

Title

***AAS27 and accountability with emphasis on
depreciation as the critical test***

by

Allan Molland B.Bus.(Acc/Eco), Grad Dip Ed., CPA, M. Bus.

School of Accounting and Law

2006

A thesis submitted in fulfilment of the requirements for the degree of Doctor of
Philosophy from RMIT University

Declaration

The content of this thesis is my own work, except where otherwise indicated.

The work has not been submitted previously by me, in whole or in part, to qualify for any other academic award.

The content of the thesis is the result of work which has been carried out since the official commencement date of the approved research programme.

Allan Molland

Acknowledgements

I wish to thank Professor Sheila Bellamy and Professor Robert Clift for being supervisors. Professor Robert Clift (affectionately known as Bob) has been an inspiration. He was always questioning and furthering my learning process.

A special thank you is extended to all these who participated in the research.

I dedicate this work to my mother and late father who were always there for me.

Allan Molland

Abstract

The purpose of this study is to investigate how senior accounting staff in Victorian local councils are recording and reporting infrastructure assets (IAs) with their relevant depreciation in General Purpose Financial Reports (GPFRs). Infrastructure assets are long-lived assets such as roads, drains and bridges.

Historically, the purpose of public sector accounting in Western countries has been to demonstrate that funds have been raised and expended strictly within the authority of the annual budget. This short-term charge/discharge objective, involving the use of a cash-based system of accounting, has effectively prevented the provision of information for long-term decision making and the assessment of those decisions. The major disadvantage for management purposes is the loss of information relating to the long-term benefits of expenditures with one of the major issues being the failure to record IAs and their relevant depreciation.

The introduction of Australian Accounting Standard No. 27 *Financial Reporting by Local Governments (AAS27)*, which applies to all Australian local authorities and the Statements of Accounting Concepts (SACs) require IAs to be reported in the Statement of Financial Position and depreciation to be charged in the Statement of Financial Performance in order to reflect the loss of service potential in the operating period concerned. It is anticipated that the study will report the implications for the **accountability** of the implementation of IA accounting and the utility and relevance of **IA information and depreciation** for decision-making by both internal and external users. Conclusions on the consequences of current practices and recommendations for change will be developed to assist local government authorities and accounting bodies.

Abbreviations

Abbreviation	Name of Abbreviation
AAM	Asset Accounting Manual
AARF	Australian Accounting Research Foundation
AAS	Australian Accounting Standard
<i>AAS27</i>	<i>Financial Reporting by Local Governments</i>
AASB	Australian Accounting Standards Board
CBD	Condition-Based Depreciation
CCA	Current Cost Accounting Method
CCF	Consolidated Capital Fund
CF	Conceptual Framework
GASB	Government Accounting Standards Board
GPFRs	General Purpose Financial Reports
IAs	Infrastructure Assets
IAS	International Accounting Standards
ICAA	Institute of Chartered Accountants Association
IMM	Victorian Institute of Municipal Management
NCA	Non-Current Assets
NCGA	National Council on Government Accounting
NZSA	New Zealand Accounting Research and Standards Board
PSACE	Public Sector Accounting Centre of Excellence
PSASB	Public Sector Accounting Standards Board

SACs	Statement of Accounting Concepts
VOLG	Victorian Office of Local Government
UIG	Urgent Issue Group

Table of Content

Title	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
Abbreviations	v
Table of Content	vii
List of Tables	xvii
Chapter 1	1
Introduction	1
1.1 Introduction and Rationale	1
1.2 Relevance of Depreciation.....	5
1.3 Local Government Accounting Information	7
1.4 Reporting the Cost of IAs and Relevant Depreciation.....	8
1.5 Purpose of IA Depreciation in Local Authorities' GPFRs	9
1.6 Local Government Depreciation Issues	12
1.7 IA Depreciation Implications	14
1.8 Methodology	16
1.9 Overview of Thesis	17
Chapter II	21
Literature Review	21
2.1 History.....	21

2.2	Developments in the 19 and 20 Centuries for Depreciation.....	23
2.2.1	19 Century Private Sector IA Accounting Practices	24
2.2.2	19 Century Municipal IA Accounting Practices	28
2.2.3	20 Century IA and Depreciation Accounting Practices	31
2.2.5	Argument for Change to Asset Accounting.....	34
2.3	Local Authorities	41
2.4	The Past—Fund Accounting	42
2.4.1	Cash and Modified Accrual Accounting Practices.....	43
2.5	Change to Accrual Accounting in the Public Sector	48
2.6	The Standard <i>AAS27 Financial Reporting by Local Governments</i>	51
2.7	Victorian Local Government Developments on Financial Reporting ...	55
2.8	Development of Financial Reporting in the Public Sector	61
2.8	Statement of Accounting Concepts (SACs) and GPFRs.....	70
2.8.1	Service Potential or Future Economic Benefits.....	90
2.8.2	Control by an Entity	90
2.8.3	The Result of a Past Transaction or Event	91
2.9	IA Accounting and User Needs under SACs.....	93
2.10	Infrastructure Assets	96
2.10.1	Definitions of Infrastructure Assets (IAs).....	97
2.10.2	Private and Public Sectors are Different	104
2.10.3	IAs are Different from Other NCA	109
2.11	Identification of Infrastructure Assets.....	111
2.12	Valuation of Infrastructure Assets.....	116

2.12.1	Historical Cost.....	117
2.12.2	Current Cost	118
2.12.2.1	Current Market Value	118
2.12.2.2	Current Reproduction Cost.....	118
2.12.2.3	Current Replacement Cost	119
2.12.2.4	Net/Realisable Value	119
2.13	Depreciation.....	123
2.13.1	Generational Equity Issues.....	126
2.13.2	Accounting Records and Policies	128
2.13.3	Effect of Depreciation in GPFRs.....	129
2.13.4	Depreciation of Infrastructure Assets	133
2.13.5	Alternative Viewpoints on Depreciation	135
2.13.5.1	Renewal Accounting.....	136
2.13.5.2	Condition-Based Depreciation (CBD) Method	142
2.13.6	Depreciation Issues	146
Chapter III	.....	153
Methodology	.....	153
3.1	Motivation for Study	153
3.2	Research Method	154
3.3	Preliminary Data Gathering.....	157
3.4	Research Problem	158
3.5	Questions Raised	160

3.5.1	What information is necessary and sufficient for decisions relating to the use, maintenance and replacement of infrastructure assets?	160
3.5.2	Has the charging of depreciation on IAs affected budgets, rating estimates and policy decisions?	162
3.5.3	Has the charging of depreciation on IAs affected day-to-day management decisions?	163
3.5.4	What are the implications of depreciation charges on IAs for intergenerational equity?	164
3.6	Data Collection	164
3.6.1	Interviews	165
3.6.2	Research Instrument	167
3.6.3	GPFRs Review	168
3.7	Data Analysis	169
3.7.1	Interviews	169
3.7.2	Questionnaire	169
3.7.3	GPFRs Review	170
Chapter IV	.....	171
Interviews	.....	171
4.1	Issues Investigated	171
4.2	The Interviewees	172
4.3	Responses from Interviewees.....	172
4.3.1	Technical Issues in Financial Reporting of IAs under AAS27	173
4.3.2	Benefits of IA Information	174

4.3.3	Identification and Valuation Problems with IAs	177
4.3.4	Education for AAS27 IA Requirements.....	185
4.3.5	Training Resources.....	188
4.3.6	Information Systems for IAs.....	189
4.3.7	Valuation Responsibilities.....	190
4.3.8	Accounting Policies for IAs	192
4.3.9	Depreciation of IAs	197
4.3.10	Auditors Opinion of GPFRs	199
Chapter V	.....	201
Questionnaire Design	.....	201
5.1	Design of the Questionnaire	201
5.2	The Questionnaire	203
5.2.1	Personal Details.....	203
5.2.2	Sections B, C and D	203
5.3	Administration of the Questionnaire.....	204
5.4	Identification Issues	205
5.4.1	IA Records.....	206
5.4.2	Education.....	207
5.4.3	Communication Benefits.....	208
5.4.4	Aggregation of IAs	208
5.4.5	Information Systems.....	209
5.4.6	Control.....	210
5.4.7	Internal Resources.....	210

5.4.8	Benefits.....	211
5.4.9	IA Committees	211
5.4.10	Accounting Policies.....	212
5.4.11	Technical Issues in Financial Reporting under AAS27.	213
5.5	Valuation Issues	214
5.5.1	Valuations were Completed Internally or Externally.....	214
5.5.2	The Asset Accounting Manual (AAM)	215
5.5.3	Method of Valuation Used	215
5.5.4	Are IA Valuations Fully Justified	216
5.5.5	Current Cost of Replacing Infrastructure Assets.....	217
5.5.6	The Current Valuation Methods	218
5.5.7	Land Improvements	219
5.6	Depreciation Issues	220
5.6.1	Fully Reflects Asset Usage in the Financial Statement.....	220
5.6.2	Has Depreciation of IAs been a Problem.....	221
5.6.3	Attitudes to Depreciation.....	222
5.6.4	The Depreciation Rates Fully Reflect the Use IAs	222
5.6.5	The Depreciation Rates were Mainly Straight-line Calculations.	224
5.6.6	Engineer and Accountant Depreciation Issues	225
5.6.7	Internal Reports	225
Chapter VI	.....	227
Analysis of the Questionnaire Responses	.....	227
6.1	Questionnaire Responses.....	227

6.2	Method of Analysis	229
6.3	Respondent Profile Analysis	229
6.4	Identification Analysis	233
6.4.1	Identification of Resources	233
6.4.2	Economic Lives.....	239
6.4.3	Implementation Issues.....	241
6.4.4	Identification Accountability	244
6.4.5	Theoretical Issues.....	247
6.4.6	Infrastructure Asset Differences	250
6.5	Valuation Analysis.....	252
6.5.1	When Valuing IAs under AAS27.....	252
6.5.2	Valuation Basis	255
6.5.3	Valuation Reliability	256
6.5.4	Valuation Problems.....	258
6.5.5	Component Valuations	260
6.5.6	Valuation Opinions.....	264
6.6	Depreciation Analysis	267
6.6.1	Depreciation Issues	267
6.6.2	Depreciation Rates	269
6.6.3	Council Depreciation Rates	272
6.6.4	Respondent Opinions	273
6.6.5	Traditional Depreciation Methods	275
6.6.6	Respondent's Ideological Views	278

6.6.7	Methodology Opinions	281
6.6.8	Council Procedures	285
6.7	Optional Comments Section	287
Chapter VII	.....	291
General Purpose Financial Reports Analysis	.....	291
7.1	Review of General Purpose Financial Reports (GPFRs)	291
7.2	Inner Metropolitan Municipalities IAs Review.....	294
7.2.1	Inner Metropolitan Municipalities Depreciation Rate Review	298
7.2.2	Inner Metropolitan Municipalities Reconciliation Review	301
7.2.3	Inner Metropolitan Municipalities Non-financial Review	302
7.3	Outer Metropolitan Municipalities IAs Review.....	304
7.3.1	Outer Metropolitan Municipalities Depreciation Rate Review	307
7.3.2	Outer Metropolitan Municipalities Reconciliation Review.....	309
7.3.3	Outer Metropolitan Municipalities Non-financial Review	311
7.4	Regional City Municipalities IAs Review	311
7.4.1	Regional City Municipalities Depreciation Rate Review.....	315
7.4.2	Regional City Municipalities Reconciliation Review	317
7.4.3	Regional City Municipalities Non-financial Review	318
7.5	Large Shire Municipalities IAs Review	320
7.5.1	Large Shire Municipalities Depreciation Rate Review	323
7.5.2	Large Shire Municipalities Reconciliation Review.....	324
7.5.3	Large Shire Municipalities Non-financial Review	325
7.6	Small Shire Municipalities IAs Review	327

7.6.1	Small Shire Municipalities Depreciation Rate Review.....	331
7.6.2	Small Shire Municipalities Reconciliation Review	333
7.6.3	Small Shire Municipalities Non-financial Review	333
Chapter VIII	.....	336
Summary, Conclusion and Recommendations	.....	336
8.1	Introduction	336
8.2	Summary on the Up-dating of IA Information for Efficient Decision Making.....	339
8.2.1	Conclusion on the Use of IA Information	342
8.2.2	Recommendations on the Use of IA Information	343
8.3	Summary of the Technical Knowledge on AAS27 IA Information	344
8.3.1	Conclusions of the Technical Knowledge on AAS27 towards IA Information.....	345
8.3.2	Recommendations of the Technical Knowledge on AAS27 IA Information.....	345
8.4	Summary on the Valuation of IAs	346
8.4.1	Conclusions on the Valuation of IAs	349
8.4.2	Recommendations on the Valuation of IAs.....	350
8.5	Summary of Depreciation Issues	351
8.5.1	What information is necessary and sufficient for decisions relating to the use, maintenance and replacement of infrastructure assets?	352
8.5.2	Has the charging of depreciation on IAs affected budgets, rating estimates and policy decisions?.....	355

8.5.3	Has the charging of depreciation on IAs affected day-to-day management decisions?	357
8.5.4	What are the implications of depreciation charges on IAs for intergenerational equity?.....	359
8.5.5	Conclusion to Depreciation Issues.....	361
8.5.6	Recommendations to Depreciation Issues	363
8.6	Summary of IA Accounting Theory	364
8.6.1	Conclusion for IA Accounting Theory.....	369
8.6.2	Recommendations for IA Accounting Theory	372
8.7	Future Research Issues.....	374
8.8	Limitations in Research.....	375
	Bibliography	376

List of Tables

Table 2.1 Prescribed Bases of Accounting	45
Table 2.2 Local Government Publications.....	62
Table 2.3 Capitalisation of Non-Current Assets	101
Table 2.4 Measurement of Non-Current Physical Assets.....	120
Table 6.1 Age Profile.....	229
Table 6.2 Gender	230
Table 6.3 Experience	230
Table 6.4 Qualifications.....	231
Table 6.5 Accounting Association	231
Table 6.6 Position	232
Table 6.7 Identification Resources.....	233
Table 6.8 Economic Lives	239
Table 6.9 Implementation Issues	241
Table 6.10 Identification Accountability	244
Table 6.11 Theoretical Issues	247
Table 6.12 Infrastructure Asset Differences	250
Table 6.13 Valuation Resources	252
Table 6.14 Valuation Basis.....	255
Table 6.15 Valuation Reliability	256
Table 6.16 Valuation Problems	258
Table 6.17 Component Valuations.....	260
Table 6.18 Valuation Opinions	264

Table 6.19 Depreciation Issues.....	267
Table 6.20 Depreciation Rates.....	269
Table 6.21 Council Depreciation Rates.....	272
Table 6.22 Respondent opinions.....	273
Table 6.23 Traditional Depreciation Methods.....	275
Table 6.24 Respondent’s Ideological Views.....	278
Table 6.25 Methodology Opinions.....	282
Table 6.26 Council Procedures.....	285
Table 7.1 Inner Metropolitan Municipal’s Roads and Bridges.....	294
Table 7.2 Inner Metropolitan Municipal’s Drains.....	297
Table 7.3 City of Melbourne Depreciation Rates.....	298
Table 7.4 City of Yarra Depreciation Rates.....	299
Table 7.5 City of Stonnington Depreciation Rates.....	299
Table 7.6 City of Melbourne IAs Accounts Reconciliation.....	302
Table 7.7 City of Stonnington Non-financial Information.....	303
Table 7.8 Outer Metropolitan Municipal’s Roads and Bridges.....	304
Table 7.9 Outer Metropolitan Municipal’s Drains.....	306
Table 7.10 City of Melton Depreciation Rates.....	307
Table 7.11 City of Frankston Depreciation Rates.....	308
Table 7.12 City of Whittlesea Depreciation Rates.....	308
Table 7.13 Melton Shire Council IAs Account Reconstruction.....	310
Table 7.14 Roads, Bridges and Drains Reconciliations.....	310
Table 7.15 Regional City Municipal’s Roads and Bridges.....	312

Table 7.16 Regional City Municipal's Drains	314
Table 7.17 City of Greater Bendigo Depreciation Rates	316
Table 7.18 IA accounts Depreciation Reconstruction.....	317
Table 7.20 City of Greater Bendigo Non-financial Information	319
Table 7.21 Large Shire Municipal's Roads and Bridges.....	320
Table No. 7.22 Large Shire Municipal's Drains	322
Table 7.23 Ararat Rural City Depreciation Rates	323
Table 7.24 Swan Hill Depreciation Rates	324
Table 7.25 Swan Hill Rural Council IA Accounts Reconstruction	325
Table 7.26 Swan Hill Rural Council Non-financial Information	326
Table 7.27 Small Shire Municipal's Roads and Bridges.....	328
Table 7.28 Small Shire Municipal's Drains	330
Table 7.29 Indigo Shire Council Depreciation Rates.....	331
Table 7.30 Loddon Shire Council Depreciation Rates.....	331
Table 7.31 Loddon Shire Council Change of Economic Life of Roads.....	332
Table 7.32 Moyne Council Depreciation Rates	332
Table 7.33 Indigo Shire Council Non-financial Information	334
Table 7.34 Loddon Shire Council Non-financial Information	335
Table 8.1 Accounting Theory for the Recording and Reporting of IAs	365
Table 8.2 Acceptance by Preparers for the Recording and Reporting of IAs ..	369

Chapter 1

Introduction

1.1 Introduction and Rationale

In July 1991, the Australian Accounting Research Foundation (AARF) released Australian Accounting Standard No. 27 (*AAS27 Financial Reporting by Local Governments*), which applies to all Australian local authorities. The Standard took effect for reporting periods ending on or after 1 July 1993, but was not fully implemented until mid-1997. Local authorities were given a three-year period before it became mandatory to report infrastructure assets (IAs) and relevant depreciation in General Purpose Financial Reports (GPFRs). This indicated the serious issues faced by local government in valuing and depreciating IAs that previously were not included in financial statements.

In recent years, Victorian newspaper headlines have highlighted significant problems in relation to local authorities' IAs—for example:

council crisis looms, the dilapidated state of council owned roads, buildings and infrastructure has been revealed in a major report released by State Government (Herald Sun Wednesday, 12th January 2000, p.10).

The report referred to in the quotation, *Facing the Renewal Challenge* (Burns, P., Hope, D., and Roorda, J., 1998), revealed some startling statistics on IAs. Only eight out of the seventy-eight Victorian councils were spending the amount required to maintain their IAs beyond the next decade; the total value of these assets was estimated to be \$23.3 billion or \$13,000 per Victorian household (1998, p.1).

This report (Burns et al., 1998) produced in Victoria indicated the scope of IA investment for local authorities:

this is the first study that gives the overall picture of the size, condition and value of its local council infrastructure—its roads, bridges, footpaths, drains, parks and recreation and public building. The Victorian local government infrastructure asset base is worth around \$23.3b in current replacement values (exclusion of land holdings), 64% of this is in transport—roads, bridges and footpaths. Drainage constitutes 15%, buildings 19% and parks despite covering a large landmass, represent only about 2% of replaceable infrastructure assets (1998, p.43).

Also the report *Facing the Renewal Challenge* (Burns et al., 1998), revealed some startling statistics on IAs:

maintenance, on an aggregate level (all Victorian councils), is currently \$225m. Many argue that this is not sufficient, but in doing so, they frequently fail to make a distinction between day to day maintenance and periodic renewal. Others argue that the maintenance dollar is ill-spent, with as much as one quarter to one third being wasted. The problem is often not so much as how much is being spent but rather *where* it is being spent (1998, p.50).

Interest in the deterioration of these assets at local government level has not been confined to Australia, but has been world-wide. The report referred to above mentioned:

it is matter of public record that when they stopped painting a major bridge in New York, it had so badly rusted within just three years that bits were literally falling off and that the roads became so bad that only buses designed for under-developed countries could manage the roughness (Burns et al. 1998, p.5).

Interest in deterioration of infrastructure assets in recent years has not just occurred in Australian local authorities, but has been world-wide, for example, New York, and has caused governments to examine accounting methods for properly reporting these assets (Regan, 1987). The Comptroller of the State of New York gave seminars (Regan, 1987) in Australia in the late 1980s on how introducing the use of accrual accounting, especially for these assets significantly improved the situation mentioned above. Accrual accounting for infrastructure assets with a depreciation focus has been cited as an efficient and effective method in reliable decision making for maintenance programs and reporting (Sutcliffe, 1985; Greenall Paul & Sutcliffe, 1988; Rowles, 1992; Peirson & Ramsay, 1994; and Public Sector Accounting Centre of Excellence (PSACE), 1994).

Infrastructure assets are normally renewed rather than being replaced. Some physical assets, for example, most furniture, plant and equipment, are used up

and completely replaced with new items, whereas, other physical assets, for example, IAs (roads) and most buildings have an indefinite life which is *renewed* by periodic replacement of individual components. IAs or networks consist of an aggregate of components, each with a different economic life. Councils need to estimate the actual length of time between successive reseals or major substructure renewal for roads to determine their economic life. The asset records of the IA networks and components were inadequate under the previous modified accrual accounting method for local government authorities and these calculations could not be completed. Technical knowledge for calculating *economic lives* normally is obtained from the engineers department which are estimates based on knowledge of these assets, the way they are being used and the climate and other conditions that give rise to decay and obsolescence (Burns et al., 1998). Depreciation under the new AAS27 IA reporting requirements needs to be calculated and applied to these assets, which is set out in the accounting standards.

Even though the appropriateness of charging depreciation is still hotly debated most of the recent research has related to the identification and valuation of previously unrecorded assets and to the *best* way to allocate their cost, for example, the best depreciation method. As a result, there is ample evidence of dramatic differences in the results of applying different methods, which raises questions about relevance and usefulness.

Recently several reports for Victorian local government authorities have highlighted the need for accurate and reliable information on infrastructure assets for financial decision-making. There appears to be mounting pressure on government and accounting bodies to provide defensible methods in depreciating IAs.

ordinary depreciation methods are not useful for an asset that is not replaced. It is recommended that the Office of Local Government explore the infrastructure option of Condition-Based-Depreciation method which is more accurate and provides a better management tool (Burns et al. 1998, p.79).

A relatively recent indication that this debate is still current is a ruling from the Urgent Issues Group (UIG), (ICAA, 2000), which as at Year 2000 effectively prohibits the use of one particular method, condition-based depreciation.

1.2 Relevance of Depreciation

As ***depreciation***, however calculated, is the ***critical test for accrual accounting***, the purpose of this study is to investigate the practical implications of how Victorian local authorities depreciate IAs and what type of financial decisions are made on these costs. The questions are listed below.

- Does depreciation of IAs reflect their loss of service potential according to senior council finance officers? and
- Is depreciation of IAs used in accrual budgets and rating estimates?

At present there is very little independent reported research into this contentious area at a local authority or government level and what research is available argues for alternative methods of depreciation. The methods of depreciation presently used and approved by Australian Accounting Standards are straight-line and reducing-balance. It is anticipated that the study will report the implications for the **accountability** of the implementation of IA accounting and the utility and relevance of IA depreciation in local government authorities. Conclusions on the consequences of current practices and recommendations for change will be developed to assist local authorities and for information to be included in GPFRs.

The investment in and potential of rapid decay of IAs have caused governments, local authorities, in particular, to examine methods for properly maintaining and reporting these assets. This is why the research to be completed is essential to achieve an unbiased and comprehensive review on the effect of depreciation that can be used in internal and external financial decision-making to help maximise resources in maintaining these assets.

A detailed example of how a road network and some buildings are seen as having an indefinite life whereas the components have a finite life is shown in the following example:

a road network remains an integral road network because of periodic renewal of components of the sub-structure and seals. Similarly buildings,

once constructed tend to last as long as they are functionally required, by virtue of being, periodically, rewired, re-roofed, re-painted, re-furbished and rehabilitated (Burns et al. 1998, p.50).

The accounting treatment of capital expenditure, operating expenditure, maintenance and depreciation of IAs is often confused by local government authorities for internal (accrual budgets and rating estimates) and external reports (GPFRs) for decision-making. This project will investigate this situation under AAS27 IA reporting requirements.

The project will involve the study of public sector accounting with particular emphasis on local government in Victoria. Victoria is representative of the other States in local government with all States sharing similar structures having inner, middle and outer metropolitan councils and large and small rural councils as well as broadly similar responsibilities and powers (Douglass, 1997 & Kluvers, 1997).

1.3 Local Government Accounting Information

Prior to the introduction of AAS27, *Financial Reporting by Local Governments*, IAs were not reported in the Balance Sheet and only the cash costs expended were reported in the Operating Statement, under modified accrual accounting procedures. The introduction of AAS27 and the Statements of Accounting Concepts (SACs) require IAs to be reported in the Statement of Financial Position (Balance Sheet) and depreciation to be charged in the Statement of

Financial Performance (Operating Statement) in order to reflect the loss of service potential in the operating period concerned. In 2005 under the International Accounting Standards (IAS) that Australia now uses the former titles are used, Balance Sheet and Operating Statement.

1.4 Reporting the Cost of IAs and Relevant Depreciation

Incorrectly calculated depreciation costs on these assets may cause serious problems in local authorities' financial statements and decision making for internal and external users. Empirical work in this area was completed just before the change from modified accrual accounting to full accrual accounting (all revenue received or earned and expenses paid or incurred in that financial period and all assets and liabilities included in the balance sheet) revealed a huge difference in the reporting of depreciation on IAs (Elliott, 1991).

Several issues relating to IAs were raised by councils and interested parties in their submissions on Exposure Draft No. 50 *Financial Reporting by Local Governments (ED50)*, the forerunner to AAS27, which were acknowledged by the Australian Accounting Research Foundation (AARF). The AARF responded to these concerns in a positive manner by allowing a transitional period in accounting for these assets under AAS27. The Victorian Government also set up a Standing Committee on Local Government Financial Management (Standing Committee) to develop suitable methodology and guidelines (for

example, an Asset Accounting Manual) in an attempt to help local authorities overcome most of the difficulties in accounting for these assets.

Much of the literature on accounting for IAs in Victoria has come from the Victorian Office of Local Government (VOLG) and the Standing Committee referred to above. Academic studies in Australia on this issue have been very limited, with the conceptual issues being raised but little feedback received from councils on the difficulties or advantages in accounting and depreciating these assets under AAS27.

1.5 Purpose of IA Depreciation in Local Authorities' GPFs

It seems clear from some of the arguments contributing to the debate that the concept of depreciation is not properly understood and that no matter how much maintenance is undertaken on an IA to prolong its virtually indefinite life, its components have finite lives that, in the case of a road, may range from 5 years to 100 years or more. This means that part of the IA is consumed (wear & tear) in each reporting period. The estimation of the economic lives of the components is sometimes a practical problem but they can be reviewed and revised periodically. Consumption of the components can be measured and depreciation charged, with the depreciation method chosen reflecting the expected pattern of consumption.

Such depreciation helps in determining the full cost of using the IA during the relevant reporting period, while maintenance is included in the full cost that allows full service potential of the IA to the community. In short, both depreciation and maintenance expenses have a role to play in financial reporting and decision-making (internal or external) in relation to infrastructure assets (accrual budgets and rating estimates). The arguments against the charging of depreciation relate to maintenance of the type that includes some new capital expenditure, with no distinction made between an expenditure or capital item for financial reporting purposes. If the maintenance is of a capital nature it increases the capacity of the asset if not the life of the asset.

The investment in local authority IAs needs to be measured on a maintenance, depreciation and renewal basis. The report (Burns et al. 1998) mentioned maintenance and renewal but not depreciation in the estimated expenditure needed in Victorian councils compared to actual expenditure and what present ratepayers provide in revenue for these assets. As mentioned in the report:

sustainment is a measure of the costs of retaining the existing infrastructure portfolio. It contains maintenance and average renewal. The average renewal is measured by the *average annual asset consumption* cost or AAAC. The AAAC for Victorian councils is \$493m. The current average annual maintenance expenditure is \$225m. The average annual sustainment cost is \$718m (1998, p.51).

The above statement shows that the current operating capacity of IAs by Victorian councils is not matching the required levels. The amount \$493m is

what Victorian councils, on average, are spending each year to renew these assets. However the amount needed is \$718m. This deficit is without depreciation that would make the position much worse which the present system of accrual accounting for IAs should highlight. This brings another problem:

ratepayers are not paying for asset consumption that they are responsible for today but rather for asset renewal (or the asset consumption that has occurred in the past). In the absence of any rationalisation of infrastructure assets, the infrastructure asset portfolio is continually growing. Renewal costs are also growing but they lag behind the growth in the asset portfolio period of the economic lives of the assets, thus the increase in renewal costs lags behind the growth in the asset portfolio by between 20-100 years depending on the composition of the additional assets (Burns et al. 1998, p.52).

This leads to other problems, with a major problem called the intergenerational equity issue that has been and is debated in local government:

the result is that today's ratepayers are only paying about 68% of the asset sustainment costs that are being incurred now. This means that the difference will be paid by future generations (either higher costs for renewal or the way of service deterioration if the costs are not afforded). This is the basis of what is often referred to as *intergenerational inequity*, that is the ratepayers use up the asset stock but it is tomorrow's generation that picks up the renewal tab. Today's ratepayers are picking up the (much smaller) tab for yesterday's asset usage (Burns et al. 1998, p.52).

The report mentioned does not accept traditional depreciation methods (for example, straight-line) and only applies maintenance and renewal costs with an index factor for the condition-based depreciation (CBD) method. These issues leave a question that needs to be answered, is there a lack of knowledge on depreciation or false assumptions (*steady state condition assumption*, Currie, 1987)) that does not include the loss of service potential of the IA? The authors

of the report acknowledge service deterioration but maintenance and renewal, not depreciation, is used to restore this service deterioration.

Maintenance and depreciation are not mutually exclusive and both should be recognised and disclosed in the financial reporting of infrastructure assets. If the level of maintenance is lower than that required to keep the IA concerned in good working condition, then the level of consumption of the asset's service potential will increase. Under accrual accounting regularly revising the economic lives of components in the IA will reflect the decreased level of maintenance, and increased depreciation will be charged. The IA will be reported at a lower value because accumulated depreciation has increased in the Statement of Financial Position.

1.6 Local Government Depreciation Issues

A wide range of issues has been canvassed in the debate about whether or not to depreciate IAs and/or record maintenance charges. Some of the issues raised are discussed briefly below. Another bigger issue is the use of IA depreciation in internal financing and decision-making (for example, accrual budgets and rating estimates).

IAs need to be kept in good working condition to provide the required service to the community, therefore regular maintenance is required. This is similar to any

other physical asset with the exception of land (in most cases). However, it has been suggested that by properly maintaining the asset concerned it will have 100 percent service potential (steady state) to the community throughout its life and therefore should not be depreciated (Currie, 1987).

In relation to the charging of both depreciation and maintenance, arguments about intergenerational inequity surface, the implication being that the present generation is paying twice while future generations are benefiting (McCrae and Aiken, 2000) while the report (Burns et al., 1998) above indicates that this is not the situation. This report indicates that the present generation is not paying enough for their present consumption and the future generation will need to make-up the shortfall.

It is also claimed that public sector IAs are different from private sector IAs. However, regardless of the sector, maintenance is needed on any physical asset to keep it in good working condition. Both sectors need to know the value of their IAs and charge depreciation to determine the full cost of the service provided; this is so whether the full cost of the service is recovered or not.

There is also an argument that IAs are different from other physical assets and should therefore be treated differently. Infrastructure assets are a non-current asset in either the private or the public sector. They may have longer lives than other physical assets but are still made up of many components that have finite

lives. They may be more complex because of the number of components and their different economic lives but this should not make any technical difference to the level of maintenance needed as distinct from other physical assets. No matter what level of maintenance is necessary, the components of IAs will still have a finite life and need to be depreciated.

1.7 IA Depreciation Implications

Difficulties in determining depreciation and maintenance costs in financial statements and budgets have been identified by various committees and academics (Institute of Chartered Accountants Association {ICAA} 1998 & 2001; Lee, Staunton & Eddie 1999). However, if depreciation and maintenance expenses are not disclosed, the reader of financial statements may assume that maintenance or consumption of service potential has not occurred. Disclosure can be achieved by:

- including details of where depreciation and maintenance expenses are not aggregated by category but each IA component, and a statement that IAs were properly maintained; or
- having a category as a separate line item on the depreciation and maintenance of IAs.

The importance of such information lies in the level of maintenance and renewal (replacement of IA components) needed and the huge amounts involved for infrastructure assets. If these assets are not maintained at the appropriate level or renewed, higher depreciation costs need to be charged to reflect the shorter economic lives.

In determining annual council rates (rating estimates), local authorities have been reluctant to charge ratepayers depreciation costs of IAs. If this is the situation then present ratepayers may not be paying enough for the use of IAs and future generations may be left with the bill.

This confusion and reluctance by local authorities to appreciate the above reported benefits of accrual accounting have led to the contentious issues of the appropriate method of depreciation to be used when reporting the consumption of IAs or whether depreciation should be applied to these assets. Different viewpoints and methods include: conventional forms of depreciation allowable under AAS27 (straight-line and reducing-balance); condition based depreciation (Burns, 1993; Sing 1998; and Burns et al., 1998); and renewal accounting which does not accept depreciation being allocated (Currie, 1987; Ma & Mathews, 1992; Neilson, 1993; and Pallet, 1995). Each method has different consequences for financial statements and economic decision-making. Also not all of those methods may be acceptable under the Australian Conceptual Framework for Financial Reporting. There are three key aspects of

accounting for infrastructure assets: identification; valuation; and depreciation. These aspects are inter-dependent and significant.

1.8 Methodology

A descriptive approach is used in this study to investigate how Victorian councils are depreciating IAs and how this information is used for decision-making and reported by senior finance officers.

Conceptual and technical issues are reviewed in the literature, and data obtained from councils by means of a questionnaire, interviews and GPFRs on their attitudes to these issues on depreciation. The study will be conducted in Victoria, with the population being the State's 78 local authorities.

As the mandating of depreciation charges has given rise to debate at several levels, the focus of the research problem is.

AAS27 and accountability with emphasis on depreciation as the critical test.

Subsidiary problems which relate to this include the following.

- What information is necessary and sufficient for decisions relating to the use, maintenance and replacement of infrastructure assets?

- Has the charging of depreciation on IAs affected budgets, rating estimates and policy decisions?
- Has the charging of depreciation on IAs affected day-to-day management decisions? and
- What are the implications of depreciation charges on IAs for intergenerational equity?

1.9 Overview of Thesis

In this thesis, conceptual and technical issues are reviewed in the literature, and data obtained from councils by means of a questionnaire and interviews on their attitudes to these issues on IA accounting and the relevant depreciation implications for decision-making. In many cases there is a consensus of opinion on the issues raised. In some cases, issues are raised by councils that do not appear in the literature; these are used in a questionnaire to determine if they are common or isolated instances.

Chapter 2 contains critiques of the literature on accounting for infrastructure assets and relevant depreciation. There are different views on this contentious issue of accounting for IAs and relevant depreciation. Different viewpoints on depreciation methods will be considered in the literature review. Methods include the conventional form of depreciation (straight-line and reducing-balance), condition-based depreciation (Burns, 1993) and renewal accounting

which does not accept depreciation being allocated (Pallot, 1995 and Currie, 1987).

Chapter 3 involves the methodology used. A descriptive approach is used in this study to investigate how Victorian councils are depreciating IAs and the information provided for decision-making. Three areas are examined which include: identifying; valuing; and depreciating IAs under AAS27 financial reporting requirements. It is recognised that these three areas of asset accounting are not mutually exclusive. A literature survey, interviews, survey of GPFs and a questionnaire are used to identify and explore relevant issues.

Chapter 4 covers the interviews with senior finance officers at fifteen councils. All participating councils are to be asked the same set of questions in a structured interview format. Analysis of these interviews may reveal the key issues of concern to practitioners, and their relationship to the issues identified in the literature. Primary and secondary data obtained in the interviews and literature survey respectively will be used in determining the content of the questionnaire.

In Chapter 5 the design of the questionnaire distributed to all Victorian councils is discussed. The questionnaire is divided into several sections. Section A, seeks details of the respondent profiles. Sections B, C and D, relate to the

issues of identification, valuation and depreciation of IAs. The final section seeks participant's views on key issues in the questionnaire.

Chapter 6 contains an analysis of the data collected in the questionnaire survey. The results from the questionnaire will be compared with the interview results. The questionnaire responses may indicate to what extent the issues raised in the interviews and literature are affecting local authorities in accounting for these assets for financial reporting purposes.

Chapter 7 analyses the GPFRs from a cross-section of fifteen councils from inner metropolitan, outer metropolitan, regional cities, large rural and small rural councils. The examination includes both financial and non-financial information in GPFRs for information on IAs.

Chapter 8 presents the conclusions to the research on what are the implications of the implementation of IA accounting and the utility and relevance of IA depreciation accounting in local government authorities. This information may reveal senior accounting council's officers' attitudes and council policies when depreciating IAs and the IA information included in GPFRs which can be used for economic decision-making by users of these reports. The work undertaken will be a valuable source of information for people or organisations wishing to evaluate what progress councils have made and how well they are doing in accounting and depreciating IAs. The findings may give an indication of what

further guidance is needed for accountability under AAS27 on the impact of depreciation of IAs in council budgets and decision-making by both internal and external users. This guidance may also help councils satisfy their IA and relevant depreciation reporting obligations under AAS27. In addition, future research ideas are suggested which hopefully will be explored by other interested parties at a later date. Copies of the survey instruments, tabulation of results and other relevant material are contained in appendices.

Chapter II

Literature Review

2.1 History

The basis of local government accounting changed from cash or modified accrual accounting in 1992 to full accrual accounting procedures through the implementation of the Australian Standards Board (AAS) *Financial Reporting in Local Government* (AAS27) and, in Victoria, the *Local Government (Reporting and Accounting Regulations, 1992) Act*. Under the previous Victorian accounting regulations, realisable non-current assets were written off and then capitalised in the balance sheet as equity and assets. As most IAs were not realisable, they were not recorded in a municipality's financial statements. The only record of these assets was in asset registers, which carried a physical description but no historical cost. Depreciation of these assets was not recorded and very little if any knowledge of the consumption in the reporting period was known.

The 1980s and 1990s saw further debate and some research (for example, Greenall et al., 1988 and the Victorian Municipal Accounting Audit Review Committee (Harrowfield Report), 1990) into the changing of local government accounting procedures. This trend for change was not just in Australia but also overseas, for example, Canada, America, the United Kingdom and New Zealand. Accrual accounting procedures for public sector reporting was a key area for research. Under full accrual accounting all fixed assets are reported and their cost of consumption in the form of depreciation charged against municipal revenue.

Hence, there has been pressure to adopt or to adapt accounting principles and practices from the private sector. In 1992, the Public Sector Accounting Standards Board in Australia promulgated Australian Accounting Standard No. 27 (*AAS27*), *Financial Reporting by Local Governments*, which is mandatory for all local authorities. A major element of the accounting standard is the use of full accrual accounting. This requires all municipalities to value and depreciate IAs. The intention of this requirement is that information will be relevant and reliable so as to support economic decision making about the use of scarce resources in General Purpose Financial Reports (GPFs) (Sutcliffe, 1985; Greenall, Paul & Sutcliffe, 1988; Rowles, 1992; Peirson & Ramsay, 1994; and Australian Society of CPAs Public Sector Accounting Centre of Excellence (PSACE), 1994).

Currently, the form and content of local government reports were directed by the theoretical requirements embodied in the Statement of Accounting Concepts

(SACs) and were mandated by an Act of Parliament in each of the States and by AAS27 but due to criticism from different groups the SACs are no longer mandatory (Deegan, 2000). Accounting for IAs and relevant depreciation is not a new concept in the public and private sector. In the 19 and early 20 centuries there were several methods used in accounting for these assets and depreciation that lead to debates on the merits of each system. A review of this time period is needed to fully appreciate the issues involved in the present debate on accrual accounting for IAs (where depreciation is the critical factor).

2.2 Developments in the 19 and 20 Centuries for Depreciation

Depreciation on capital assets (infrastructure type) in the private, corporation and municipality environments in the 19 and early 20 centuries was debated in ways very similar to those that are now occurring. Municipalities, especially newly created municipal corporations, had the responsibility for water, gas, tramways and electricity services. In the private sector, railway companies made significant investments in the 1830s and 1840s (Edwards, 1992). Also, Wales (1990) and Baldwin (1994) looked at the reporting of infrastructure in the coal industry in the late 19 and 20 centuries. This infrastructure investment in both sectors lead to vigorous debate on depreciation policies used in financial statements. In the municipal sector the debate widened with capital maintenance revolving around the treatment of loan repayments (Jones, 1985).

2.2.1 19 Century Private Sector IA Accounting Practices

In the private sector an examination of coal industries and also of the railway companies (it appears there was more debate from a wider audience in the literature) in IA accounting helps understand the depreciation development on financial statement disclosures. Edwards (1986) mentions that before the introduction of The Regulation of Railways Act 1868 financial managers in the rail industry were faced with three methods when accounting for IAs in their financial statements.

The first was a depreciation fund where depreciation was credited to a depreciation fund, which was reported in the general balance sheet with undistributed profits. The costs of the renewals were debited to this depreciation fund and the capital account remained unaffected. Edwards points out that most of the time corresponding cash or readily realisable investments did not exist (Edwards, 1986).

