of these columns above you should also exclude the costs of services provided (ie maintenance, cleaning, energy, security) to these leased spaces

### How to handle Carpark Space:

Where a carpark comprises >50% of the total GFA of a building then the "primary function" of the building is deemed by definition to be a carpark and the carpark space should be treated as UFA. However, where the total carpark space comprises 50% or less of a building then the building's primary function is not that of a carpark and the carpark space should be recorded as non-UFA.

General Statistical Data (Columns 1 to 13)				
1, 2	Respondents may choose to submit survey data at the aggregated institutional level or by individual campus. If reporting on a campus by campus basis please duplicate forms and submit a separate return for each campus. <u>Also submit a return at the aggregate level.</u> Please identify each campus clearly and indicate in Column 3a if the campus is a Central Business District (CBD) Campus, Suburban Campus or Rural Campus.			
Column	Term	Unit	Definitions	Comments
3a	Campus type		Specify a campus type - CBD, Suburban or Rural. If submitting an aggregate response please specify the predominant campus type (based on your student/staff population)	
4	Gross Floor Area (GFA)	m <sup>2</sup>	<p>The sum of the Fully Enclosed Covered Area (FECA) and the Unenclosed Covered Area (UCA) of a building in square metres. <math>GFA = FECA + UCA</math> (m<sup>2</sup>)</p> <p><b>Note:</b> include all spaces owned or used by the university for <u>University Purposes</u>. Do not include space held for investment purposes or non-University Purposes (eg investment real estate, Shopping Centres, Technology Parks (where the FECA. Fully Enclosed Covered Area is the sum of all fully enclosed covered areas at all building levels, including basements (except unexcavated portions), floored roof spaces and attics, garages, penthouses, enclosed porches and attached enclosed covered ways alongside buildings, equipment rooms, lift shafts, vertical ducts, staircases and any other fully enclosed spaces and useable areas of the building, computed by measuring from the normal inside face of exterior wall ignoring any projections such as plinths, columns, piers and the like which project from the normal inside face of exterior walls. It shall not include open courts, light wells, connecting or isolated covered ways and net open areas of upper portions of rooms, lobbies, halls, interstitial spaces and the like, which extend through the storey being computed. <b>Note:</b> atriums and light wells are only measured at the base level. Do not include the area of the non-existent floor slab at upper levels.</p> <p>UCA. Unenclosed Covered Area is the sum of all such areas at all building floor levels, including roofed balconies, open verandahs, porches and porticos, attached open covered ways alongside buildings, undercrofts and useable space under buildings, unenclosed access galleries (including ground floor) and any other trafficable covered areas of the building which are not totally enclosed by full height walls, computed by measuring the area between the enclosing walls or balustrade (ie from the inside face of the UCA excluding the wall or balustrade thickness). When the covering element (i.e. roof or upper floor) is supported by columns, is cantilevered or is suspended, or any combination of these, the measurements shall be taken to the edge of the paving or to the edge of the cover, whichever is the lesser. UCA shall not include eaves, overhangs, sun shading, awnings and the like where these do not relate to clearly defined trafficable covered areas, nor shall it include connecting or isolated covered ways. (Unit of measurement is square metres.)</p> <p>New building space (m<sup>2</sup> GFA) that comes into service during the reporting period should be <u>included</u> in the total GFA figure.</p>	
5	Useable Floor Area (UFA)	m <sup>2</sup>	<p>Useable Floor Area. The sum of the floor areas measured at floor level from the general INSIDE face of walls of all spaces related to the Primary Function of the building. This will normally be computed by calculating the FECA and deducting Common Use Areas, Service Areas, and Non-habitable Areas. <b>Note:</b> in some cases the Useable Floor Area may include some external covered areas which relate to the Primary Function of the building. <b>Example:</b> a covered external play area is a Primary Functional requirement of a Child Care Centre and should be included although it is not part of the FECA. Similarly, an open but roofed hydraulics modelling laboratory associated with Civil Engineering should be counted as part of the UFA. Common Use Areas include corridors which are defined by partitions but do not include passages and secondary circulation areas which are part of open plan spaces. Further, foyers of large lecture theatres should be treated as UFA.</p> <p>Non-habitable Area is the area occupied by internal columns and other structural supports, internal walls and permanent partitions, service ducts and the like.</p> <p>New building space (m<sup>2</sup> UFA) that comes into service during the reporting period should be <u>included</u> in the total UFA figure.</p>	
6	Area Efficiency	%	= UFA/GFA * 100	Do not enter data. Calculated by computer.



7a	ARV Buildings	R million	<p>The Asset Replacement Value for buildings, fixed equipment, services and systems is the best estimate of current cost of designing, constructing &amp; equipping for its original use <b>as a new facility providing equal service potential as the original asset &amp; which meets currently accepted standards of construction &amp; also complies with all contemporary environmental &amp; other regulatory requirements (NCRB)</b>. ARV of student housing should be excluded from building ARV</p> <p>The cost shall include the cost of all building services and associated plant, finishes and built-in furniture but not the cost of relocating into the building <b>(note: exclude the cost of loose furniture and soft furnishings)</b>. The cost excludes all equipment other than that required for the normal functioning of the building. Costs associated with laboratory, scientific and loose equipment are not included in the cost. The cost includes all fees, approvals and other incidental expenditure associated with construction and initial occupation but excludes those costs normally included in the Insured Value such as demolition, site clearing and the provision of temporary accommodation</p>	
9	Replacement Cost of Buildings per m <sup>2</sup> GFA	R per m <sup>2</sup>	= column 7a / column 4	Do not enter data. Calculated by computer.
10	Full Time Equivalent Student Load (all on-shore students)	EFTSU, FTS, EFTS	= column 10	Include all internal and external on-shore students but exclude any off-shore students
11	Gross Floor Area per (EFTSU)	m <sup>2</sup> GFA per EFTSU	= column 4 / column 10	Do not enter data. Calculated by computer.

Building Maintenance Services (Columns 16 to 25)				
Maintenance		All actions necessary for retaining an item or asset in or restoring it to its original condition. Include maintenance of locks and keys, maintenance of infrastructure (eg. underground services, above ground hydrants, power transformers, pumping equipment etc.), roads, pathways, paved areas, maintenance of electronic security & access control systems, fixed external furniture, retaining walls, guard rails, water features etc. and external cleaning of building <del>exclude</del> pest control and window cleaning and the cost of grounds maintenance activities included in grounds maintenance section		
Preventive Maintenance		The actions performed to retain an item or asset in its original condition as far as practicable by providing systematic inspection, detection and prevention of incipient failure. Preventive maintenance is normally programmed		
Corrective Maintenance		The actions performed, as a result of failure, to restore an item or asset to its original condition, as far as practicable. Corrective maintenance may or may not be programmed		
Backlog Maintenance		Maintenance that is necessary to prevent the deterioration of the asset or its function but which has not been carried out		
Column	Term	Unit	Definition	Comments
16	Maintenance Staff Costs, Administrative and Professional Staff Salaries and on-costs	R		Include costs of professional and administrative staff <u>directly and indirectly</u> involved in the maintenance operation. Where a staff member spends only part of his or her time on maintenance activities, please estimate & apportion their time and costs accordingly. <u>Include</u> a provision for FM management overhead (ie the Director's Office <i>refer note on Page 1 of these Guidelines</i> ) On-costs include payroll tax, allowances, superannuation, workers compensation, sick leave, annual leave & long service leave provisions
17	Maintenance Staff Cost Trade Staff Wages and on-costs	R		Include all costs associated with maintenance trades staff working on maintenance activities only. Where maintenance staff also perform "new work" or alterations as part of their duties, please estimate their time and costs and apportion accordingly. The portion that relates to "new work" should be excluded from the maintenance costs reported
18	Total Maint Staff Salaries/Wages & on-costs	R	= column 16 + column 17	Do not enter data. Calculated by computer.
19	Maintenance Materials and Contracts	R		Include the costs of materials (eg paint, timber, hardware, lamps, plumbing supplies, etc) used by your maintenance staff on preventive and corrective maintenance activities plus payments made to external service providers (eg air-conditioning, lift, electrical, plumbing contractors, etc).
20	Total Maint Expenditure	R	= column 18 + column 19	Do not enter data. Calculated by computer.
21	Gross Floor Area maintained from these funds	m <sup>2</sup> GFA		Cannot exceed the GFA in Col 4 Exclude independent operations such as Student Unions, Guilds, Sports Unions, leased spaces and tenancies, student accommodation if these are maintained or funded by others.
22	Maint Expenditure/m <sup>2</sup> GFA	R/m <sup>2</sup> GFA	= column 20 / column 21	Do not enter data. Calculated by computer.
22a	Maint Expenditure/EFTSU	R/EFTSU	= column 20 / column 10	Do not enter data. Calculated by computer.