The second method was repairs and renewal accounting. Maintenance charges and renewals to individual components and replacing sleepers were charged to revenue. The main objective of this method was to maintain the IAs in efficient working order.

The third method was replacement accounting where replacing the entire IA was charged to revenue. No indication of how this method was made operational is given by the author (Edwards 1986, p.252).

Edwards (1986) remarks that during most of the 19 century the widespread assumption was that IAs had an unlimited life if properly maintained and that that assumption was used by companies who preferred the repairs and renewals method, although a limited number of companies viewed IAs as having a finite life and either used the depreciation or replacement methods. Also some companies did not disclose IAs which meant that users of financial statements had difficulty knowing what method or methods the company had adopted.

Edwards mentions the misunderstanding of a major assumption, which would affect how the above three methods were applied. In the 1840s railway tracks' economic life came under scrutiny. Up to this time most rail companies estimated that the life was 100 to 150 years if properly laid, these estimates were found to be very excessive (Edwards, 1986). After the 1840s railway companies started a policy of a depreciation fund for renewal of these tracks. Not all companies followed the same policies or methods which led to major inconsistencies in the financial reporting of IAs in financial statements during that period. This, in turn, led to confusion among investors on which rail companies were more profitable and efficient. According to Edwards:

in the case of permanent infrastructure, repairs and renewals were charged against revenue and the obligation to replace large sections of the line was ignored until 1849, partly because of the popular belief that this robust structure had an indefinite useful life provided it was properly maintained (1986, p.255).

Railway companies found that these IAs had shorter economic lives than previous accounting policies indicated. Some companies set up depreciation funds for the eventual replacement of these IAs. This, however, affected the returns to shareholders who demanded a high return for a high-risk industry. So by the 1860s most companies were again accounting for repairs, renewals and replacement as they arose, with some companies also publishing engineers' reports on the condition of their infrastructure. New Zealand also used this system of engineers' reports on the condition of IAs in the 1990s.

In 1866 a series of company financial collapses, in particular some railway companies, occurred. These were caused by loan defaults that were not highlighted in their financial statements for external users to become aware of financial difficulties in these companies. Wales (1990) points out that replacement values were widely used in this period although often very complex in nature. Academic researchers reviewing financial statements of coal companies have found that profits and asset values were, in most cases, unreliable.

Baldwin (1994) looked at accounting practices for capital accounting in the 19th century for a particular coal company and found that policies changed depending on the manager's views on the amount of reported profits and capital asset (IAs) values. One manager was motivated to value fixed assets at the lowest cost as possible in statements and used the annual charging of depreciation as one of the ways to achieve a lower result. Whereas another manager did not use depreciation, instead, using the renewals method.

The Regulation of Railways Act 1868 (31 & 32 Vict. Ch. 119) was introduced to try and overcome some of the differences in reporting methods for financial statements in the railway industry. These, known as the double account system, involved financial reporting procedures, which included:

- publish half-yearly accounts with various forms;
- capital account form;
- revenue account form;
- general balance sheet form;
- estimate of further expenditures on capital account form; and
- certificates signed by engineers on the condition of infrastructure (Edwards 1986, p. 258).

There, however, was an absence of depreciation reserve funds. Edwards states:

in the early years of the present century railway companies began voluntarily to make provision for depreciation (Accountant 1905, p.189). The reason for this charge was that it became evident, from experience, that no amount of maintenance could prolong indefinitely the useful life of assets (1986, p.261).

Edwards points out that charging depreciation was voluntarily adopted in the early 20 century and some railway companies did depreciate after they realised the inherent disadvantage of the strict application of the double account system and not charging depreciation.

Analysis has shown accounting for IAs and depreciation in the 19 and early 20 century on the issues and development of accounting and recording IAs and depreciation are not too dissimilar to late 20 century solutions or methods being proposed. It is important to realise the current debate is not new in terms of previous accounting experience but earlier views may not have been known or accepted by the different authors on the need for accounting for depreciation on IAs for users of financial reports.

2.2.2 19 Century Municipal IA Accounting Practices

Municipalities, in accounting for their corporations' depreciation, started to become an issue as the demand for infrastructure services (gas, electricity and water services) increased significantly in the middle to late 19 century. Until this time, municipality accounting viewed the sinking funds as an alternative to depreciation and avoided intergenerational equity issues, which would occur if depreciation was charged. This issue of intergenerational equity was seriously debated in the 19 century. Coombs & Edwards (1992) point out that a municipal

treasurer, formally a chartered accountant, urged the need to change attitudes and that there was a need for both depreciation funds and sinking funds which were very different. Depreciation was a provision for the maintenance or replacement and sinking funds were for repayment of borrowed funds. Also some people in the public sector thought that charging depreciation was a double charge to the current generation therefore making these a gift to the next generation (Coombs & Edwards 1992, p.189).

Problems with statutory requirements and practical policies for depreciating IAs were difficult for municipalities in providing financial statements with an easy solution. Coombs & Edwards quoted a local municipal treasurer who summed up the intergenerational equity debate in 1888:

I think we may well wish to leave the world or our little corner of it better than we found it, we may wish to lighten the burden of our successors, and to take a broader view of the matter than the strictly legal official one (1992, p.190).

Reporting of IAs and depreciation in financial statements appeared more in local municipal authorities accounts than private sector authorities. Local forms for statutory requirements in 1893 contained forms for depreciation of plant, building and machinery with revenue account transfers to reserves. However, in 1907 legislative requirements did not have depreciation and only allowed transfers to a renewals fund as well as to a reserve fund in the net revenue account. Coombs & Edwards point out:

that loan repayment rules were not just the municipal equivalent of private sector depreciation; they actually required an equivalent amount of cash to be set aside which helped guarantee financial stability. Moreover, where a decision was made to set up a reserve fund or a sinking fund, the same "liquidity rules" applied, so that there was no problem finding the cash when, for example, the tramway track fell due for replacement. The other side of the coin was that the decision to depreciate did not involve a mere bookkeeping entry; the action required an equivalent amount of cash to put the accounting policy into effect (1992, p.191).

Depreciation and accounting for IAs was very contentious for treasurers, municipality accountants, auditors, town councillors, engineers, ratepayers and academics. Coombs & Edwards (1992) point out that in presenting their arguments, these individuals were naturally influenced by their background and experience, with some being extremely stubborn. This position may not have improved for the issues being debated in the 1990s and early 2000s for the depreciation of IAs in General Purpose Financial Reports (GPFR) for local government reporting. Discussions on depreciation of large IAs in the public sector were mainly the responsibility of municipal corporations other than the municipality itself. Edwards (1992), summed up the situation with the managers and external users different views on information contained in financial statements:

even where companies and municipal corporations offered similar trading services, it is possible to perceive quite different priorities: whereas company directors were (arguably) guided by the profit maximising motive, council policy could vary between offering services at the market value whatever that was, or pricing them to break-even, receive a subsidy or generate a surplus in relief of the rates. It is therefore not surprising to discover that these fundamental differences had implications for the nature and purpose of published financial reports (1992, p.71).

This was given as a reason for not charging depreciation on IAs.

2.2.3 20 Century IA and Depreciation Accounting Practices

The following is an important quotation from Paton in 1932 reported in Kern (2000) on private companies' attitudes towards the use of depreciation on their infrastructure in financial statements:

depreciation accounting has by no means attained an ideal state, but there is now almost universal agreement as to the general significance of depreciation and the importance of recognising the phenomenon in some appropriate manner. The cost of plant assets which have a limited useful life must evidently be taken into consideration, in some other way if not in the form of systematic accruals, if costs of production are to be accurately calculated, periodic income determined on a sound basis, and the integrity of investment maintained. The income tax regulations have no doubt been more potent in bringing about this condition than the admonitions of accountants or the argument of academics (2000, p.148).

So from the 1920s to 1930s accounting for depreciation for infrastructure in the private sector was generally accepted. Whereas in the municipal sector, accounting for depreciation for IAs was not generally accepted. This situation also applied to municipal corporations.

The debate about the non-reporting of IAs and depreciation in financial statements for municipals began to surface again in the 1960s when a number of academics questioned the reliability of fund accounting for external users of financial statements. Jones remarks that:

the environment may have changed (though as we have seen there are remarkable parallels with today's debate) but the modified accruals accounting model has remained the same (1992, p.157).

Jones also mentions that in the water industry in the 1970s modified accruals had depreciation charges included, then, when privatised, they adopted current cost accounting methods for reporting their IAs in GPFRs. The move to full accrual method was really modified accrual method according to Jones (1992) because the method they were applying did not explicitly (most obvious deficiency) provide the accounting number which we might refer to as cost of service (depreciation charge needs to be included).

As early as 1969, academics were questioning the failure to report the consumption of fixed assets in Victorian municipal revenue statements. The counter argument was that loan redemption was a surrogate for depreciation charges. Purdie (1969), however, argued that loan redemption reflected financial decisions and was different in substance to depreciation. To overcome the problem, Purdie proposed using a consolidated capital fund (CCF) model. This model was developed by Professor Roy Sidebotham (1966) in an attempt to alleviate many of the deficiencies inherent in the consolidated loan fund scheme used by municipalities in the United Kingdom. The CCF model never became an accounting practice in local government in Australia. Even under this model, IAs were not recognised, since they were not realisable fixed assets. In the late 1960s and the 1970s, Purdie tried to introduce a CCF model in Victorian local

government in an attempt to improve the accounting for fixed assets and expenditure procedures. Although the model was never used, it set the agenda for change (Bellamy 1992, p.5).

Anthony (1978) indicated that there was a need to develop accounting policies governing the definition of IAs and how to treat them in public sector financial statements. Depending on the definition the useful life of IAs (very long) may affect depreciation. Anthony (1978) argued against the use of fund accounting because of its complex nature and failure to report all assets and depreciation. He also thought that for reporting purposes there was no difference to the private sector:

in summary, a business operating statement measures revenues, expenses and the difference between them; a non-business organisation's operating statement should report that information even though the meaning of the bottom line is not the same (1978, p.170).

Anthony (1978) makes the point about the reporting of both private and public information and recommends that the information should be the same for decision-making for users of financial statements.

Anthony (1978) mentions that the government accounting method (fund accounting) focus was a form of stewardship which, in his opinion, was inadequate. So, in the 1980's Anthony stated that the problem of accounting for

capital assets in financial statements was that they did not include depreciation into the measurement of operating performance of the municipalities.

2.2.5 Argument for Change to Asset Accounting

Parkes (1989) is another author who criticises local municipalities on capital asset accounting for financial statement users. He lists several deficiencies:

- the nominal cost of services are dependent on financing decisions, rather than the actual use;
- they still do not necessarily reflect financial reality, in that *debt charges* may relate in part to the repayment of internal funds;
- there is poor accountability to ratepayers, since the size of the capital stock is almost inevitably understated because of the omission of debt-free assets from the accounts; and
- misleading signals are given to managers, without any encouragement in better asset management (1989, p.109).

These deficiencies were overcome with AAS27 in accounting for IAs and depreciation in GPFRs. Parkes claims that this information will be very beneficial for *both* internal and external users. Criticisms of AAS27 reporting requirements for IAs and depreciation are that this information is not being used for financial decision-making.

Parkes (1989, p.112) pointed out that the local municipal service provision of IAs is a political decision and municipalities generally have funds (rates and taxes) available. So the concept of capital maintenance was considered irrelevant and

therefore depreciation not appropriate. However, at a service level, the consumption of capital (which depreciation is important on IAs) is needed for the economic cost of services to ratepayers. According to Parkes:

similarly with roads where the carriageway itself is constantly wearing out and will need complete replacement (1989, p.112).

Parkes argues against the local authorities' exemption from charging depreciation on IAs and using full maintenance and renewal provisions for reporting purposes. Calculation of renewals is questionable and he gives an example:

a Country Council typically has several thousand miles of road of widely varying design, condition and usage. It would be extremely difficult to derive renewals requirements (1989, p.113).

Proponents of the renewal method often cite depreciation as being unreliable due to the long life of the IAs but Parkes makes a point that renewal accounting is not easy also.

Parkes has a view on valuation of IAs and makes the following statement:

infrastructure again presents some practical problems. Intuitively, the value of a (unsaleable) stretch of road is zero. To ascribe to it, a positive value smacks of imprudence, yet it certainly has a value to continuing service provision and in the context of a current accounting system. Here too logic points towards replacement cost. Again a formula approach will probably be appropriate. But there are two important caveats. The first is that at day 1 of implementing the new accounting system infrastructure (in particular) will be *worn out* to varying degrees: there will be a structural maintenance backlog, should be reflected in opening valuation (and which, when corrected, will lead to a higher valuation and capital charge). The

second caveat is that practical experience of this approach is needed before it can be commended without reservation (1989, p.115).

Here Parkes makes the point about using replacement cost as a value to be used in financial statements for IAs valuation. The point of maintenance backlog was not directly used and municipalities assessed the amount of economic life left on the infrastructure components of IAs and used this as the *written down replacement value* for the initial value of the IAs. This involved both the identification and valuation of infrastructure components when converting to an accrual accounting method under AAS27.

Parkes strongly argues for a change:

local authority capital accounting cries out for reform. The present system is only defensible on the cynical bases that central Government's published accounts are much worse, or the public sector capital accounts have no interest or significance anyway. Yet the road to reform is strewn with previous abandoned efforts, which have failed largely because of the lack of consensus in either the way forward or its justification on a cost-benefit basis (1989, p.118).

Perrin (1984) was also arguing for change within the public sector and makes some interesting points why the change was needed. Perrin makes a comparison of how a public corporation, which supplies ratepayers with water and sewerage services, as recently as 1974 adopted best commercial practice using full current-cost asset valuations and depreciation in their financial statements. These changes were not easy as IAs details were:

even where asset registers or equivalent records are kept, they are frequently incomplete. Many of the assets of local, water and health authorities were acquired long ago, before modern accounting concepts.....under existing practice no conventional balance sheets are prepared, no asset valuations or revaluations are disclosed, and depreciation accounting is not practised.....Much hard work on identifying, recording and valuing fixed assets had to be done in the Water Industry. But what water industries have done, local and health authorities, and even central government, could also be required to do(1984, p.62).

This quotation reveals that even before AAS27 the water public sector authority in 1974 undertook the task of identifying, valuing and depreciating IAs for financial statement reporting even though they faced the same problems as local municipalities faced in changing to an accrual accounting method. A 1980 report by Arthur Andersen & Co. on State and Local Government property also highlights the inadequate records being kept under cash or modified accrual methods:

state and local government units are complex and they often lack records. This makes developing and auditing property balances of financial statements difficult. It gives the government unit and its auditor a real challenge: to creatively solve a major problem. Developing these data usually provides far-reaching benefits to the government units that accept the challenge (1980, p.10).

Perrin had four questions that relate to the reporting of IAs in financial statements for use in decision-making by: managers; taxpayers or ratepayers; consumers of the services provided; and political representatives. These questions are.

- is opportunity value acted upon (accounting for capital assets)?
- is capital expenditure wisely decided and controlled?

- is capital stock being maintained (capital maintenance and depreciation accounting, and capital accounting with changing prices)?
- is the cost of maintaining capital stock equitably shared (accounting, self-financing and equity; and capital gearing adjustments)? (1984, p.63).

Perrin argues that even in the 1970s and 1980s some local authority organisations were applying private sector accounting methods for recording IAs for information for both internal and external decision-making:

the nationalised industries and certain other public corporations, trading funds and water authorities broadly follow the same conventions as in commercial accounting, and account for fixed assets independently from their accounting for the source of funding for those assets: indeed, in general there is a presumption that their fixed assets are financed from the *common pool* of financial resources derived from operational net cash flows plus any increments in long-term equity or debt financing (1984, p.64).

The question of capital stock being maintained Perrin applies in two contexts. First, are physical assets of the public sector receiving physical maintenance to maintain a constant level of service performance and cost efficiency? As quoted the answer to this is:

accounting information alone cannot give a full answer to this, and anyway the accounting information available in most of at least the non-trading public sector falls short of what could be provided if complete asset registers and optimal/planned maintenance programmes and standard costs were in general use (1984, p.71).

The second context of this question is, are the values of the public sector stock of capital assets being maintained at their real value? Perrin points out that:

in absolute terms this question is unanswerable because the opportunity costs (or, opportunity values) of most fixed assets are not objectively assessed, and relative cost-benefit trade-offs at the margin

between different combinations of resource uses are not known. At the level of the practical, second-best solution, this question should be answerable in approximate terms by the use of CCA asset valuation and depreciation, supported by good asset registers and inventories of the state of capital stock (1984, p.71).

Some critics of AAS27 have implied that accounting for IAs is a costly time consuming exercise with limited benefits but arguments made by Perrin for the inclusion of IAs values and depreciation in financial statements do have many more benefits in decision-making for **both** internal and external users of this information.

The problems in accounting for IAs that some authors raise are:

- determining what is their real stock of fixed assets;
- what is its physical state;
- its expected physical life;
- expected economic life given changes in technology of pipeline and sewer renovations;
- population movements; and
- changes in the scale and nature of industrial activity which demand for water and for effluent disposal (Perrin 1984, p.73).

The problems listed above were overcome by the water authorities back in 1974, when they started valuing and depreciating IAs at the Current Cost Accounting (CCA) Written-down Replacement Cost method in financial statements for decision-making purposes for both internal and external users.

The issue of equity of the present taxpayer/ratepayer was also addressed by the water industry when valuing and depreciating IAs at CCA method. The inclusion of depreciation affects the present and future taxpayers/ratepayers on the consumption of IAs from year to year. If depreciation is too low or not at all this may cause rates, taxes or charges (capital maintenance) to be too low, then future generations will have to pay more than their fair share in order to restore the capital infrastructure of service provisions. The opposite can occur if depreciation charges are too high. Perrin also points out that the above issue has caused problems for these in government:

in local authorities also, there is a desire for greater independence from central government, and therefore an interest in means of increasing their self-financing. The use of capital funds and repairs and renewals funds, and of direct capital expenditures from revenue funds, are all methods of raising the level of self-financing. But these are on a relatively small scale. The only means by which local authorities can achieve a major increase in their self-financing ratio would be to increase rates substantially and earmark the increment for capital rather than revenue expenditures (Perrin 1984, p.78).

This quotation helps explain why, when AAS27 was released, accrual accounting was used for financial statement information (IAs values and depreciation) but budgets were completed on a cash basis (excluded depreciation). In the late 1990s and since, however, most municipalities use accrual budgets (instead of cash) to help fully reflect the rates estimates. The depreciation used in some municipalities is actual replacement values of the IAs in the coming year rather than the consumption of the IAs in the coming year. This reflects some type of catch-up financial measure.

2.3 Local Authorities

A local authority can also be called a municipality or council. In this research, the terms local authorities, municipalities or councils are used interchangeably. A definition of a local authority is given below:

a political subdivision with which a municipal corporation has been established to provide general local government for a specific population concentration in a defined area (Drebin 1981, p.21).

Although this is a United States definition, it is applicable to the Australian situation. A local authority provides services desired by a concentration of population, and acts as an agent of the state in delivering certain goods and services such as, roads, sewage disposal and garbage services to its inhabitants.

Local authorities were the first public sector entities in Australia to have their own comprehensive industry-specific accounting standard. In 1998 Local authorities infrastructure asset base was worth around \$23.3b in current replacement values (exclusive of land holdings) (Burns et al. 1998, p.43). Non-current assets under their control include such items as land, community buildings, local roads, drainage and heritage assets. In Victoria, local authorities expend \$225 million annually on the maintenance of all IAs. A key area of spending on such assets relates to roads; this accounted for 64% of expenditure

in 1998 (Burns et al. 1998, p.50). Given their significance in economic and social terms, information about how councils have progressed in the identification and valuation of IAs is needed because this has a direct impact on the depreciation of IAs which is one of the issues.

2.4 The Past—Fund Accounting

Before the introduction of AAS27, accounting and financial reporting by Victorian local authorities were governed by the *Victorian Municipal Accounting Regulations 1985*, the forerunners of which date back to 1894. These regulations determined the content of financial statements. The resulting financial statements were criticised often for being highly prescriptive and too detailed for most external users to comprehend properly (Victorian Municipal Accounting and Audit Practices Review Committee {Harrowfield Report} 1990, p.4). The financial statements were introduced to provide a system to measure funds available to finance the activities of councils. When compared with council budgets they afforded an effective means of control and spending. Fund accounting requires that municipal resources are divided into separate funds and each fund is a separate accounting entity. The commonly quoted definition of fund accounting is:

a fiscal and accounting entity with a self-balancing set of accounts recording cash and other financial resources together with all related liabilities and residual equities and balances, and charges therein, which are segregated for the purpose of carrying on specific activities or attaining

certain objectives in accordance with special regulations or limitations (NCGA 1979, p.79).

Fund accounting is not concerned with measuring profits or the recognition of wealth but, rather, stewardship of the resources a council has at its disposal. In municipal financial reporting the stewardship function of accountability has been dominant in Australia. Stewardship includes the following responsibilities:

1. safekeeping and custody of organisational resources;
2. compliance with all applicable statutes;
3. compliance with contracts and legally binding covenants; and
4. reporting of these custodial and compliance activities (Copeland 1983,p.14).

2.4.1 Cash and Modified Accrual Accounting Practices

Over the years, the cash-based practices of fund accounting have been combined with some accrual accounting procedures to become a modified accrual accounting system. Under this system, certain non-expense items, such as loan redemption and capital expenditure, are included in the revenue statement as operating expenses. Expenditures which benefit future periods, such as IAs, are treated as a current period expense and not included in the balance sheet. Because these assets are not in the balance sheet the full financial position of councils is unknown by the users of these financial statements. Further, some of the costs of providing services to the community

are not correctly stated because depreciation of IAs is not included in the operating statement (Bellamy 1992, p.5).

The differences between modified accrual accounting and full accrual accounting are that in the former:

1. some expenses, such as depreciation, may not be recognised in operating statements as part of the cost of providing services;
2. some accrued revenue (earned but not received) may be excluded;
3. expenditures which benefit future periods may be treated as a cost rather than as an asset;
4. some non-expense items, such as repayments of debt principal, may be included as operating expenses; and
5. different practices are adopted in relation to the valuation of non-realizable assets by the different Australian local authority jurisdictions.

The financial reporting requirements for local governments in Australia are prescribed by the Local Government Acts and associated regulations of each State. Table 2.1 shows the diversity and different accounting methods used in which State or Territory of Australia. In Victoria, financial reporting under the *Local Government Act 1989*, requires under *Section 125(1)*, that the council maintain proper accounts in accordance with the regulations. The Victorian Municipal Accounting Regulations prescribe the manner in which local authorities prepare and present their annual financial statements.

Table 2.1 Prescribed Bases of Accounting

Reporting Entity	Modified Accrual Basis	Cash Basis
NSW - Trust Funds		X
- all other entities	X	
VIC - all entities (1)	X	
SA - Reserve and Trust Funds		X
- all other entities	X	
WA - General Fund and Trading Funds	X	
- Loan, Reserve and Trust Funds		X
QLD - each "undertaking"	X	
- all other entities		X
TAS - the larger municipalities and their business undertakings	X	
- other entities		X
NT - Trust Funds		X
- all other entities	X	
ACT - City of Canberra Financial Statements	X	

Note 1. In VIC, monies held in trust are reported on as part of the General Fund, so the issue of a prescribed basis of accounting for Trust Funds does not arise.
(Greenall et al. 1988, p.35)

The financial statements required under the *Victorian Municipal Accounting Regulations 1985* included:

1. General Fund - Revenue Statement;
2. General Fund - Revenue Statement and Schedules 1-28;
3. General Fund - Balance Sheet;
4. General Fund - Statement of Plant Operating Account;
5. General Fund - Funds Statement;
6. Accounts for Electricity Undertakings;
7. Accounts for Abattoirs;
8. Accounts for Municipal Undertakings; and

9. Private streets and lanes accounts.

Schedules were required, also, covering acquisitions and disposals of property, loans, contracts, works commenced (in progress and completed), valuations and rates, and long service leave.

The balance sheet was presented in two separate self-balancing sections, the Revenue Section and the Capital Section:

1. the revenue, or working funds, section set out current assets and liabilities and reserves of the General Fund; and
2. the capital section recorded the non-current assets (realisable), sinking fund (fund for future loan repayments) investments, unexpired loans and long-term liabilities.

A municipal balance sheet differed from a private sector balance sheet in the following ways:

1. there was no separate capital section;
2. the exclusion of infrastructure and heritage assets and other “non-realizable” assets, which are not accounted for at all; and
3. incompleteness and inconsistency between local authority jurisdictions in what non-current assets would be capitalised.

The modified accrual fund accounting system, with separate financial statements for each fund entity, gave no information about the financial situation of the organisation as a whole. Another major deficiency was that the cost of providing roadwork's, bridges and other associated IAs was written off in full in the year of acquisition. In contrast to the requirements of Statement of Accounting Concept No.4 (*SAC 4) Definition and Recognition of Elements in Financial Statements* and *AAS27*, these assets were not shown in the balance sheet, or was the cost of consuming these assets (depreciation) shown as an expense.

The limitations of fund accounting from an accounting viewpoint can be summarised as follows:

- a) a narrow focus on budget performance and compliance with finance-related legislation;
- b) the specialised nature of the system limits its use to specialist users;
- c) the presentation of separate financial reports for each fund entity ignores the financial situation of the organisation as a whole;
- d) the absence of clear formal standards to support the principles of the system; and
- e) the failure to recognise infrastructure assets and record depreciation on these assets as an expense.

2.5 Change to Accrual Accounting in the Public Sector

A cash-based system recording cash receipts and payments has been used traditionally to report the activities of public sector entities (Carpenter 1990, p.163). This method is generally known as cash accounting with cash inflows, cash outflows and cash balances becoming the major elements reported (Sutcliffe et al. 1991, p.41). Cash flows and balances are easily measured, and the system is a simple form of accounting to implement. Cash received and cash paid provide the timing of the event (Carpenter 1990, p.163). However, despite these advantages, it has been questioned whether cash accounting is relevant for monitoring the efficiency and effectiveness of the expanding number of public sector bodies (Glynn 1987, p.10). Other criticisms include lack of information on non-realizable fixed assets (for example, IAs) and on the cost of consumption in the form of depreciation (Purdie 1969; Gynther 1982).

In the 1980s and 1990s, accounting bodies and public sector organisations in many countries including the United States, Canada, New Zealand, the United Kingdom and Australia, have undertaken research which supports the use of full accrual accounting within the public sector (Sutcliffe et al. 1991, p.51).

The argument against the use of full accrual accounting in the public sector is that this system of accounting is generally associated with commercial

enterprises in the private sector (Glynn 1987, p.10). The accrual accounting system is used to recognise events other than those which revolve around the time of receipt or payment of cash (Carpenter 1990, p.163). Under accrual accounting the operating statement discloses information about revenues to the entity and expenses incurred in operating that entity with a statement of financial position, reporting on the assets, liabilities and equity of the entity (Sutcliffe et al. 1991, p.41; Walker 1988, p.156).

The arguments supporting accrual accounting suggest that accounting information disclosed will be more informative and assist in holding the government departments and authorities accountable for the resources they control and the results of that control (Sutcliffe et al. 1991, p.46; CICA 1989, p.10). In Australia, *SAC 2 The Objective of General Purpose Financial Reports* supports the accrual basis of accounting, providing that the general purpose financial reports disclose information about the assets, liabilities, expenses, revenues and equity of an entity—information which is necessary for the purposes of internal and external economic decision making. Sutcliffe suggests the accrual basis of accounting is the only way to provide such financial information (1991, p.46). Mandatory full accrual accounting was not present in public sector accounting in Australia until the introduction of AAS27 for local governments in 1992.

As an alternative to full accrual accounting, most State or Territory local governments in Australia have developed some form of modified accrual system whereby some non-cash items are taken into account. The most common form of modified accrual accounting in the public sector incorporates most cash and accruals other than non-realizable fixed assets and depreciation (Walker 1988, p.154; Greenall et al. 1988, p.34). This type of modified accrual system existed in the NSW and Victorian local governments before the introduction of AAS27.

Although some writers see the choice being between cash and accrual accounting, the notion that there is a need for both cash and accrual accounting information by entities within the public sector has not been dismissed. Carpenter (1990, p.164) suggests that cash and accrual accounting are complementary with information from both systems being necessary for effective management. In Victoria, under AAS27 requirements, accrual accounting is to be used for information included in municipal financial statements. To calculate the rates within a municipality the cash accounting system was used; depreciation (a non-cash item) is not included in the calculation when AAS27 was first introduced but over time to 2001, municipalities have changed to now use accrual accounting for both GPFRs and budgets. This is where the two systems of accounting were thought to be needed within Victorian municipalities and was expressed in a review of Victorian Municipal Accounting Regulations by a Victorian Municipal Accounting and Audit Review Committee (Harrowfield Report) in 1990:

whilst private sector budgets are usually prepared on an accrual basis, the forecasting and monitoring of cash flows is a most important aspect of private sector management. A cash flow budget is important for setting out what a government requires to compulsorily raise from the community by way of taxes, charges and loans to finance outlays. It follows that Local Government will continue to find it necessary to prepare a cash based budget for the purposes of informing ratepayers, of the amount necessary to be raised through rates, increased charges and borrowing. In order to avoid confusion that may arise with full accrual accounting, Councils should prepare a reconciliation between the accrual accounts and the annual cash statements (1990, p.60).

It was suggested that only through both forms of accounting can varying user needs be met (Carpenter 1990, p.164). However since 1992 municipalities questioned why reporting is completed on an accrual basis while rates are determined on a cash basis. The cost of consumption on non-current assets was not included in the rating system; which did not fully reflect what AAS27 was designed to achieve. This meant that conflicting signals were coming from the government.

2.6 The Standard *AAS27 Financial Reporting by Local Governments*

In June 1991, the AARF (Australian Accounting Research Foundation) finalised Australian Accounting Standard No.27 (*AAS27 Financial Reporting by Local Governments*). The Standard was prepared by the Public Sector Accounting Standards Board (PSASB) of the AARF, and was issued in July 1991.

AAS27 reflects the view that local authorities should be accountable for the resources they control and their performance in managing those resources. It requires local authorities to disclose information about such matters as resources controlled, liabilities incurred, the costs of services provided, and the extent and sources of cost recoveries. Disclosure of the information is intended to enhance the level of accountability of local governments and the usefulness of the financial report for economic decision-making purposes.

The Standard includes a number of specific requirements which have changed the way in which local authorities report. For example, the Standard requires local authorities to:

- i) consolidate the activities of the funds they operate and prepare financial statements which report all revenues, expenses, assets (including infrastructure and heritage assets), liabilities and equity (paras.18-21);
- ii) disclose certain information about major activities and/or funds in notes to the accounts (paras.60-79);
- iii) treat as revenues, rates and grants when the local government gains control of them (paras.51-59); and
- iv) comply with applicable Australian Accounting Standards (paras.13-15).

The legal status of AAS27 comes from State legislation. In Victoria, *Section 125(1) of the Local Government Act 1989* requires that the council maintain proper accounts in accordance with the regulations. Further the *Local Government (Reporting and Accounting Regulations) Act 1992* requires that the annual report of the council be prepared in accordance with AAS27 (Reg. 81).

AAS27 (para.13) specifically requires that the general purpose financial report of a local authority be prepared in accordance with Statement of Accounting Concepts and Australian Accounting Standards:

the general purpose financial report of a local government shall be prepared in accordance with Statements of Accounting Concepts and Australian Accounting Standards other than Australian Accounting Standards AAS16 “Financial Reporting by Segments” and AAS22 “Related Party Disclosures”, except to the extent that the requirements of this Standard differ from the requirements of those Statements and Standards (para. 13).

After an extensive consultation period which included drawing on several reports and discussion papers (Victorian Municipal Accounting and Audit Practices Review Committee {Harrowfield Report},1990), The Working Party on *State-Local Government Financial Relationships* {Pope Report},1985 and Greenall et al., 1988), *ED50* was released in November 1989. During the ensuing six months, 154 submissions were received by the AARF from a wide range of groups including local government authorities, local government departments, Auditors-General and accounting firms. In July 1991, the AARF released *AAS27 Financial Reporting by Local Governments*, which applies to all local authorities in Australia, to take effect for reporting periods ending on or after 1 July 1993.

Transitional provisions were also contained in *AAS27* for the reporting of some assets which met the criteria in paragraph 88:

from the commencement of the reporting period to which this Standard is first applied, until the commencement of the first reporting period ending on or after 1 July 1996, transitional provisions shall apply. Under those

provisions, local governments, while encouraged to apply the full provisions of this Standard, may elect instead not to recognise as assets in the statement of financial position those assets:

- (a) which have been acquired prior to the commencement of the reporting period to which this Standard is first applied; and
- (b) in respect of which significant practical problems would arise in determining a reliable measure of a carrying amount.

In Victoria the transitional period was extended to 1 July 1997. The reason for the extension was that after the introduction of AAS27, Victorian reporting timelines were changed from 30 September each year to 30 June each year.

The valuation and depreciation of IAs have generated significant and sometimes controversial comments from a number of different bodies. The debate suggested a need to focus on this issue and to investigate it from both theoretical and practical perspectives to determine what, if any, are the implications for councils in their progress in depreciating these assets under AAS27.

After the normal due process relating to accounting standards, the AARF issued Australian Accounting Standard, AAS27, *Financial Reporting by Local Governments*, in July 1991. In tandem with the Australian accounting bodies, Victorian local government initiated changes in the Local Government Act. Local authorities in Victoria reported under regulations provided in the State's *Local Government Act 1989*. Several government reviews, discussed below, were

carried out in the 1980s and 1990s in Victoria on local government accounting and reporting.

There are three key aspects of accounting for IAs: identification; valuation; and depreciation. These aspects are inter-dependent and significant. The main theme is depreciation but it is necessary to consider identification and valuation of IAs, which will affect the reliability and relevance of the depreciation being charged.

2.7 Victorian Local Government Developments on Financial Reporting

In Victoria, a Working Party (the Pope Committee) was formed in 1985, to evaluate State and local government financial relationships. The Working Party observed that the current accounting regulations were too prescriptive and did not allow for sufficient flexibility in financial operations. It concluded that there was a need to consider the appropriateness of a number of regulations under the *Victorian Municipal Accounting Regulations 1985*, in an industry with a \$2 billion annual turnover (Harrowfield 1990, p.3).

As an outcome of these findings, the Victorian Government in 1989 established the Victorian Municipal Accounting and Audit Practices Review Committee, chaired by the Hon. John Harrowfield M.P. The Committee's brief was to review

the Accounting Regulations with a view to developing recommendations on which changes to the Regulations could be based.

An extensive process of consultation with the local government sector was undertaken by the Committee during 1989 and 1990. Throughout the process, the views of a wide range of groups affected by or involved in local government financial practices were canvassed.

The Committee recommended in its final report *Victorian Review of Municipal Accounting Regulations* (Harrowfield Report 1990) that the new Regulations provide for full reporting and accounting of all assets, liabilities, revenue, expenses and equity of local government. Further, the Regulations should ensure that the accounting records of municipalities be sufficient to enable adequate public reporting of their operations. The Committee also recommended that councils' financial reports be prepared in accordance with professional accounting standards, in particular, *Exposure Draft 50 Financial Reporting by Local Governments (ED50)*.

Following the Committee's recommendations, changes to *Sections 6 and 7* of the *Local Government Act 1989* were passed in Parliament on 2 June 1992, to apply from 1 October 1992. This date corresponds with the commencement date of AAS27.

The new accounting regulations, *Victorian Municipal Accounting Regulations 1992*, require councils to prepare their financial statements in accordance with the requirements of AAS27.

In Victoria, there was considerable debate on accounting for IAs. As a result of these concerns a Standing Committee was formed. The Standing Committee on Local Government Financial Management was established in December 1990, by the Victorian Government to investigate key financial management issues arising from the recommendations of the Harrowfield Committee. A diverse group of people in local government made up the Committee.

Key recommendations of the Harrowfield Committee concerning local government financial management, accounting for all assets (including IAs), and revised auditing arrangements were reviewed by the Standing Committee.

These concerns were also conveyed to the AARF in the submissions on *ED50*.

An example of this concern from a submission is shown below:

...recognition and depreciation of assets

The proposal that all assets under the Council's control be recognised in the statement of financial position is supported as a general principle.

However, it is felt there will be many problems with this proposal if it is brought in straight away. Some of the problems envisaged include:

1. how will the valuation for a road, footpath, sportsground, etc. be obtained. In many cases these assets were constructed or acquired many years ago, as a result historical cost records will not be available.

2. In some instances grants have been received towards the cost of an asset eg. roads, pre-school centres. How will the asset be valued?

3. In many instances there have been assets constructed on crown land - how will the asset be valued? It seems that the principle of valuing assets on crown land which cannot be sold needs to be further looked at.

4. In respect of roads, kerbs and channel etc. it will involve a massive allocation of resources to determine a value and the life of a road.

One would certainly question whether the whole process will be of benefit considering the costs involved. It would be extremely difficult for municipalities to put a value on roads etc. consistently with other municipalities not only around Victoria, but around Australia. There would be many variables that would affect the value of a road. As well as these points is also the fact that a road cannot be sold.

It is suggested that extensive research and evaluation of a variety of municipalities across Australia be carried out to see the problem areas and benefits that may evolve with such a proposal. It will be only with this research and evaluation that standards will be established that will be meaningful for all municipalities. It is important that consistency is maintained throughout all municipalities with regard to recording and accounting methods.

If the proposal is to include all assets including roads etc. is to remain as a standard it is regarded as vital that the implementation period be 3 to 4 years (Shire of Hampden, 1990).

The Standing Committee carried out an extensive program of consultation and training across local government. This resulted in the publication of material and guidelines which formed the basis of the Local Government Accounting and Financial Management Manual, and an Asset Accounting Manual (AAM). The Committee also published a series of reports on accounting for assets under the AAS27 requirements. These reports examined the implementation of and procedures involved in identifying, valuing and depreciating infrastructure assets. A brief summary of these reports is given. The first report dwelt with *Infrastructure Assets in Issues and Implementation Report* (Victorian Office of

Local Government, Maunsell Pty Ltd and Coopers & Lybrand, 1991a), based on a sample of four municipals and set out a summary of their findings:

this report, accompanied by the Infrastructure Assets Procedures Manual, addresses the issue of how AAS27 will be implemented by municipalities and specifically highlights the practical experiences encountered by councils which volunteered to trial the procedures and assess costs and resources;

Infrastructure assets comprising roads, bridges, parks and gardens etc. have traditionally not been recognised in municipal financial statements. While the definition of infrastructure assets is all encompassing, the pilot councils' experience has shown that roads and the land under roads are the dominant (greater than 80%) infrastructure assets;

Consequently, much attention has been focused upon road valuation in conjunction with valuer representation and the representatives of engineers in local government. The proposed methodologies contained in the manual reflect these practical inputs to devising implementation procedures;

There is no doubt that the time consuming task will be conducting the inventory of assets for each municipality. While this task will create significant costs in complying with AAS27, there are benefits which will flow to municipalities;

Apart from these benefits, the experience of the pilot councils suggest that the driving force behind implementing AAS27 should be asset managers, such as engineers. Recording assets is a passive element and it is through positive use of infrastructure asset data that municipalities will realize benefits. Therefore AAS27 should be promoted as an aid to asset management to engineers, and other decision makers;

Councils need to take advantage of the traditional provisions of AAS27;

The presence of PMS systems and asset registers will enhance the changeover process and possibly reduce implementation costs;

A multi disciplinary implementation team will be required to combine the skills of engineers, accountants and valuers.

Office of Local Government will need to take a leading co-ordinating role in managing the implementation of AAS27. Their efforts should be supported by reference points drawn from engineers, valuers and accountants; training requirements should address valuers and engineers (VOLG, Maunsell Pty Ltd and Coopers & Lybrand 1991,p.2/3).

In the course of monitoring the impact of AAS27, the Victorian Office of Local Government (VOLG) in association with the Standing Committee on Local Government Financial Management had examined data from selected councils and published the second report *Accounting for Assets No.3* (Victorian Office of Local Government, 1993d), which was based on a sample of 22 municipals and set out a summary of their findings:

of the 22 pilot councils progressing with the identification and valuation of assets, three councils (two metropolitan and one rural) are leading the way by proposing to disclose all assets, including infrastructure assets, in the 1992/93 financial statements;

Of the remaining 19 councils, five propose to account for and disclose all assets in their 1993/94 financial statements, while the remainder intend to use the full phase in period provided by AAS27;

Costs incurred by the three councils which have completed the task of identifying and valuing all assets have varied from 0.07% to 2% of total revenue for the 1991/92 reporting year;

Preliminary estimates of depreciation to be accounted for by the three leading councils have ranged from \$890,000 to \$3m, with asset values varying from \$17m to \$756m;

The methods adopted by the pilot councils for identifying and valuing assets have ranged from a comprehensive management approach to a more simplified approach which permits values to be assigned to assets and depreciation, where applicable, to be calculated; and

Engineers have played a key role in the collection of data for infrastructure assets and believe that AAS27 has provided a long input for improved asset management (Victorian Office of Local Government 1993d, p.1).