Cleaning & Waste Management Services (Columns 49 to 55d)				
Cleaning		Reducing contamination to an acceptable degree		
Column	Term	Unit	Definition	Comments
49	Cleaning Staff Cost, Admin & Professional Staff Salaries plus Cleaning Staff Wages & on-costs	R		<u>Include</u> all salaries and wages of in-house staff involved directly (eg cleaners, cleaning supervisors) and indirectly (FM support staff - refer note on Page 1 of these Guidelines) in cleaning activities.
50	Cleaning Materials	R	All materials from stores or purchased directly for use by in-house staff. If you provide cleaning materials and consumables to external contractors, include these costs too.	<u>Include</u> supplies of toilet paper, soap, paper towels and all cleaning consumables
50a	Building Cleaning Contracts	R	All cleaning contracts relating to the cleaning of buildings	<u>Include</u> general building cleaning, window cleaning, cleaning of curtains/soft furnishings and pest control. <u>Exclude</u> the costs of Non-building Cleaning Contracts specified in 50b & 50c
50b	Non-building Cleaning Contracts (general waste)	R	Non-building cleaning contracts are contracts relating to the removal of general waste	<u>Include</u> waste removal to land fill, land fill charges or other Govt charges, grease trap cleaning, sanitary bin service. <u>Exclude</u> pathological and chemical waste
50c	Non-building Cleaning Contracts (contaminated waste)	R	Non-building cleaning contracts are contracts relating to the removal of contaminated waste	<u>Include</u> pathological waste removal and chemical waste disposal only. <u>Note</u> : pathological and chemical waste costs are <u>excluded</u> from the cleaning benchmarks in Columns 52a to 54
51	Total Cleaning Expenditure	R	= column 49 + column 50 + column 50a + column 50b	Do not enter data. Calculated by computer.
52	Gross Floor Area cleaned from these funds	m <sup>2</sup> GFA		Use GFA of buildings cleaned. This figure will in all cases be greater than the area actually cleaned (due to plant rooms, lift wells and other uncleaned areas) but to allow a consistent measure for comparison you are asked to use GFA!!! Do not include costs of cleaning Student Residences
52a	Cost of Cleaning Buildings/m <sup>2</sup> GFA	R/m <sup>2</sup> GFA	= (Col 49 + Col 50 + Col 50a)/Col 52	<u>Note</u> : cost of cleaning buildings <u>excludes</u> non-building cleaning costs (ie Col 50b-50c) Do not enter data. Calculated by computer.
53	Cleaning Expenditure/m <sup>2</sup> GFA	R/m <sup>2</sup> GFA	= (Col 49 + Col 50 + Col 50a + Col 50b)/Col 52	Do not enter data. Calculated by computer.
54	Cleaning Expenditure/EFTSU	R/EFTSU	= (Col 49 + Col 50 + Col 50a + Col 50b)/Col 10	Do not enter data. Calculated by computer.

Energy Consumption and Expenditure (Columns 58 to 65)				
Column	Term	Unit	Definition	Comments
58	Annual Energy Consumption	GJ		Convert all energy consumed to Giga-joules using formula 1 kWhr = 0.0036GJ. Include all energy sources (Gas, Steam, Electricity) at point of purchase. If Gas is purchased & used to generate electricity do not count twice. <u>Include energy consumed from co-generation plant</u> . Exclude energy consumed by assets/space not included in Col 4 (eg Student Housing or assets leased to and operated by others). If leased space is excluded in Col 4 energy consumed by leased space should be excluded from total energy consumed figure
59	Annual Expenditure on Energy Purchase	R		Include the cost of all energy consumed. Exclude cost of energy consumed by assets/space not included in Col 4 (eg Student Residences or assets leased to & operated by others). If leased space is excluded in Col 4 the cost of energy consumed by leased space should be excluded from total energy consumed figure. Include ALL energy-related expenditure such as distribution and network costs and charges, fees and <u>depreciation for capital invested in co-generation plant</u> . Include the salaries of any staff (eg energy management engineer) directly involved in managing energy.
60	Total GFA supplied with Energy referred to in columns 58 and 59	m <sup>2</sup>		Ensure GFA figure is consistent with definitions provided in Columns 58 and 59
61	Energy Consumption per m <sup>2</sup>	GJ/m <sup>2</sup>	= column 58 / column 60	Do not enter data. Calculated by computer.
62	Energy Consumption/EFTSU	GJ/EFTSU	= column 58 / column 10	Do not enter data. Calculated by computer.
63	Energy Cost per m <sup>2</sup>	R/m <sup>2</sup>	= column 59 / column 60	Do not enter data. Calculated by computer.
64	Energy Cost per EFTSU	R/EFTSU	= column 59 / column 10	Do not enter data. Calculated by computer.
65	Average Cost of Energy/Unit	Cents/kWhr	= column 59 * 0.36 / column 58	Do not enter data. Calculated by computer.