In the course of monitoring the impact of AAS27, the VOLG in association with the Standing Committee on Local Government Financial Management had examined data from pilot councils and published the third report *Accounting for Assets No.4* (VOLG, 1994d), based on the Standing Committee on Local

Government Financial Management reviewed municipals' first year GPFRs under AAS27 requirements and set out a summary of their findings on IAs:

most councils have only included depreciation for assets constructed during the 1992/93 year. Consequently, most councils have delivered a significant surplus on operations;

a number of councils which have valued their infrastructure assets or a proportion of these assets have not included them in the 1992/93 financial statements; and

some councils have not separated land under roads, which is unrealizable, from land which can be resold (VOLG 1994d, p.1).

These reports from the Standing Committee indicated that Victorian municipalities were making considerable progress in the reporting of IAs and depreciation for both GPFRs and internal purposes in this time period. The information, however, indicated that more research was needed on depreciation after the identification and valuation of IAs were completed.

2.8 Development of Financial Reporting in the Public Sector

The publications in Table 2.2 have been consistent with the development of the conceptual framework and Statement of Accounting Concepts (*SAC 1 to SAC 4*). Several of these papers and Standards, especially Discussion Paper No.12; the Pope Report; the Harrowfield Report; Accounting Theory Monograph No.5; and *ED50* helped in the development of AAS27. Table 2.2 lists the following publications and Standards for accounting in the public sector.

Table 2.2 Local Government Publications

- The Working Party on State-Local Government Financial Relationships (Pope Report), 1985.
- Sutcliffe, P., *Financial Reporting in the Public Sector - A Framework for Analysis and Identification of Issues*, Accounting Theory Monograph No 5, AARF, 1985;
- Greenall, D.T., Paul, J., *Financial Reporting by Local Governments*, Discussion Paper No. 12, AARF, 1988;
- Australian Accounting Research Foundation, Proposed Australian Accounting Standard Exposure Draft No.50 ED50 *Financial Reporting by Local Governments*, 1989;
- Victorian Municipal Accounting and Auditing Practice Review Committee (Harrowfield Report), 1990;
- Australian Accounting Research Foundation, Australian Accounting Standard No.27 AAS27 *Financial Reporting by Local Governments*, 1990;
- Sutcliffe, P., Micallef, F., and Parker, L.D., *Financial Reporting by Government Departments*, Discussion Paper No.16, AARF, 1991;
- Rowles, T.R., *Financial Reporting of Infrastructure and Heritage Assets by Public Sector Reporting Entities*, Discussion Paper No 17, AARF, 1992;
- Australian Accounting Research Foundation, *Definition, Recognition and Measurement of Non-current Physical Assets by Public Sector Entities: A Guide to Applying Professional Pronouncements*, 1992;
- Australian Accounting Research Foundation, Proposed Australian Accounting Standard Exposure Draft No. 55 ED55 *Financial Reporting by Government Departments*, 1992;
- Micallef, F., Sutcliffe, P., and Doughty, P., *Financial Reporting by Governments*, Discussion Paper No.21, AARF, 1994; and
- Burns, P., Hope, D., and Roorda, J., *Facing the Renewal Challenge*, Victorian Office of Local Government, 1998.

In 1984, the PSASB established a sub-committee to investigate existing practices and problems in the area of local government accounting. Discussion Paper No 12 was released by the AARF in 1988. One of the recommendations in the Discussion Paper was that the presentation of financial reports by local authorities be more in the nature of private sector reporting, involving full accrual

accounting, with the inclusion of previously omitted IAs in the financial statements of local authorities (Greenall et al. 1988, p.55).

The argument for separate recording of IAs that, according to Pallot (1989), display different characteristics to other fixed assets used in the public sector, was taken up by Rowles in Discussion Paper No 17 *Financial Reporting of Infrastructure and Heritage Assets by Public Sector Reporting Entities 1992*. Rowles (p.36) concluded that these assets should not be reported any differently from other fixed assets.

Where a local authority elects not to recognise these assets during the transitional period, AAS27 requires disclosure of those types of asset in the notes to the accounts with the accounting policy adopted in respect of them. It was believed that these disclosures would assist users in assessing, during the transitional period, the nature and possible extent of the assets not yet recognised and depreciated. An example of the disclosure from a 1992-1993 local authority's financial statements is shown below:

recognition of Assets

... certain assets acquired prior to October 1992 have not been recognised as assets in the statement of financial position because there are significant practical problems in determining a reliable measure of carrying amount for those assets. Council is addressing these problems and will recognise the assets when they have been reliably measured. The assets in question are road pavements, land improvements and structures other than buildings. All assets will be recognised at the conclusion of the identification and valuation procedures which will be undertaken over the period to 30 September, 1996 (City of Prahran, 1993, p.50).

Note that after the publication of the above financial statements the phase-in period in Victoria was extended to 30 June 1997. This concession by the PSASB to local authorities in accounting for these assets showed how contentious this matter had been. This contention provided a reason for investigating *how councils had identified and valued IAs, concerning issues involved in depreciating IAs.*

Several issues relating to IAs were raised by councils and interested parties in their submissions on Exposure Draft No. 50 *Financial Reporting by Local Governments (ED50)*, the forerunner to AAS27, which were acknowledged by the Australian Accounting Research Foundation (AARF). The AARF also responded to these concerns in a positive manner by allowing a transitional period in accounting for these assets under AAS27. The Victorian Government also set up a Standing Committee on Local Government Financial Management (Standing Committee) to develop suitable methodology and literature guidelines (for example, an Asset Accounting Manual) in an attempt to help local authorities overcome most of the difficulties in accounting for these assets.

Much of the literature on accounting for infrastructure assets in Victoria has come from the Victorian Office of Local Government and the Standing Committee referred to above. Academic studies in Australia and overseas on this issue had been very limited in the early 1980s and 1990s but increased in

the late 1990s and early 2000s especially in Australia. These studies are considered briefly.

- *Capital Asset Accounting in UK Non-trading Organisations*, Lapsley, I., Financial Accountability & Management, 1986:

a comparative study of capital accounting practices in non-trading organisations (NTOs) in the public sector of the UK economy. It examines the potential for the reform of existing means of accounting for capital expenditure by the adoption of depreciation accounting in two types of NTOs—Local Authority (LAs) and Health Authorities (HAs). This investigation seeks to contribute to the debate on how this change in accounting practice might improve the financial accountability of these NTOs. The study is based on a survey of senior finance officers in these NTOs. At present little is known of the views of practicing accountants on such matters. Therefore, the findings of this study are of potential interest, not only to academic investigators, but also to accountants as policymakers involved in the accounting standard-setting process and, indeed, to UK central government, which has a major role to play in the determination of the accounting practices of such NTOs (1986, p.273).

- *Infrastructure Assets: An Assessment of User Needs and Recommendations For Financial Reporting*, Van Daniker, R.P., and Kwiatkowski, V., Governmental Accounting Standards Board, 1986:

many state and local governments are facing critical problems in maintaining, rehabilitating, replacing, and expanding their infrastructure assets. Current generally accepted accounting principles permit the optional reporting of infrastructure assets information by state and local governments. The results is that few state and local governments include infrastructure assets information in their financial reports. This research study was designed to assess the needs of selected financial report users for information relating to infrastructure assets and to determine recommendations for financial reporting (1986, p.111).

- *Facing the Renewal Challenge*, Burns, P., Hope, D., and Roorda, J., Office of Local Government, 1998:

this study reported the progress of 78 Victorian councils in information management and data for IAs. This involved information that could predict the cost and timing of the councils future infrastructure renewal liabilities (\$23billion) to develop corrective planning strategies. All this information was recorded on a central database held by the Office of Local Government (Abstract).

- *Reporting of Infrastructure Assets: Public Accountability and reporting Practices in New South Wales*, Lee, J., Staunton, J. & Eddie, I., AAANZ Conference, 1999:

this paper examined IAs meeting the criteria in SAC3 for GPFs users. A survey of annual reports of public sector entities for years 1993 & 1997. As a conclusion to the study more reporting regulations are required to improve the relevance and comparability of IA information in order to enhance public accountability. Infrastructure assets are used as the basis of reporting of assets in GPFs. Non-financial information is an area of importance from this study (Abstract).

- *Reporting on the State of Infrastructure by Local Government*, Walker, R.G., Clarke, F.L. & Dean, G.W., Accounting, Auditing & Accountability Journal, 1999:

local councils (NSW) use current written down values replacement values (profession's asset valuation) and accrual accounting for GPFs have also included present information about the physical condition of infrastructure, together with estimates of maintaining infrastructure to that standard thereafter. This study examined a sample of NSW council GPFs and concluded that some anomalies and uncertainties surrounding the rating of physical condition and the concept of *satisfactory condition* disclosures for relevance to both internal and external users (Abstract).

- *AAS27 Reporting on Parks and Recreation Assets: A Victorian Local Government Perspective*, McSweeney, P., Public Sector Centre of Excellence, 1999:

this study examined conceptual issues and reporting practices regarding land, land improvements and amenity trees. The study was written amidst continued debate about the adequacy of traditional accounting models in bringing to account and depreciating infrastructure assets (Abstract).

- *Reporting about Infrastructure: A preparer Perspective*, Van Daniker, R., & Harris, J., Public Budgeting & Finance/Summer, 1999:

this study followed up on a similar study in the 1980s and indicated that infrastructure assets could become the largest account balance on the statement of financial position. Additionally, the cost of initiating and maintaining reporting systems will be substantial. Infrastructure reporting will require governments to develop asset inventories, establish asset valuations and implement new systems. Activities to accomplish these tasks will extend beyond the accounting staff and well into line operations. Rather than being an obscure technical matter, reporting about infrastructure is a significant issue with broad implications (1999, p.111).

- *The Measurement and Depreciation of Infrastructure Assets by the Western Australian Local Councils*, Connolly, T., Tower, G., & Hollaway, D., AAANZ, 1999:

this study was an empirical analysis from 138 annual reports of the determinants of the measurement and depreciation of infrastructure assets by the Western Australian local councils. Four independent variables were examined and two variables were selected from the Costly Contracting (CCT) and Public Choice (PCT) theories, while the other two variables were exploratory (Abstract).

- *AAS27: an Issue of Implementation*, Pilcher, R., Australian CPA, 2000:

this paper examined the recording, maintenance and depreciation of roads in a sample of NSW local councils. Inconsistencies highlighted suggested that whether councils report an operating surplus or an operating loss (due to the inclusion of a depreciation expense), influenced their willingness to comply with current reporting requirements (Abstract).

- *Local Government Accounting Standard-Setting in Australia: Did Constituents Participate*, Ryan, C., Dunstan, K., and Stanley, T., Financial Accountability & Management, November, 2000.

this paper argues that the *due process* of the PSASB did consider all comments from the interested constituents into the formation of AAS27. This was achieved by examining the access to that process and the strategies used in an attempt to influence the process; and identifying the key issues and positions taken by the major respondents. In the findings local governments (account preparers) comprised the majority of respondents to the ED50. There was support from the respondents for most issues. The controversial issues were: recognition, revaluation and depreciation of IAs; recognition of capital grants; and the format of the operating statement.

- *Accountability Disclosures by Queensland Local Government Councils: 1997—1999*, Ryan, C., Stanley, T., and Neilson, M., Financial Accountability & Management, August, 2002:

this study concentrated on the role of annual reporting in discharging accountability obligations. The first objective was to study the quality of disclosures by Queensland local government. The second objective was to investigate the factors that that may contribute to quality of disclosures by local government. The authors developed their own index to measure the quality of Queensland local government reporting. The study showed that while the quality of reporting improved over the 1997—1999 period there were still several areas that remained below average. These disclosures were: corporate governance; remuneration; personnel; health and safety; and equal opportunity policies. In relation to the quality of disclosures in GPFRs the study showed a positive correlation between the size of local government and quality of disclosures.

- *Report on the Valuation and Reporting of Cultural, Heritage and Infrastructure Assets*, Public Accounts and Estimates Committee, Forty Ninth Report to Victorian Parliament, October, 2002.

This report focused on the change from cash to accrual accounting in accounting for particular assets which included IAs. After evidence given to the committee they were strongly supportive in accrual accounting for IAs but acknowledged some practical problems associated with valuation and depreciation of IAs. The Committee Inquiry was initiated because of the concerns of some agencies about the appropriateness of applying aspects of accounting standards to IAs. The Committee believes that the adoption of new strategy will lay the foundations for a more consistent, reliable and cost-effective valuation and management approach for the future. To successfully implement this strategy, ongoing commitment from senior management within agencies will be crucial. An interesting comment from the Committee was that the Inquiry would be difficult and was not disappointed on that score. Not only did it expect to be confronted with a range of complex technical issues, but an overlay of professional sensitivities and the re-opening of some **bottom-line-mentality** debates that had accompanied the original policy introduction. Added to this was the fact that the rest of the Western World had effectively left the valuation of IAs in the **too-hard** basket....with receding that Australia's initiative for inclusion of IA valuations and depreciation in GPFs was to be followed. It appears to the Committee that existing accounting standards, including the recent guidance by the UIG, address most of the depreciation and maintenance cost difficulties identified by the proponents of CBD methods. The accounting rules are quite clear and consistent with those adopted by other major countries. Another issue raised in the submissions is the possibility of agencies attempting to manipulate the depreciation and maintenance expense amounts mainly for financial reporting, funding and pricing purposes. To reduce such manipulation, the Committee considers that the Department of Treasury and Finance should set clear guidelines and that the Auditor-General's Office should continue to apply a rigorous approach when auditing those two areas.

These studies indicated that the results and information in GPFs were sending out different signals of usefulness to internal or external users. The conceptual

area of AAS27 and the SACs on depreciation of infrastructure assets needed to be considered.

2.8 Statement of Accounting Concepts (SACs) and GPFs

A history on the development of conceptual frameworks (CF) of accounting for the public sector is now presented. A study commissioned in the USA stimulated the development of a conceptual framework for financial reporting. The study was titled, The American Accounting Association's *A Statement of Basic Accounting Theory* (ASOBAT, 1966). It was produced by a Committee of nine and completed in twenty days. The definition of accounting developed was widely acknowledged but the committee did not attempt to identify who the users of this financial information were. The Committee did identify the objectives of accounting which uses the same standards of information for both internal and external users. The Committee also concluded that the same accounting objectives and information needs apply to both profit and not-for-profit organisations (Jones 1992, p.250). This is an interesting point that there was a view that financial information should be the same for both profit and non-for-profit organisations in the 1960s. The Accounting Principles Board (APB), had been commissioned to develop a statement of broad principles of accounting to serve as a foundation for its subsequent pronouncements. The first attempts were rejected by the APB which was disbanded and the Financial Accounting Standards Board (FASB) was created. The American Institute of Certified

Public Accountants (AICPA), published the Trueblood Report, *Objectives of Financial Statements* (1973). The report only dealt with the profit sector and thus another study was needed for the not-for-profit sector (Jones 1992, p.252).

In The UK, the Accounting Standards Steering Committee of the ICAEW, produced the Corporate Report which was similar to Truebloods' report by only recognising the profit sector in identifying user groups and qualities of financial reporting information. In 1975, the Chartered Institute of Public Finance and Accountancy (CIPFA), published *Local Authority Accounting 1: Accounting Principles and Local Authority Accounting 2: Finance in Management*, but these were not conceptual frameworks. Conceptual frameworks are based on some form of user/user needs analysis. Most are based on hypothesised users and hypothesised needs concentrating on the decision-usefulness of external information for users (Jones 1992, p.252).

In August 1977, the FASB commissioned Robert Anthony, to provide the basis for standards for not-for-profit organisations to be included in the conceptual framework, which led to the *Objectives of Financial Reporting by Nonbusiness Organisations*. Anthony (1978) emphasised that there was nothing inherently different in accounting for business and non-business organisations (Jones 1992, p.253). Common standards should apply to both private and public sectors,

no sense to have one agency setting standards for government organisations and another ... for all other nonbusiness organisation (Anthony 1978, p.16).

Anthony's users groups were in general terms that could be applied to any business or non-business organisation. In doing this Anthony avoided differences in the measurement of efficiency and effectiveness and the question of budgetary information. His users and user needs are:

users; Governing bodies; Investors and creditors; Resource providers; Oversight bodies; Constituents; User needs; Financial viability; Fiscal compliance; Management performance; and Cost of services provided (Anthony, 1978 {Jones 1992, p.253}).

The FASB concluded that there was no need for an independent conceptual framework for any one group of entities and that the two sets of objectives that it had identified (business and non-business) would become part of an integrated conceptual framework for all entities. At this time, the FASB had no power to set government standards and this was labelled as an attempt to seize this power which led to radical change in government accounting standard-setting (Jones 1992, p.253). The conceptual frameworks were implicated in the eventual establishment of the Government Accounting Standards Board (GASB).

Another study (Holder, 1980) was commissioned by the National Council on Government Accounting (NCGA), which surveyed all relevant studies to date and concluded that the commercial model is the most appropriate one for governmental units. This conclusion did not meet the approval of the NCGA.

Another conceptual framework project was commissioned and the results were published in 1981 (Drebin et al.). This Study contradicted Anthony's' study where: Drebin had ten user groups instead of five; twenty-two user needs instead of four; and that government accounting is quite different from commercial accounting. The subsequent conceptual framework developed by the NCGA (1981) relied heavily on this study (Jones, 1992).

The GASB then started its own research into the development of a conceptual framework. The research which was completed with interviews and questionnaire, was concerned more with explaining the day-to-day reality of accounting in government than it is with establishing a radically different conceptual framework. The controversy discovered was essentially related to the fact that government needed to change to accrual accounting to be completely effective in meeting user needs in GPFR instead of funds accounting which did not meet user needs in financial reporting (Jones 1992, p.256).

A push for a conceptual framework for governments occurred in the 1980's. The conceptual framework was seen to be the answer for decision-usefulness of GPFR for users. Canada up to 1980 led in research with several reports published, including, *Financial Reporting by Governments*, Canadian Institute of Chartered Accountants (CICA, 1980). This study also included a list of users and user needs from GPFR. The Auditor-General of Canada, and the

Comptroller-General of the US, began work to determine the applicability of the commercial accounting model to national government which was previously mentioned in the 1960s. This study was different to previous studies in the physical identification of users and the direct questioning of their needs. Ratepayers or taxpayers as users of financial information did not directly read GPFR but relied on other user groups, for example, government departments or the media (Jones, 1992 & Anthony, 1978). The CICA study (1989), *Accounting and Reporting for Physical Assets by Governments*, excluded the following assets from the definition of assets: infrastructure; public lands; monuments; and defence assets.

New Zealand made significant contributions to conceptual framework research. In 1987, the New Zealand Society of Accountants (NZSA) issued a Statement of Public Sector Accounting Concepts, which applied to all parts of the public sector for the objectives of GPFR. The significance of this statement is that it is based on a common set of conceptual concepts for all entities, including both the private and public sector. The NZ framework was clearly influenced by the FASB's conceptual framework project, but adopted a slightly modified version of the FASB's qualitative characteristics and also offers definitions of the elements of financial statements: assets; liabilities; equity; revenues and expenses; and income. The framework also applies equally to the public sector entities (Jones 1992, p.258).

Here in Australia a complete conceptual framework has been developed into four Statement of Accounting Concepts which have been incorporated into particular accounting standards for public sector entities with the first being for Local Government, *AAS27 Financial Reporting by Local Government* as previously mentioned. As with New Zealand, local governments here in Australia have the current practice for accounting for GPFs, full accrual accounting and the methods are indistinguishable from the private sector except that the public sector provides more information based on current cost accounting. The reason for this is that the cost of previous assets was never reported in financial statements under modified accrual accounting (Jones, 1992).

The Conceptual Frameworks discussed were all developed by, or on behalf of, bodies of preparers and auditors of financial statements. Many of these bodies are professional accounting associations. Another feature that these bodies have in common is that none of them have the power to establish and enforce their accounting standards. In Australia, the position is seen to be the one where the accounting standard-setter (AASB) has the most power because the law requires companies to follow the profession's standards, but, of course, this serves also to emphasise the fact that ultimate power therefore rests with the government. Obviously, when we turn to accounting standard-setting for the public sector organisations, there is an additional element to governmental power, now the power is not only in relation to other organisations in society but in relation to itself (Jones 1992, p.262). Since 1992 and the Statement of

Accounting Concepts (SACs) were made mandatory, there was significant pressure from different interest groups to have the mandatory requirements of the SACs removed. The mandatory requirements of the SACs were removed eighteen months after they were made mandatory. The SACs are seen to be normative in nature therefore according to accounting theory will not be generally accepted by the accounting profession and preparers of GPFRs. This is where this study will attempt to gauge the opinions of local government municipalities in accounting for IAs and depreciation in their GPFRs.

The major benefit from a conceptual framework is a more analytical approach to accounting issues, involving separating out different user needs and matching relevant answers to questions being sought. Also many of these questions and answers are relevant to the efficient internal management of the entities, they should ideally be produced as a low cost by-product of good managerial processes. There is much scope for the consideration of public sector issues to positively reinforce the development of a conceptual framework for financial reporting which is relevant to both the public and private sectors. The development can both strengthen the traditional roots of financial reporting in monitoring stewardship and through many of the conceptual tangles that have characterised the contentious debates on depreciation accounting. A better understanding of the conceptual framework gives the underpinnings both of the appropriate measurement basis for answering different user need questions, and of the allocation process on which accruals accounting depends, since

accrual accounting remains the central feature (Jones 1992, Lapsley 1992, Mayston 1992 & Rutherford 1992). These comments further strengthen the shift from modified accrual accounting to full accrual accounting for reporting of IAs and depreciation for both internal and external users in efficient decision-making.

A common feature of the conceptual framework is the proposition that financial reports should provide information to their users which is useful. In the main, the framework concentrates on what is called general purpose external financial reporting. This means that the users for whom the reports are to be designed are taken to be parties external to the reporting entity who do not have access to the underlying data and who cannot call for specific reports tailored to their particular needs. Another feature of the framework is that usefulness is generally determined in the context of decisions to be taken by the parties to whom the information is supplied. Conceptual framework (CF) for the public sector here in Australia has adopted the same structure as the private sector. It focuses on external users, with the information helping make economic, social and political decisions and to evaluate a government's use of resources (Rutherford, 1992).

The underpinning's of the CF tend to be normative and to base assumptions about information needs on a priori assertions rather than on rigorous empirical research. External users frequently identified include: taxpayers; voters; creditors; unions; lobby groups; government departments; professional

associations; employees; media groups; counsellors; and politicians. There is sometimes, however, a difficulty in identifying the decisions external users may conclude from GPFR from a government organisation. Another argument is that user/user needs for government organisations from GPFRs are misunderstood by financial statement users when full accrual accounting in GPFRs of a government body do not purport to measure output, and therefore provide limited information about efficiency (Rutherford 1992, p.268). This is a selective argument because many private organisations do not measure output, local authorities in Australia do report full cost of services and outcomes can be measured from GPFR which is much more beneficial to user/user needs than previous financial statements under the modified accrual accounting system.

In private sector organisations a positive approach has been adopted to identifying users/user needs which in most cases encountered little difficulty in locating substantial numbers of individuals, for this purpose. The same cannot be said of the public sector where identifying users/user needs has proved difficult to near impossible using a positive approach (Rutherford 1992, p.269). A study by Butterworth, Gray and Haslam (1989) attempted to track down users of local authority financial statements, which are not widely distributed and, like most public sector financial statements, must be purchased. The local government authority placed copies of its financial statements in local libraries, where they could be consulted free of charge. Spot checks by the authors on their availability were carried out randomly and after the six months no

responses for use of the financial statements were received in the three libraries selected (Rutherford 1992, p.269). Rutherford claims from this event in locating users of local authority financial reports that limited use is made of the financial statements. From this and other empirical research in identifying user/user needs Rutherford suggests the difficulty of identifying in practice external users of public sector financial statements tends to confirm the a priori conclusion reached earlier that there are no rational reasons why such parties should wish to use these financial statements.

Rutherford argues that this does not mean that user/user need for a conceptual framework does not exist but may be different to what normative research indicates. Rutherford states:

the character of the user-community differs between the public and private sectors: in the public sector the dichotomy between internal and external users which is so obvious in the profit-seeking sector is much less marked. Rather, users spread out along a spectrum with fully internal, managerial users at one end and fully external users at the other. In the middle are a variety of intermediate users, internal from some perspectives and external from others. The classic example is the legislature in the case of central government: in principle capable of demanding any information it chooses; in practice severely constrained. For local authorities and other public sector bodies, these intermediate users include superior government units (1992, p.271).

The elusiveness of a decision may explain why there is a greater tendency in conceptual frameworks directed at the public sector (IFAC study) to introduce notions of accountability. If a conceptual framework for the public sector is to be constructed which bears comparison with those applying in the profit-seeking

sector, the notion of accountability needs to be sorted out. One approach would be to view the activities of the intermediate users as the exercise of indirect control, weaker than the direct control exercised by governing bodies themselves, but stronger than the passive, reactive decision-making of fully external parties (Rutherford 1992, p. 271). A specification of the information needs of public sector intermediate and external users are similar to the users in the private sector, except that the users in the public sector use this information at different levels and means of decision-making.

As mentioned earlier the importance of accrual accounting in our (Australia) conceptual framework has led to a better assessment of the cost of services and the efficiency of local authority operations has meant increased accountability and decision-making outcomes for internal and external users of GPFR at different levels. This has improved local authority efficiency and effectiveness over the previous methods of fund accounting and modified accrual accounting which often understated the real cost of services and the true financial position. The improved information provided in GPFR has benefited all normative external users of GPFR whether they realise or do not recognise this new method of reporting using the conceptual framework for GPFR. Education of preparers of GPFR using accrual accounting has often been cited as a means of improving the quality of this information so one recommendation is that accounting bodies, standard setters, government bodies and preparers should undertake a campaign of educating external users on the new method of reporting and the

decisions that can be made from GPFR (Rutherford 1992). Internal and external users of local authority GPFR concerned with the level of services delivered and outcomes achieved, accruals-based information is widely believed to be a better proxy for information about outputs and outcomes than cash-based information. Anthony (1985) indicated that there were different decisions made by these users depending on whether it was private or public sector organisation but these could be achieved from accrual accounting and GPFRs (based on the SACs).

Statements of Accounting Concepts (SACs) set out the circumstances in which GPFRs are to be prepared and the concepts to be applied in the preparation and presentation of them. The SACs define the nature, subject, purpose, and broad content of general purpose financial reporting. The four Statements of Accounting Concepts currently on issue are discussed below.

The SAC 1 Definition of the Reporting Entity establishes the criterion for the determination of those entities which are reporting entities and are therefore required to prepare general purpose financial reports. When fund accounting was in force, each fund was a separate reporting entity; this differs under AAS27 requirements. Under SAC 1 (para.25) all types of government entities are defined as reporting entities:

an implication of applying the reporting entity concept in the public sector is that a government as a whole, whether at the Federal, State, Territorial

or local government level, would be identified as a reporting entity because it is reasonable to expect that users will require general purpose financial reports to facilitate their decision-making in relation to the resource allocations made by, and the accountability of, those governments. At a lower level of reporting, a number of individual statutory authorities and departments (and the entities they control) may also be defined as individual reporting entities because of their economic or political significance and/or their financial characteristics (for example, resources controlled and level of indebtedness). In some cases, these factors may also identify a ministerial portfolio as a reporting entity.

The SAC 2 Objective Of General Purpose Financial Reporting specifies the broad objective which general purpose financial reporting should seek to achieve. SAC 2 (para.11) identifies the users of general purpose financial reports, their common information needs, and the type of financial reporting appropriate to those needs:

general purpose financial reporting is not an end in itself, but is a means of communicating relevant and reliable information about a reporting entity to users. The objective specified in this Statement derives from the information needs of those identified as the users of the general purpose financial reports. Those needs depend, in turn, on the activities of reporting entities and the decisions users make about them.

The SAC 3 Qualitative Characteristics of Financial Information identifies the qualitative characteristics that financial information should possess if it is to achieve the objective of general purpose financial reporting:

this Statement identifies relevance and reliability as the primary qualitative characteristics which financial information should possess in order to be the subject of general purpose financial reporting. These characteristics may need to be balanced against each other; however, this Statement does not rank either characteristic above the other (para. 7).

The SAC 4 Definition and Recognition of Elements in Financial Statements gives detailed definitions of these accounting elements. AAS27 is based on

these definitions; these are considered below. Assets are defined in SAC 4 (para.12) and AAS27 (para.12) as follows:

the service potential or future economic benefits controlled by the reporting entity as a result transactions or other of past events.

The three key elements of this definition, discussed later in the section, are:

- 1) there must be service potential or future economic benefits;
- 2) the reporting entity must have control over the service potential or future economic benefits; and
- 3) the transaction or other event giving rise to the reporting entity's control must have occurred.

When an entity has established that an asset exists, AAS27 requires that it be recognised only when:

- 1) it is probable that the service potential or future economic benefits embodied in the asset will eventuate; and
- 2) the asset possesses a cost or other value that can be measured reliably (para.13).

As indicated earlier, under the *Victorian Municipal Accounting Regulations 1985*, councils reported only *realisable* non-current assets (as defined under AAS27 and SAC 4) in their financial statements. This resulted in a municipality not recognising its total investment in the community. Items such as roads, drains, parks and gardens, representing significant sums of money, were not reported as assets. However, once these assets are in place the residents of a

municipality have the benefit of them for many years. On these grounds it can be argued that it is appropriate that these assets be recognised in the financial statements. Under *AAS27*, infrastructure assets are required to be included in the financial statements of a municipality.

The capacity of an entity to control the service potential or future economic benefits would normally stem from legal rights and may be evidenced by title deeds, possession, or other devices that protect the entity's interests. However, legal enforceability of a right is not a prerequisite to the establishment of control, and therefore, not an essential condition for recognition of an asset. For example, Crown land used by a municipality, whilst not owned by it, may assist in providing services and should, arguably, be recognised as an asset. Roads and bridges also would be classified as assets if controlled by the municipality even though they may have been constructed by some other authority.

The identification of roads that are controlled by local authorities and those which are controlled by state road authorities depends on the classification of roads for which each type of entity has primary responsibility. A question raised in respect of this subject is whether local governments control arterial roads that they maintain under contracts entered into with state authorities. The obligation of a local authority would be confined only to maintenance activities and the community would look to the state road authority to ensure that the arterial road

meets user needs. Thus the local government would not control the road. For the purposes of AAS27:

control over a resource means the capacity of the local authorities to benefit from the resource in pursuit of its governing body's objectives and to deny or regulate the access of others to that benefit (SAC 4, para.25).

In this section there will be a discussion on the implications of the SACs on GPFRs. This is where most critics fail to recognise the wording and meaning of the SACs on the decision-usefulness of GPFRs for users of these reports (Rowles, 1992). Statement of Accounting Concepts SAC2 *Objectives of General Purpose Financial Reporting* (AARF, 1990), states GPFRs are:

...not an end in itself... (para. 11).

This will vary with the objectives sought in complying with the SACs and this cannot include an extensive list but the most appropriate objectives to convey a reliable financial position and full cost of services of the local authority. These objectives of the information that the GPFR should provide to financial users are listed in SAC2:

- is useful to users for making and evaluating decisions about the allocation of scarce resources;
- assists managements and governing bodies in discharging their accountability; and
- is relevant to assessment of performance, financial position and financing and investing, including information about compliance (paras, 43-45).

GPFRs for local authorities provide a means of evaluating the accountability in the use of IAs and their allocation of cost, of these scarce resources that they control. GPFRs prepared by providing this information about the value of resources controlled by the authority, changes in those resources and information from which assessments about the performance of the local authority (LA) in the use of resources can be made. The full potential of GPFRs to serve this function is not fully appreciated by different groups who seem determined to advocate for changes for their own political or philosophical agendas (Rowles 1992, p.11). The identification in the users of GPFRs is very important and can either be determined by empirical or normative research. As above, SAC2 indicates that GPFRs have intended specific objectives so they are potentially useful to a wide audience of financial users (Lapsley 1992, Mayston 1992 & Rutherford 1992). Financial users of GPFRs have been identified from normative research which in SAC2 include:

- resource providers;
- recipients of goods and services; and
- parties performing oversight functions.

The normative nature of identifying financial users has lead to a broad description. From a local authority perspective the users could include: mayor and municipal representatives; parliamentarians; financial commentators; ratepayers; and others interested in the use of scarce resources provided from rates, taxation and other sources. It can be anticipated that ratepayers and other

members of the community will have an interest in being informed about the financial affairs of local authorities controlling IAs via GPFRs (Lapsley 1992, Mayston 1992 & Rutherford 1992).

The purposes of financial users of GPFRs when determining the main objectives are included in SAC2:

- resource providers, for example, taxpayers and ratepayers, will want to know whether the entity is achieving the objectives which formed the reason for the provision of resources, and is operating economically, and efficiently and effectively;
- recipients of goods and services will be interested in the ability of the entity to continue to provide goods and services in the future, the levels at which goods and services will be provided, and the likely cost of the goods and services; and
- parties performing oversight functions will want to know whether the entity has been operating economically, efficiently and effectively in the interest of the community (paras. 21-25).

Drebin, in a comprehensive study (CICA, 1989) on accounting for fixed assets, identified a number of users and user needs for financial reporting information from public sector entities which included:

- determination of a government's financial position and hence the size of government;
- determination of whether resources have been acquired with regard to economy and efficiency;
- assessment of the adequacy of government programs for maintenance and renewal of infrastructure assets and, hence, to permit assessment of whether resources are sufficient to maintain service levels; and
- to evaluate the resource allocation priorities of government (p. 15).

These are similar to Australia's objectives of the SACs for GPFs. The SAC2 allows financial users of GPFs to determine if management and governing bodies have discharged their *accountability* obligations in local authorities. This was used in GASB Concepts Statement No. 1 *Objectives of Financial Reporting* which describes accountability as:

...the cornerstone of all financial reporting in government ... based on the belief that the citizens have a right to know ...(paras. 20-21).

There appears to be confusion on what accountability means depending on the form of financial reporting in which it is from: cash; modified cash; modified accrual or full accrual. Traditionally in local authorities, accountability for revenue and expenses has been discharged by *fund statements* which evidence compliance with spending mandates to exclude certain information about assets, liabilities and expenses (Rowles 1992, p.12). This is where SAC2 narrowly defines compliance as:

adherence to those statutory requirements, regulations, rules, ordinances, directives or other externally-imposed requirements in respect of which non-compliance may have, or may have had, a financial effect on the reporting entity (para. 5).

Rowles states that:

SAC 2 indicates that financial reports which contain information useful for making economic decisions, and which contain information that permits assessment of economy, efficiency and effectiveness in the use of resources, will be reports which permit managements and governing bodies to fully discharge their accountability for the use of scarce resources (1992, pp. 12-13).

This acknowledges that this broad definition requires local authorities not to only be accountable for expenditure of funds, but also for the acquisition and use of their resources, which also includes the cost of IAs and depreciation. Without this information assessments cannot be made and management made accountable.

Critics of GPFs confuse accountability and compliance (Rowles 1992, p.12). GPFs which reflect compliance will not provide users with sufficient information to make judgements about economy, efficiency and effectiveness in the use of resources. This was highlighted where traditional *fund accounting* concentrated on compliance which in accounting for IAs and depreciation did not allow for the accountability of local authorities. The reason for this approach is that compliance is a narrower view of the concept of accountability. The concept of accountability identified in SAC2 addresses this issue. The SAC2 definition of accountability is:

... the responsibility to provide information to enable users to make informed judgements about the performance, financial position, financing and investing, and compliance of the reporting entity (para. 5).

The next issue to consider is whether infrastructure and IAs meet the asset definition criteria of AAS27 and SAC 4. If they do, they should be recognised in the municipality's statement of financial position. The three essential characteristics set out in SAC 4 (para.12) and AAS27 (para.12): service

potential or future economic benefits; control by an entity; and the result of a past transaction or event provide guidance are discussed below.

2.8.1 Service Potential or Future Economic Benefits

In profit-seeking entities, assets contribute to entity objectives either by directly generating cash inflows, reducing cash outflows, or by some combination of the two (Rowles 1991, p.46). Cash inflows, in particular, may evolve in two forms: i) through the sale of the asset which embodies the service potential or future economic benefit or, ii) sale of the outputs produced through the use of the asset (SAC 4 para.17). This characteristic has been claimed to be appropriate for not-for-profit entities such as most municipalities. In not-for-profit entities, the service potential or future economic benefit is used to provide goods and services. Despite the fact that little or no cash inflow will result, the assets benefit the entities by enabling them to meet their objective of providing needed services to ratepayers. Therefore, IAs do have *service potential* characteristics.

2.8.2 Control by an Entity

Control (SAC 4, para. 22) is related to the capacity of the entity to benefit from the asset in pursuit of its objectives or to deny or regulate the access of others to that benefit. In the public sector, local government may not have legal control or own the object in question (para. 23). In many public sector entities, however,

the entity itself will, at least, have control over the services and benefits the asset provides, even if legal possession is not possible (Rowles 1992, p.47). IAs controlled by local governments do display this *control* characteristic. This issue was discussed in considerable detail in a study by the Australian Society of CPAs Public Sector Centre of Excellence (Victoria Cell) into the *Recognition and Reporting of Crown Land by Government Entities (1994)* which concluded that Crown land owned by either the Federal or State authorities but controlled by a local authority should be recognised and reported in the local authority's financial statements. Others might not agree with this view. This was the situation in Queensland where the Auditor-General qualified the financial statements of the Brisbane City Council for including roads and land under roads in their Statement of Financial Position (Australian Society of CPAs, 1994). The Queensland Government passed legislation requiring all State Crown land to be recorded in the State's financial statements, even though the local authority has control over these assets. Land under Roads is no longer required to be reported in GPFRs as accounting authorities determine whether it should be reported.

2.8.3 The Result of a Past Transaction or Event

Under the previous accounting requirements, IAs were written off as an expense in the operating statement, not reported as assets. Under AAS27 (para.12)

those assets arising from a past transaction or event are capitalised (provided they satisfy the recognition criteria) and depreciated.

Defining non-current assets for public reporting entities into what are distinguishable areas of IAs has been one of the developments made in terms of extending and understanding public sector assets. A study of non-current assets by the New Zealand Society of Accountants, through a questionnaire survey about assets held by public sector institutions, attempted to place certain types of public sector assets into a distinctive group of their own with specific characteristics (Pallot 1989). These items were categorised as *community assets* and were defined as *fixed assets of an infrastructure, recreational or cultural nature, held by the public sector entity*. The definition encompasses items of a heritage nature. Within this definition of *community assets* the following characteristics were established:

- 1) they are used directly by the community at large; and
- 2) they are non-substitutable and/or non-saleable.

According to Pallot (1995, p.8), community assets have certain characteristics which distinguish them from other fixed assets. These characteristics include:

- 1) the costs of acquiring them are sunk (non-alterable);
- 2) they serve a social rather than a commercial purpose;
- 3) they are indivisible;
- 4) they lack both market and determinable economic life; and

- 5) they have an infinite physical life with proper maintenance program (1995, p.8).

Rowles (1991a), in reviewing these characteristics, claims that none appear to help in identifying unique features of IAs. Rowles argues that most of these characteristics are associated with other fixed assets in the public and private sectors—therefore, they are not unique and should be recorded in the financial statements in the same way as any other fixed assets (1991a, p.72).

The New Zealand Accounting Research and Standards Board (NZSA) discontinued support for the concept of a community asset in August 1991, withdrawing *ED/TGB-4 Defining and Reporting Community Assets*. In March 1992, the NZSA issued a statement indicating that *SSAP-28 Accounting for Fixed Assets* applied to non-physical assets of governments such as IAs (Rowles 1992, p.22).

2.9 IA Accounting and User Needs under SACs

The discussion above shows the potential user needs for IAs and depreciation information and emphasises that different questions may well have different answers depending on the level of information sought and how it will achieve decision-usefulness. The CF helps GPFR users determine what type of information will be beneficial in decision-making. Without a sound CF confusion will remain on what is to be recorded and what decisions can be made from

GPFR by internal and external users of this information. Mayston (1992) argues against GPFRs in attempting to answer all conceivable questions that users require for decision-usefulness:

it can be seen that the potential user information needs for capital accounting information are rich ones, with the above set of questions extending the earlier list of Perrin (1984), and emphasising again that different questions may well have different answers. If financial accounting is to progress as a discipline, it must follow the logic of other analytical branches of knowledge by a disciplined separation of the different strands involved. If not all questions that are relevant to users can be adequately answered in a single published set of accounts, there is then a strong case for financial accounting to follow other academic and professional disciplines in concentrating on a few things to do well, such as stewardship and cash-flow reporting, rather than attempting to answer all conceivable questions within the published financial reports (Mayston 1992, p.243).

The above quotation displays an attitude that other writers and academics have towards the CF and its purpose towards GPFRs and user needs. Before the CF and accrual accounting in Australia's public sector, external financial users needed to rely on fund accounting and detailed financial reports (up to 300 pages) which were incomplete (IAs were not included) and did not show the full cost of services (depreciation omitted). A huge step has been made to increased accountability and stewardship with the introduction of accrual accounting and GPFRs which are underpinned by the CF and help users of this information, whether external or internal to make informed decisions in these areas.

The private sector provides GPFRs but also include other supplementary reports, for example, statement of cash flows and current cash information. The

present system can be improved and is currently updated to reflect changing situations but it does provide foundations for users of financial information to place creditability in the CF and GPFR when making informed decisions. Sometimes the GPFR will not provide the information needed but this also occurs in the private sector and where do preparers stop in the benefit versus cost of producing GPFRs for external users. Expecting the CF to solve all the problems regarding financial reporting is simply unrealistic (Mayston, 1992).

Mayston suggests that meeting user needs for capital accounting information within the bounds of practicality can be achieved by:

- (a) the indexing of new capital expenditure after the start of the new system of capital accounting to a general price index to record the real input of resources that has gone into providing the additional capital assets of the authority, with an associated real annual depreciation charge;
- (b) the recording of the initial capital stock of the authority at the start of the new system at its depreciated current cost;
- (c) the inclusion of a real charge alongside the annual depreciation charge, to reflect the opportunity cost of tying up capital in the relevant assets;
- (d) the separate identification of cash-flow and financing needs of the authority or public service from those accounting measures aimed at answering performance-related questions; and
- (e) the provision of time profile, and current backlog, information on replacement and maintenance costs (Mayston 1992, p.244).

There are specific user needs for IAs and depreciation (capital accounting) information and the above summary highlights quite strong similarities with

private sector user needs, and the list mentioned above are some of the possible financial accounting solutions.

2.10 Infrastructure Assets

The problem of accounting for non-current assets has attracted a great deal of attention in public sector accounting research. Pallot writes:

researchers in Canada (CICA, 1989), the United States (GASB, 1987, 1994; Hughes, 1994), the United Kingdom (Currie, 1987; CIPPA, 1990), Australia (Rowles, 1991; PSASB, 1992; Greenall, 1989) and elsewhere (Luder, 1991) have examined the issue of accounting for assets in the public sector and suggested a variety of reporting methods (Pallot 1995, p.1).

Infrastructure assets (IAs) are normally regarded as items such as roads, underground pipes, railways, government buildings and airports (Bellamy 1992, p.3).

Public investments in IAs, for example, roads, reticulation systems and bridges are significant:

infrastructure in Victorian Councils is worth around \$23.3 billion in current replacement terms, or approximately \$13,000 per household (Burns, Hope & Roorda 1998, p.1).

As earlier mentioned critics of the CF and accrual accounting in the public sector often claim that the service potential provided by these assets is different to that of other assets and should not be recognised as assets and their

depreciation should not be recorded in GPFRs. These are significant assets, consuming large amounts of scarce public resources in their acquisition and replacement/maintenance. For users of GPFRs to make informed decisions on a local authority's financial position it is important IAs and depreciation are included in GPFRs, if not a significant segment of local authority resources are effectively hidden from scrutiny.

Before the change to accrual accounting and CF there had been considerable critical comments about the lack and suitability of financial information being available to the public about IAs and depreciation for making and evaluating economic decisions and accountability purposes. There still have been critics since the change in local authority accounting methods but these are from different philosophies of the role of government and confuse practical problems and those of theory. This had been demonstrated in various media reports where the information provided in public sector GPFRs was described by Gittins (1991), as *bamboozlement caused by the accounting conventions of public finance* (Rowles 1992, p.2). A discussion will follow on the suitability of a definition for IAs for reporting in GPFRs.

2.10.1 Definitions of Infrastructure Assets (IAs)

This is the initial starting point with understanding how particular authors view and acknowledge the importance or need for depreciation of IAs in local

government. The researcher has selected a wide range of views on some important criteria, which will be useful in explaining why this issue has been very contentious and there are wide differences of opinion. The first area of investigation is the definition of IAs, which, in some cases, is different among authors and has been used to justify or support their arguments on whether depreciation should be in GPFRs on IAs in local government. After looking at the definitions of IAs there are five important issues that will be discussed to determine why the debate is contentious and a solution has proven difficult to find. These are:

- private and public sectors are different;
- IAs are different from other NCA;
- IAs can be identified, valued and depreciated;
- depreciation should be charged on IAs; and
- depreciation is useful for economic decision-making.

Currie divided these assets into two categories, which are:

major civil engineering works, such as dams, reservoirs, highways, railway tunnels and embankments. These assets often have little alternative use and their lives (in the sense of being taken out of service or replaced) are very long and almost impossible to quantify.

Network assets which are constructed in blocks or as systems within which it is difficult to define boundaries of costs which are going to be useful in accounting for discrete assets, for example, railway track, roads, power lines, signalling networks and distribution pipelines. Components are renewed, but the whole block of assets is unlikely to be replaced at any one foreseeable time (Currie 1987, p.8).

This definition separates IAs into two categories which appears to help Currie (1987) in his argument against depreciation of these assets. He poses two questions using his definition. Question 1 states: *if the assets are not going to be replaced and continually being renewed, is depreciation conceptually the best solution?* He states that there is a risk of double counting by recording renewals costs and current cost depreciation at the same time. Question 2 states: *how can asset records be best maintained for networks of interlinked assets some of whose elements and sections are likely to be replaced in piecemeal fashion?* His answer to this question is that it becomes very difficult to set up an asset record, which permits the normal accounting for asset lives, retirement and replacement to take place. This accounting for IAs becomes impossibly detailed, expensive and may be very vulnerable to error.

This definition also appears to assist Currie in his view of IAs, in the acceptance of a main assumption, that, at some stage of the IA lifecycle will be in *steady state (mature stage)*. This means that after the IA has been constructed and the service use of the IA nears capacity it is defined as being in *steady state*. At the steady state stage, Currie suggests that the cost of renewals is equivalent to the cost of consumption. How he derives this logic is that when the IA is built to provide the new service there are no renewals for a number of years, and then the incidence of renewals will gradually climb to a *steady* level at which point the system may be in equilibrium.

A number of issues are raised by Currie's arguments (using his definition). His definition separates IAs into two areas. One is the overall system and the second is the network, which is made of elements as coined by Currie. These elements are, in other definitions, called components, which can also be considered as ordinary assets. Now looking at these elements as ordinary assets does Currie's argument logic remain sound? Currie has not separated conceptual accounting theory of IAs from the practical issues in accounting for these assets. In this way, his argument for the difficulties in accounting for an IA appears logical unless you separate the conceptual issue from the practical issue then his argument is not as persuasive. When an IA is defined as a group of ordinary assets working as a network then, conceptually and practically, renewals and depreciation of these ordinary assets are separate issues and accounting systems should be able to cope with the depreciation and renewal of these assets. Currie at the time of his article was a member of the accounting firm, Arthur Andersen & Co. who worked with clients in the water industry (huge IA investment). His views are from a professional viewpoint and appear narrow in their representation of what IAs are and how they are made up for accounting purposes.

Greenall, Paul and Sutcliffe indicate:

these assets are not exhaustively defined in the regulations, however, they would include: roads; streets and bridges; parks and gardens; and may also include such items as sewerage pumping plant and flood mitigation works (Greenall et al 1988, p.41).

This definition is limited but still applies to the types of assets that Currie indicated in the definition given earlier. In Discussion Paper No. 12 *Financial Reporting by Local Governments* (Greenall et al, 1988) when accounting for non-current assets IAs were often viewed as being different for capitalisation purposes and this varied widely between State and Territory local authorities under previous reporting methods. In Table 2.3 Capitalisation of Non-Current Assets (Greenall 1988, p.41) shows the capitalisation of non-current assets by the State and Territory local authorities in Australia prior to AAS27.

Non-Current Assets Capitalised	States
A. Non-current assets other than infrastructure:	
all, regardless of saleability	NSW, SA, TAS, NT, ACT.
those which are realisable	VIC.
those which are realisable and/or insurable (1)	WA.
B. Infrastructure assets (2)	
all expenditures capitalised (including roads & bridges)	TAS
only land and major plant items (3) forming part of infr.	NSW, WA, ACT.
no expenditure capitalised.	SA (4), VIC, NT (5).
Notes	
1. The criteria to be applied in WA provide considerable discretion as to whether expenditure on some types of fixed assets will be capitalised.	
2. These assets are not exhaustively defined in the regulations, however, they would include roads, streets and bridges, parks and gardens, and may also include such items as sewerage pumping plant and flood mitigation works.	
3. For example, sewerage pumping plant.	
4. For example, in SA, parklands and land use for roadworks or drainage works are not capitalised.	
5. However, from a limited review of local government financial statements it was difficult to assess whether parks and gardens are recognised as assets in VIC and NT. (Greenall et al. 1988, p.41)	

This view given to IAs does not give a definition that indicates what makes up an IA for reporting purposes in GPFRs.

In 1991 Rowles suggested:

that although IAs have not been precisely defined they are usually taken to include: roads; bridges; government buildings; railways; water; sewerage; gas; and electricity reticulation systems (Rowles 1991a, p.69).

The Public Sector Accounting Standards Board (PSASB) commissioned Discussion Paper No. 17 *Financial Reporting of Infrastructure and Heritage Assets by Public Sector Entities* (Rowles, 1992), which identified controversial issues in the financial reporting of *infrastructure and heritage* type assets in the public sector, particularly not-for-profit entities, and explored mechanisms for the resolution for those issues. In this definition there is no distinction between the IA and what makes up this asset. Rowles indicates that IAs are found in both the private and public sectors. Rowles looks at the Statement of Accounting Concepts ED 42C (this is now known as SAC4) which focus on the concept of economic benefit or service potential contributed by the asset, and sets out defining characteristics. These characteristics are: cannot be divided into smaller parts; valuation and estimation of economic lives are always problems for accountants and engineers; and only land is viewed as having an infinite life. An IA is often a large system, which is made up of smaller finite assets and can be divided and valued for financial and management accounting purposes. Rowles acknowledges that these assets are a distinctive sub-group of non-current assets for which a definition is required which will permit an operationally useful distinction to be made.

Pallot suggests:

IAAs are those stationary systems where the system as a whole is intended to be maintained indefinitely (not infinite life) at a particular level of service potential by continuing replacement and refurbishment of its components. The total system is therefore a network, which can include normally recognised ordinary assets as components (Pallot 1995, p.9).

Pallot acknowledges that IAAs are assets for GPFR purposes. The definition provided is a significant step forward in developing a definition for IAAs. The definition used by Pallot (1995) was developed by The Society of Local Government Managers (SOLGM). The SOLGM prepared guidelines to assist councils in the interpretation of financial reporting standards or in cases where Generally Accepted Accounting Principles (GAAP) developed for the commercial sector were incomplete or inappropriate. However, in the case of a definition for IAAs the SOLGM Working Party decided to produce a definition which was neutral across public and private sectors and which was relevant to the critical issue of maintaining essential services in serviceable condition (Pallot, 1995). This shows that in this definition that IAAs were made up of **ordinary** assets that could be measured reliably and depreciated over their economic lives. Also there were no differences between the public and private sectors in the operation and purpose of IAAs which also complied with the definition of an asset under SAC4.

These are important points which help in understanding that, conceptually, the purpose and use of IAs does not change depending on the operation of the organisation and depreciation of IAs applies as well as other non-current assets even though the application may be more involved for IAs. This definition is important as it shows that IAs are made up of ordinary assets which do have infinite lives and can be depreciated over their economic lives. The IAs may consist of many components (ordinary assets) and be very complex in nature but conceptually they all are still non-current assets that can be measured and depreciated for GPFs requirements.

As mentioned earlier after an appropriate definition is found there is a list of issues that need to be resolved to determine if depreciation in GPFs is relevant and reliable for economic decision-making by both internal and external users.

2.10.2 Private and Public Sectors are Different

Not all interested parties have supported the adoption of accrual accounting in the public sector. For example, Mautz (1981, p.53) questions whether the general reporting framework used for profit-seeking enterprises is appropriate for financial reporting by government units. Authors (Currie 1987, Rowles 1992, Ma and Mathews 1992, and Sutcliffe et al. 1991) on this issue debate if there is a difference in private and public sectors for GPFs. This issue needs to be addressed after a suitable definition of IAs has been agreed. Depending on the

authors' views on whether there is a difference, sometimes agreement will not be reached on the other issues in reporting IAs in GPFs. Some authors' views will be summarised below.

Currie suggests:

there is a difference in the private and public sectors in the information given in GPFs. In the private sector if price levels were changeable, CCA would have a role to play in measuring the cost of asset consumption that has taken place. In the public sector and, to a degree, the utilities world, accounting followed a different path. The huge investments in assets required were financed by borrowings. Instead of depreciation, the repayment of the borrowings was charged against revenue. These sectors were cash based and it was seen as more important to match financing costs against revenue than consumption costs (Currie 1987, p.7).

Currie does believe that depreciation has a role to play in the private sector as it indicates the cost of consumption of the IA and can be used in many decisions, for example, pricing, maintenance and renewal purposes. However, in the public sector, depreciation is not relevant as repayments are more important for matching revenues with expenses. Currie simply has confused borrowing costs with financing decisions and depreciation with operating decisions which applies to both the public and private sectors. Currie has a perception of repayments being a substitute of depreciation in the public sector because for many years under fund accounting or even modified accrual accounting this is how local authorities throughout the world recorded IAs transactions. This is one of the main reasons why there was the need to change local authority GPFs to accrual accounting in accounting for IAs to overcome the confusing position of

using financing decisions in operating decisions which could have serious implications for economic decision-making. Currie cannot say that only the private sector needs to know the cost of consumption using depreciation and the public sector only requires information on repayment of loans. The public sector also as Currie states has a huge investment in IAs, which means they need to know the cost of consumption though depreciation not repayment of loans (totally different decision) for the pricing of services for taxpayers or ratepayers that use IA services.

Rowles suggested:

that IAs, serving the same function, may be operated in the private or public sectors and profit or not-for-profit organisations. For both the private and public sectors the reporting of IAs in GPFRs provides information on financial position and performance necessary for evaluating economic performance. GPFRs communicating information about economy, efficiency and effectiveness in the operation of infrastructure resources will be of wide interest and importance to both the private and public stakeholders for economic decision-making about the use of scarce resources (Rowles 1992, pp.33-34).

Rowles states that there is no difference in the use of IAs in either the public or private sectors. He also argues that the GPFR users in both sectors need the same information on the use and depreciation of IAs for economic decision-making. This is where Currie and Rowles disagree on the types of decisions and the purposes of their use by GPFR users. Currie, implies that knowing the cost of the service only applies to the private sector but, as Rowles points out, this also is a necessary

requirement for the public sector and depreciation needs to be used by both the private and public sectors.

Ma and Mathews argued:

that there is a difference in private and public sectors in GPFRs. They suggest that public sector GPFRs cannot be justified from a number of perspectives—accountability relationships, relevance for decision making and managerial control, measurement problems, implementation costs, information needs in the budget sector, and longer-term consequences for social change. This implies, wrongly, that public sector issues need to be analysed in a profit-oriented private sector framework, with its asymmetrical accountability and power relationships (Ma & Mathews 1992, p.24).

The reasons given by the authors need to be divided into problems involving conceptual or practical issues. Conceptual issues can then be discussed to determine if there are problems in logic which if applied in certain circumstances can lead to incorrect decision-making by GPFR users or problems in the authors' logic. Practical issues can be overcome and should not be an excuse for not implementing a sound conceptual issue, for example, depreciation of IAs in the public sector for economic decision-making by GPFR users.

Sutcliffe suggests:

that the prime purpose of public sector GPFRs is not the measurement of profit for shareholders or the recognition of wealth, and not that loan funds should be managed and used judiciously. The aim for both the private and public sector GPFRs is that both should be accountable for resources they control and the results of that control—and this will require the reporting of all assets, liabilities, expenses, revenues and equity (net assets). The level of accountability and the information necessary as input

for economic decision-making will not be different between the two sectors (Sutcliffe et al. 1991, p.39).

In this statement Sutcliffe has refuted both Currie's and Ma & Mathew's reasons for a difference between the public and private sectors to value and depreciate IAs in GPFRs as conceptual and practical mistakes by the authors. He suggests that the level of information required is the same and conceptually the two sectors both need this information for economic decision-making even though the users may have different purposes. The confusion may be that people have always viewed the two sectors as being different because the method of measurement used in GPFRs varied considerably. Now that the private and public sectors both use accrual accounting for GPFRs then the same level of information can be used by different users. Also people are reluctant to change and sometimes logic is lost to their fear that certain things will change instead of embracing change as improving a system which may have be out of date with what is really needed. This is often highlighted in accounting theory with the issues surrounding arguments using either positive or normative theories when commenting whether a change is required to an accounting method.

2.10.3 IAs are Different from Other NCA

Characteristics said to distinguish infrastructure assets from other types of assets include:

1. costs are sunk once an investment is made in a non-current asset, the investment is irrelevant to considerations of incremental costs or revenues, other than the sale of the asset;
2. provision of “social” benefits to the community at less than full cost recovery, or at no direct cost to consumers; and
3. lack of a determinable economic life and a long life (Pallot, 1995 p.8).

Pallot argues that these are factors that make IAs different from other assets but Rowles in Discussion Paper No. 17 *Financial Reporting of Infrastructure and Heritage Assets by Public Sector Entities* (Rowles, 1992) disagrees. With the characteristic of *sunk costs*:

therefore, whether an investment is sunk is not a characteristic uniquely confined to infrastructure and heritage type assets of not-for-profit entities, and the concept does not distinguish these assets from other types of physical assets. The fact that costs are sunk does not provide grounds for the non-recognition of these assets (Rowles 1992, p.37).

This is a financing decision which can apply to any kind of asset. The characteristic of *costing the use* of IAs, Rowles makes the following point:

however, these arguments are not consistently applied to all physical assets employed in the provisions of public services. For example, while a police or fire station might be regarded as *infrastructure*, to be accounted for according to distinctive principles, it is not suggested that a police car or fire engine should be treated in the same way. The notion that assets which provide public services as distinct from commercial services are *different* is not one that is consistently applied (Rowles 1992, p.38).

The public sector also encourages agencies and organisations to price services on the full cost of these services to taxpayers/ratepayers. Another characteristic used by Pallot (1995) was that IAs lack a determinable economic life, Rowles argues that:

as with other assets, the effects of decay and obsolescence must be made up by maintenance and replacement of components if assets are to be maintained in existence. In assets of the infrastructure and heritage type, over time this maintenance will amount to progressive reconstruction of the asset. Since the service potential of infrastructure and heritage assets is consumed in the same manner as for physical assets generally, components of this type of asset have a finite life and an expense is incurred by their possession and use (Rowles 1992, p.38/39).

This is the reason Anthony makes the point of having a definition for IA reporting purposes. The IA network is made up of physical assets that have finite lives then there is a determinable economic life. In Discussion Paper No. 12 *Financial Reporting by Local Government (Greenall et al., 1988)*, Burns is quoted as:

community (infrastructure) assets do wear out and that, at least in the case of roads, it is possible to predict with reasonable accuracy the useful lives of such assets; but also,

If decision makers are to be provided with information useful for making decisions in respect of the acquisition (or creation) and management of infrastructure assets, financial statements should be prepared on the accrual basis, and should recognise depreciation of all assets, including infrastructure assets (Greenall et al.1988, p.58).

Burns position has changed since advocating CBD on the accuracy of determining economic lives of IAs in criticising traditional depreciation methods (straight-line and reducing balance) now suggesting that economic lives are too difficult to calculate under traditional depreciation methods.

2.11 Identification of Infrastructure Assets

The thesis is primarily focusing on depreciation of IAs as the critical test for the change of local government to accrual accounting method but because the details of these assets were inadequate under previous accounting methods there needs to be a summary of how they were identified and valued under AAS27 requirements.

Under previous accounting procedures, capital expenditure incurred by municipalities was recorded in the accounting records in one of the following ways:

- a) If incurred out of revenue it was charged in the revenue statement either by debit to the relevant works accounts or as *capital expenditure out of revenue*.
- b) If expended out of loan funds, the relevant works accounts or asset accounts were debited (VOLG, 1991b).

In NSW and Victoria, councils used modified accrual accounting procedures. This involved the recognition of capital expenditure other than on non-realizable assets (roads, bridges and drains) and the non-recognition of IAs. All other assets of the municipality were included in their financial statements, requiring a

regular review of replacement or rehabilitation costs and making it difficult to determine the real cost to the municipality of providing its services.

A consultancy firm who specialised in IAs methodology hired by some Victorian Councils set out a list which is needed to manage these assets efficiently:

- what the assets consist of including their components?;
- what is their present replacement value?;
- what condition are they in?;
- what is the optimal maintenance required to provide long life at least cost?;
- can they be rehabilitated or do they need to be replaced?;
- when should they be rehabilitated or replaced?;
- what will it cost, and how will the funds be provided?; and
- are there any great problems to be faced at certain times in the future (GHD 1992, p.1)?

In a detailed study completed by the Brisbane City Council on how they changed over to a accrual system needed for AAS27 requirements, the following list of identification issues is given:

AAS27 requires that Local Authorities determine and recognise their assets in the general purpose financial reports. Since many Local Authorities do not maintain comprehensive asset registers, they will be undertaking asset identification programs over the coming years.

Councils starting asset identification will need to consider:

- defining an asset;
- capital versus recurrent expenditure;
- materiality;

- network assets;
- previously acquired assets; and
- resource projects (McHugh 1993, p.59).

AAS27 contains solutions to the above problems by requiring identification of all assets and adopting a current cost accounting approach to present a logical assessment of the true condition of the municipality's IAs if historical cost details are not available or do not reflect a realistic valuation. As indicated, under the previous Victorian regulations these assets were not reported in the financial statements and there were, in most cases, only limited descriptions given in asset registers. Because of the task involved, municipalities were given a three-year transition period to record these assets.

The identification of these assets needs to be comprehensive to enable effective and efficient asset management. There were many issues that needed to be addressed by municipalities in the identification process in accounting for IAs to meet AAS27 requirements. The requirement to account for these assets should have gone further than AAS27 reporting requirements and in, most cases, it was claimed, will improve asset management (Victorian Office of Local Government 1992, p.37). Municipalities were faced with a need to analyse these assets and needed to develop asset accounting procedures which previously they did not follow, or follow in such detail, under previous accounting regulations.

In addition, municipalities needed to develop asset management plans, an objective to enable enhanced management of these assets including financial/technical integration. A further objective was to assess the impact of AAS27 accounting regulations on the municipality in respect to IAs. These areas will be investigated in this thesis.

In the identification process the municipality may have needed to set up a group from different departments (for example, accountants, engineers, valuers and management) to meet regularly to develop policies in accounting for IAs. The purposes of the policies were to:

- 1) determine the extent of the different infrastructure and heritage assets involved, their general condition and materiality and depreciation policies;
- 2) examine the existing asset registers and determine a suitable system required to meet the municipality's future needs;
- 3) determine the resources (costs) needed in accounting for these assets and the potential benefits that could be gained from their implementation; and
- 4) determine a program suitable to the municipality to achieve the effective implementation of the systems (Victorian Office of Local Government 1993 (d), p.4).

For the information to be recorded in its asset registers Vicroads identified details that should be recorded and reported for IAs under accrual method.

These details for a road network included:

- unit replacement cost per lane kilometre per road category;
- number of kilometres per road category;

- number of lanes per road category;
- separation of each of the above into urban and rural areas; and
- unit replacement costs in (1) above divided into costs for construction and reconstruction.

Vicroads Operations Division will provide unit replacement costs required under (1), (4) and (5) above. These unit rates are expert estimates based on a sampling of relevant job types of both current construction jobs, and re-construction jobs.

Vicroads Road Management Information System (RMIS) will provide the relevant information required under (2), (3) and (4) above (Turner & Konstantopoulos 1990, p.20).

According to the Victorian Standing Committee for accounting for assets for the VOLG, the cost of implementing AAS27 has been a main concern to municipalities in Victoria and Australia. In 1992, the Standing Committee produced a report, *Accounting for Assets*, containing estimates of the cost of asset accounting implementation from a pilot study of four municipalities. A comparison of **costs to rate base** of each pilot municipality indicated that the costs comprise less than three percent of each council rate base. The report concluded that, given the significant size of each pilot council's rate base, it is reasonable to expect that some costs should be allowed towards the reporting of these assets which would assist in more effective asset management (Victorian Office of Local Government 1992, p.3).

Changes in the Victorian Accounting Regulations require a Regulatory Impact Statement to be prepared in accordance with the *Subordinate Legislation Act 1962*. The Statement sets out the benefits and costs associated with the

introduction of the *Local Government (Reporting and Accounting Regulations) Act 1992*. The Statement indicates that the proposed Regulations will provide all users of local government financial reports with more meaningful information about how resources, managed on behalf of the community, have been utilised over time. The Statement concludes that any costs incurred through implementation are expected to be outweighed by the benefits achieved. The key benefits claimed in this Statement include:

identification of the investment in assets, including infrastructure assets, which will assist councils with their future decisions about resource allocation;

full recognition of resources required to maintain all council assets;

improved communication between the key management personnel responsible for asset management with the municipality;

more comprehensive information concerning the condition of assets in decisions about their replacement or maintenance; and

recognition of the importance of ensuring that generations of ratepayers who gain benefits from an asset over its useful life, contribute towards the asset's ultimate replacement (VOLG 1992, p.13).

These issues will be investigated to determine what impact they have on municipalities' progress in the identification and implementation process in accounting for these assets under AAS27.

2.12 Valuation of Infrastructure Assets

One of the most significant issues arising from AAS27 is the measurement of IAs for financial reporting purposes. This requirement is an attempt by the

PSASB to make local authorities more fully accountable for all their assets. One element of the issue is the selection of a valuation method. The following are the possible broad valuation methods for IAs: Historical Cost; and Current Cost.

2.12.1 Historical Cost

The historical cost of an asset is the original cost of purchase and its installation cost. Newly acquired assets (after 1 October 1992) was recorded at the cost of acquisition (AAS27 para.39). For IAs acquired before 1 October 1992, historical cost may not be appropriate. This was suggested in Discussion Paper No. 21 *Financial Reporting by Governments* (Micallef et al., 1994). With infrastructure and heritage assets acquired at different times, the adoption of the historical cost basis of measurement would result in a lack of comparability of asset values and a consequent lack of comparability of the cost of service delivery across local authorities. Also, historical cost records of assets acquired long ago may not be available and the basis for the valuation of such assets will, therefore, have to be current cost. Further, some assets may have been acquired at no cost. AAS27 (para.39) indicates current cost methods should be used for these assets.

2.12.2 Current Cost

Current cost can be defined in different ways. The current cost of an asset can be measured as the cost at which the gross service potential of that asset could be currently obtained in the normal course of operations (Harry, 2001).

There are four broad methods of current cost valuation that could be applied to these assets. A description of each method is given together with an indication of which method is appropriate for which asset(s).

2.12.2.1 Current Market Value

Under this method a value is determined for the current cost by reference to the value which could be obtained for an asset on the market. Such a basis for valuation could be applicable, for example, to motor vehicles, office equipment and standard plant (Churchill, 1992b).

2.12.2.2 Current Reproduction Cost

Under this method a value is estimated for the current cost by reference to the cost of reproducing the asset. This method could be applied if the asset were not available in the market and the technology were relatively unchanged (Harry, 2001).

2.12.2.3 Current Replacement Cost

Under this method a value is estimated for the current cost by reference to the cost of replacing the asset by the modern replacement facility. It applies where the asset being valued would be replaced at balance date by a different asset (in terms of scale and/or technology) having a similar service potential (Churchill, 1992b).

2.12.2.4 Net/Realisable Value

Where the service potential of an asset could not be replaced or has already been replaced by some other asset, the asset should be brought to account at its realisable value or at the net cash inflow that would be realised from its continued use, whichever is higher (Harry, 2001).

The public accounting firm, Hall Chadwick (1992), expressed concerns in an educational paper on AAS27 about the subjectivity of using current cost (written down replacement cost) for the valuation of infrastructure assets. They indicated that for verification of infrastructure asset valuations, auditors have to place heavy reliance on the documentation covering the recognition, valuation and depreciation of these assets. The documentation also has to cover the methodology and reasoning for the treatment of these matters.

AAS27 (para.88) provided a transitional period that allowed IAs to be recorded in financial statements over a three year period to June 1996. As mentioned earlier, Victorian municipalities had been granted an extension to June 1997. Part of this research contains a review of Victorian municipalities to determine if the transitional (phase-in) period was useful, as identification, recording and valuation of these assets may have required substantial resources in terms of time and staffing.

Table 2.4 Measurement of Non-Current Physical Assets
CURRENT REQUIREMENTS FOR BUDGET SECTOR ENTITIES

JURISDICTION	PHYSICAL ASSETS	INFRASTRUCTURE ASSETS	HERITAGE ASSETS
ACT	Written-down current cost	Written-down current cost	Disclose at nominal value
C'WEALTH	No mandatory requirement	No mandatory requirement	No mandatory requirement
NSW	Written-down current cost	Available for sale: Realisable Market Value To be Retained: Written-down current cost	Some Specific Assets: \$1.00 Others: Written-down current cost
NT	Historical cost	No mandatory requirement	No mandatory requirement
QLD	Written-down current cost	Written-down current cost	Written-down current cost
SA	Written-down current cost	Written-down current cost	Written-down current cost
TAS	Written-down current cost	Written-down current cost	Written-down current cost
VIC	Written-down current cost	Written-down current cost	Written-down current cost
WA	No mandatory requirement	No mandatory requirement	No mandatory requirement (Rowles 1992, p.31)

According to AAS27 (para.39), the most appropriate method of valuation for infrastructure assets would normally be current replacement cost less accumulated depreciation (used-up economic life) for those assets existing at 1 October 1992. This method was reported to be most used by local authorities in Discussion Paper No.21 (Micallef et al. 1994, p.107) as is shown in Table 2.4.

These resources could be internal or external to the organisation. Internal resources may include different levels of staff, information systems and time. External resources may include consultants, literature and education programs. This should not be a difficult task in the methodology used by municipalities in the change to accrual accounting for IAs and their depreciation used because certain government agencies have already completed the changeover from modified accrual to full accrual method for recording and reporting IAs. Vicroads, for example, had the policies given below:

the best measure of current cost for most IAs is current replacement cost. This method establishes the *going rate* for the replacement of existing assets and will reflect characteristics such as condition, supply and demand, and remaining service life and current dollar values.

It will show the amount needed at any one time to replace the existing IA network, to achieve the same conditions of traffic capacity (level of service) and geometric conditions, incorporating current (new) design and construction technology (Turner & Konstantopoulos 1990, p.20).

The Roads and Traffic Authority (RTA) in a paper given by Balding is acknowledged as:

RTA Financial Statements for the last financial year reflected, for the first time, the value of **all** RTA assets which now include \$42.4B of infrastructure assets. Capitalisation of the road infrastructure by the RTA is a very first in Australia and I am not aware that it has been done anywhere in the world (Balding 1991, p.4).

It was also revealed in a 1992 study (Turner, 1992) of a Victorian road authority that recognition of infrastructure assets meant that several billion dollars of infrastructure assets would be reported in their financial statements. The value to the public is said to be that the real cost of maintaining and preserving the road network will assist in the evaluation of the performance of the Corporation in managing these assets (Turner et al. 1990, p.2). Vicroads had included the valuation of roads and other infrastructure assets in its 1990/91 supplementary financial statements. It is claimed that this has been very helpful in management decision-making and accountability. Once valued and incorporated in the balance sheet, the cost of maintaining the asset in the face of changing vehicle loadings and volumes becomes more visible. In turn, the public can obtain accountability for the condition of the asset and resources devoted to its preservation (Turner et al. 1990, p.8). These comments tend to support the benefits mentioned earlier.

Russell Balding who was Director, Finance and Performance Evaluation of the RTA in 1991, also made a comment on the reliability of the valuation given:

in relation to roads and bridges, the Accountants at the RTA were very fortunate in that a number of our Engineers were just as keen to capitalize the infrastructure and that they had the technology to achieve that task.

.....our Divisional Engineers provided estimates of current costs to reconstruct each road and through the technical and financial modelling capabilities of the Pavement Management System (PMS) we were able to assess the amount of expenditure necessary to restore each road segment to *almost* new condition. The estimated cost of restoration was subtracted from the estimated current replacement cost to determine the written down replacement value (Balding 1991, p.11).

This shows that a reliable value can be obtained for IAs for GPFRs. Critics of valuing IAs often use the argument that the values under CCA lack any value that can be used for decision-making. The examples given above show that the values given for IAs under CCA are very technical and accurate which can be used in GPFRs for efficient decision-making by either internal or external users.

2.13 Depreciation

The concept of depreciation of IAs evolved and its application has been discussed and practised over a long period by the private sector and to a lesser extent the public sector (earlier reviewed in the Section 2.2). This topic has been of interest to a number of parties: accountants; shareholders; governments; creditors; accounting standard setters; and the general public.

Baxter provided a very good description for the private sector which has an important application of why depreciation should be seriously considered by local municipalities:

.....as communities grow richer, their stake in depreciating assets grows bigger; and the spending up on technology makes for shorter asset lives

and therefore still higher depreciation costs. In the extensively equipped factories of the future, one may expect depreciation to be a big—perhaps the biggest—element in cost, and so to play a great part in decisions. An alert and numerate management will then demand accounts that match economic reality, or explanations of why such reality cannot be accounted for. Depreciation theory will come into its own (1971, p.1).

Golberg (1960) considered the problems associated with the concept of depreciation for different contexts in which the word is used. This also applies to local municipalities for the different and changing interpretations depending on how it is applied and used. These terms and where to charge depreciation has caused confusion and debate, both at theoretical and practical levels on why and how depreciation should be applied in the private sector from a quotation from a chartered accountant in England in 1910:

depreciation is a difficult item to deal with, more particularly as it has, unfortunately, got largely into the hands of auditors and book-keepers, who deal with it according to their limited knowledge and entirely as a matter of amount. Depreciation is much more than this, and can only be properly adjusted by an engineer who thorough knowledge of his profession and intimate acquaintance with the particular buildings and machinery with which he is at the moment dealing (Golberg 1960, p.1).

Golberg quotes P. D. Leake (1912) and Professor Eugene L. Grant (1955):

the subject of Depreciation and Wasting Assets is of universal importance and yet it has hitherto received little or no systematic attention (Leake, 1912).....writers on depreciation seem to agree on nothing except that other writers on the subject are confused (Grant, 1955), (Golberg 1960, p.1).

Peirson and Ramsay (1994) quote Littleton (1933):

evidence of depreciation accounting existed in 1588 for general application up to the nineteenth century. This was to treat depreciable assets in the same way as the unsold merchandise of a sole proprietor. Also practice at

this time indicates that a loss by usage, wear, tear and age, with any difference between the previously recorded figure and the amount to be carried forward as inventory or other asset account was treated as a loss (1994, p.4).

Golberg (1960) identifies four principal interpretations: depreciation as a fall in price; depreciation as physical deterioration; depreciation as a fall in value; and depreciation as an allocation of cost. SAC4 defines value in the definition of an asset. Future economic benefits can be from two sources: value in use: and value in exchange. All assets have a value in use and a value in exchange and these values may and generally are quite different especially for IAs in local municipalities. By the 1950's two broad approaches to the concept of depreciation had been identified: allocation of cost; and process of valuation.

Depreciation has been called the most controversial single issue in accounting for non-business organisations (Anthony, 1978 p.135). These debates among academic researchers and professionals in this field have not related to the depreciation methods used **but** whether depreciation should be used especially on IAs in government organisations. Fremgen (1985), suggests that, in business, depreciation is used to match income and assets as well as being used to measure a firm's income tax expense. As governments do not incur tax liabilities this leaves one purpose for recording depreciation in GPFR in maintaining capital maintenance of the government entity concerned. As IAs are a major asset of governments in size and value it is vital to determine the

importance of depreciation for determining the financial situation of the entities' operations.

Some of the areas of debate will be discussed: depreciation in government entities GPFRs; intergenerational equity; and asset registers. The first is relevance of depreciation on IAs in government entities. Is depreciation important for both GPFR users, internal managers, both of these or not needed at all? The relevance of depreciation to several specific issues will be considered later.

2.13.1 Generational Equity Issues

The next issue is generational equity which often involves value judgements and potentially emotional considerations. The debate is about whether each generation should pay for the governmental services that it receives. Governmental accounting should match tax (rates) and other revenues (the amount paid by the current generation) with expenses (the cost of government services consumed by that generation) in each period in order to determine the extent to which generational equity has or has not been achieved (Henke 1987, p.38). A quotation from Henke indicates that the accounting method used has a big influence on generational equity issues:

the most appropriate measurement of the extent to which generational equity has been achieved during a particular reporting period would seem

to call for matching the resources provided by taxpayers during that period for use during that period against the total resources consumed by service recipients during the period. This can best be achieved by using the full accrual basis of accounting that requires the accountant to distinguish between capital and revenue items, both on the expenditure and revenue sides, plus the recognition of depreciation of fixed assets (Henke 1987, p.21).

Using full accrual accounting method instead of modified accrual or cash accounting methods will be the most appropriate method to disclose the generational equity information in GPFRs. According to Henke modified accrual or cash accounting methods:

provides a very imprecise measurement of the extent to which generational equity has been achieved because of the failure to capitalise expenditures representing future potential service benefits and the failure to reflect as an outflow the depreciation of fixed assets...(Henke 1987, p.21).

The modified accrual accounting method recognises spendable resource inflows as revenues in the accounting period they become available. Outflows of resources are recognised as expenditures in the accounting period in which a fund liability is incurred. This method makes no distinction between inflows creating long-term obligations or outflows benefiting future periods, and those inflows or outflows earned and used during the reporting period. Also this method provides no recognition of depreciation of long-term assets including IAs. This shows the importance of the change in accounting methods and information in GPFRs especially in the public sector in equity issues in different generations of taxpayers or ratepayers on IAs and their depreciation.

2.13.2 Accounting Records and Policies

Another issue is the implementation of accounting policies and use of depreciation financial information. The question here is should accounting systems require the collection and processing of depreciation data that may or may not be relevant to the information needs of users of GPFR of government entities, internal management requirements or both. The most commonly mentioned accounting systems consideration is the role of **depreciation** as an **integral** part of the **accrual basis** of accounting. To determine if the omission of depreciation makes the resulting accrual accounting GPFR less useful is a legitimate question, which returns the focus of the debate to the issue of relevance.

The next area is the date of acquisition of IAs. Detailed asset records will not be difficult to maintain as they are acquired. The problem is that for assets acquired prior to accrual accounting, implementing depreciation policies may cause practical problems. As property records had not been maintained or did not include necessary data to support depreciation computations, it might be necessary to make an extensive search of other records or make estimates of depreciation data, for example, estimated remaining economic lives and replacement cost of IA components (Fremgen 1985, p.14). This is an area where Lapsley (1986) found that implementation of converting from modified

accrual to full accrual accounting system was a major problem for the accounting staff involved:

however, it is important to note that a dominant factor in determining the preferences of accounting methods of finance officers in Local Authorities was the feasibility of implementation of depreciation accounting. Numerous difficulties were envisaged (particularly asset identification and estimation of useful lives). A further reservation was whether adequate staffing and resources would be made available to implement depreciation accounting effectively (Lapsley 1986, p.292).

Fremgen (1985) also mentions that depreciation could be used as a surrogate for other information that is truly relevant but difficult to measure. This can be seen from Lapsley's quotation on the attitudes of accounting managers from Local Authorities. Here depreciation may be used as a means of providing visibility for fixed assets that are pertinent to plans or operations but that otherwise would not seem to fit into financial analyses and reports. He suggests that depreciation might serve as an indicator of the age and declining usefulness of assets and, thus, as a reminder of the need for replacement which would be useful for both internal (managers) and external users financial information.

2.13.3 Effect of Depreciation in GPFs

The most substantial arguments regarding the role of depreciation in government accounting are those that focus on how depreciation is or is not relevant to information needs of various users of governmental reports (Fremgen 1985, p.15). Fremgen states that, *there is general agreement in*

publications of authoritative bodies that governmental accounting should provide information that is useful for five purposes:

- assessing the financial viability of a governmental unit;
- determining management's fiscal compliance with legal and fiduciary requirements;
- determining the costs of government activities and services;
- evaluating the performance of managers and organizations; and
- financial planning and resource allocation (Fremgen 1985, p.16).

Incorrectly calculated depreciation costs on these assets may cause serious problems in a local council's financial statements and decision making for internal and external users. Empirical work by Elliot (1991) in this area which was completed just before the change from modified accrual accounting to full accrual accounting revealed a huge difference in the reporting of depreciation on infrastructure assets (IAs). Using modified accrual accounting where depreciation on IAs is not reported, three councils' operating statements showed surpluses but when the three councils' accounts were reconstructed using an accrual accounting method the results were very different. An estimate was made of the written-down-value of these infrastructure assets and the annual depreciation charge of these three municipalities under AAS27, amounted to operating losses of \$10M, \$12M and \$17.5M (Elliot 1991, p. 15).