Grounds Maintenance Services (Columns 68 to 72a)				
Grounds Maintenance		All actions necessary for retaining soft and hard landscaping in or restoring it to its original condition. Do not include construction or major redevelopment. Include grass cutting, garden bed maintenance, plant trimming, tree pruning, repairs to irrigation systems (excluding maintenance of pumping stations and other pumping systems), maintenance of grounds plant and equipment, litter removal, road sweeping, cleaning of open drains and chemical spraying of herbicides & pesticides. Exclude all items listed under "building maintenance" (Col 26)). Include sporting ovals maintenance if centrally funded and include associated hectares included in Column 71.		
Column	Term	Unit	Definition	Comments
68	Grounds maintenance professional and field staff salaries, wages & on-costs	R		Include all salaries and wages of in-house staff involved directly (eg groundspersons, curators, supervisors) and indirectly (FM support staff - <i>refer note on Page 1 of these Guidelines</i> ) in grounds maintenance activities.
69	Materials and contracts for grounds maintenance	R		All materials, plant and equipment used by in-house staff plus all contract costs of maintaining soft and hard landscaping. Do not include landscape construction or major reconstruction
70	Total Grounds Maintenance Expenditure	R	= column 68 + column 69	Do not enter data. Calculated by computer.
71	Effective Area of grounds maintained from these funds.	Ha	If a substantial part of the campus is not actively maintained on a regular basis, weight this area by an appropriate factor. For example, if your total grounds area is 80 Ha but only 20 Ha is actively maintained, you should "de-rate" the 60Ha by an appropriate factor, for example 0.3. Therefore, in this example, you may wish to record "Effective Area of Grounds maintained from these funds" (Column 71) as 20 Ha + [0.3 x 60] Ha (or 38 Ha in total). <u>Do not deduct the footprint areas of buildings, roads, lakes, etc.</u> If you maintain facilities such as farms or large pastoral holdings you may wish to exclude both the costs and areas associated with the maintenance of these altogether or "de-rate" them to a much higher degree (eg at a rate of 0.05 - 0.1, or de-rated by a factor of 90 to 95% percent)	
72	Grounds Expenditure per Ha maintained.	R/Ha	= column 70 / column 71	Do not enter data. Calculated by computer.

Security Services (Columns 75 to 82a)				
It is appreciated that some institutions carry out security and parking functions under one organisational unit. If security & parking duties are shared among staff in the same section, please estimate the proportions of time & other costs spent on each and apportion accordingly.				
Security		Actions & activities necessary to provide minimum risk to property and personnel in the institution. (Note: do not include expenditure on major installations of or upgrades to mechanical or electronic security systems)		
Column	Term	Unit	Definition	Comments
75	Security Staff wages, Admin & Prof'l Staff Salaries plus on-costs	R		Include all salaries & wages of in-house staff involved directly (eg CMS operators, guards, supervisors) & indirectly (FM support staff - <i>refer note on p1 of these Guidelines</i> ) in security activities.
76	Security Contracts	R		Include the total costs of contracts with external security patrol organisations
77	Other Security Costs	R		Include costs of any other security contracts (e.g. maint agreements on CMS equipment, comms hardware [eg radios], remote monitoring of alarms, etc). <u>Do not include</u> the costs of <u>maintaining</u> electronic access systems (eg Cardax) - these costs should be included in Col 19 (Maint contracts)
78	Total Security Expenditure	R	= column 75 + column 76 + column 77	Do not enter data. Calculated by computer.
79	GFA under Security Patrol	m <sup>2</sup> GFA		Use the Gross Floor Area of the Buildings patrolled.
80	Security Expenditure/m <sup>2</sup> GFA	R/m <sup>2</sup> GFA	=column 78 / column 79	Do not enter data. Calculated by computer.
81	Security Expenditure/EFTSU	R/EFTSU	=column 78 / column 10	Do not enter data. Calculated by computer.

Building Operating Costs (Columns 108 to 113)				
Building Operating Costs		The sum of the costs of maintenance, energy, security & cleaning of buildings. (Note: does not include grounds maintenance)		
Column	Term	Unit	Definition	Comments
108	Building Operating Costs	R	= column 20 + column 51 + column 59 + column 78	Do not enter data. Calculated by computer.
109	Operating Costs per m <sup>2</sup> GFA	R/m <sup>2</sup>	= column 22 + column 52a + column 63 + column 80	Do not enter data. Calculated by computer.
110	Operating Costs per EFTSU	R/EFTSU	= column 108 / column 10	Do not enter data. Calculated by computer.
110a	Operating Costs as %ARV	%	= column 108 / column 8	Do not enter data. Calculated by computer.