Comments on these differences caused by using different accounting methods in accounting for IAs started the confusion and contention on whether

depreciation should be reported, whether the methods of depreciation allowable under AAS27 are suitable for IAs, what effect depreciation would have on the level of rates levied, intergenerational concerns and the effect on internal and external financial decision making? To help alleviate these concerns, several research studies were completed (Lapsley, 1986; Van Daniker and Kwiatkowski, 1986; Rowles, 1992; Victorian Office of Local Government Standing Committee on Financial Reports, 1993 and 1994; Peirson and Ramsay, 1994; Molland and Bellamy, 1997; Facing the Renewal Challenge, 1998; Lee, 1999; Van Daniker and Harris, 1999; Walker, Clarke and Dean, 1999 and Pilcher, 2000) but these reports only widened the debate. A study (1993{d}) of the first year GPFRs produced by local municipalities under AAS27 by the Victorian Government of Local Government Standing Committee on Financial Management suggested that depreciation may not be as significant as Elliot (1991) indicated in terms of its effect on the operating statement's profit or loss:

while it is difficult at this stage in the transition period to predict likely depreciation trends, these results suggest that the effect on the Operating Statement may not be as significant as at first anticipated (Victorian Office of Local Government 1993 {d}, P.19).

Molland and Bellamy (1997, p.36) questioned whether the study fully allowed for the three year grace until 1996-97 to be included in financial statements. So at the time of the Victorian Local Government Study most local authorities did not know what amount their depreciation would be. As at 1996, a study showed that the determination of depreciation might not be fully reflected in financial

statements (Molland & Bellamy 1997, p.36). Sixty percent of Victorian local authorities did not know or disagreed that depreciation rates **fully reflect** the consumption of their infrastructure assets in depreciation calculations.

Different opinions have evolved on whether IAs do depreciate. Depreciation of assets in the private sector and in some public sector entities is an uncontroversial accounting process. According to SAC4 depreciation is concerned with measuring the cost of consumption of asset service potential which normally results from the use of non-current physical assets, except land. However as an accounting process applying to IAs, either owned or controlled by local authorities, depreciation has become a contentious issue. Often confused is what definition is being applied to depreciation which may describe charges unrelated to the consumption of asset service potential.

Some view IAs as having infinite or very long lives, which, with certain expenditure on maintenance and replacement (normally regarded as expenses or capital), can be maintained or renewed indefinitely. So if this is the situation, then the concept of depreciation, representing the cost of consumption of asset service potential is not contemplated.

This confusion and reluctance by local authorities to appreciate the reported benefits of accrual accounting has lead to the contentious issues of the appropriate method of depreciation to be used when reporting the consumption

of IAs or whether depreciation should be applied to these assets. Different viewpoints and methods include: conventional forms of depreciation allowable under AAS27 (straight-line and reducing-balance); condition based depreciation (Burns, 1993; Sing 1998; and Burns et al., 1998); and renewal accounting which does not accept depreciation being allocated (Currie, 1987; Ma & Mathews, 1992; Neilson, 1993; and Pallot, 1995). Each method has different consequences for financial statements and economic decision-making. Also, not all of those methods may be acceptable under the Australian Conceptual Framework for Financial Reporting.

2.13.4 Depreciation of Infrastructure Assets

AAS27 also requires that all depreciable non-current assets be depreciated in accordance with *AAS4 Depreciation of Non Current Assets*. The depreciation of non-current assets is covered in the 'expense' category in SAC 4 (para.101):

“expenses” are consumptions or losses of service potential or future economic benefits in the form of reductions in assets or increases in liabilities of the entity, other than those relating to distributions to owners, that result in a decrease in equity during the reporting period.

Depreciation of infrastructure assets in particular is covered by AAS27 (para.45), which requires that although such assets are long-lived, they still need to be depreciated:

it is sometimes argued that depreciation should not be recognised in respect of long-lived assets such as buildings, monuments, roads, bridges

and underground pipes, because they do not wear out. The view adopted in this Standard is that, with rare exceptions, the service potentials of long-lived assets do expire over time, notwithstanding proper maintenance. Accordingly, depreciation of long-lived assets is to be recognised as an expense, except in respect of those assets that have unlimited useful lives, such as most types of land.

The consumption or loss of service potential must be probable and be able to be measured with reliability. The consumption or loss of service potential from infrastructure assets needs to be recorded as depreciation under AAS27 requirements (para.42 to 45). Earlier in this chapter it was mentioned that before AAS27 was introduced in 1992, depreciation was a non-funded expense in a council's operating statement and did not impact on rating assessments, which are determined by the cash budget. In the Harrowfield Report (1990), concerns were expressed that the introduction of full accrual accounting would have a major effect on rates as a result of the provisions made for depreciation of assets in the Statement of Financial Position. The Committee concluded in their report that provisions for depreciation on fixed assets do not have to be *funded* on an on-going basis from rate revenue. This position was followed under the then Regulations which operate in Victoria for local authorities (Victorian Municipal Accounting and Audit Practices Review Committee 1990, p.51) which have now been amended to require the use of accrual budgets but rate determination is by cash budgets. A senior local government officer on the above Committee has suggested that since after the phase-in period for IAs and depreciation in GPFRs the position of the Victorian Office of Local Government is that rate determination should include IA depreciation.

The municipalities' viewpoints on depreciation are a major area of interest in this study; understanding their attitudes will be significant for the research results. Discovering the current situation in reporting attitudes from the accounting staff involved in the reporting AAS27 requirements in the three areas: recognition; valuation; and depreciation will be of importance as suggested by Lapsley (1986) earlier. There are different views on this contentious issue of accounting for depreciation.

2.13.5 Alternative Viewpoints on Depreciation

Different viewpoints on depreciation methods will be considered. Methods include the conventional form of depreciation (straight-line and reducing-balance), condition-based depreciation (Burns, 1993) and renewal accounting which does not accept depreciation being allocated (Pallot, 1995; Currie, 1987).

Peirson and Ramsay (1994), quoted Thomas' (1969) views on selecting a conventional form of depreciation using an arbitrary approach:

..... given the present state of allocation theory it often will be impossible to give theoretical justification of accountant's allocation methods, no matter which method he chooses (1994, p.19).

This quotation shows the debate that can occur on the method and rate of depreciation. It is important to remember that it is cost allocation and is informed

estimates that reflect the consumption of the IAs. The Asset Accounting Manual produced by the Victorian Institute of Municipal Management (IMM) and Victorian Office of Local Government (VOLG) suggested that for practical purposes the two likely choices will be straight-line and reducing-balance depreciation methods for municipal activities:

straight-line: this method provides the means of calculating depreciation charges for assets which expire at a constant rate over the assets' useful life. It is the most commonly adopted method mainly because of its simplicity.

reducing balance is where depreciation charges decrease from reporting period to reporting period. Decreasing charges resulting from the application of this method can be justified where an asset is expected to yield more service in the earlier reporting periods than in the later (Victorian Institute of Municipal Management (IMM) 1992, p.116).

These definitions are given to municipal officers in the Asset Accounting Manual for information on depreciation methods. The manual provides a list of assets including IAs with their expected straight-line depreciation rate, for example, road pavement seal has a 20 year useful life and the sub-structure has a 100 year useful life.

2.13.5.1 Renewal Accounting

Renewal accounting applies on the basis that infrastructure assets have an indefinite life if properly maintained. Consumption of service potential is not considered to apply in this situation. A cash accounting approach is used in *renewal accounting*, in which all expenditure on infrastructure assets is written

off as an expense in the operating statement, a weakness of this type of accounting method. Currie (1987) suggested concerns from managers about the applicability of both current and historic cost accounting to industries, for example, water authorities, which have huge IAs. Currie argues that the private and public sectors followed different paths. In the public sector investment in IAs was financed by borrowing, so the repayment of the borrowing was charged against revenue instead of depreciation. The financial reports were cash based. Under renewal accounting there is no recognition whether repairs are an expense or capitalisation of the IA in the reporting period. The method does not use depreciation and the loss of service potential is not reported in the GPFRs which gives an indication of the full cost of consumption from the IAs in the period concerned. Currie believes that renewal accounting provides a better means of accounting for IAs than depreciation accounting methods (Currie 1987, p.7).

Currie (1987) suggests that a workable depreciation accounting system is: reliably estimated economic life; a cost for the asset (or with each component of the asset if the components have different lives); and the ability, when the asset or component of the asset is retired, to be able to identify the cost and related depreciation so as to be able to account for the retirement. He suggests that most commercial assets meet these requirements and that depreciation is an admirable approach to measuring the cost of consumption of assets in a

majority of commercial situations if the requirements as listed above are met (Currie 1987, p.8).

He believes that IAs do not fit the above criteria. Major civil engineering works, for example, highways and dams have little alternative use and their lives are very long and almost impossible to quantify. Network assets, which are constructed in blocks or as systems within which it is difficult to define boundaries of costs which are going to be useful in accounting for discrete assets, for example, railway tracks and roads. As previously discussed it is highly unlikely that the assumptions made by Currie are correct. These assets are being renewed but the whole block of assets is unlikely to be replaced at any time in the foreseeable future. Two questions arise: If IAs are not to be replaced but components continually renewed, there is a risk of double counting renewal costs and current cost depreciation at the same time and how can asset records be best maintained for IAs of interlinked assets of which components are likely to be replaced in piecemeal fashion (Currie 1987, p.8)? One question that is not answered by the proponents of renewal accounting is how do they handle a change in service potential or do they ignore this issue? This again involves how they account for repairs which increase the economic life of IAs. According to Doyle and Thompson (2000), proponents of renewal accounting, IA components do have finite lives which can be identified and used in management decisions on replacement of the IA components:

the network would include many components, each with different age profiles and curves showing the relationship between deterioration in the condition of the assets and time, so that the summed network value is stable and its life indefinite because its continued existence is dependent not upon the physical characteristics of the asset but entirely upon management's intention to continue to maintain it at its current level of service capacity (2000, p.14).

The above quotation disagrees with Currie's views about the information known on IA components and their expected lives in the overall network (IA). Doyle and Thompson indicate that this level of information is known and is used in renewal accounting. If this is the situation then traditional depreciation should pose no problems in determining the economic lives of the components in IAs.

Hay (1994) is another author supporting renewal accounting and suggests that in organisations using historic cost for IAs it is often difficult to determine if the network is built up over a long time. Also, depreciation is a problem because the expected life is difficult to estimate and could be very long (Hay 1994, p.35). AAS27 allows for current-cost method (written-down replacement cost) which overcomes one of the problems mentioned by Hay. Burns, who is an advocate for CBD, rejected claims that it was difficult to estimate the economic life of IA components. This argument depends on the definition of IAs for reporting purposes which Anthony (1978) mentioned as important.

This approach to *renewal accounting* involves recognising decreases in the condition of an infrastructure asset. These decreases are called *deferred maintenance* to avoid confusion with the concepts of depreciation. As long as

infrastructure is renewed, the deferred maintenance amount reported in financial statements is zero. When required maintenance programs are not completed, the cost of the backlog of *deferred maintenance* appears in the financial statements. No depreciation is reported under *renewal accounting* (Pallot, 1995). Hay (1994) mentions that more sophisticated renewal accounting methods allow for adjusting for maintenance costs. Proponents of this method criticise the arbitrary nature of depreciation policies but Hay suggests that:

renewal accounting requires arbitrary decisions about the amount of maintenance required over a given period, and the level to which assets such as roads are to be maintained (1994, p.39).

Jensen discusses the loss of service potential using either the renewal accounting method including deferred maintenance or a traditional depreciation method:

when both are introduced well, both approaches may produce very similar measures of change in service potential in financial statements. However, the difficulty of determining sensible network sub-assets, producing reliable estimates of IA lives, deciding when to expense and when to capitalise, and preparing asset management plans, should not be under-estimated (1996, p.66).

The quotation shows that the major objection to depreciation is for practical reasons not theoretical. This shows that some of the proponents of renewal accounting do not know or accept the treatment of expensing or capitalising repairs and replacements. An interesting article makes a comparison of two English companies accounting for their IAs using different policies. One company provides water and the other company provides gas. The situation is

allowable in both the English private and public sectors because there is no accounting standard which is similar to Australia where AAS27 uses the accrual method under which valuation and depreciation of IAs have to be completed:

British Gas and the water companies adopt very different accounting policies for activities which are, *prima facie*, very similar. British Gas primarily uses replacement cost with historical cost for comparison purposes.....depreciates its network over 60 years, whereas the water companies do not depreciate.....by contrast the water companies *smooth* maintenance costs via use of provision for infrastructure renewals expenditure (Clatworthy, Jones & Mellett 1997, p.36).

Both the gas and water industries thus have extensive pipeline networks. However, while British Gas's network loses little through leakages, the water industry network suffers material water loss. *Prima facie*, British Gas's network would seem to be relatively intact, while that of the water industry has depreciated. However, this is not reflected in their respective depreciation policies. Essentially, British Gas depreciates its network, but the water companies do not depreciate theirs (Clatworthy, Jones & Mellett 1997, p.36).

The water companies argument for not charging depreciation (i.e. that the networks are to be maintained in perpetuity) recognises that the company will always have an obligation to provide its customers with water and will always require the infrastructure to fulfil this obligation. Although logical, this argument appears less convincing given that other companies with infrastructure assets, including Rail track, BT and National Grid, have contractual obligations to maintain their networks but still charge depreciation on them in addition to maintenance expenditure. Rail track, for example, has an obligation to provide a rail network for the foreseeable future but still charges depreciation on its infrastructure assets. Rail track could also argue that its network must be maintained in perpetuity. The water companies' approach also appears *prima facie* inconsistent with the ASB's recent discussion paper, *Measurement of Tangible Fixed Assets (October 1996)*, as paragraph 5.24 states that the estimate of a tangible fixed asset's useful economic life should not assume a limitless extension through maintenance, refurbishment, overhaul or replacement of components'. On the face of it, therefore, the water companies rather than British Gas seem to be out of step when compared to other privatized companies (Clatworthy, Jones & Mellett 1997, p.38).

This shows that the water industry, which is used by proponents of renewal accounting as a good example of how it applies to accounting for IAs, is not as good (Currie, 1987), as they actually make out the water industry to be.

2.13.5.2 Condition-Based Depreciation (CBD) Method

Burns proposes the use of the Condition-Based Depreciation (CBD) method as an alternative to traditional depreciation methods. Claims are made that this method is more useful for both internal and external decision-making and more reliable. The benefits are:

- greater ease of calculation;
- greater credibility, accuracy and relevance because depreciation is a by-product of operational management; and
- a more useful presentation format for management (Burns 1993, p.90).

Burns states how CBD works in practice:

in simple terms, the agency assesses what needs to be done to maintain the operating capacity of the asset – be it water network.....etc. It considers all work to be done by way of major maintenance, replacement or rehabilitation, simply to maintain the current capacity and standard of operation. (a master asset plan would add upgrades and extension, i.e. new capital works, to this assessment of capital maintenance, to make a complete asset-management plan)(Burns 1993, p.98).

The question here is; if they have this much information where is the difficulty with any accounting method? Also, replacement and rehabilitation are new concepts used here which really mean new capital expenditure.

Sing (1998) is another author who supports the CBD method and mentions the difficulty of charging both maintenance and depreciation without having double counting problems:

accountants may raise a depreciation charge against the operating result for the financial year; but IA managers may object to such a charge being raised against their assets following maintenance and renewal work that has restored any loss in value experienced through physical deterioration. Such an objection raises a question as to the purpose and relevance of accounting for the depreciation of IAs (Sing 1998, p.56).

It appears that an assumption has been made that the loss in value exactly equals the cost of maintenance. This is a refusal to distinguish the issues or, worse, equating them. This presents a logical conundrum—why did this *loss* occur if their arguments were valid? This brings in the point that of: if the information is that good, there is no problem; If not, depreciation charges highlight the assumptions made. Sing has made a mistake about how depreciation is applied:

the concept of consumption, or loss in service potential, is based on the premise that depreciation is a decline in value, with the most appropriate measure of this reduction being the cost of restoring that value. Further, methods developed under this concept (i.e. Renewals annuity) estimate depreciation from the condition of the asset and not as a percentage of its balance sheet value (i.e. straight line)(Sing 1998, p.58).

This shows that the problem of not knowing the differences between concepts (depreciation, renewal and maintenance) creates myths about what is being reported and for what purpose. All of these concepts are needed for the reporting of IAs and they are not mutually exclusive. Depreciation and

maintenance are both needed and the level of maintenance *will* have an effect on the depreciation which actually *occurs*.

The definition of the IA for reporting purposes is important. The complete IA may have an indeterminable life but is made up of a network of assets each with finite lives and different economic lives. Maintenance is needed on the IA to obtain the optimum economic life out of each of the finite assets that make up the IA. Each finite asset of the IA will have a shorter economic life at the end of the financial period than at the beginning of the period no matter how much is spent on maintenance. Depreciation measures the consumption of the individual assets that make up the IA and is recorded as a depreciation expense in the Statement of Financial Performance and reduction in the total amount of the IA in the Statement of Financial Position.

CBD was rejected by the Urgent Issues Group (UIG):

the UIG agreed that depreciation methods would not comply with AASB 1021/AAS4 *Depreciation* where the methods (including CBD & renewals) do not determine depreciation by reference to the carrying amount of the asset and where they do not differentiate between maintenance and capital expenditure or account separately for major components of complex assets when necessary (Abstract 30 *Depreciation of Long-Lived Physical Assets, including Infrastructure Assets: Condition-Based-Depreciation and other Methods*' 2000, p.5).

The Urgent Issues Group of the Australian Accounting Standards Board investigated the application of CBD methods in 1999 because there were concerns that they did not meet the requirements of accounting standards. As a

result, an Urgent Issue Group (UIG) Abstract 30 was issued in January 2000, clarifying the Board's position:

- the depreciation expense is not determined by reference to the depreciable amount of the asset;
- the depreciation expense is determined without consideration of technical obsolescence, potential changes in consumer demand and related factors that can influence the consumption or loss of the asset 's future economic benefits during the reporting period;
- expenditure on maintenance and enhancement of the asset's future economic benefits are not separately identified where reliable measures of these amounts can be determined, and are not recognised as an expense of the period in which the expenditure was incurred (in the case of maintenance expenditure) or as an asset (in the case of asset enhancement expenditure);
- the asset is presumed to be in a steady state and a renewals accounting approach is adopted, recognising all expenditure on the asset as an expense in the period in which it is incurred without considering whether that expenditure enhances the future economic benefits of the asset; and
- the method does not separately identify major components of complex assets or amount for them as separate assets where necessary to reliably determine the depreciation expense of the reporting period (Abstract 30, 2000).

The above Abstract appears to address most of the depreciation and maintenance cost difficulties identified by proponents of renewal and CBD methods.

A prominent engineer (Blore, 1989) wrote in 1989 on the use of depreciation for IAs especially roads. The principle of depreciation allows a measurement in financial terms of the rate of consumption of the value of an asset in producing the service benefits. The application of a depreciation mechanism used to reflect

the finite life of the road asset according to him is considered sound accounting practice. The actual method applied, whilst attempting to reflect the current asset value, does not necessarily pretend to correspond to actual value at any point. Whilst the reducing balance method might most accurately portray the value of an asset which depreciates rapidly in the early years for use (for example, a new car), in the case of roads, where deterioration accelerates towards the end of the economic life, the increased maintenance expense offsets the reduced benefits obtained from the asset because of the aging process and the reduced rate of return achieved. Hence, depreciation on a straight-line basis in accordance with the mechanism (factor the asset value for age) is considered to convey adequately the status of the asset for both financial management and financial accounting purposes.

2.13.6 Depreciation Issues

A paper by Turner (1992), a senior manager from Vicroads, on the valuation methodology for local roads indicates the issues faced when changing to accrual accounting. Vicroads had many issues when changing their accounting system to accrual accounting for GPFR purposes. A summary is set out from a senior accounting manager from Vicroads who was involved in the process of the change in accounting systems. In accounting for depreciation and establishing depreciation rates, a critical factor to the process was the age or life expectancy of the assets for Vicroads. Schedules showing the age of the assets provided

users with an insight into the timing of the need to replace or rehabilitate assets or to face major increases in maintenance costs. Meaningful information on the age of the assets was required for a comparison with their expected useful lives. This information allowed users to develop estimates of the amount of time that assets will remain in service.

Age disclosures can provide an indicator of future capital needs, however, to be useful, certain factors must be taken into consideration, for example:

1. the actual useful life of an asset may differ from that anticipated depending on the maintenance and other factors;
2. the estimated useful life may be affected by climate and other conditions (e.g., poor drainage, heavy vehicles, etc.); and
3. new technology may render an asset obsolete prior to the end of its expected life.

Detailed data records can focus attention on questions such as the following.

1. are assets approaching the end of their useful lives going to be replaced? If so, how will the replacement be financed?
2. how will maintenance requirements be affected by an increase in the age of the assets?
3. if the assets are not replaced, how will services be affected? Will services suffer from the use of outdated or malfunctioning assets? How will reduced services affect business and quality of life within the government's jurisdiction?

4. how do anticipated maintenance expenditures coincide with life cycle of the assets?

In order to develop appropriate depreciation methods, Vicroads engineers estimated a standard life expectancy for the infrastructure assets based on the assumption that the assets are fully maintained. These estimated standard lives are:

- | | |
|-----------------------------|----------------|
| 1. Land | infinite life; |
| 2. Roads | 80 years; |
| 3. Bridges & Major Culverts | 80 years; and |
| 4. Traffic signals | 15 years. |

Turner (1992) concluded that public infrastructure assets are subject to different laws of nature and obsolescence than similar assets of business entities and that the eventual using up or depreciation of most of these assets occurs. Recognising depreciation as a periodic charge in the operating statement is generally the using up of assets which involves an event, or a sacrifice in service potential, which is a cost of providing services in the accounting period. It can be argued that a charge for periodic decline in service potential, calculated without reference to how the asset is financed, will assist users in assessing an entity's service efforts, costs and accomplishments. Omitting this charge may result in a misunderstanding about the economics of providing governmental services and may contribute to inefficient management of public assets.

For Vicroads a charge for depreciation on some valuation was needed to help users assess whether current year revenues were sufficient to pay for current year services (i.e., use of assets) or whether future generations of taxpayers are assuming the burden for costs associated with services previously provided. Depreciation based on current cost valuations, will provide an indication of future replacement needs. Also, operating deficits caused by recognising depreciation expense will be a factor in explaining the level of funds required to replace and maintain the capital investment.

Vicroads depreciated its infrastructure assets (except the land component which has an infinite life) using the straight-line method based on the standard asset lives mentioned previously. By depreciating at replacement cost, the economic cost of the assets was matched against the economic benefits received which provides a clear indication of the funding required to replace the asset when it becomes necessary.

No matter how well assets are maintained, eventually they will have to be replaced. For Vicroads it is not unusual for maintenance expenditure, required for an asset to reach its economic life, to be delayed or deferred. One of the affects of deferring maintenance may be to shorten the asset's useful life. In such cases, the original estimate of the assets useful life may need to be adjusted with consequent adjustments to the rate of depreciation. It should be

noted that maintenance keeps the assets at operating condition whilst depreciation reflects the fact that assets, no matter how well they are maintained, will eventually be replaced either through obsolescence or because they will no longer be able to be repaired to an acceptable standard.

A quotation from Turner (1992) indicates the need for depreciation on IAs for user-pays principles:

If Vicroads ever move to a user pay approach then depreciating on current cost and provision for depreciation should be used so that the whole cost can be taken into account. Even if user pay funding is not used the accounts will represent the real level of funding required to preserve and maintain our infrastructure at today's prices along with keeping capital intact (Turner 1992, p.8).

In capitalising Vicroads infrastructure there were many practical problems. These problems included.

1. which assets come under the definition of infrastructure? How can these assets be identified? How do we value these assets?
2. how do we make the community more aware of its dependence on infrastructure? How can we focus the attention of managers on the implications of asset management and replacement?
3. how to make estimations of age, useful life, remaining, standard life, etc. which will rely on setting acceptable standards?
4. how do we distinguish between capital expenditure and maintenance expenditure?

5. what information is held on infrastructure in our databases and do systems need to be changed or developed to account for it? and
6. how do we value at current cost? How will we revalue at current cost?
Do we need appropriate indices or expert valuations?

Some of the solutions included:

1. the design of appropriate fixed asset registers and computer systems;
2. devising useful techniques for distinguishing between capital and maintenance expenditure;
3. developing a closer working relationship between the accounting and engineering fraternities;
4. discussing and agreeing on standards;
5. developing a consistency in our approach with other states and local government; and
6. developing improved reporting mechanisms.

This showed that the experience at Vicroads on the above practical problems were overcome within a framework of traditional accounting concepts.

Determining the useful life of a long-lived asset is an area of subjectivity and in, some cases, variation. The useful lives of many local government assets will be determined by local government policy and practice. Guidelines are contained in the Asset Accounting Manual (Section 9) released by the Victorian Standing Committee and Victorian Institute of Municipal Management in May 1992. Hall

Chadwick (1992) indicated that determination of useful life is a matter of judgement as is the valuation method, and that written-down replacement cost will need detailed documentation. Using cost allocation method for the depreciation avoids the valuation method and gives depreciation the traditional meaning:

depreciation accounting is a system.....which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life...in a systematic and rational manner. It is a process of allocation, not of valuation (Chadwick 1992, p.25).

The above statement is often confused by readers of GPFRs who sometimes misunderstand the written-down value of the IA as the realisable amount. The basis for valuation and depreciation policies will need to be disclosed and workings retained by municipalities for their auditors to form an opinion on the criteria adopted. This area of concern will be investigated.

Chapter III

Methodology

3.1 Motivation for Study

Observation of and anecdotal evidence from local government suggests that the adoption of full accrual accounting procedures as required under *AAS27 Financial Reporting by Local Governments* has presented a number of challenges to councils, in particular the identification and measurement of non-current physical assets such as IAs.

At present there is a dearth of independent reported research (Section 2.8 and 2.13.2) into this contentious area at a local authority level and what literature is available espouses normative approaches, normally favouring a particular method of depreciation. The principal area of investigation in the present study is *AAS27* and accountability with emphasis on depreciation as the critical test concentrating on the implementation of IA accounting and the utility and relevance of depreciation accounting in local government municipalities that has not been completed at this level by other research studies.

The study will provide a detailed examination on the views of the finance officers and council policies on IA and depreciation information for decision-making by internal and external users. This is an important area because the preparers of GPFs have a significant influence on the information used for both internal and external purposes. Conclusions on the consequences of current practices and recommendations for change will be developed to assist local authorities and enhance information to be included in council policies (for example accrual budgets and rating estimates) and GPFs.

3.2 Research Method

The research study is to be primarily descriptive in nature. The steps to be undertaken in this investigation include:

1. literature review and informal discussions;
2. data collection (interviews, questionnaire and GPFs);
3. data analysis (interviews, questionnaire and GPFs); and
4. deduction.

As indicated earlier, observation and preliminary information-gathering suggested that councils might have problems in accounting for infrastructure assets and relevant depreciation.

The first stage was a comprehensive review of the Australian literature on the recognition, measurement, recording and depreciating of infrastructure assets.

Informal discussions were held with senior officials from local government authorities. A comprehensive examination of relevant secondary data, which included: the GPFRs of the local authorities; Victoria Grants Commission statistics; Vicroads; and other data published on infrastructure depreciation was carried out. This information was used to indicate which questions on various issues would be used in the interviews. The information was also used after comparing interview responses in the design and issues raised in the questionnaire.

The second stage was interviews with fifteen senior financial managers from a cross-section of fifteen Victorian councils. The questions in the interviews enabled detailed and comprehensive answers on technical and practical issues associated with IA and depreciation accounting under AAS27 to be sought. Later contact with the interviewees confirmed the accuracy of the transcripts.

The third stage involved the analysis of the interviews. This was completed to identify any issues not found in the literature and also to gauge the importance of the issues compared to the literature. This information was used in the design of and issues raised in the questionnaire.

The fourth stage involved the generation of new data by means of an administered questionnaire to CEOs in all local authorities. The sample and population were the 78 Victorian local authorities. The specific details of the

questionnaire were not determined until the first and second stages of the research had been completed. The information sought would relate to the accounting systems and accounting policies adopted by each of the local authorities concerned. Questions included: Did the decisions based on depreciation costs achieve the objectives? What information was necessary to make decisions that were 'successful'? A list of the Victorian Councils is in Appendix 3.1.

The fifth step was the analysis of the data contained in the questionnaire. The survey sought both qualitative and quantitative data. As the data collected contained quantitative elements, the analysis was conducted using the statistical package SPSS (Version 10 Windows).

The sixth stage was a comprehensive review of local council GPFRs. The purpose of the review was to identify the type of financial and non-financial information on IAs and depreciation in GPFRs. A sample of 19 percent of the 78 Victorian Councils was used. This consisted of three councils from each of the local government categories which are: inner metropolitan; outer metropolitan; regional cities; large shires; and small shires. A random selection within each group is how the councils were selected as the sample.

The seventh stage was the write-up of the thesis with the conclusions and recommendations of the study.

The interviews, questionnaire and examination of GPFRs provided for effective triangulation of the data collected.

3.3 Preliminary Data Gathering

To delineate the research problem more precisely, a preliminary data-gathering phase was undertaken; this involved a literature review and informal discussions with senior officials from local government organisations (for example, Victorian Office of Local Government and Victorian councils).

The literature review reported in Chapter 2 highlights areas of disagreement and usefulness of *AAS27* and the *Statements of Accounting Concepts* (SACs) in accounting for IAs and depreciation. It also indicates the nature of the issues that ought to be investigated and the appropriate ways to gather data.

In the informal discussions with senior officials from local government it was indicated that the implementation of *AAS27* required a significant amount of resources and time. The areas of identification, measurement and depreciation of IAs were seen as especially important, with many issues resolved but some important issues remaining unresolved. The omission of these assets from financial statements *pre-AAS27* with, in some circumstances, only limited physical descriptions in engineers' asset registers meant that extensive identification, valuation and depreciation tasks had to be undertaken.

3.4 Research Problem

From the information gathered during the literature review and informal discussions, a research problem evolved. Currently, the form and content of local government financial reports are dictated by the theoretical requirements embodied in the SACs and mandated by State Acts of Parliament as well as by AAS27. The problem this study focuses on is whether AAS27 and accountability with emphasis on depreciation as the critical test has been achieved with IAs. However, research has revealed a low level of compliance by local authorities with the requirement, dissatisfaction with reports and a widespread lack of understanding of the information disclosed (Sing, 1998). The confusion and reluctance by local authorities to appreciate the above reported benefits (debate on whether these are real or claimed by certain parties) of accrual accounting has led to the contentious issue of selecting the most appropriate method of depreciation to be used when reporting the consumption of IAs or, indeed, whether depreciation should be applied to these assets. Different viewpoints and methods include: conventional forms of depreciation allowable under AAS27 (for example, straight-line and reducing-balance); condition-based depreciation (Burns 1993; Sing 1998; and Burns et al., 1998); and renewal accounting (Currie 1987; Ma and Mathews 1992; Neilson 1993; and Pallot 1995). Each method has different consequences for financial statements and economic decision-making. Further, not all of those methods

may be acceptable under the Australian Conceptual Framework for Financial Reporting, which comprises the Statements of Accounting Concepts referred to above. It is anticipated that this study will guide the selection of the most appropriate depreciation methods for different types of financial decisions.

The mandating of depreciation charges has given rise to debate at several levels, the central problem here is: AAS27 and accountability with emphasis on depreciation as the critical test.

Secondary problems which relate to this include:

- What information is necessary and sufficient for decisions relating to the use, maintenance and replacement of infrastructure assets?
- Has the charging of depreciation on IAs affected budgets, rating estimates and policy decisions?
- Has the charging of depreciation on IAs affected day-to-day management decisions?
- What are the implications of depreciation charges on IAs for intergenerational equity?

3.5 Questions Raised

The literature review and informal discussions yielded different views on how councils might respond to AAS27 IA accounting requirements as they relate to non-current physical assets in particular IAs. Some writers/senior officials thought councils were in a position to respond positively and efficiently. Others indicated that a number of councils struggled with the task of identification and measurement in reporting these assets that have direct implications on depreciation charges and decisions made as a result of these charges.

The above primary and secondary research problems (Section 3.4) gave rise to a number of questions which are reflected in the questionnaire. These questions are mutually exclusive but may apply to more than one problem. A list of the questions under the appropriate problem is given in Sections 3.5.1 to 3.5.4.

3.5.1 What information is necessary and sufficient for decisions relating to the use, maintenance and replacement of infrastructure assets?

What education is needed by staff to account for these assets?

What are the accounting policies for these assets?

Whose task is it to value these assets?

Whose task is it to value these assets?

What departments are involved in accounting for these assets?

How and when will depreciation of these assets be shown in the operating statement?

What are the auditors' thoughts on council's progress in accounting for these assets?

What education is needed by councillors and ratepayers to understand financial statements prepared under AAS27?

Where are these assets located?

What do the assets consist of, including their components?

What condition are they in?

Are they adequately recorded?

Are they being adequately maintained and depreciated?

Can they be rehabilitated or do they need to be replaced?

What decisions are made should they be rehabilitated or replaced?

What are the capitalisation policies for these assets for reporting requirements (distinguish between capital and maintenance expenditure)?

What are the depreciation policies including determining economic life and rate consumption for these assets?

What are the resources needed to carry out the implementation policies for these assets?

What will be the future costs to maintain or to replace these assets?

3.5.2 Has the charging of depreciation on IAs affected budgets, rating estimates and policy decisions?

What are the accounting policies for these assets?

Whose task is it to value these assets?

How and when will depreciation of these assets be shown in the operating statement?

What are the auditors' thoughts on council's progress in accounting for these assets?

What education is needed by councillors and ratepayers to understand financial statements prepared under AAS27?

Will this asset accounting information aid accountability, decision-making and/or internal management?

What do the assets consist of, including their components?

What condition are they in?

Are they adequately recorded?

Are they being adequately maintained and depreciated?

Can they be rehabilitated or do they need to be replaced?

What decisions are made should they be rehabilitated or replaced?

What are the capitalisation policies for these assets for reporting requirements (distinguish between capital and maintenance expenditure)?

What are the depreciation policies including determining economic life and rate consumption for these assets?

What are the resources needed to carry out the implementation policies for these assets?

What will be the future costs to maintain or to replace these assets?

3.5.3 Has the charging of depreciation on IAs affected day-to-day management decisions?

What departments are involved in accounting for these assets?

How and when will depreciation of these assets be shown in the operating statement?

Will this asset accounting information aid accountability, decision-making and/or internal management?

Where are these assets located?

What do the assets consist of, including their components?

What condition are they in?

Are they adequately recorded?

Are they being adequately maintained and depreciated?

Can they be rehabilitated or do they need to be replaced?

What decisions are made should they be rehabilitated or replaced?

What are the capitalisation policies for these assets for reporting requirements (distinguish between capital and maintenance expenditure)?

What are the depreciation policies including determining economic life and rate consumption for these assets?

What are the resources needed to carry out the implementation policies for these assets?

What will be the future costs to maintain or to replace these assets?

3.5.4 What are the implications of depreciation charges on IAs for intergenerational equity?

How and when will depreciation of these assets be shown in the operating statement?

What education is needed by councillors and ratepayers to understand financial statements prepared under AAS27?

What do the assets consist of, including their components?

Are they being adequately maintained and depreciated?

Can they be rehabilitated or do they need to be replaced?

What decisions are made should they be rehabilitated or replaced?

What are the depreciation policies including determining economic life and rate consumption for these assets?

What will be the future costs to maintain or to replace these assets?

3.6 Data Collection

The purpose of the interviews was to discover how councils had progressed with accounting for infrastructure assets under AAS27. The interviews were

important to confirm or raise issues in addition to those drawn from the literature survey and informal discussions. The interviews were also important to find out from the ground level what issues were important and in the range of issues investigated in the questionnaire. Before both the interviews and questionnaire the interview format and questionnaire was submitted to the University's Ethics Committee for approval. This procedure aims to protect the rights of individuals that are asked to participate in research projects. Approval was granted before the interviews and questionnaire were administered. GPFRs were collected for a detailed analysis of financial and non-financial IA and relevant depreciation information.

3.6.1 Interviews

The issues from the literature survey and informal discussions formed the basis of the questions used in the interviews. The interviews sought to gauge the level of consensus of interviewees' opinions on the issues identified.

The questions were asked in the similar order with all interviewees. Those questions were intended to seek information about the topics listed in Section 3.4. Interviewees were either the finance manager or a senior staff member in the finance department. These officers were directly involved with IA accounting and depreciation of these assets.

Fifteen councils out of the *population* (78) were used as the *sample*. After looking at the council sizes, locations and rate bases (information supplied by the Victoria Grants Commission), the councils in Melbourne's telephone area code were selected. This included inner metropolitan councils, which have many very old infrastructure assets, and outer metropolitan councils, which have recently constructed these assets. A check of three councils in NE Victoria was undertaken to give an indication of whether their opinions were consistent with those of the sample councils. The check involved Wangaratta Rural City Council, Wodonga City Council and Moira Shire Council.

The councils interviewed (Appendix 3.2) ranged from older established councils, such as Stonnington City Council and Port Phillip City Council, to outer urban councils experiencing rapid new development, such as Nilumbik Shire Council and Whittlesea City Council. It was assumed that these developmental circumstances might have different implications for these councils in identifying, valuing and depreciating IAs. The interviews were expected to range from one to two hours.

Responses to the questions reflected, in some cases, the personal views of the interviewees and were not interpreted as necessarily being council policy. In most cases, the answers reflected council's policies on accounting for IAs rather than opinions as to whether this change should be occurring. This information

was analysed and used to design the questionnaire on issues that needed further investigation. The results of the interviews are analysed in Chapter 4.

3.6.2 Research Instrument

The literature and interviews highlighted issues that needed further investigation in the form of a questionnaire (refer to Section 3.5). The questionnaire had closed-response questions on the progress of councils in accounting and depreciation for IAs. Demographic questions and those calling for accounting numbers or statistics were seeking categorical answers therefore closed questions were appropriate in this case. The closed-response questions required the ticking of the appropriate box from a range of selections (five-point Likert scale). There was a section for respondent comments. The questionnaire is provided in Appendix 3.3.

The study was undertaken in Victorian local government with the population and sample being the State's seventy-eight local authorities. Victoria had been selected as representative of the other Australian states given that they share similar structures—with inner, middle and outer metropolitan councils and large and small rural councils—and have broadly similar responsibilities and powers.

The questionnaire was tested using a sample of senior finance managers from eight Victorian councils. Metropolitan councils included: Darebin City Council;

Port Phillip City Council; Glen Eira City Council; Monash City Council; and Stonnington City Council. All participants indicated that Section B (covering issues on identification, valuation and depreciation of these assets) was very relevant in accounting for these assets. They commented that they enjoyed completing this section and that it showed a technical and practical awareness of how they were progressing and of the different issues encountered. Three rural councils: Wangaratta Rural City Council; Wodonga City Council; and Moira Shire Council were tested. The questionnaire was amended in some slight respects to accommodate relevant comments obtained in the pilot study then distributed by mail to the 78 Victorian councils. Administration of the questionnaire is discussed in Chapter 5.

3.6.3 GPFRs Review

A letter was sent to all the Victorian councils requesting a copy of their 2000/2001 financial year GPFRs. A sample of fifteen councils was selected which represented three councils from each of the five categories used by local government authorities for financial analysis. These categories include: inner metropolitan; outer metropolitan; regional cities; large shires; and small shires. The review of financial and non-financial information in GPFRs is in Chapter 7.

3.7 Data Analysis

Three sources of data were analysed at different stages in this study. The interviews were conducted after the literature review and informal discussions with various local authority organisations' senior officers. The interviews were analysed before the questionnaire was designed. The questionnaire was analysed before the review of GPFRs.

3.7.1 Interviews

The data from the interviews were summarised in question order. Some of the summaries consisted of Tables with the number of interviewees answering the questions with the same answers recorded. The results were used to identify the issues raised in the questionnaire. The analysis of the interviews is in Chapter 4. A summary of the interviews is in Appendix 3.4.

3.7.2 Questionnaire

The information sought by the questionnaire is descriptive and quantitative so the analysis of the results will be completed using SPSS package (Version 10 Windows), which incorporates appropriate statistical functions. Conclusions on the consequences of current practices and recommendations for change will be

developed to assist local authorities, Victorian Parliamentary Public Accounts and Estimates Committee Report conclusions and for information to be included in General Purpose Financial Reporting. The responses of the questionnaire are analysed in Chapter 6. Appendix 3.5 contains the questionnaire with the responses received to each statement in a percentage format.

3.7.3 GPFRs Review

The information reviewed will be both financial and non-financial information in GPFRs. Three councils from each of the five categories were selected. A sample of 19 percent was used which would give representation of 78 Victorian councils using the five categories: inner metropolitan; outer metropolitan; regional cities; large shires; and small shires. The sample of council GPFRs will be used to review IA and depreciation financial and non-financial information. The analysis of GPFRs is in Chapter 7. Appendix 3.6 contains a list of council GPFRs reviewed.

Chapter IV

Interviews

4.1 Issues Investigated

As indicated in Chapter 2, many issues emerged in the literature review on accounting for IAs. To identify areas of concern to councils, interviews prior to the questionnaire were conducted with senior finance managers from fifteen councils. These interviews were intended to encourage the senior officers to respond in a detailed and comprehensive manner to questions on technical and practical issues. Each respondent was asked similar questions designed to explore issues raised. Several issues suggested inadequacy in the extant body of literature on accounting for IAs. The variety and insightfulness of responses led to identification of the real nature and relative importance of the different issues from either the councils' or interviewees' perspective that were used in the questionnaire. In the following pages the terms interviewees or councils are used in an attempt to distinguish between personal views and reporting council policies.

4.2 The Interviewees

The interviewees were all senior managers within the financial and/or infrastructure departments (for example, dealing with roads, bridges and drains). All had more than three years work experience within local government. Each gave his/her time willingly in participating in the interviews. Most responded positively on how their council was accounting for IAs under AAS27. Details given by the interviewees assisted in determining if the benefits or problems experienced by councils in relation to AAS27 were similar or were limited to several councils on both technical and practical issues in accounting for IAs and relevant depreciation.

4.3 Responses from Interviewees

The following information in this chapter is the questions and responses given by the interviewees from the fifteen senior council financial managers. Responses were not always definite and are recorded as a majority or minority response with a discussion on the issues raised.

4.3.1 Technical Issues in Financial Reporting of IAs under AAS27

The interviewees were asked a wide range of questions including: the purpose of the SACs; definition of assets; nature of IAs; purpose of AAS27; reporting requirements for IAs; and comparison of the public sector and private sector in reporting IAs.

Knowledge of the SACs by most interviewees ranged from very limited to none at all. Exceptions were recent accounting graduates, but some voiced the opinion that the SACs were not relevant or useful in accounting for IAs. In contradiction, they had found AAS27 useful (definitions and accrual accounting criteria, etc.) in accounting for these assets. Two of the interviewees who had more than ten years local government experience thought that IAs accounting was a waste of time and was irrelevant for decision-making. One interviewee (Interviewee 7) said:

fund accounting was like having jars of money for different services the council provided and gave anyone a clear indication of the income received and expenditure paid out. Where is this information under the new requirements, what a waste of time and money for useless information on assets you cannot sell and money you cannot receive for depreciation of IAs.

There was no consensus among interviewees as to whether there is a difference between the public and private sectors in accounting for IAs. Nine interviewees thought there was a difference between these assets and other physical assets.

Twelve interviewees thought that AAS27 accounting requirements were a real

improvement on previous fund accounting requirements for IA reporting and accountability.

4.3.2 Benefits of IA Information

When IA accounting under *AAS27* what benefits will this information have for accountability, decision-making and internal management? The responses to this question were positive and suggest that the reporting requirements of *AAS27* will enable more efficient asset management than under fund accounting. The councils reported that having IA records with current condition, age and value has heightened awareness of spending and maintenance requirements.

According to the majority of interviewees, there has been a marked improvement in accountability, decision-making and internal management under *AAS27* requirements for IAs. Several of these councils reported going beyond the *AAS27* requirements and completing comprehensive reviews of these assets for total asset management. It is anticipated that this will reduce their costs over a period of time due to the improved service potential of these assets and the more complete knowledge of their age, condition and maintenance needs.

Most interviewees were enthusiastic about implementing the requirements of AAS27 for IAs believing that accrual accounting would benefit both internal and external users of GPFRs. Those councils also indicated that the benefits mentioned above would outweigh the costs of implementation. However, there was a concern from all councils that the dynamic environment in local government could affect the quality and quantity of information on accounting for these assets, especially depreciation requirements. Some problems for the quality and quantity of information that could affect calculation of depreciation according to interviewees included: type of identification (simple or comprehensive of individual components of the IA); methods of valuation; comprehensive rates and values for depreciation; and implementing an efficient and effective form of asset management for these assets as discussed in the literature review.

Several interviewees believed that the benefits of accounting for IAs under AAS27 requirements will lead to optimum times for maintenance on IAs which will reduce overall expenditure over their useful life. Accountability for IAs has improved for ten councils, as a result of greater control and more details recorded. However, according to two interviewees, accountability has not improved under AAS27 accounting requirements. Three interviewees indicated that it was too early to give any indication on whether accountability of IAs has been enhanced. Interviewees were aware of the local government definition of

accountability and there was evidence of disagreement. As one interviewee (Interviewee 7) suggested:

who needs this level of information when the council cannot sell a road.

Whereas another interviewee (Interviewee 2) said:

it is about time a council knew the condition and value of a road so the cost of using that road can be properly recorded in the councils GPFRs and in budgets.

Decision-making on IAs for optimum maintenance programs, capital expenditure and efficient services to ratepayers has improved (local roads, sewerage and bridges) according to eight of the councils interviewed. Two interviewees indicated that there was no effect on decision-making from accounting for these assets under AAS27. Five interviewees suggested it was too early to know what the effect on decision-making was or would be.

Internal management has improved according to ten councils. Major advantages included: communication between departments; knowledge of the requirements of these departments as to their expenditure needs: the amounts to budget for on capital expenditure; and maintenance programs which all improved internal management for these assets. However, two councils claimed no effect on internal management when reporting for AAS27 requirements. Some councils also indicated it was too early to know if internal management had improved.

4.3.3 Identification and Valuation Problems with IAs

The interviewees were asked what problems were encountered in identifying or valuing IAs in implementing AAS27. The majority of interviewees reported experiencing some type of problem in identifying and/or valuing these assets. Councils found accounting for IAs to be resource-hungry and time-consuming. All interviewees indicated that many hours, involving all levels of staff, mainly in the engineering and accounting departments, had been involved. As one interviewee (Interviewee 14) said:

after years of having inadequate records under previous accounting systems the implementation of recording these IAs was difficult but not an impossible task with technology and methodologies of documentation being of a significant benefit in this process which will benefit both internal and external users of this information.

The interviewees could not quantify the number of hours to identify IAs. Computer systems had also been heavily utilised in accounting for these assets; in some cases, this task took priority over other requirements of AAS27 being completed.

In the area of identification and valuation of infrastructure assets, three councils contracted consultants. These councils expressed the view that the consultants were better equipped and had more knowledge of the issues than their staff. They also indicated that they used the consultants because they did not have

the resources internally. Twelve councils reported that auditors helped with advice on some problems that had arisen in accounting for these assets.

The engineers completed most of the task of identifying these assets. This exercise included:

1. visual assessment of road surfaces;
2. measuring road surfaces;
3. checking and identifying heritage assets; and
4. bridge and drain identification.

As indicated earlier some councils appointed outside consultants to help in their identification process. One consultant, Gutteridge, Haskins and Davey Pty Ltd (GHD), has been involved with three councils; all but one council said that their help has improved asset management significantly. GHD's claim is that their comprehensive method of identification for the councils has meant that each component of an asset has been accurately identified, the current condition assessed and valuation given. This, according to the literature (GHD, 1992) and to two councils concerned, will lead to a reduction of costs in relation to discovering the optimum time for maintenance or replacement of infrastructure assets.

In the time period 1992 to 1996 for the implementation of reporting IAs and relevant depreciation the reported drain on resources had been significantly

increased with two other areas taking priority over IA accounting. The two areas concerned were council amalgamations and Compulsory Competitive Tendering (CCT).

Amalgamation has reduced the number of councils in Victoria from 210 to 78. According to interviewees, amalgamations had several effects with two major areas of concern. First, as a result of amalgamation senior financial and engineering staff had left local government positions and that had further strained resources and delayed the identification and valuation of these assets in a post-amalgamation environment. Second, councils indicated that depreciation of IAs did cause problems in meeting CCT requirements. Amalgamation for councils also caused problems in accounting for these assets, since post-amalgamated councils needed to look at each pre-amalgamated council's asset accounting policies and derive a common set of policies to suit the new structure of the council. Some pre-amalgamated councils delayed plans to buy information systems for asset accounting until after amalgamation.

Fourteen of the interviewees indicated that as a consequence of AAS27 they updated their asset register records and included some IA records that were not formerly included. Engineering departments traditionally kept most of the records on infrastructure assets; these were used for their maintenance and up-keep programs. The records included physical measurement only and

sometimes the condition of the assets. Engineers, in most cases, needed to update their IA records to satisfy AAS27.

Valuation of drains caused most concern for the majority of councils because of identification problems. Roads, if identified properly, sometimes proved a problem to value according to the some interviewees because of applying terminology of methods in certain situations. From the councils interviewed, IAs proved easier to value than heritage assets.

The valuation of IAs in all fifteen councils was undertaken using the written-down replacement cost method. To record a valuation under this method a number of facts had to be known about the IA network. These included:

1. the current condition of each component of the asset;
2. length;
3. width;
4. depth of some assets (for example, roads and drains);
5. current cost of replacement of the components of each asset;
6. economic life of the asset; and
7. different ages of the one class of asset.

One interviewee indicated that the auditors had suggested using the deprival valuation method which, in the auditor's opinion, was more relevant for IAs. One approach using this method is called *greenfields optimisation* based on the cost

of replacing IAs in an open field with no traffic. According to this interviewee and other interviewees this was not the situation for councils and the valuation was confusing and misleading. The interviewees felt that replacement cost was more relevant for both internal and external decision-making. The majority of interviewees indicated that calculating the written-down value of these assets was a problem.

As argued in the literature review, it was important that the economic life of each component is used and not the overall life of the IA to perform depreciation calculations. This appeared to be the position in councils with the majority of interviewees indicating that they needed to determine the current condition of their IAs. As one interviewee (Interviewee 3) said:

this area of identifying the current condition of the IAs is time consuming but having this information helps in decisions about maintenance, depreciation and replacement of the components of the IA network.

The most commonly used method of achieving this was visual assessment of the features listed above except underground drains which needed in some cases underwater cameras which can be expensive. One council did value IAs without obtaining sufficient information but since that initial valuation had revalued these assets.

The identification and valuation processes had been very costly in time. For example, measurements of length and width of roads had to be taken with

measurement wheels, a very labour-intensive method. Discovery of the nature and depth of different layers (for example, seals, pavements and sub-structures) caused problems for most councils. In some cases, because of insufficient records, estimates were made. Other councils used the length and width of roads to aggregate the one class of asset without different depths and layers being taken into account for valuation and depreciation purposes. Under this method, a council's financial statements may under-state or over-state asset values and depreciation calculations. This could cause problems in asset management. The interviewees and the literature (Lapsley, 1986 and Turner, 1992) acknowledged that this may occur with insufficient asset records and valuations.

In ten councils an aggregate (broad identification of components) approach to identification was used, councils intimated that they refined the measurement of IAs to reflect a more realistic value. However, because of workload demands and staff movements in councils a more complete separation of individual components of the IA system, condition and valuation given to IAs was not reviewed until a much later date than had been anticipated. This was an area of concern and a hurdle to obtaining the real benefits of AAS27 (for example, asset management), which appears to have been overcome by the councils concerned.

In the identification of certain IAs, records were insufficient or did not exist prior to AAS27. IAs, such as roads, were visibly assessed for their current condition but others, notably drains proved difficult to assess in this way. Councils also used sampling when visual assessment was completed on roads. The sample was taken from existing records, which showed similar roads and condition. The results from the sample groups were generalised for the entire population of roads to determine their remaining life. This method proved to be the most cost efficient and gave results that, according to six interviewees, were highly representative of the actual remaining life of roads when tests were completed on the accuracy of the sample results. Five councils (older existing councils) indicated that not only did records on drains not exist, they did not know where or whether the drains existed; their invisible nature made their identification challenging. As one interviewee (Interviewee 1) said:

the only time we know where a drain is located that is over 50 years old is when it bursts.

One council used underwater cameras to determine the current condition of its drains. One interviewee indicated that drains existing prior to AAS27 still were to be valued.

Finding suitable software to record IAs, measurements and valuations has been another problem for ten councils. As indicated above, roads caused councils many problems, which needed appropriate software, these included

identification, aggregation, valuation and depreciation. Twelve councils indicated that in the majority of cases they overcame these problems. The valuation of land under roads proved especially difficult with all councils believing that such an exercise yielded a nonsense value and would not assist in any asset management decision. Although the Asset Accounting Manual recommended using municipal unit site value as a method of valuation for land under roads, many variances of this method were found to exist in the practical application of the method by councils. At the time it was required by AAS27 but is no longer required until the UIG (being reviewed by accounting authorities) investigate this area of GPFR reporting.

When AAS27 was introduced six of the councils being interviewed did not even have their accounting policies or timetables in place for the asset identification process in 1995. This fact was a concern to the councils themselves, local government authorities, accounting and auditing firms and the standard setters (AARF). When asked about progress made since 1995, interviewees explained that while other matters had to come first in the 1992 to 1996 environment since this period significant progress had been made in accounting for these assets. These priorities consisted mainly of amalgamation and CCT (no longer relevant) issues, as indicated earlier.

However, it appears that some councils may not have been as diligent as others. This is not to say that they were neglectful of their duties since there was

an implementation phase-in period (to mid1997) for councils of which most took advantage. Leaving the identification, valuation and depreciation of these assets to the last year of the phase-in period appears to have lead to poorly estimated measurements and values which could have significant effects on the financial statements. Twelve interviewees indicated that significant refinement of identification of IA components and values has occurred since this time period.

The depreciation of these assets if not properly identified and valued may lead to incorrect consumption values that affect decisions on asset management in councils. This additional workload and the absence in some cases of key personnel from the pre-amalgamated councils who had been involved in the identification, valuation and depreciation of IAs caused initial problems which according to interviewees have been overcome. As one interviewee (Interviewee 9) said:

in the beginning the task seemed impossible but as staff gained knowledge and information systems were incorporated in accounting for IAs problems did not seem so major.

4.3.4 Education for AAS27 IA Requirements

Was education needed for councillors, staff and ratepayers for IAs requirements under AAS27? Thirteen of the interviewees took the view that education was a vital element in ensuring an efficient transition from fund accounting to the requirements of AAS27. All interviewees reported that education was given to

their staff and were aware of training taking place in other departments, for example, for engineers and valuers. The education of staff on AAS27 was administered in several different ways. Key personnel from the Finance department attended formal seminars or workshops run by various external organisations; these ranged from half-day sessions to three-day sessions. Participants would, in turn, provide in-house education to other financial staff members; alternatively or additionally, accounting firms would give in-house education sessions. The education given to their staff on AAS27 requirements proved beneficial (IA reporting requirements), according to most interviewees, and provided the stimulus needed for efficient and effective change.

The accounting staff attended training sessions held by the Victorian Office of Local Government (VOLG), Institute of Municipal Management (IMM), Municipal Association of Victoria (MAV), Price Waterhouse and Coopers & Lybrand (now PWC). Engineers and valuers also had their own training sessions through their own societies or associations. A minority of interviewees thought the training sessions provided by the Victorian Local Government Association and large accounting firms were expensive.

Six councils reported that councillors had undertaken some form of training, usually that given to staff, to gain knowledge of the requirements of AAS27 and its impact on council's financial statements.

However, the greatest amount of education and training on AAS27 requirements was given to council staff. As indicated above, this education came in various forms and it was believed that the benefits would outweigh the costs of education over time. Some councils had already received these benefits, whereas other councils suggested it would come at some time in the future.

Only one interviewee reported that during the transition period for IAs accounting requirements (at this stage the council had not valued and depreciated pre-1992 IAs) a ratepayer had queried the financial statements prepared under AAS27. Noting the substantial profit reported, the ratepayer wanted to know why rates and charges were not to be reduced as a consequence. The financial manager informed the ratepayer that the profit made did not fully reflect all operating expenses. Had depreciation on pre-1992 assets been included; the profit would not have been as substantial. The ratepayer concerned appeared well informed about the changes occurring in local government accounting and expressed surprise that more ratepayers were not seeking information as a result of the change in financial statements prepared under AAS27. As one interviewee (Interviewee 5) said:

why report infrastructure asset information when only a small number of ratepayers read the GPFRs.

Whereas another interviewee (Interviewee 9) said:

the information on the valuation and depreciation of infrastructure assets is in the GPFRs that may be useful in helping ratepayers understand where the council is spending their money.

4.3.5 Training Resources

What were the training resources for staff on the requirements of AAS27 IA accounting? Interviewees indicated that education and training resources were both important but education was viewed as more important for accounting staff, engineers and valuers. On the question of the benefits outweighing the costs of the training resources, two interviewees thought that they did not. Some could not answer the question.

Ten councils also relied on the two manuals issued by the Institute of Municipal Management (IMM) for guidance on the requirements of AAS27. These were the Asset Accounting Manual (AAM) and Financial Management Manual (FMM). The former was used extensively to help identify, value and depreciate IAs, as well as for in-house training purposes. Four interviewees felt that practical working examples on certain applications would have made the manual more useful. Overall, the AAM was used regularly and provided answers to most of the questions encountered.

4.3.6 Information Systems for IAs

To what extent did your information systems need to be developed to record and report on infrastructure assets, as a consequence of AAS27? Eight councils indicated that they had a Pavement Management System (PMS) in existence before AAS27 to record the types and condition of roads. Even so, six of these councils needed to up-date and identify the different layers comprising roads to satisfy the standard's requirements. Materiality policies were important in determining what should be capitalised or expensed. Councils with low capitalisation values struggled to identify and input all of the data on the different components of the roads into the system. Turner (1992) noted that councils needed comprehensive materiality policies to produce an effective and efficient information system on roads for asset management and reporting. It was on the issue of how to record these assets in a PMS that councils reported the Asset Accounting Manual as inadequate to their needs.

Four councils without a PMS before AAS27 investigated the purchase of PMS or, alternatively, of a system that would record and maintain efficient infrastructure asset records. Four councils had acquired a Geographical Information System (GIS), while three councils had deferred up-dating their information systems until completion of the amalgamation process on the basis

that a system would be very costly and may not be compatible with that of other councils with which they were amalgamating. These councils now have an information system.

Two councils had developed their own software to link their different information systems within each council. An asset register connected to a data-base information system was the most common format linkage. One council had developed its own road information system called SAMS (Street Asset Management System), and intended, following further development, to sell it to other councils.

4.3.7 Valuation Responsibilities

Who in your council had the responsibility for valuing infrastructure assets? The majority of councils interviewed had their engineers value IAs, while five councils also used accounting staff. One council used auditors while valuers undertook the task in another council.

Interviewees thought that the land concerned could be used only for roads and would never be realised, although several instances were cited where land under roads had been sold for other purposes. According to the councils, this meant it was very doubtful that such land had alternate uses.

Thirteen interviewees agreed that accounting for IAs had improved asset management significantly, the exception being the valuation of land under roads which was a nonsense value for recording, reporting and decision-making purposes.

One interviewee (Interviewee 11) said:

I can see the relevance of reporting IAs and depreciation but land under roads is a worry to me because it has a very high value, that is in most cases crown land and cannot be used for anything else except a road.

In some councils, especially inner metropolitan councils, land under roads accounted for more than 70% of the total asset value for that council. While this may suggest a position of financial well-being to an inexperienced GPFRs user, in most cases the land is Crown land that can only be used for local roads.

Taking three inner metropolitan councils as examples, several interesting valuations were made. One council used the full municipal unit site valuation, and its valuation of land under roads accounted for 85% of the total value for all their assets. Another council used \$1 per square metre to value land under roads, which accounted for less than 5% of the total for all its assets. The third council determined that the municipal unit site value was \$415 per square metre for land under roads. However, instead of using this figure they discounted it by 60% so \$175 per square metre was used for their value which accounted for 46% of their total for all assets. The valuation was discounted because the land

under roads was unrealisable, there were service easements beneath the road, and it would never be used for commercial developments.

From this small sample of councils interviewed a diverse approach to the valuation of land under roads can be seen. Some interviewees thought that the valuation of land under roads was only academic and had no practical use for asset management or financial reporting purposes. Land under roads valuations in GPFRs, was not required (in year 2000) to be reported while the UIG investigated this situation.

4.3.8 Accounting Policies for IAs

What accounting policies for depreciation and threshold rates were developed in implementing AAS27? Seven councils relied on the Asset Accounting Manual as a guide for depreciation and materiality threshold policies. After referring to the depreciation rates given in the manual, those councils reviewed their asset consumption patterns to determine whether these rates were appropriate. Most councils used rates similar to those in the manual, while two councils used only those rates, and three councils used rates calculated by their auditors. Three councils used rates determined by their asset consumption patterns without reference to any other material. A large accounting firm (PWC) had produced detailed policies on depreciation and thresholds which two councils used. All councils used the straight-line depreciation method. The majority of

interviewees indicated that engineers also have had a great influence in determining depreciation policies and rates since the initial use of the Asset Accounting Manual (1992). According to a majority of interviewees the engineer department has full responsibility for determining valuation and depreciation policies. Some interviewees, however, said that both the finance and engineer departments worked together on depreciation policies and issues. It appeared from interviews that interviewees felt that the engineers did not view depreciation as being relevant for internal decision-making and a method based on condition would be a better alternative to straight-line depreciation.

When interviewees were asked if depreciation policies and rates reflected the consumption of service potential of IAs, the majority indicated that initial valuation and depreciation values in GPFRs did not reflect accurate information. According to the majority of interviewees that since these initial valuation and depreciation values, refinement in many areas (identification of components economic lives varied, condition of the IA network reviewed and more education on IA network reporting requirements) has improved the reliability and accuracy of this information. The majority of councils indicated that depreciation on pre-existing 1992 IAs was not included in GPFRs until after the phase-in period (1997).

Interviewees indicated that depreciation rates were reviewed annually but some interviewees felt that the review was not totally reliable in the method being

applied by either the engineer or accounting staff. Some interviewees thought that an industry standard for depreciation policies would be an advantage for applying consistency between councils for GPFR purposes.

The Victorian Office of Local Government commissioned a study in the late 1990's to determine the level of IA recording and reporting in the 78 Victoria councils (VOLG, 1993b). That study found that most valuation and depreciation policies and values were inadequate. The preparers of the study visited each council and gave advice on the appropriate methods in up-dating IA information (policies, identification and valuation needs for IA networks) which led to refinement of IA policies and values. The preparers of the study were also advocating condition-based-depreciation (CBD) because in their opinion this method represented consumption of service potential for IAs more accurately than straight-line depreciation. According to most interviewees the word **condition** in the CBD method had encouraged engineers and some accountants to think that this method better reflected usage of these assets than the straight-line method of depreciation, which was viewed as not reflecting the condition and maintenance needs of IAs. When interviewees were questioned how CBD was applied their knowledge was very limited. The difference of maintenance and depreciation for IA recording and reporting purposes had varied responses. These responses included: maintenance not depreciation was important for internal decision-making; maintenance was more relevant for budget requirements; depreciation should not be included in rating estimates

and maintenance was more relevant; and depreciation was independent to maintenance. Only seven interviewees felt that depreciation was a cost to ratepayers using IA services but three of these interviewees felt it should not been included in rating estimates. Reasons for this opinion varied with some interviewees indicating that political (depreciation causing significant increases in rating estimates) and different views on why depreciation was used in a council environment on these assets had the greatest influence. Thirteen interviewees felt that IA services should funded under user-pays principles which indicates some confusion on the purpose of depreciation from the earlier views.

Ten interviewees indicated that capital expenditure requirements were more relevant for rating estimates than depreciation. Also when interviewees were questioned on how the depreciation was calculated for accrual budgets six interviewees indicated that depreciation was part of the capital expenditure to be spent in the following year. Two interviewees indicated that depreciation was irrelevant and only needed for auditing and reporting requirements. One possible reason suggested for a negative attitude to depreciation for accrual budgets and rating estimates was the time periods between new reporting AAS27 requirements and the phase-in period for inclusion of IAs and depreciation on these assets in GPFRs. It was not until the late 1990s that complete IA information appeared in GPFRs, accrual budgets and rates capping (CPI minus 1 percent) which according to the interviewee has caused confusion

for council staff on the purpose of depreciation. In the early 2000s rates capping was discontinued.

Prior to amalgamation with another, one council developed its own depreciation method for roads using a road-curve computer program based on previous usage. The program calculated rates into four quadrants with an average life of the road being 30 years. The first quadrant was 10%, the second 25%, the third 35% with the last quadrant being 55%. This was a unique way of depreciating roads, and was not used by any other council. According to this programme most roads depreciate more rapidly towards the end of their lives, rather than evenly throughout their lives as suggested by straight-line depreciation calculations. This programme is no longer used in the post-amalgamation council because straight-line was viewed to be more relevant for GPFRs according to the interviewee. Another interviewee (Interviewee 15) said:

straight-line depreciation properly understood which it appears is not at this stage in an council environment can be very helpful in making decisions on the future needs of that IA.

One council said its capitalisation threshold policies for IAs were calculated in accordance with the Victoria Grants Commission (VGC) guidelines on materiality for inclusion in their reports to the VGC. Interviewees indicated that their capitalisation thresholds were too low after the first year of AAS27, while other interviewees were worried that their thresholds were too high. The councils

indicated that they changed their capitalisation threshold policies in later years since the 1992 to 1996 period. One interviewee (interviewee 10) said:

at first we tried to put every single cost of the IA network into the PMS but the cost of inputting this information was too costly for the relevance and materiality in GPFs. Over a short period our policies on thresholds has improved with experience and more knowledge on the systems' capabilities, also what was involved in recording and reporting an infrastructure network.

4.3.9 Depreciation of IAs

Has depreciation of IAs been a problem? For the majority of interviewees, the method and calculation of depreciation on these IAs had caused and continue to cause problems. Most interviewees lacked knowledge on the theory of depreciation and the purpose of depreciation in IA accounting. In particular, interviewees had limited knowledge of the following issues: condition-based depreciation method (CBD); the relationship between maintenance and depreciation; user-pays and ratings calculations using depreciation instead of capital expenditure; the difference between reserves and depreciation; depreciation and internal decision-making for these assets; and the relevance of straight-line depreciation calculations for these IAs. Problems included: estimating the remaining economic life on pre-1992 IAs; the decision is to whether to depreciate the aggregate assets or separate components (simple or comprehensive approaches); the rates used; and whether depreciation of these assets should be included in the financial statements. Three councils indicated that depreciation would be very useful in asset-management decisions.

The majority of councils split each IA into its component parts for depreciation purposes after the initial identification of IA systems. Interviewees indicated that councils which used different depreciation rates for each IA component represented them in their notes to the accounts in the Statement of Financial Position. One interviewee (Interviewee 15) said:

while this process of reporting IA information especially depreciation is new for local government GPFRs we have included too much detail in the notes to accounts which I expect over a period of time will become more compact and less confusing.

A cursory examination of the depreciation rates used by councils in their GPFRs had revealed some striking patterns (councils which used the rates prescribed in the Asset Accounting Manual). Interviewees were asked if these rates fully reflected the economic use (consumption) of the IAs within the accounting period. The common response was that the rates were used to meet both AAS27 and auditors' requirements. A majority of councils indicated that the depreciation rates were adjusted after original rates were set. This helped for asset management decisions, external users of financial statements, and financial reporting requirements. There were several councils that had the same or very similar depreciation rates and policies, which indicated that they may not have reviewed rates or that the original estimates were correct.

A brief examination of GPFRs of the fifteen councils, prior to the interviews revealed that three accounting firms mainly audited them, and that the

depreciation policies and rates varied with the auditors. This may be appropriate if all councils audited by that firm have the same asset usage but not where, say, one council is an inner city council and the other is an outer metropolitan one. An auditor from one of these auditor firms was questioned on the similarity in depreciation policies and rates and whether it was a case of convenience or actual asset usage to meet AAS27 requirements. The reply was that it provided a comparison for external users between councils and that it would be consistent. This answer was not satisfactory as it avoided the issue of actual usage of assets being reflected in a council's depreciation policies and rates.

4.3.10 Auditors Opinion of GPFs

Were the auditors satisfied with your financial statements prepared under AAS27 in accounting for your IAs? In thirteen councils, the interviewees indicated external auditors were satisfied with their GPFs and progress with identification, valuation and depreciation of IAs under AAS27 requirements. The interviewees in these councils appreciated the assistance and advice auditors had given on different aspects of asset accounting. Although originally the appointment of auditors was regulated by legislation (*Local Government [Reporting and Accounting Regulations] Act 1985*), a change in policy and legislation caused the deregulation of local government auditors and allowed councils to appoint commercial audit firms. This development enabled councils

to seek assistance in applying the commercially-based AAS27. Such assistance included:

- training programs;
- comprehensive policy material (e.g., depreciation and materiality thresholds);
- advice on methods for valuing IAs;
- information technology assistance on computerised asset accounting; and
- format guidelines for financial statements under AAS27.

It was clear from positive responses of interviewees that auditors and councils had worked closely together to develop IAs accounting that would ensure efficient asset management and reliable figures in council's financial statements.

As one interviewee (Interviewee 8) said:

the auditors helped the staff not just accounting staff understand what were the AAS27 requirements for IA reporting. Having this co-operation helped in what seemed an impossible and irrelevant task at the beginning to now being an area of growing importance in determining future needs for ratepayers using IA services.

Councils appeared to be driven by the need for proper accounting procedures and values for asset-management purposes and not simply to give values and depreciation amounts to meet AAS27 requirements for IAs.

Chapter V

Questionnaire Design

5.1 Design of the Questionnaire

The questionnaire was developed from the literature survey and interviews with fifteen metropolitan councils discussed in Chapters II and IV. The questionnaire was drafted in several different formats before being finalised. It was then tested in several different arenas. Several councils (metropolitan and rural) were also asked for comments on the design of the questionnaire in a pilot study. The comments were positive and the pilot study respondents thought that the questions asked were very relevant to IA financial reporting. The technical questions on the SACs (*Statements of Accounting Concepts*), the AAS27 (*Financial Reporting by Local Governments*) and depreciation were found to be difficult or unknown by most respondents. These respondents still felt that these questions needed to be included to determine the level of knowledge of council officers involved in IA financial reporting.

The suggestion was that a questionnaire which only involved ticking boxes represented more opportunity for a reasonable response rate than one which involved both ticking boxes and supplying written information. An optional section was left at the end of the questionnaire for comments from respondents. The problem that remained was to make sure that the questionnaire was clear and simple for respondents to understand but still appropriate to the research questions. After several drafts, refinements were made to ensure this. The optional section at the end of the questionnaire was for respondent details (council's name, officer's name, position and telephone number) and comments that gave respondents an opportunity to expand on (opinions on issues raised) the data supplied. After taking the above suggestions into account, the questionnaire was modified to enable maximum responses from the councils.

The questionnaire commenced with an explanation of how it was designed; it was divided into five parts (including the comments section). Section A was involved in determining personal profiles. Section B sought opinions on various aspects of identification, Section C sought opinions on various aspects of valuation and Section D sought opinions on various aspects of depreciation of infrastructure assets. An optional section was for respondent details and views on issues raised in the questionnaire. A response legend was given for each question. In Section B, C and D, the legend remained the same for each statement with the responses being:

- strongly agree;

- agree;
- not know;
- disagree;
- strongly disagree.

5.2 The Questionnaire

5.2.1 Personal Details

Information on the profile of the respondents was sought in Section A: their age; gender; local council experience; academic qualifications; professional accounting experience; position in council. The profile of the person completing the questionnaire could be used in the analysis of answers in Section B, C and D.

5.2.2 Sections B, C and D

These sections were intended to generate information about the identification, valuation and depreciation of infrastructure assets. The general format involved the making of a major statement followed by a series of sub-statements. Respondents were expected to give a single response on a printed scale. Close attention was given to making the statements very clear and simple to read but being able to generate the required information.

The literature survey and interviews at fifteen Victorian councils proved invaluable here. They enabled the statements that were presented to councils in the areas of identification, valuation and depreciation to be detailed enough to ensure that the responses would accurately reflect the difficulties, attitudes and progress in accounting for infrastructure assets under AAS27.

5.3 Administration of the Questionnaire

A letter of introduction was also used to support the questionnaire. This letter was sent from the supervising university—in this case, RMIT—with the student's name and address and the supervisors' names and addresses. As the questionnaire was the primary data-collection instrument in the research this instrument would need to achieve an acceptable response rate.

After giving evidence at a Public Accounts and Estimates Committee for a *Report on the Valuation and Reporting of Cultural, Heritage and Infrastructure Assets*, there was discussion with the Hon. R Hallam MLC (Sub-Committee Chairman) about the research being undertaken. He thought that it would be valuable to all concerned. As a result of the evidence given and research being undertaken, the Sub-Committee gave their support to the research. A letter from the Sub-Committee to the Chief Executive Officers of the councils supporting the questionnaire and stating that the information sought would be valuable and give

greater insight to local government organisations, Sub-Committee and interested parties in this area. This was an important development in the investigation. Without the backing of the Sub-Committee the response rate to the questionnaire may have been minimal. The help obtained was very much appreciated and gave the questionnaire more credibility enabling more responses from the councils. A copy of the letters are contained in Appendix 5.1.

The letter from the researcher and supervisor contains several points which include who was conducting the research; the Sub-Committee's support to the councils to complete the questionnaire; the purpose of the research; no due date for completion but quick response of the questionnaire; and thanks for participating in the research. This would lead to maximum measurement from the questionnaire responses. The letter was given approval by the Ethics Committee at RMIT.

5.4 Identification Issues

Information on the identification process was sought first. Thirty-one statements were made requiring responses on the five-point scale mentioned in Section 5.1.

The literature review and interviews (15 interviewees) suggested that further information was required on the eleven following issues. Thus, statements about these issues appeared in the questionnaire.

5.4.1 IA Records

The first section was involved in finding out information on how councils identified pre-1992 IAs when AAS27 was introduced. Councils indicated that existing asset records had not been adequate. In the interviews, councils at that time without Pavement Management Systems (PMS) or similar information systems needed to up-date their records significantly. Councils with PMS still needed to up-date their records. In interviews most councils indicated that engineers had the greatest influence on the identification and update of infrastructure asset records.

The literature review revealed that under the previous accounting method (modified accrual) there were large inconsistencies between councils with financial reporting of assets and IAs were not recorded or reported. Under the previous method the asset registers were the main recording source for IAs and these were inadequate with minimal or no details being recorded over the life of the IA network. The components of the IA network and their condition was not recorded in the majority of public sector organisations including local government authorities. The maintaining of IA details in asset registers was in the majority of councils the responsibility of the engineer's department. Since the change to AAS27 requirements the identification and valuation of IAs has remained in the majority of councils with the engineers department. In some

councils interviewed the accountants or finance department have had minimal or no influence on valuation and depreciation policies. These issues will be investigated in the questionnaire.

5.4.2 Education

In interviews there was a mixed response to the education and training resources received on AAS27 financial reporting requirements. Some councils according to interviewees relied on the manuals (for example, Asset Accounting Manual) while other councils needed thorough education and training of staff. These sessions were conducted by the Victorian Office of Local Government (VOLG), Institute of Municipal Management (IMM), Municipal Association of Victoria (MAV), Price Waterhouse Coopers (PWC). Some councils interviewed used the Asset Accounting Manual (AAM) for aspects of asset accounting (for example, depreciation and materiality rates). In the interviews some doubts were raised on the amount of practical and comprehensive details in the AAM for reliable recording and reporting of IA components and overall IA network. The cost of the courses was also an issue with some interviewees. These issues and the method or sources of various IA policies needed to be identified.

In this chapter specific data from the literature review and preliminary interviews were used to determine what questions would be asked in the questionnaire.

5.4.3 Communication Benefits

In the literature on accounting for IAs, accountability was mentioned as one of the biggest benefits under AAS27. In the interviews, asked if accountability for these assets had increased, there was a mixed opinion on the benefits, with some interviewees suggesting that it was too early to know.

Similar comments were received when asked if decision-making had been more efficient and effective, with most councils thinking that it would be a benefit but to what extent was unknown at this stage.

Internal communication between departments has improved according to interviewees (e.g., Engineers, Valuers and the Financial Department).

In the interviews, most interviewees agreed that communication had improved. It was indicated that having the information available on these assets assists in knowing what are the needs and demands of the various departments.

5.4.4 Aggregation of IAs

Most interviewees indicated that IAs were aggregated to make the identification and valuation process easier with pre-1992 IAs. At the time it appeared from the interviews and literature (VOLG) that some councils were only identifying

lengths and widths of roads, then applying a written-down replacement cost. Different depths of seals and sub-substances were not being taken into account at this stage of the process. One engineer suggested that the values resulting from this process were only estimates and the actual figure was different. Interviewees indicated that there were depreciation problems resulting from using this method with one overall depreciation rate being used on a length and width of seal. Different ages and depths in the seals and sub-structures in most cases have now been taken into account. This issue appeared to be of concern to some interviewees about the 1992-96 period of initial AAS27 IA financial reporting; however, other interviewees suggested that this situation had mainly been resolved since. According to some interviewees a study (*Facing The Renewal Challenge*) prepared in the late 1990s helped Victorian councils with issues on identifying and valuing components of IA networks.

5.4.5 Information Systems

Interviewees indicated that a different information system was needed to make the process easier and more effective. The need to include detailed information on infrastructure assets for identification, valuation and depreciation purposes suggested that interviewed councils had to up-grade their information systems.

5.4.6 Control

From the literature it appeared that determining who had 'control' of the asset would be problematical. The majority of councils interviewed indicated 'control' was not a major problem with AAS27 and that *SAC 4 (Definition and recognition of Elements of Financial Statements)*, provided adequate criteria to determine who was in control of infrastructure assets. Although one interviewee indicated that some of the roads that were in council accounts and reported in their GPFR had also been recorded and reported in Vicroads accounts and GPFR. This situation was not resolved until 2001.

5.4.7 Internal Resources

The majority of councils interviewed advised that they relied on their internal resources for the identification process. The minority of councils that did have consultants indicated that they had obtained more detailed identification of IAs than by using their internal resources. This may be evident with their roads being identified by consultants in sections according to age, length, width and depth. Most councils using internal resources over time up-dated IA asset records as more staff gained knowledge and experience.

5.4.8 Benefits

The literature, especially local government material (VOLG), suggested that the benefits of AAS27 would be greater than the costs involved. In the interviews, most interviewees agreed but reported that the benefits were not immediate but in most cases were now evident.

5.4.9 IA Committees

From the interviews, the majority of councils indicated that they had formed committees and set up achievable goals for implementing infrastructure accounting. However, in most cases, councils believed that they were never given the opportunity for these goals to be achieved. The reason was that local government in Victoria at that time was undertaking massive changes in many areas, which crowded out the AAS27 concerns. The most significant areas of change noted by councils were CCT and amalgamations. A number of factors had worked against asset accounting which in the majority of councils, has been ignored for more immediate issues. Also, councils in Victoria had been given until June 1997 to complete the change to IA accounting because of a change in the financial year from 1 October-30 September to 1 July-30 June. Changes in local government had been numerous and very rapid in the 1992-96 period.

Councils at that time may have been under-resourced and given very limited time to implement the various changes. So with the extended time for IA accounting, this issue has helped councils improve their IAs financial reporting, this appears to disagree with literature at that time. A senior partner with Coopers and Lybrand, now PWC (Harry 1994) indicated that the longer councils leave IA accounting, the chance for detailed and accurate IA accounting reduced. Most councils interviewed claimed that their auditors were pleased with their IA accounting progress.

5.4.10 Accounting Policies

The councils interviewed indicated that this was a major initial step if cost-efficient and accurate IA accounting was to be achieved. As mentioned in this time period, 1992-96, two amalgamating councils with different accounting policies needed to find some common ground and develop accounting policies to be used in the amalgamated council. This was a problem in some councils and careful planning was needed to complete the exercise. From the interviews, interviewees indicated that accounting policies came from various sources that will be investigated in the questionnaire.

5.4.11 Technical Issues in Financial Reporting under AAS27.

The interviewees were asked a wide range of questions including : the purpose of the SACs; definition of assets; nature of IAs; purpose of the AAS27; reporting requirements for IAs; and the comparison of the public sector and private sector in reporting these assets. This was an important area and was discussed in Section 4.3.2 and these were the issues mentioned. The knowledge of the SACs by most interviewees was very limited to none at all. The only interviewees who had knowledge were recent accounting graduates but some voiced the opinion that the SACs were not relevant or useful in accounting for these assets. On the contrary, with AAS27 they found it useful in accounting for IAs. Only a few of the interviewees who had more than ten years local government experience thought that IAs accounting was a waste of time and was irrelevant for decision-making. There was no real consensus amongst interviewees whether there is a difference between the public and private sectors in accounting for these assets. Most interviewees thought that there was a difference between other physical assets and IAs. Some interviewees thought that AAS27 accounting requirements were a real improvement on previous fund accounting requirements for IA reporting and accountability.

5.5 Valuation Issues

Information on the valuation process was sought next. Twenty-three statements were made requiring responses. The literature review and interviews suggested that further information was required on the seven following issues. Thus, statements about the issues appeared in the questionnaire.

5.5.1 Valuations were Completed Internally or Externally

Most councils indicated in the interviews that IAs were valued internally. The engineer department was mainly involved. This response varied among the councils interviewed about who completed the valuations. In some councils the valuation of roads, drains and bridges was completed by the engineers, while in a minority of councils this was done by the finance department. In some councils the finance and engineer departments worked together on valuation issues. A valuer was used by one council and auditors by another council to value IAs

5.5.2 The Asset Accounting Manual (AAM)

In most cases, councils used the AAM frequently in determining their accounting policies in asset accounting according to interviewees. However, some interviewees indicated this could lead to problems. The major problem in doing this is that it may lead councils into using suggested policies (for example, depreciation rates and materiality rates) instead of their actual usage rates. For example, roads in different councils will have different usage and, therefore, different lives; this is certainly the case with seals and pavements. Thus, two councils with different road usage, using the same depreciation rates as suggested in the Manual, may give misleading valuations and depreciation figures. A conflict between consistency and comparability of council GPFRs has been raised in the literature (Pilcher, 2000) when using benchmark policies.

5.5.3 Method of Valuation Used

The literature suggested that for IAs, written-down replacement value was the best valuation method (Micallef et al., 1994). The majority of the councils reported they were using or would use written-down replacement cost and that it presented no problems. When asked some technical questions on the use of this valuation base, most interviewees responded vaguely. This seemed to

suggest that the councils were unsure of how to apply this valuation base under certain situations. One interviewee indicated that another area of concern was the use of the deprival valuation method called *Greenfield optimization*. According to the interviewee the external auditors recommended this method instead of their actual replacement cost.

5.5.4 Are IA Valuations Fully Justified

According to the literature, the main fault with modified accrual accounting in local government was that it did not include certain non-realizable non-current assets in the balance sheet (Greenall et al, 1988). AAS27 now requires councils to show all their current and non-current assets in their Statement of Financial Position. Most councils interviewed concurred that non-current assets should be shown in this statement for good asset management but thought the valuation of land under roads was not justified and, therefore, should not be included. The literature (Greenall et al, 1988) and the councils interviewed suggested that accounting under AAS27 is more effective than the previous method (modified accruals system) in giving an accurate financial position of a council's operations.

Changes to the values have occurred since the initial 1992-1996 period to reflect their accurate value. In the councils interviewed, most if not all had up-dated

these asset valuations since this time period to bring them in at more realistic figures.

The practical valuation of land under roads has been difficult according to the councils interviewed and it is currently not reported in GPFRs and under review by the accounting authorities (UIG).

5.5.5 Current Cost of Replacing Infrastructure Assets

The interviewees gave a mixed response to this question. A closer review of how and in what form the current costs are to be applied to these assets caused concern with the process. In the identification process, there appeared to be a problem with how certain assets were being aggregated. An example is how current costs are being aggregated and not apportioned to individual seals and layers of a road asset. This was also an issue raised in Section 5.4.4.

Establishing the current condition of IAs is or was a problem? There was a mixed response according to the interviewees from the councils interviewed. Some had difficulties and the minority of others had no problems with the time and cost of finding out the current condition of these assets. Again, problems appear to exist in how the councils are aggregating these assets and applying an average current condition to the road network as a whole and not to sections of the road network. Drains are a problem with old records or no records being

available and the difficulty of assessing their current condition with them mostly being underground. This is also an expensive exercise according to some interviewees.

5.5.6 The Current Valuation Methods

Most councils interviewed indicated that the values of their IAs may not have been accurate initially but they have been refined to reflect more realistic and accurate values. The reason could not be attributed to a single variable according to the councils. Variables may have included:

- aggregation of the assets;
- opposition to AAS27 by the participant filling out the questionnaire; and
- the method used in applying current costs to the assets involved.

The statement, *the valuation of those assets should not be used in the financial statements*, was used in the questionnaire. This appears very similar to another statement **but** there is a subtle difference. Some variables were listed in other statements and this is expected to narrow them down to give an indication on the reaction to AAS27 of the respondent filling out the questionnaire. According to interviewees, some of the financial managers did not believe or accept that the value of infrastructure assets should be in financial statements.

5.5.7 Land Improvements

In the interviews, some interviewees reported that values given to pre-October 1992 land and improvements had created difficulties with respect to how to account for the improvements. Several different approaches were mentioned with none being exactly satisfactory to the councils. Double counting was a problem. The method most agreed to by interviewees was to capitalise the improvement to the value of the land. Revaluation did prove to be a problem because *AAS10* at that time stated that revaluation cannot relate to one asset but all assets in that class. So revaluations may not be completed on a class of assets for three to five years because of the restriction in *AAS27*, this has now been changed where the class of asset can be re-valued over several years.

A new seal to an existing road network (pre-October 1992) was difficult to record under the written-down replacement costs method. Councils interviewed had experienced a problem in completing this task under *AAS27* because of the requirement to revalue the whole class of the asset, but since this has changed the situation has improved. Another problem was that if their method of identification and valuation were aggregated, what amount would be assigned to the old seal being replaced? Also, if an amount can be determined, to what account is the figure written off?

5.6 Depreciation Issues

Information on issues relating to the depreciation process was sought. Thirty-seven statements were made requiring responses. The literature review and interviews suggested that further information was required on the seven following issues. Thus, statements about the issues appeared in the questionnaire.

5.6.1 Fully Reflects Asset Usage in the Financial Statement

The response from the councils interviewed was mixed. Interviewees who did not want IAs in the Statement of Financial Position did not think depreciation was appropriate. Interviewees that thought IA values in the financial statements were justified varied on the question of depreciation. Some interviewees said depreciation was justified because it was an expense of the period and represented good asset management. Other interviewees did not want depreciation because it was a non-funded entry according to them. The councils at this time in the early 2000's should be using accrual budgets and, since rates capping no-longer applies, depreciation should be included in rating estimates according to the Victorian Office of Local Government. This was discussed in Section 4.3.8. Also, estimates of the asset values would have a considerable effect on depreciation; this is again a reason why depreciation may not be fully reflected.

5.6.2 Has Depreciation of IAs been a Problem

The majority of interviewees indicated that the method and calculation of depreciation on these assets had caused problems. Most interviewees were lacking knowledge on the theory of depreciation and the purpose of depreciation in IA accounting. Interviewees had limited knowledge on the following issues: condition-based-depreciation (CBD); the relationship between maintenance and depreciation; user-pays and ratings calculations using depreciation instead of capital expenditure; reserves and depreciation; depreciation and internal decision-making for IAs; and straight-line depreciation calculations for these assets. These issues will be investigated in the questionnaire to determine the level of knowledge in the Victorian Local Government environment. Problems included: estimating remaining life on pre-1992 assets; the decision whether to depreciate the aggregate assets or separate components; the rates used; and whether depreciation of these assets should be included in the financial statements. Literature and some interviewees indicated that depreciation would be very useful in asset-management decisions. This is discussed in Section 4.3.9.

5.6.3 Attitudes to Depreciation

According to a minority of interviewees depreciation was not an expense that should be shown in the operating statement. This view on depreciation will be tested in the questionnaire to determine the response from the respondents. Also some interviewees indicated that depreciation was not very useful in asset management. Some councils interviewed, however, reported that depreciation is very useful in asset management; in all of those cases the councils have comprehensive identification and valuation policies. Interviewees that indicated depreciation would not be helpful in asset management normally have a very simplified approach to the identification and valuation of assets. In this process, councils calculated depreciation on the aggregate figure and not on the components making up the asset. The questionnaire will seek to gain an indication on how councils are focusing on depreciation issues and opinions of the respondents.

5.6.4 The Depreciation Rates Fully Reflect the Use IAs

Some councils interviewed used the rates given in the Asset Accounting Manual or by the auditors. Also, some interviewees believe that by using the rates given in the Manual they will fully reflect the consumption of the underlying assets for financial reporting purposes. Where councils use depreciation more as an asset

management tool than a reporting requirement, they are of the opinion that some rates needed to be changed because the rates did not initially reflect the actual amount of usage.

The majority of councils interviewed indicated that depreciation rates would be reviewed annually to reflect the use of the assets. Some councils interviewed indicated that they did not have the resources to review rates regularly. Also a minority of interviewees thought depreciation was a nonsense concept and provided limited information for GPFRs purposes. Some interviewees also said they were aware that the consumption of assets during different periods could vary and would react when this occurred. The concept of depreciation is new to local government and it appears from the interviews that some councils are still struggling to recognise what is involved.

The depreciation rates were from the Asset Accounting Manual and with auditors' guidance, but were refined to actual municipality usage at a later date according to most interviewees. It was thought appropriate to determine the percentage of councils who are using rates given in the literature at this stage in their asset accounting.

5.6.5 The Depreciation Rates were Mainly Straight-line Calculations

In all cases, the councils interviewed used this method of depreciation calculation. They were not happy with this method but it was easy for them to implement. Roads need different depreciation rates for each layer and need to be reviewed regularly to reflect fully their uses in each financial period. This issue brought a mixed response from the councils interviewed. Some had different straight-line depreciation rates for each layer of road network where components had a different life and usage. While other councils used one rate for the whole road network. One council before amalgamation initially used a different form of depreciation method where the calculation involved simulating the usage of the road through a road-curve program to find the amount of road usage. After amalgamation the straight-line method of depreciation was thought to be more relevant.

On the issue of straight-line depreciation being appropriate for roads, interviewees had varied opinions on this issue. Some used straight-line because it was the most appropriate method available but thought it still did not represent the actual depreciation of roads. On the other hand, some interviewees thought this method was appropriate for accounting purposes but not internal decision-making. Also use of the CBD method has caused confusion in its application to

IAs where some interviewees thought this method was more relevant than the straight-line method.

5.6.6 Engineer and Accountant Depreciation Issues

In the interviews, some interviewees reported that engineers determined depreciation issues. However, some interviewees indicated that engineers and accountants both determined depreciation issues. Also, it was mentioned that auditors provided information on depreciation issues

5.6.7 Internal Reports

The councils interviewed were asked if deficits and big differences between cash and accrual outlays (budgets) occurred because of IA depreciation expenses. Most interviewees indicated this has caused problems in what should be funded or not in rating estimates. The rating estimates for ratepayers were determined from the cash budget in the early 1990s. In the late 1990s following the phase-in period for IA information including depreciation in GPFRs (1997) the use of accrual budgets and using this information in rating estimates was recommended by government and accounting authorities. There was a mixed response from interviewees whether their council policies had IA depreciation as a funded entry; and if their rating estimates were based on accrual budgets. In most councils depreciation was not accounted for until after the phase-in period

(June 1997), this was when the Victorian Office of Local Government expected councils to use accrual budgets and particularly the Statement of Financial Performance with depreciation of IAs being a significant expense for rating estimates. Most councils interviewed indicated that depreciation was not included in relation to the pre-October 1992 assets until after the phase-in period, even if the assets had been valued. This caused problems by delaying its inclusion in the financial statements. These problems may have included CCT calculations and what initial effect depreciation would have on the operating results. Also, if the pre-October 1992 assets had been valued, there should have been no reason why depreciation should not be shown. This appears no longer to be a problem. Confusion by interviewees on the purpose and use of depreciation in accrual budgets and rating estimates still remains.

This is the end of the questions on the issues raised in interviews and literature. At the end of the questionnaire an optional section is provided where the respondent can provide additional information.

Chapter VI

Analysis of the Questionnaire Responses

6.1 Questionnaire Responses

The questionnaire was sent out on 21 May 2001 to 78 Victorian councils (a list is in Appendix 3.1) to be completed and returned at their earliest time possible due to the heavy workloads at this time of the year. The workloads included: preparation and approval of the annual budget; and preparation for the end of year financial statements (GPFs). These are major accounting processes within councils each year but to delay the sending out of the questionnaire by three months was not thought to be appropriate.

Four weeks after this due date only twenty-six percent of councils had responded. This was not unexpected because of council work commitments. A second mail-out occurred on 18 June 2001. The response rate was thirty-two percent four weeks later. A third and final mail out occurred on 23 July 2001. Also an additional letter was attached stressing the importance of the

questionnaire and the contribution that councils would make in supplying data for both the research undertaken and the parliamentary inquiry (Public Accounts & Estimates Committee: Report on the Valuation & Reporting of Cultural, Heritage & Infrastructure Assets). Also, in the middle of August, telephone calls were made to councils that had not completed the questionnaires. This resulted in a thirty-eight percent response. Overall the response rate from the seventy-eight councils was ninety-six percent.

Some council's indicated that they required additional questionnaires when telephoned. These were either faxed or sent by mail. After informing the councils of the need for their responses on the progress in accounting for IAs, they indicated that the questionnaires would be completed. A pleasing contribution by the respondents was that thirty-two percent included detailed comments on IAs, which was an additional and optional section of the questionnaire. There was one council (City of Melbourne) however that completed three questionnaires, three infrastructure asset managers who controlled and managed different IAs completed these. These responses were included as valid in the results.

Considering the time of the year the questionnaire was sent out the response rate indicated the recognition of the importance of the issues by the council's officers.

6.2 Method of Analysis

The information sought by the questionnaire was descriptive and quantitative so the analysis of the results was completed using SPSS package (Version 10 Windows), which incorporates appropriate statistical functions. In analysing Sections A, B, C and D, several of the statements were used together in Tables using the same number as in the questionnaire to find out if there were patterns in the data collected. Each statement was a particular issue for the councils in their identification, valuation and depreciation of infrastructure assets. The questionnaire with the percentages of the responses received is in Appendix 3.4.

6.3 Respondent Profile Analysis

Section A included statements on the profiles of the participants completing the questionnaire. The personal profile data were analysed to give an indication of the validity of the data provided.

Table 6.1 Age Profile

1) Your age:	
20-24.....	1
25-29.....	3
30-34.....	15
35-39.....	14
40-44.....	24
Over 45.....	43

The first statement from Section A on the personal profile gave an indication of the respondents' age groups. With eighty-one percent of respondents being thirty-five and over creditability is assured as these respondents have the experience to complete the questionnaire.

Table 6.2 Gender	
2) Your gender:	
a) male.....	85
b) female.....	15

Table 6.2 indicates that males mainly hold senior positions in local government. However, some finance managers or chief executive officer positions are now held by females who gave the questionnaires to senior male staff because of their experience with IAs.

Table 6.3 Experience	
3) The length of experience with local councils is:	
a) less than 3 years.....	6
b) 3 to 5 years.....	11
c) 6 to 10 years.....	16
d) 11 to 15 years.....	19
e) over 15 years.....	48

Statement 3 asked the important question on how long the participant has been employed in local government (Table 6.3). Sixty-seven percent of respondents had more than ten years experience. This further supports the validity of the information obtained from the questionnaire.

Table 6.4 Qualifications

4) Academic Qualifications:	
a) Secondary School graduate or Year 12 equivalent.....	3
b) TAFE diploma.....	3
c) Bachelors degree with accounting major.....	37
d) Bachelors degree with non-accounting major.....	15
e) Post graduate diploma.....	5
f) Master degree.....	7
g) Local government degree.....	1
h) Other (please specify).....	5
i) more than one degree.....	24

Information about the education level of participants was sought. Responses are summarised in Table 6.4. The majority of respondents are well educated with higher education qualifications, but it is surprising only one percent have a local government qualification. Respondents with more than one degree held Bachelor and Master degrees.

Table 6.5 Accounting Association

5) Are you a member of a professional accounting association?	
a) yes.....	57
b) no.....	43

Information about the respondent being a member of an accounting association was sought and is summarised in Table 6.5. Fifty-seven percent were members. Some of the respondents were infrastructure asset managers being engineering association members instead. Over half the respondents, it is assumed, have specialised accounting education.

Table 6.6 Position

6) Your position in the management structure of your organisation:	
a) CEO.....	7
b) 2 nd level.....	24
c) 3 rd level.....	49
d) 4 th level or below.....	20

Statement 6 asked the important question on the respondent's position within the council (Table 6.6). Eighty percent had a senior position in a council. Also it was found that an officer completing the same work tasks, for example, a finance manager may be a different level in different councils. Monash City Council and Glen Eira City Council both have finance managers but they are at different levels. The Monash finance manager is at level three because that person reports to a finance director who then reports to the chief executive officer, whereas the Glen Eira finance manager is at level two because that person reports directly to the chief executive officer. Glen Eira does not have a finance director. Most level four positions are those of infrastructure asset managers in metropolitan councils. These demographic profiles indicate that senior and competent council officers completed the questionnaires, which increases the validity of the data received.

All council respondents who returned the questionnaire completed Sections B, C and D. Detailed analysis of the responses given to the Statements in Sections B,C and D of the questionnaire is reported below. Some of the statements are compared to information identified in the literature review and interviews. Also this area has been an interest of the researcher for many years and there has been regular contact with various councils discussing many issues on accounting and financial reporting of IAs.

6.4 Identification Analysis

The first part of Section B related to the process of identifying infrastructure assets under AAS27. In the questionnaire respondents were asked to:

please circle the appropriate response for each statement: Strongly agree (SA), Agree (A), Not Known (NK), Disagree (D), and Strongly disagree (SD), according to your observations and opinions on the identification of Infrastructure Assets (IAs). Note that some statements relate to the time of changing the reporting method to full-accrual while others relate to the present time.

6.4.1 Identification of Resources

Table 6.7 Identification Resources

When identifying IAs under AAS 27:	SA	A	NK	D	SD
1. existing IAs asset registers were adequate	7	19	2	44	28
2. IAs asset registers needed a thorough review	44	37	4	15	0
3. engineers identified IAs and up-dated records	20	58	4	17	1
4. educators/consultants provided relevant & practical information	3	35	21	40	1
5. training was needed for staff involved	23	59	5	12	1
6. the LG Asset Accounting Manual proved useful	4	55	25	13	3
7. an infrastructure committee was helpful	1	33	39	23	4

Table 6.7 includes statements that were asked to give indications on the level of IA information in a physical form. Also who was involved in the identification process and type of education was sought. The responses from all the statements are viewed as important in the critical area of identification and also to give the reader some background knowledge so comments will be made on all statements. Statement 1 indicated that the majority of councils needed to update their asset records. The literature review (Lapsley 1986, Victorian Office of Local Government (VOLG) 1993, and Turner 1992) and interviews indicated that IA records would be insufficient in many cases for asset accounting under AAS27 requirements. This was to be expected for IAs, which did not appear in financial statements under the previous modified accrual accounting system and only limited records were kept which, at the time, was different to the private sector that kept comprehensive records of these assets. The change to an accrual accounting system improved IA records, which was urgently required after many years of limited information for decision making either by internal or external users.

Statement 2 indicated that forty-four percent strongly agreed and thirty-seven percent agreed that their council needed to review thoroughly infrastructure records. The literature indicated that under the previous accounting regulations councils did not need to value these assets. For this reason, and the way that they were accounted for, the records would not be sufficient for AAS27 requirements. The response from the questionnaire showed beyond doubt that

this was the case. This is supported from the literature review and local government authorities indicated that these asset records needed review. This was an area that pre-amalgamated and post-amalgamated councils found resource consuming which may give an indication why significant differences occurred in councils on the methods used to up-date IA records. The councils' differences in methods of updating IA records may indicate why there are significant variances in a council's ability to aggregate IAs for financial reporting and depreciation purposes.

Statement 3 responses (Table 6.7) indicated that twenty percent strongly agreed and fifty-eight percent agreed with this statement that engineers had a major influence in identifying IAs. This is supported from the earlier literature (VOLG 1993), which indicated that the engineer's department would have the greatest influence in up-dating these records. As at year 2001 councils should have known who completed up-dating IA records. The questionnaire administered in a post-amalgamated council environment has shown that only four percent did not know. Thirty-four percent disagreed with this statement but gave no indication of who did have the greatest influence in up-dating these records.

The responses from Statement 4 indicated that forty percent disagreed and one percent strongly disagreed, while only three percent strongly agreed and thirty-five percent agreed with this statement. The *not known* response had a significant figure of twenty-one percent. During the years when AAS27 was

introduced the Victorian Office of Local Government (VOLG) supported the councils by providing training courses with this organisation, Institute of Municipal Management (IMM), Victorian Municipal Association (VMA), various universities and large accounting firms supplying the resources and materials. At the time (1992 to 1995) some councils complained about the costs and the nature of the material. In interviews the majority of interviewees indicated that education was an important requirement in ensuring an efficient transition from fund accounting to the requirements of AAS27 IA accounting. It appears that the education programs and material provided may not have been as successful as local government authorities hoped.

Statement 5 responses comprehensively highlight that senior officers and other staff within councils needed some form of education to cope with the change in accounting methods and on-going techniques required with accrual accounting for infrastructure assets. This is also supported from the literature review and interviews, which indicated that some form of education was needed for IA accounting under AAS27 requirements. Councils agreed to the need for education, but in the period since 1995 the education provided did not appear to be successful. This is surprising because of the significant change in accounting methods and the changes in financial statements.

The responses from Statement 6 indicated that four percent strongly agreed and fifty-five percent agreed with this statement, while thirteen percent disagreed

and three percent strongly disagreed. It appeared from Statement 4 that there was a lack of relevant and practical information from educators or consultants. This may indicate that the Victorian Local Government Asset Accounting Manual (1992) has been an influence in the identifying of IAs and appears to be relevant and practical information produced by Maunsell Pty Ltd and Coopers and Lybrand for the Victorian Office of Local Government (Section 2.7). The worry being that, if this is correct, the manual was very simplistic and only written to cater for an introductory level in accrual procedures for IAs. This is supported from the literature review (VOLG 1993) and interviews, which indicated that councils used this manual frequently. However, some councils thought that the manual lacked comprehensive and practical instruction on how to account for these assets. The fact that some council officers did not know if the manual was useful is significant. Education and use of the asset accounting manual are seen as important issues.

The responses from Statement 7 indicated that a significant number of councils did not know (39%), only one percent strongly agreed and thirty-three percent agreed with this statement, while twenty-three percent disagreed and four percent strongly disagreed. This disagreed with earlier literature (VOLG 1993, McHugh 1993 and Turner 1992) which indicated that committees made up from representatives from different departments would be beneficial. The difference between the literature and the current research is that councils have had time to reflect and evaluate if infrastructure committees have been beneficial with the

verdict still not fully known and a higher number of councils disagreeing. This is a worrying position because of the detailed information required from different departments in identifying, valuing and depreciating these assets a committee made up of the different departments was vital.

Several reasons for the responses could be that at this time councils were in transition of rapid change in other areas: amalgamation; compulsory competitive tendering (CCT) requirements; and rate capping. The CCT requirements for councils sometimes caused the different departments to conceal information in the belief that if all this information was disclosed their department would be more easily tendered out. This caused limited information sharing and sometimes disharmony between departments within a council, which should no longer apply.

Since the late 1990s the factors above do not exist in the current environment of municipalities who have sufficient time to reliably report IAs and depreciation on these assets. Also communication between departments about information on IAs is important for efficient and effective decision-making on these significant (value and service to the community) assets.

6.4.2 Economic Lives

When identifying IAs under AAS 27:	SA	A	NK	D	SD
8. economic lives of IAs were difficult to estimate	27	50	4	19	0
9. economic lives of IA <i>components</i> were difficult to estimate	38	44	4	13	1
10. IAs components were aggregated	9	59	16	13	3

Table 6.8 has some very significant information on how the different councils estimate lives which depends on the method and process of aggregation. If the council aggregation of IA components is completed leading to limited information then valuation and depreciation problems will occur. The responses indicated that most councils have difficulty in estimating economic lives of the IA components and the IA network. The lives of most IA networks are indefinite but the components of the network have finite lives while providing a certain level of service to community.

The responses from Statement 10 indicated that nine percent strongly agreed and fifty-nine percent agreed with this statement, while thirteen percent disagreed and three percent strongly disagreed. Sixteen percent did not know which is a worrying statistic because in valuing and depreciating IAs it is extremely important to know what components are or are not aggregated for reliable and relevant information for internal and external users. Information is

lost in the process of aggregation. This should have been determined at the start of the process and not left until later.

The Victorian Office of Local Government suggested (Section 2.7) that councils used either a simplistic or comprehensive approach in aggregation of IA components. The simplistic approach is where all individual components were labelled identical in age, condition and material with an average age used. The comprehensive approach in identifying and valuing individual components tries to identify age, condition and material of the IA component in the infrastructure asset network. The comprehensive approach (separate components of the IAs) of identifying and valuing the assets leads to better asset management and depreciation estimations, because less information is lost in the process of aggregation.

Aggregation normally leads to less reliability of information but because of their nature, size and number of components IA networks, for example, a road network, a certain level of aggregation is required. The reliability of methods or types of aggregation has been mentioned in the literature. The methods or level of aggregation may lead to problems of comparability, reliability and accuracy. This information would be insufficient to determine depreciation bases and the information in financial statements would be insufficient for internal or external decisions to be made. In interviews, interviewees indicated that since initial identification and aggregation of components in the IA network significant

process has been made in the further identification of specific components and their condition.

6.4.3 Implementation Issues

When identifying IAs under AAS 27:	SA	A	NK	D	SD
11. discovering who controlled IAs was difficult	5	38	4	52	1
12. a different information system was needed	27	55	5	12	1
13. other issues delayed the identification process	15	56	16	13	0
14. auditors were satisfied with the identification process	7	67	9	17	0
15. the council used the full implementation period (1997)	17	61	15	7	0

Table 6.9 shows responses to Statement 11 that fifty-two percent disagreed and one percent strongly disagreed to having difficulty on the question on who had control of IAs. Only four percent did not know. This suggests that councils are more aware on the issues of control in recording these assets than in the 1992 to 1996 period. The 2001 questionnaire data disagreed with previous literature (Rowles 1992), where there was a difference of opinion on the issue of 'control'. The previous literature suggested that this might not be a problem area whereas the 2001 questionnaire response indicated that they did have problems on this issue. According to one interviewee, there was an issue with control between

the council and Vicroads that had the same roads in each organisation's accounts and GPFRs until 2001. The level of maintenance was the issue according to the council who indicated that their maintenance programs were superior to Vicroads. After discussions between the two organisations and the Auditor-General's Office the issue was resolved with the roads now reported only in Vicroads GPFR. Resolving the control issue helps ease the problems that may lead to double counting of these assets in public organisations, State and local government GPFRs if left unsolved.

The responses from Statement 12 indicated that the majority of councils required a different information system. This indicates that the records of councils before AAS27 requirements were insufficient for accurate reports of IAs and their components. Most councils in interviews appear to be benefiting from having increased information for internal and external use.

Statement 13 responses indicated that seventy-one percent of councils had other issues that delayed identification when AAS27 was introduced and the sixteen percent who did not know may suggest some of the respondents were not in a local council environment at this time. This is supported from the literature review (VOLG). The biggest problem that councils had back in 1995 in accounting for these assets was a lack of resources and, in that past, workload, amalgamation, staff losses and CCT requirements had all delayed asset accounting in most councils.

The responses to Statement 14 indicated that seven percent strongly agreed and sixty-seven percent agreed. The literature disagrees with council views. Harry (1995) wrote that his firm, Coopers & Lybrand (PWC), was critical of the progress in some of their client councils. This shows that there may be a lack of communication between the auditors and councils. Seventeen percent disagreed with the statement, which suggests that the article by Harry (1995) may be relevant on how some councils are progressing in accounting for IAs. Also a report prepared for the VOLG by Burns et al. (1998), indicated that municipalities were not recording IA networks and components comprehensively for internal and external users. However, as a result of this report all Victorian municipalities were given education and extra resources to record IAs. The report indicated that municipalities were recording more reliable IA information and recorded this information on a central database at the VOLG.

The responses from Statement 15 indicated that seventeen percent strongly agreed and sixty-one percent agreed. This is a predictable result due to the changes that occurred in local government (AAS27 requirements) and, as previously discussed, the complexity in reliably identifying IAs.

6.4.4 Identification Accountability

As a result of the identification process:	SA	A	NK	D	SD
16. decision-making has become more efficient	7	51	17	21	4
17. communication between departments has improved	1	48	17	31	3
18. internal council accounting policies have been updated	1	74	17	5	3
19. accountability for IAs has improved	10	73	5	12	0
20. the tangible benefits have outweighed the costs	8	31	19	33	9

Table 6.10 indicated that decision-making has become more efficient with seven percent strongly agreeing and fifty-one percent agreeing. This is supported from the literature review and interviews. With some councils “not knowing” at seventeen percent in 2001 there has been time since the introduction of AAS27 requirements for IAs to comment on the impact of AAS27 requirements on decision-making within councils. Such a high percentage not knowing indicates that some more time may be required before there is an informed response to the above statement.

The responses from Statement 17 did not indicate any direction on this issue in that one percent strongly agreed and forty-seven percent agreed with this statement, while thirty-one percent disagreed and two percent strongly

disagreed, while nineteen percent did not know. Councils interviewed indicated that there was an improvement in internal management.

Statement 18 responses were seventy-five percent needed to up-date internal council accounting policies. This is supported from the literature review and interviews, where most councils indicated that they determined accounting policies from different sources. It is disappointing that seventeen percent did not know if accounting policies have been up-dated. One of the important aspects of successful asset accounting is to have a comprehensive list of accounting policies for AAS27 requirements (Turner 1992, VOLG 1993, McHugh 1993 and Burns et al. 1998). This is another reason to determine if councils have developed comprehensive accounting policies (especially for aggregation), for identifying, valuing and depreciating IAs.

The issue on accountability for these assets in Statement 19 indicated that eleven percent strongly agreed and sixty-nine percent agreed that accountability improved. The literature suggests that AAS27 requirements would significantly increase accountability for these assets. The main literature on this issue came from the Victorian Office of Local Government, the Australian Accounting Research Foundation, public sector senior managers and leading academics. The majority of the councils agreed. It is a positive sign that the majority of councils believe that by asset accounting under AAS27 requirements their accountability will improve.

The responses from Statement 20 were spread over the five given responses that may indicate that most councils do not agree on the benefits to be gained from accrual accounting for IAs. Eight percent strongly agreed and thirty-one percent agreed with this statement, while thirty-three percent disagreed, nine percent strongly disagreed and nineteen percent did not know.

From the literature review local government authorities, IA reporting organisations and Standard preparers indicated that the councils are positive about the change in accounting procedures for AAS27 requirements and the benefits that will occur. The benefits were for both internal and external users with IAs brought into accounts for the first time, which would allow the council to manage these assets better. The theory was that more efficiency and effectiveness would involve regular review of replacement or maintenance costs and determine the real cost to the council of owning or controlling IAs. For external users the reporting of these assets in financial statements would indicate the level of IA consumption and maintenance during financial periods and the extent of resources required to maintain these assets. Nineteen percent did not know which is significantly high after ten years of reporting under AAS27. Interviewees indicated there were benefits but did not fully acknowledge these as the literature suggested.

6.4.5 Theoretical Issues

In my opinion, in accounting for IAs:	SA	A	NK	D	SD
21. IAs are assets under SACs (<i>Statement of Accounting Concepts</i>) definitions	3	45	35	15	2
22. IAs are assets under AAS27 definition	7	83	2	5	3
23. IAs are assets for financial purposes	1	58	1	36	4
24. SACs are useful in accounting for IAs	0	40	32	24	4
25. AAS27 is useful in accounting for IAs	5	60	8	19	8
26. AAS27 is confusing in accounting for IAs	5	39	11	44	1
27. SACs are too confusing in accounting for IAs	4	30	40	25	1

These statements in Table 6.11 were made to find out the extent of theoretical knowledge of the respondents with the change of accounting methods to AAS27 requirements, as this will help in understanding the responses given in the previous and later statements. In particular, in previous statements respondents were critical of the education given and indicated that the local government manual was a source of reference for education on the changes.

Statement 21 asked respondents if IAs are assets under SACs (Statement of Accounting Concepts) definitions. The responses from the questionnaire

indicated that three percent strongly agreed and forty-five percent agreed with this statement, while fifteen percent disagreed, two percent strongly disagreed and thirty-five percent did not know. It was surprising (even though interviews indicated this may be the situation) that the majority of respondents did not know that *AAS27* was the first standard released using the *SACs*. The *SACs* define the nature, subject, purpose and definitions of the accounting elements for content of the general purpose financial reporting. There is a very close link between *AAS27* and *SACs* with *IAs* and depreciation of *IAs* in financial reports. Some more discussion will be given on areas of significance in Table 6.11.

Respondents to the Statement, *IAs* are assets under *AAS27* definition, indicated that seven percent strongly agreed and eighty-three percent agreed which is what standard preparers and local government authorities would expect after the introduction of *AAS27* and the outcome of their education material. Also most respondents are well qualified and most are members of an accounting association, which would also lead to this response.

Under *AAS27* requirements and *SACs* definitions *IAs* are assets for financial purposes. The responses indicated that only two percent strongly agreed and sixty-one percent agreed with this statement. The worrying issue is that a high percentage (36%) of respondents disagreed but agreed that *IAs* are assets. This indicates that there may be some reluctance on reporting these assets.

Statements 24 and 25 were used to determine the respondent's level of understanding and the purposes of AAS27 and SACs in being useful in accounting for IAs. The responses should have been similar but again, as previously indicated, showed a lack of theoretical understanding.

Statements 26 and 27 were used to determine the respondent's level of understanding and the purposes of AAS27 and SACs. The validity of the questionnaire data was enhanced with very similar response patterns being found from the data in this Table. Again, the difference between AAS27 and SACs from the respondents' viewpoints is highlighted. Forty-three percent did not know if SACs are too confusing in accounting for IAs which indicates that there is a lack of awareness and the purpose of the SACs in determining the broad content of general purpose financial reporting for local government.

Knowledge of theories such as the SACs behind accounting standards is important for: GPFRs preparers; internal; and external users. This knowledge helps those groups make informed decisions on the efficiency and effectiveness in the use and expenditure of these assets by municipalities.

6.4.6 Infrastructure Asset Differences

Table 6.12 Infrastructure Asset Differences

In my opinion, in accounting for IAs:	SA	A	NK	D	SD
28. IAs in the public sector are different from the private sector	33	38	17	8	4
29. IAs are different from other physical assets for reporting purposes	34	44	1	20	1
30. SACs have helped improve reporting IAs compared with the previous reporting system	0	25	52	20	3
31. AAS27 has helped improve reporting IAs compared with the previous reporting system	12	57	16	12	3

Statement 28 is an area where significant differences in opinion occur on whether IAs in the public sector are different from the private sector. The responses indicated that thirty-three percent strongly agreed and thirty-eight percent agreed. This is not surprising considering the previous accounting environment in which local government did not account for these assets after the initial purchase. If they were not owned but controlled then these assets were considered as an accountability problem for some other public sector entity. This is where attitudes may still remain even though significant changes have occurred in public sector standards and the development of the SACs, which recognise no difference between sectors for the accounting and reporting of IAs. This may be the reason respondents felt that education courses were relevant or practical because of the belief that there is a difference between sectors in accounting for these assets. This was a significant issue in the literature review

in discussing the development of a conceptual framework for financial reporting of these assets.

Statement 29 responses followed on from the previous statement where senior local government accounting staff for different reasons view IAs as being different from other physical assets for reporting purposes in a local government environment. The responses indicated that thirty-four percent strongly agreed and forty-four percent agreed with this statement. This is a critical issue in the attitudes of council staff in the benefits to be gained from AAS27 requirements for IA reporting. The majority of interviewees thought that there was a difference.

Statements 30 and 31 were included to gain insight into the respondent's attitudes on whether the SACs or AAS27 helped improve reporting IAs compared with the previous reporting system. The SACs responses indicated that twenty-seven percent agreed with this statement and nineteen percent disagreed, three percent strongly disagreed, while fifty-two percent did not know. This follows on from the responses from Table 6.11, where the value of a conceptual framework was either questioned or unknown.

The AAS27 responses indicated that twelve percent strongly agreed and fifty-nine percent agreed with this statement, while eleven percent disagreed, three percent strongly disagreed and sixteen percent did not know. This response is inconsistent with Statement 28 and 29 responses where respondents thought

IAs were different from other physical assets and those in the private sector. AAS27 requirements do not allow that IAs are different from other physical assets or those in the private sector

6.5 Valuation Analysis

6.5.1 When Valuing IAs under AAS27

Table 6.13 Valuation Resources

When valuing IAs under AAS27:	SA	A	NK	D	SD
1. all valuations were completed internally	11	36	0	45	8
2. the Finance department was mainly involved	1	34	0	57	8
3. the Local Government Asset Accounting Manual was used	3	59	18	19	1
4. external consultants were used	8	50	0	37	5
5. accounting software was used	4	45	3	43	5

In this section an analysis of valuation issues is undertaken beginning with Table 6.13. Statement 1 responses indicated that only eleven percent strongly agreed but thirty-six percent agreed to valuations being completed internally. The majority of councils called on consultants (Statement 4), even though this showed that experience and resources were available in some councils.

This is supported from the interviews that indicated engineers or outside consultants helped in the identification and valuation process in some councils.

Another possible suggestion at that time (1992-1996) was that because of CCT requirements councils changed from internal to external valuation for these assets to meet the requirements and staff losses in the post-amalgamation environment.

The responses from Statement 2 indicated that the finance department did not have the greatest influence in the valuation process. Earlier responses from the identification process indicated that engineers had a major influence. Literature (VOLG 1993, McHugh 1993 and Burns et al. 1998) and interviews indicated that in some councils the engineers would value infrastructure assets and only a minority of councils would have both the engineers and finance department complete valuation. Roads, bridges and drains would be valued by the engineer's department (88%), while some councils suggested that the finance department would oversee the valuation of infrastructure assets. It can be seen that progress has been made in the area of valuation and in most councils other sources either external (Statement 4) or internal were used other than the finance department.

Statement 3 asked if the Local Government Asset Accounting Manual was used in the valuation process. Three percent strongly agreed and fifty-nine percent agreed with this statement. This tends to agree with the earlier two statements because the finance department appears to have not been the major influence and would be unlikely to know if the other parties used to value IAs used the

manual. It does appear that the manual was used more in the identification process (Table 6.7).

The above information must be a pleasing response for the Victorian Office of Local Government, the Institute of Municipal Management and Coopers & Lybrand (now PWC) who spent a considerable amount of money and time in producing the manual for proper accounting of these assets under AAS27 requirements. This corresponds with Table 6.7 (Statement 6 identification process) where the majority of councils indicated that the manual proved useful.

Accounting software was used (Statement 5), indicated that four percent strongly agreed and forty-five percent agreed with this statement, while forty-three percent disagreed, five percent strongly disagreed and three percent did not know. This shows that information technology resources have not fully been explored for the advantages that these resources possess. Some councils have fully explored these resources and developed their own software according to interviewees.

This is supported from the interviews, where some councils used a Pavement Management System (PMS), a spread-sheet format for recording these assets or had a problem in finding suitable software. One council had produced its own software for recording roads: the Streets Asset Management System (SAMS).

This showed that councils do have resources if they can allocate to the valuation of IAs and other information needs from other departments do not take priority.

Forty-eight percent not using software needs to be investigated. These councils should have at this stage of the process accounting software that is needed for better asset management and meeting AAS27 asset accounting requirements. The 1992-96 period indicated that difficulty in finding suitable software and amalgamation problems were the causes which should have been overcome by 2001.

6.5.2 Valuation Basis

Table 6.14 Valuation Basis					
When valuing IAs under AAS27:	SA	A	NK	D	SD
6. deprival cost was used	1	20	32	42	5
7. written-down replacement cost was used	17	64	6	11	1

Statement 6 that, *deprival cost was used*, indicated that one percent strongly agreed and twenty percent agreed with this statement, while forty-two percent disagreed, five percent strongly disagreed and thirty-two percent did not know. This is a high number of councils that do not know what method was used; the majority of councils indicated written-down replacement cost was used. This is supported from the literature review that written-down replacement cost method of valuation would be used in the valuation of infrastructure assets. However one council interviewed indicated that the preferred method from the auditors

was the *Greenfields Optimal* in which the values are based on the cost of constructing in an open field with no obstructions and no traffic. This method according to some interviewees was not realistic in IA valuation.

The way this method was used by the different councils in obtaining the written-down replacement cost of the asset varied. In the interviews there appeared to be a significant divergence in estimating the written-down value, ranging from complex site valuation methods to standardisation of ages. This could lead to significant subjectivity within the councils in the calculation of the written-down value that may inhibit good asset management and external users. What type of valuation they used and whether it led to a more realistic and accurate valuation than the written-down replacement cost method would need to be considered.

6.5.3 Valuation Reliability

When valuing IAs under AAS27:	SA	A	NK	D	SD
8. valuations were fully justified	4	69	8	16	8
9. the Statement of Financial Position was reliable	4	52	16	23	5
10. the council used the full phase-in period (1997)	12	68	17	3	0

The responses from the questionnaire indicated that valuations were fully justified. This is supported from the literature (VOLG, 1993b) where the response was a positive reaction to AAS27 requirements on accounting for IAs.

This reaction will encourage government authorities and standard setters on the attitude of local government officers to AAS27. The positive literature and training given in accounting for these assets may have caused this high response. There appears to be more focus from this training on the need to be given by senior council staff, academics, local and accounting authorities on why these asset valuations are important for inclusion in the council's financial statements.

The, *Statement of Financial Position was reliable*, indicated that four percent strongly agreed and fifty-two percent agreed with this statement, while twenty-three percent disagreed, five percent strongly disagreed, and sixteen percent did not know. This response shows that AAS27 requirements in accounting for IAs have been accepted by the majority of councils. Sixteen percent that did not know is too high for internal and external decision-making. The majority of councils indicated that they used the full phase-in period for valuing these assets.

According to research (Molland and Bellamy, 1997)) there was a suggestion from a senior council official that the IA phase-in period should have been staggered in a way similar to the CCT requirements. CCT requirements were to be brought in over three years with 20%, 30% and 50% of operating expenses being tendered out for each of the three years. The officer believed that IAs might have been given more priority if quotas were placed on the percentage of

assets recorded in each year during the phase-in period. This could only be done after proper identification of the IAs was completed to know what percentage needed valuing. The suggestion was logical because there appeared to be a tendency for the post-amalgamated councils to give these assets a lower priority than CCT and amalgamation. CCT requirements were abolished in 1997 and amalgamation problems were not as serious as first thought and councils should have had IA valuations as a priority.

6.5.4 Valuation Problems

Table 6.16 Valuation Problems					
In valuing IAs, the following problems were encountered:	SA	A	NK	D	SD
11. there were difficulties in the valuation method used	12	63	5	20	0
12. current costs methods were difficult to use	7	49	11	33	0
13. establishing the current condition of IAs was difficult	21	54	1	23	1

For difficulties in the valuation method used, the responses from the questionnaire indicated that twelve percent strongly agreed and sixty-three percent agreed. This is an interesting response to determine the reasons why difficulties existed. As earlier indicated (interviewees) were the reasons due to the following;

1. uncertainty on how to aggregate IAs components for valuation purposes;
2. unable to determine condition of IAs components;
3. lack of experienced qualified staff;
4. estimating written-down cost of components; and
5. valuation methods do not suit valuation of IAs.

This is supported from the literature review and interviewees indicated they would use the written-down replacement cost method for valuation which some of the problems mentioned above were overcome or in the process of being improved. Some interviewees have questioned the use of the deprival value method for IAs. Some respondents (thirty-two percent) that did not know if the deprival value method was used which indicated there is still confusion.

Statement 13 responses from the questionnaire indicated that twenty-one percent strongly agreed and fifty-four percent agreed in having difficulties in determining current condition. It has been suggested that two people valuing the same infrastructure assets could calculate significantly different values using the written-down replacement cost method of valuation. The estimation of the current condition of the asset has been suggested as the area where most subjectivity may occur.

6.5.5 Component Valuations

In valuing IAs, the following problems were encountered:	SA	A	NK	D	SD
14. valuation of IAs components was difficult	12	64	0	23	1
15. valuation of road components was difficult	17	54	3	25	1
16. valuation of a new seal to an existing road network is difficult to record under written-down replacement cost	23	36	12	29	0
17. valuation of land under roads was difficult	48	17	27	8	0
18. land improvements to roads are difficult to record and value	28	40	23	9	0
19. valuation of bridge components was difficult	9	46	17	27	1

Table 6.17 indicates that, *valuation of IAs components was difficult*. This helps identify a reason why councils had difficulties with valuing these assets. In the interviews before the questionnaire, council officers suggested that lack of physical details was a prime reason. This situation may decrease the reliability of the valuations of these assets in financial statements for both internal and external decision-making.

Table 6.17 gives some indication with which particular IAs councils encountered difficulties in the valuation of the components. Roads were cited as an IA where councils were having difficulties with component valuations if proper identification was not completed according to interviewees. Again, the prime

reason given for this situation by council officers was the lack of physical and monetary details when AAS27 IA requirements were made mandatory.

Statement 16, *valuation of a new seal to an existing road network is difficult to record under written-down replacement cost*, responses indicated that twenty-three percent strongly agreed and thirty-six percent agreed with this statement, while twenty-nine percent disagreed and twelve percent did not know. This is another technical issue that may need more guidance for accounting purposes under local government conditions. Some interviewees anticipated a problem that may develop due to new technology when using part of the old seal in the construction of the new seal. Also, if an amount can be determined, to what account is the old value figure written off? This may be a lack of accounting knowledge (revaluation requirements under AAS10) or may highlight a problem.

The problem is that part of the old seal is used in the formation of the new seal under a process called asphalt rehabilitation. New technology in road construction adds problems in determining an accurate valuation for these assets. This is an area that may need more detailed literature in accounting for local government IAs on technical issues.

Statement 17 includes one of the components of a road network that has been and is one of the areas of major debate in valuation of IAs where accounting authorities are still resolving it. The responses from the questionnaire indicated

that forty-eight percent strongly agreed and seventeen percent agreed with this statement, while eight percent disagreed and twenty-seven percent did not know. It appears odd to have this situation on a highly debated issue when the valuation of the land will have a huge impact on the road valuations in financial statements and decision-making implications.

This is supported from the literature review and interviews where the majority of councils thought that to value roads would lead to a nonsense value. This was due to different methods, Crown land and, in most cases, the fact that the land is not realisable. This shows that there is some confusion and difficulties in valuing land under roads. A relatively high percentage (27%) still did not know if valuation of land under roads would be difficult. This shows that there were many councils that had not addressed the issue of valuation of land under roads. Only a small portion of councils did not have difficulties, with eight percent disagreeing with the above statement. The Urgent Issues Group (UIG) is investigating this matter at the time of writing (2005).

Statement 18, *land improvements to roads are difficult to record and value*, responses indicated that twenty-seven percent strongly agreed and thirty-seven percent agreed with this statement, while nine percent disagreed and twenty-seven percent did not know.

Several councils during the interviews indicated that some technical issues have not been well explained in the available literature. This was one of the areas where a number of councils had difficulties. It appears that half of the councils who responded experienced common problems. This is where the Asset Accounting Manual could usefully have been more comprehensive with practical examples on detailed technical local government issues

Another related issue that since 1995 has been resolved by the relevant authorities is the revaluation of non-current assets. Revaluation caused a problem because *AAS10 Accounting for the Revaluation of Non-Current Assets* stated that revaluation cannot be completed on one asset but all the assets in that class. IAs may be a problem because of their size and the components involved. So, in IA (for example, road network) revaluations may not be completed on that class of asset for three to five years because of the restriction in *AAS27*. The standard now allows councils to revalue over a period of time as long as this is highlighted in the notes of the financial statements. Bridge components are another area of valuation difficulty for councils.

One council indicated they revalue all IAs annually and have no problems. This council is large in its asset base and has a very high population increase each year and is an exception to other councils. The majority of councils cannot revalue all these assets annually because resources are strained.

6.5.6 Valuation Opinions

Table 6.18 Valuation Opinions

In my opinion:	SA	A	NK	D	SD
20. valuation methods need further refinement	35	55	2	8	0
21. valuation methods do not reflect actual value to council	32	48	3	17	0
22. IA values should not be in the financial statements at all	23	16	5	40	16
23. IA values should only be included in the notes to the accounts in the financial statements	19	25	8	33	15

The opinions from respondents, *valuation methods need further refinement*, indicated that thirty-five percent strongly agreed and fifty-five percent agreed with this statement. This was a technical issue involving IAs and the suitability in the choice of the present valuation methods acceptable by AAS27 and accounting bodies. The question that follows on from the responses to this statement indicates that there is some reluctance by councils to accept these methods and *why* this situation exists. The interviews indicated that councils have made significant changes to initial valuations of these assets.

This is supported where the response was a common theme in the interviews that the valuations of these assets are estimates that needed to be reviewed over the next few years for a more accurate valuation since initial valuation. Also

back in 1995, CCT requirements may have caused some valuations to be lower so a lower depreciation expense could be obtained.

Statement 21 was asked to gauge respondents' views on whether valuation methods used do not reflect actual value of IAs to council in their financial statements. The responses indicated that thirty-two percent strongly agreed and forty-eight percent agreed with this statement, while seventeen percent disagreed and three percent did not know. There appears to be a problem with technical application and the perception of the respondents to the valuation obtained and what they think the real value of these assets is. This perception may lead to problems in the council's decision-making responsibilities in budgeting and depreciation allocations for these assets. This can flow on to the perception of external users of financial statements on the reliability of IA information.

Councils interviewed before the questionnaire thought that the current valuation methods were hard to apply to IAs. With the majority of respondents (80%) indicating that present valuation methods did not give an accurate value for these assets, local government and accounting authorities may need to review standards and literature (for example, AAM) to help councils improve their techniques and perceptions on these asset values. There still appears to be some reluctance explaining why council respondents think this way. As listed in Chapter 4, some reasons suggested by interviewees in the interviews included:

1. aggregation of assets;
2. opinion of AAS27 by respondents;
3. the way in which current costs are being applied to the assets involved; and
4. the estimation of written-down values of infrastructure assets (e.g. roads, drains and bridges).

Statement 22 narrows down the previous statement in obtaining the respondents' opinions of IAs accounting under AAS27 requirements. The majority of councils support valuations of these assets in financial statements but forty-six percent disagree which would be a worry for accounting authorities. This is supported from the literature review (McHugh 1993, Turner 1989) where some of the financial managers did accept that the valuation of these assets should be in financial statements. Again, this suggests that the majority attitude to accounting for these assets under AAS27 requirements is positive.

Statement 23, *IA values should only be included in the notes to the accounts in the financial statements*, indicated that nineteen percent strongly agreed and twenty-five percent agreed with this statement, while thirty-three percent disagreed, fifteen percent strongly disagreed and eight percent did not know. A slight majority disagrees (forty-eight percent) with only forty-four percent agreeing which again indicates that there is a problem with some of the respondents in having these valuations in financial statements.

6.6 Depreciation Analysis

6.6.1 Depreciation Issues

When depreciating IAs:	SA	A	NK	D	SD
1. accountants worked on the issues	11	55	2	25	7
2. engineers worked on the issues	20	70	1	7	2
3. depreciation was not accounted for until after the phase-in period under AAS 27 (1997).	11	48	21	20	0

In this section an analysis of depreciation issues is undertaken beginning with Table 6.19. In this section each statement is analysed individually. The questionnaire asked if accountants worked on the issues when depreciating IAs, the responses indicated that eleven percent strongly agreed and fifty-five percent agreed with this statement, with Statement 2 indicating that significant responses (20%) strongly agreed and seventy percent agreed that engineers worked on depreciation issues. This implies that there is communication and input on depreciation issues between accounting and engineering departments. Before the introduction of AAS27, these assets were controlled and recorded by engineers. Now that they need to be valued and depreciated, accountants need to work with engineers to obtain reliable and accurate valuation and depreciation of these assets. It appears from interviewees and respondents that engineers

have the major influence and in a number of councils accountants do not have any input in determining this information.

It appears that engineers had a prime role in the work on depreciating IAs. If this were the situation it would be unfortunate that the finance officers did not also determine depreciation policies. In interviews and the pilot study, two participants were involved in engineering activities and they indicated that part of their role in accounting for these assets was to have thorough knowledge of AAS27, the SACs and associated accounting standards. In these interviews and pilot study both the finance and engineer officers were from inner metropolitan councils. The engineer officers appeared well versed on what was required and the information required from both internal and external users of IAs financial information for decision-making.

Statement 3 indicated that eleven percent strongly agreed and forty-eight percent agreed with this statement, while twenty percent disagreed and twenty-one percent did not know. The high percentage of respondents that did not know was mainly due to the respondents not being involved at this particular time period. The majority of councils used the phase-in period to complete the IA identification and valuation before bringing depreciation into the accounts.

Depreciation on pre-1992 infrastructure assets was used in the CCT calculations, which, in most cases, was a significant expense. It was suggested

that inclusion of depreciation on these assets before the end of the phase-in period would give councils a better indication of whether they can meet CCT requirements. Some auditors (Coopers & Lybrand (PWC) and Hall Chadwick) had advised councils that the inclusion of this depreciation figure as soon as possible would be beneficial to them. Now that CCT requirements no longer exist this issue has subsided and the threats about distorting financial statements and decision-making are not warranted. Also with the implementation period ended (1997), IA and depreciation values are now in GPFRs.

6.6.2 Depreciation Rates

Table 6.20 Depreciation Rates

The depreciation rates used by my council:	SA	A	NK	D	SD
4. fully reflect asset service potential consumption	4	44	20	27	5
5. fully reflect asset consumption	5	39	17	32	7
6. were obtained from auditors	1	9	7	57	26
7. were obtained from the LG Asset Accounting Manual	1	43	9	40	7

The depreciation rates used by my council, *fully reflect asset service potential consumption*, indicated that four percent strongly agreed and forty-four percent agreed with this statement, while twenty-seven percent disagreed, five percent strongly disagreed and twenty percent did not know. The question is why rates do not reflect IAs consumption? Is this a problem: theoretical; practical; or both?

Twenty percent that do not know indicates some respondents are unaware of the importance of this issue in financial reporting for internal and external decision-making. Having rates that reflect consumption is important for knowing the level of funding (rating estimates) needed in the future renewal of IAs components and budget requirements for future depreciation expenditure. This helps internal decision-makers with forward projections and external decision-makers, for example, the Victorian Grants Commission, with future funding requirements for council's IAs.

Statement 5, *fully reflect asset consumption*, responses from the questionnaire indicated that five percent strongly agreed and thirty-nine percent agreed with this statement, while thirty-two percent disagreed, seven percent strongly disagreed and seventeen percent did not know. This indicates there is a significant degree of variation in responses on the issue. Is the reason due to unreliable valuation of IAs, the determination of depreciation rates, use of traditional methods of depreciation or reluctance by council officers to accept depreciation of these assets?

Depreciation rates were obtained from auditors, indicated that one percent strongly agreed and nine percent agreed with this statement, while fifty-seven percent disagreed, twenty-six percent strongly disagreed and seven percent did not know. This is an area where a number of councils in the past have mentioned that auditors gave the councils depreciation rates, which would not

always be a reliable source. Rates need to be determined internally between the departments that are involved in the councils' IAs to reflect fully the service potential consumption for reliable information for decision-making. Also each council will have unique features in the consumption of these assets, for example, climate, usage, maintenance and materials used in construction.

Statement 7 indicated that one percent strongly agreed and forty-three percent agreed with this statement, while forty percent disagreed, seven percent strongly disagreed and nine percent did not know. Some comments from parties (Pilcher, 2000) interested in IA accounting have suggested that standardised rates would lead to better information for comparisons between councils, however, all councils' consumption of these assets will not be the same due to their own particular features of usage and maintenance. Using rates from the manual may save time and expenditure in the short term but lead to incorrect rates of consumption, which have serious implications for internal and external decision-making in the future.

A number of councils interviewed before the questionnaire used the Accounting Asset Manual in some way to determine their depreciation rates. Most indicated that they refined their rates to actual municipal usage at a later date. The majority of councils interviewed appear concerned that depreciation rates should show actual municipality usage of these assets.

6.6.3 Council Depreciation Rates

Table 6.21 Council Depreciation Rates

The depreciation rates used by my council:	SA	A	NK	D	SD
8. are revised annually	7	58	5	29	1
9. need to be based on an industry standard	12	51	8	23	6
10. are mainly straight-line	25	51	3	21	0
11. are traditional methods (e.g. straight-line & reducing balance) used for external reporting purposes only and not for internal decision-making	15	51	2	27	5

Depreciation rates are revised annually, indicated that seven percent strongly agreed and fifty-eight percent agreed with this statement. This shows that councils are aware of the importance of having accurate depreciation rates and will be flexible enough to review them annually. The response to the questionnaire was similar to the interviews before the questionnaire on this issue. Some interviewees indicated that a lack of resources made this task difficult.

Statement 9 that, *depreciation rates need to be based on an industry standard*, indicated that twelve percent strongly agreed and fifty-one percent agreed with this statement. This issue has been discussed earlier in this section and there are positives and negatives for this proposal. Again standardisation may lead to conflicting signals in the consumption of service potential of IAs for reliable financial information for internal and external users.

Depreciation rates for IAs are mainly straight-line calculations, indicated strongly that this method is used. This corresponded with interviewees and a review of council financial statements (Chapter 7) that revealed that all councils used straight-line depreciation calculations.

Statement 11 indicated that fifteen percent strongly agreed and fifty-one percent agreed with this statement, while only twenty-seven percent disagreed and five percent strongly disagreed. This is very disappointing for local government and accounting authorities that respondents could not comprehend the valuable information obtained from traditional depreciation methods, which is one of the biggest advantages of accrual accounting for these assets.

6.6.4 Respondent Opinions

Table 6.22 Respondent opinions					
In my opinion:	SA	A	NK	D	SD
12. depreciation is very useful in asset management	13	64	0	16	7
13. depreciation is very useful in internal decision-making	13	58	3	21	5
14. maintenance of IAs is more relevant than depreciation for <i>internal</i> decision-making	21	54	9	16	0
15. maintenance of IAs is more relevant than depreciation for <i>external</i> decision-making	12	44	13	31	0

The respondents' opinions that depreciation is very useful in asset management indicated a positive response (77%). This conflicts with an earlier statement

(No.11), where traditional methods of depreciation may not be adequate for internal decision-making. It appears that councils viewed depreciation for asset management favourably. This shows councils are not viewing all aspects of depreciation negatively. Councils have a positive attitude on depreciation being very useful in asset management.

The question, *depreciation is very useful in internal decision-making*, indicated that thirteen percent strongly agreed and fifty-eight percent agreed with this statement. Most respondents value depreciation as a tool in IA decisions.

The Statement, *maintenance of IAs is more relevant than depreciation for internal decision-making*, indicated that twenty-one percent strongly agreed and fifty-four percent agreed with this statement. Again, maintenance information is important but is used with depreciation information to determine if councils are using adequate resources in the upkeep of IAs; also, depreciation rates and economic lives are dependent on the amount of maintenance spent. Also a review of financial statements reveals that external users cannot easily obtain maintenance expenditures on these assets for analysis (Chapter 7).

The Statement that followed from the previous one, *maintenance of IAs is more relevant than depreciation for external decision-making*, indicated that twelve percent strongly agreed and forty-four percent agreed with this statement, with thirty-one percent disagreeing and thirteen percent did not know. Again, should

there be a difference between maintenance and depreciation for decision-making? There is a positive correlation between these two variables in the amount of service potential consumed.

6.6.5 Traditional Depreciation Methods

In my opinion:	SA	A	NK	D	SD
16. depreciation is needed to reflect the cost of services that the council provides	7	63	5	20	5
17. traditional depreciation methods (eg.straight-line & reducing balance) are not appropriate for IAs.	23	52	8	16	1
18. straight-line depreciation is not appropriate for roads	32	51	3	13	1
19. roads need different depreciation rates for each layer and need to be reviewed regularly to reflect their consumption	23	61	5	8	3

On the issue, *depreciation is needed to reflect the cost of services that the council provides*, most of respondent's believe depreciation costs are needed when calculating the cost by ratepayer's consumption of IAs. This shows that the majority of respondents recognise depreciation as a cost in using these assets.

For Statement 17, the responses from the questionnaire indicated that twenty-three percent strongly agreed and fifty-two percent agreed with this statement, while sixteen percent disagreed, one percent strongly disagreed and eight

percent did not know. This is an interesting response in that the majority of respondents thought that these methods were not adequate for these assets but still felt depreciation was needed for IAs financial accounting.

For the majority of respondents (83%), *straight-line depreciation is not appropriate for roads*, shows a significant reluctance by council officers to use this method. This follows on from the previous statement and may also help understand why respondents were reluctant to use depreciation costs for internal decision-making. There appeared to be problems with the value and information given from traditional depreciation methods. Again, is this theoretical, practical or both issues from respondent's views of depreciation? Depreciation, as well as valuation of these assets, is relatively new for local government accounting and may be one of the issues to help explain these responses and the respondents' knowledge of depreciation. Also, as mentioned earlier, engineers having the major influence in depreciation policies and an earlier study (Burns et al., 1998) could be reflected in the respondents' opinions.

The next statement, 18, found that the majority (84%) thought roads needed different depreciation rates for each layer and needed to be reviewed regularly. Only eleven percent disagreed and five percent did not know. An examination of the councils' financial statements (Chapter 7) showed they used straight-line depreciation calculations for roads.

On the issue (Statement 19), *roads need different depreciation rates for each layer and need to be reviewed regularly to reflect their consumption*, the responses indicated that twenty-three percent strongly agreed and sixty-one percent agreed with this statement.

This is supported from the literature review (VOLG, 1993) that indicated that depending on the council's approach in identification, using either comprehensive or simplified (aggregate) methods, depreciation of the layers will vary. In the comprehensive approach, each layer is depreciated at a different rate whereas in the simplified approach the whole road is depreciated as a single unit.

These responses and previous responses showed an area of concern as to subjectivity and the different methods used in identifying, valuing and depreciating roads. More technical guidance needs to be given so that councils can value and depreciate these assets in a way that is comparable with other councils. In the literature (Turner et al, 1990 & O'Shea 1991) Vicroads and the RTA did encounter problems when changing to accrual accounting for these assets but indicated that these problems were overcome.

6.6.6 Respondent's Ideological Views

In my opinion:	SA	A	NK	D	SD
20. condition-based-depreciation (CBD) should be used to obtain more relevant and reliable information on IAs	41	48	7	3	1
21. CBD could be used for external and internal decision-making whereas traditional depreciation methods cannot be used internally	24	47	17	12	0
22. there is a difference between depreciation and maintenance costs in CBD calculations	19	56	24	1	0
23. depreciation should not be included in rates budget determination	16	46	9	21	8
24. depreciation costs rather than capital expenditure should be included in rate calculations	1	12	16	52	19
25. ratepayers should be paying for the use of services	15	69	4	12	0
26. depreciation causes intergenerational inequity problems	4	23	32	37	4

The respondents' opinions for Statement 20 on whether *condition-based-depreciation (CBD) should be used to obtain more relevant and reliable information on IAs* forty-one percent strongly agreed and forty-eight percent agreed with this statement, while three percent disagreed, one percent strongly disagreed and seven percent did not know. This is a very interesting response as the CBD method is not a depreciation method but is an up-grade of using deferred maintenance in financial accounting, which was sometimes used in modified accrual accounting. This was not allowed under AAS27 and is also a

reason why CBD was rejected by accounting authorities as an alternative to depreciation methods allowable under AAS27. Before the questionnaire was sent out, Victorian councils were asked for information and given advice on accounting for these assets in a report called *Facing the Renewal Challenge*, (Burns et al, 1998) in which the consultants who prepared the study advocated the CBD method instead of traditional depreciation methods. This may have influenced respondents' answers.

Statement 21, *CBD could be used for external and internal decision-making whereas traditional depreciation methods cannot be used internally*, indicated that twenty-four percent strongly agreed and forty-seven percent agreed. This follows from the previous response and shows a lack of knowledge of the CBD method.

The respondents were asked if there is a difference between depreciation and maintenance costs in CBD calculations; responses from the questionnaire indicated that nineteen percent strongly agreed and fifty-six percent agreed with this statement, while one percent disagreed and twenty-four percent did not know. This statement was asked to gauge the respondents' technical knowledge of CBD and indicates that it may not be credible as CBD does not recognise depreciation costs, only maintenance costs.

Statement 23, *depreciation should not be included in rates budget determination*, indicated that sixteen percent strongly agreed and forty-six percent agreed with this statement, while twenty-one percent disagreed, eight percent strongly disagreed and nine percent did not know. As respondents have indicated that depreciation and user-paying methods for IAs should be used, then why do the majority of officers not want depreciation costs in rates estimates?

On the issue, *depreciation costs rather than capital expenditure should be included in rate calculations*, the responses indicated that one percent strongly agreed and twelve percent agreed with this statement, with fifty-two percent disagreeing and nineteen percent strongly disagreeing, while sixteen percent did not know. Again this statement follows on from the previous one and indicates reluctance by respondents to use depreciation costs for important internal decisions on the cost of IA consumption by ratepayers and abandon cash accounting.

On the issue of *whether ratepayers should be paying for the use of services* responses indicated that fifteen percent strongly agreed and sixty-nine percent agreed with this statement, while twelve percent disagreed and four percent did not know. This response conflicts with the issue of why depreciation is an important tool for determining IA consumption costs in a user pays environment. Respondents indicated that ratepayers should be paying for IA consumption but

appear not to realise the importance of depreciation. As discussed earlier, this could possibly be due to the lack of knowledge or conflicting views by interested parties on the theory of depreciation and what it represents in IA costs and financial reporting. Also this may be reluctance by council officers to accept accrual accounting and still think of a fund accounting environment.

The responses to *depreciation causes intergenerational inequity problems* indicated that four percent strongly agreed and twenty-three percent agreed with this statement, while thirty-seven percent disagreed, four percent strongly disagreeing and thirty-two percent did not know. This indicates a thirty-two percent did not know response, that respondents are unable to recognise the use of depreciation in attempting to overcome these problems with the consumption of IAs by ratepayers.

6.6.7 Methodology Opinions

Responses to *depreciation can cause significant differences between cash and accrual budgets* indicated that thirty-two percent strongly agreed and fifty-five percent agreed with this statement, while four percent disagreed and nine percent did not know. This is supported from the literature review and most interviewees thought this would occur. The rating estimates were determined from the cash budget where depreciation, being unfunded, was not included until after the IA phase-in period (1997). Some of the interviewees' thought that

IA depreciation should be funded to be included in accrual budgets and rating estimates. This is also the situation with the Victorian Office of Local Government which believes depreciation should be reflected in rating estimates.

Table 6.25 Methodology Opinions

In my opinion:	SA	A	NK	D	SD
27. depreciation can cause significant differences between cash and accrual budgets	32	55	9	4	0
28. financial statements with depreciation of IAs are useful for external users	11	43	17	19	10
29. depreciation should not appear in the operating statement	12	16	12	37	23
30. if IAs are properly maintained they should be depreciated in financial statements.	5	62	13	12	8
31. maintenance schedules should be included in the notes of financial statements so external users can make informed decisions	1	42	11	33	13
32. an amount equal to the depreciation should be placed in a reserve	1	16	9	54	20
33. there is a difference between depreciation and maintenance costs in internal management decision-making.	24	67	4	4	1

In the respondents' opinions, *financial statements with depreciation of IAs are useful for external users*, the responses from the questionnaire indicated that eleven percent strongly agreed and forty-three percent agreed with this statement, while nineteen percent disagreed, ten percent strongly disagreed and seventeen percent did not know. This is an interesting response in the perception of depreciation from respondents, where the majority agreed that

depreciation is useful for external users but earlier indicated that traditional depreciation was not useful for internal decision-making.

On the issue *depreciation should not appear in the operating statement* twelve percent strongly agreed and sixteen percent agreed with this statement, while thirty-seven percent disagreed, twenty-three percent strongly disagreed and twelve percent did not know. The majority agreed that depreciation should be in financial statements, which indicates that respondents still recognise some importance that depreciation has in IA financial reporting. As was seen earlier, there was a positive attitude to valuation of these assets in AAS27 requirements. The reaction to depreciation from the interviews before the questionnaire and questionnaire suggest that it may also be positive to AAS27.

Statement 30, *IAs are properly maintained they should be depreciated in financial statements*, indicated that five percent strongly agreed and sixty-two percent agreed with this statement, while twelve percent disagreed, eight percent strongly disagreed and thirteen percent did not know. This indicates that the majority of respondents, even if unknown to them, do not support CBD and believe that IAs do have consumption costs (depreciation) when properly maintained.

On the issue of additional information, *maintenance schedules should be included in the notes of financial statements so external users can make*

informed decisions, the responses indicated that one percent strongly agreed and forty-two percent agreed with this statement, with thirty-three percent disagreeing and thirteen percent strongly disagreeing, while eleven percent did not know. It has been suggested by some authors (Lee, 1999) that these asset maintenance schedules be included as additional information in GPFRs for more efficient decision-making by users who are interested in the service potential of IAs being reported.

Statement 32, *an amount equal to the depreciation should be placed in a reserve*, indicated that one percent strongly agreed and sixteen percent agreed with this statement, while fifty-four percent disagreed, twenty percent strongly disagreed and nine percent did not know. This shows that depreciation is not made up of reserves which indicates that respondents are not relating depreciation to some form of replacement accounting with the use of reserves that previous accounting systems used. However this is the opinion of the respondent who is a finance officer, which appears different according to interviewees who indicated that engineers were demanding reserves for IA depreciation if it was included in accrual budgets and rating estimates. This divided opinion in a council environment has caused further confusion for the purpose of IA depreciation between senior staff and councillors.

Asked if, *there is a difference between depreciation and maintenance costs in internal management decision-making*, the responses indicated that twenty-four

percent strongly agreed and sixty-seven percent agreed with this statement, while four percent disagreed, one percent strongly disagreed and seven percent did not know. This is a positive response on the difference between depreciation and maintenance in IA accounting.

6.6.8 Council Procedures

In my council:	SA	A	NK	D	SD
34. there is a difference between depreciation and maintenance costs in traditional depreciation methods.	23	64	8	5	0
35. an amount equal to the depreciation allowance is used to replace IAs	1	13	12	54	20
36. an amount equal to the depreciation allowance is used for various internal purposes	0	24	12	55	9
37. in my council's financial statements there is a difference between depreciation and maintenance costs	20	72	3	4	1

In a council's accounting procedures, *there is a difference between depreciation and maintenance costs in traditional depreciation methods*, the responses indicated that twenty-three percent strongly agreed and sixty-four percent agreed with this statement, while five percent disagreed and eight percent did not know. Earlier responses (Statement 33) in this questionnaire indicated that maintenance costs were more important for internal decision-making. Respondents may not recognise the dependence each has on the amount charged each year, for example, less maintenance spent on IA would affect the depreciation costs which would increase and IAs component lives decrease.

Responses to Statement 35, *an amount equal to the depreciation allowance is used to replace IAs*, indicated that one percent strongly agreed and thirteen percent agreed with this Statement, while fifty-four percent disagreed, twenty percent strongly disagreed and twelve percent did not know. This is a positive response that respondents are not using or thinking about old accounting methods as an alternative to the new accrual accounting environment. Some interviewees, however, indicated that the IA depreciation expense for the accrual budget and ratings estimates is the short-fall in capital expenditure for the next financial year.

On the issue, *that an amount equal to the depreciation allowance is used for various internal purposes*, indicated that twenty-four percent agreed with this Statement, while fifty-five percent disagreed, nine percent strongly disagreed and twelve percent did not know. This response indicates the lack of knowledge by the respondents on the theory behind depreciation. The question needs to be asked; what use is made of the depreciation costs in council outlays during a financial year?

The final statement, *in a council's financial statements there is a difference between depreciation and maintenance costs*, indicated that twenty percent strongly agreed and seventy-two percent agreed with this statement, while four percent disagreed, one percent strongly disagreed and three percent did not

know. The respondents have indicated that there is a difference but a study of financial statements (ICA 1998) indicated a difficulty in reconstructing IA accounts and the maintenance and depreciation charged in the financial year.

6.7 Optional Comments Section

Also included in the questionnaire was a section where respondents could provide council profile details and any suggestions or opinions on any of the issues. The response rate with suggestions or opinions was very encouraging with twenty-one written responses. Most were very positive about the effects on the councils by reporting IAs and depreciation under AAS27. This area also highlighted many of the responses in the early interviews with senior finance officers. A selection of these questionnaire responses will now be completed.

One respondent commented:

having some 30 years experience in local government I can only say that, notwithstanding the cost and effort, the recognition of IAs in financial statements has revolutionised the attitude of managers of these assets. Some refinement is possible but no diversion to old days of non-recognition.

One respondent had some positive points on the issues but also some areas that caused concern:

the lack of any consistency in how different councils identify, measure and depreciate IAs continues to make a mockery of State Government attempts to introduce best value and meaningful benchmarking between councils.

IAs constitute the lion's share of total council assets and the lack of comparable data for performance management and reporting systems means these initiatives are meaningless. Another related inconsistency is the vast difference in capitalization policies, e.g., the classification of road reseals as maintenance expenses or the creation of an asset.

Another respondent commented:

the emphasis is to have an asset management system that can account and then prioritise works (based on condition). The asset system should be connected to the finance package (general ledger) and to a GIS. It is more difficult to do condition based reports rather than straight-line depreciation. This is fact.

One respondent had some interesting points on opposition to IA and depreciation reporting under AAS27:

the opposition/criticism of AAS27 and the inclusion of depreciation has come from two sources (in my view!). Those who have to manage the assets and can't because they don't have the money; and those who have the money and won't! I have heard the former CEO of Vicroads claims that AAS27 (and the Victorian Asset Renewal Study) were *just accounting figures*. The implications was that they weren't real and didn't tell us anything. *Very Sad!* The other group is even sadder. They say *we are in good financial shape if depreciation is ignored*. They are guilty of lying to their stakeholders or gross ignorance. The fact that infrastructure renewal is a big problem needs to provoke a better response than just criticising the measurement system.

Another respondent was less positive:

councils need to record their infrastructure assets as they do materially affect Council business due to the inevitable shortfall in both maintenance and renewal budgets. If depreciation is going to be used, it should be realistic—straight-line is totally misleading for long lived assets that undergo a variety of conditions, maintenance and renewal treatments. *Useful lives* should be expected to vary across organizations and even within a class. As IAs are rarely if ever sold, why are they even understood as non-current assets? – they could be understood as a *community service obligation* with their maintenance and renewal costs recognised as liabilities that must be funded from a condition based depreciation linked sinking fund.

The comments from the following respondent indicates the reluctance to change to accrual accounting:

financial reporting is NOT an outcome. It is a tool. The primary focus should be provision of sustainable infrastructure not *ACCURATE* or *CONSISTENT* reporting. This issue has been approached in isolation from both the accounting and infrastructure prospective. For example at those involved in your research, Accounting/Law. Who cares if you produce a brilliant financial reporting tool that is *informative* and *compliant*, if it doesn't reflect REALITY or the true status of the assets in the field.

On the issue of depreciation and maintenance some respondents were very positive:

the AAS27 requirements for the reporting of infrastructure assets and depreciation has allowed us to properly understand the level of investment and spending on these assets. Straight-line depreciation is reliable for the consumption of infrastructure assets and allows for decisions on the maintenance being spent and replacement. We are in a better position for decision-making than under fund accounting when this information was not always known.

Another respondent commented:

depreciation is often misused by those in councils. Depreciation as I understand is the cost or amount of service potential used up by that infrastructure asset in a reporting period which is a cost incurred. The maintenance on a road will determine when replacement is needed and this impacts on the life of the road. Depreciation is an indication of the consumption or usage of the road which is used in decisions about levels of maintenance and replacement requirements in the future.

However another respondent indicated that depreciation and maintenance were unrelated:

although we use straight line depreciation we do not use the same rate for each asset e.g. on average sealed roads may depreciate at say 20% but the depreciation rate for a particular segment is determined from the age and condition of the segment and will be different from the average. Not only are depreciation and maintenance different they have no relationship with each other what so ever.

Some positive comments on the benefits of IA reporting from a respondent were:

accrual accounting has provided a system for planning for replacement and maintenance of IAs. The information on the cost of IAs during the accounting periods has been improved with the inclusion of depreciation. Having this information helps with decision-making on the requirements for IAs with maintenance and replacement.

These comments show the level of opinions from the staff involved in the area of IA reporting using the accrual accounting method and responses from the interviews.

Chapter VII

General Purpose Financial Reports Analysis

7.1 Review of General Purpose Financial Reports (GPFRs)

The purpose of this chapter is to examine the reporting of IAs and depreciation in GPFRs, both financial and non-financial information. Lee (1999), studied the usefulness of IA information for GPFR users and concluded:

these reveal that potential public sector report users exist and non-financial types of information such as replacement cycle and aging schedule, standard of service, asset condition and infrastructure asset management plans were regarded as highly useful by users in addition to the traditional financial information such as asset valuation. However, the information needs are not adequately met by current disclosure in the annual reports of public sector entities providing infrastructure services. The results indicate that annual report disclosures emphasise compliance rather than accountability (1999, p.17).

The review of GPFRs concentrated on the clarity, consistency and appropriateness of IAs and the depreciation in financial and non-financial information disclosures for GPFR users. In particular, the review focused on the

following criteria: whether councils were using GPFRs to their full potential, to convey information about performance on IAs to financial users; innovation in the presentation of IA information; consistency between the various financial and non-financial IA information; and whether GPFRs could be used to compare IA performance between councils. A list of the Victorian councils used for this review is in Appendix 3.6.

Also, where appropriate, a reconciliation was completed between the financial statements in an attempt to understand IAs and depreciation balances.

In 1998 the Institute of Chartered Accountants in Australia completed a survey of Victorian Local Government Annual Reporting of 78 municipalities. One key finding was that the quality of reporting varied on the resources available to each municipality involved:

there was a distinct difference between the reporting performance of larger urban councils (in particular Melbourne based councils) and the more remote rural councils. This is partly the result of resources availability. In many cases the financial report did not receive the same level of importance as the report of operations resulting in the financial statements and the explanatory notes thereto being of poorer quality with less clarity and readability (1998, P.15).

For the present study a sample of 19 percent of the 78 municipalities in Victorian Local Government was analysed. The Victorian Office of Local Government divides the 78 municipalities into five categories when they review financial information in GPFRs. The municipalities are split into the following categories:

inner metropolitan; outer metropolitan; regional cities; large shires; and small shires. This representation allows an indication from GPFRs on the amount of both financial and non-financial information on IAs and depreciation usefulness.

In the following sections an analysis is completed on how municipalities present certain IAs in their capitalisation and depreciation in GPFRs. Roads and bridges are used as one category while drains was the other category; and Tables were used for each category. The Tables consist of a *function asset* which was the category being reviewed (roads and bridges or drains) which is then divided by the total assets to give a percentage. This indicated what portion of that category of IAs made up total assets. For the next section of the Table a similar review was completed for the depreciation expense (*function expense*) of that category of IAs and compared to total expenses as a percentage. The next section of the Table reviews the depreciation expense of that category which is divided by the total function assets of that category of IAs. The final section reviewed total expenses divided by total assets as a percentage. Three municipalities from each of the five categories are reviewed using the above format. The data provided in the Tables provide an indication of the size of either roads and bridges or drains asset bases across the five categories of municipalities. The significance of these assets varies between municipalities and is influenced by factors such as the history, location, area and population of the municipalities. Also included in different Tables are the different

depreciation rates and non-financial information used by these municipalities in GPFs.

7.2 Inner Metropolitan Municipalities IAs Review

The data provided in Tables 7.1 and 7.2 give an indication of the size of road, bridge and drain asset bases, across of sample of inner metropolitan municipalities. The municipalities include: City of Melbourne; City of Stonnington; and City of Yarra.

Function/activity	City of Melbourne Roads & Bridges \$000s	City of Yarra Roads & Bridges \$000s	City of Stonnington Roads & Bridges \$000s
Function Assets	364,807	250,520	99,052
Total Assets	1,948,934	737,935	713,892
% of Total Assets	18.7	33.9	13.9
Function Expenses	20,575	6,286	3,842
Total Expenses	355,683	71,816	72,519
% of Total Expenses	5.8	8.8	5.3
Function Expenses/ Function Assets	5.6	2.5	3.9
Total Expenses/ Total Assets	18.3	9.7	10.2

The City of Melbourne has a population of 51,840 and an area of 33.2 square kilometres. The City of Stonnington has a population of 90,186 and an area of 25.6 square kilometres. The City of Yarra has a population of 69,263 and an

area of 19.5 square kilometres. The information and statistics used in this chapter on municipality demographics unless indicated is at June 2002 from the Victoria Grants Commission.

There was a significant difference with the City of Stonnington having 13.9% of these IAs of their total assets whereas the City of Yarra had 33.9% in the value of roads and bridges. All three municipalities used written-down replacement cost as their basis of valuation for IAs. In the questionnaire 81 percent used this method for valuation. The City of Melbourne had 18.7% of these assets as their total assets. This showed that roads and bridges made up a significant proportion of inner metropolitan municipalities asset bases. An examination of different factors: length; condition; and age of roads and bridges was undertaken to try to determine why the differences in financial information occurred. All three municipalities are of the same age and border on each other. Another reason for the difference with the percentage of roads and bridges between the City of Melbourne and City of Yarra could be the lengths of roads and number of bridges and the area of these municipalities. The City of Melbourne has an area of 33.2 square kilometres, the total length of roads is 202 kilometres and no bridges. The City of Yarra has an area of 19.5 square kilometres, the total length of roads is 217 kilometres and the total bridge area is 570 square metres of concrete. The City of Stonnington has an area of 25.6 square kilometres, the total length of roads is 257 kilometres and the total bridge area is 1,820 square metres of concrete. All these municipalities roads were kerbed and guttered. It

is a surprise that the City of Melbourne has no bridges. This information does not help explain the differences in the value of roads and bridges as the City of Yarra has the smallest square area. Looking at the notes to accounts no reasons for the difference could be found. The application in the method of valuation may be a reason for the differences according to literature and interviewees.

The depreciation which represented the consumption of roads and bridges was 5.3% of total expenses for the City of Stonnington which agreed with the result as this municipality had the lowest of the three in value of roads and bridges. The City of Yarra had a significant proportion in value of roads and bridges at 33.9% of total assets and their depreciation expense for these assets was 8.8% of total expenses. That appeared to be a low percentage for depreciation when compared to the other two municipals in considering the value of roads and bridges to their total asset bases and their depreciation percentage. Depreciation for roads and bridges ranged from 2.5% to 5.6% of the value for roads and bridges which was higher than the straight-line rates given. The City of Melbourne was the highest at 5.6% of the depreciation expense to the value of the roads and bridges. The actual rates appear higher than those shown in the note to accounts at straight-line which is reported later.

Function/activity	City of Melbourne Drains \$000s	City of Yarra Drains \$000s	City of Stonnington Drains \$000s
Function Assets	17,433	45,724	39,208
Total Assets	1,948,934	737,935	713,892
% of Total Assets	.9	6.2	5.5
Function Expenses	530	817	959
Total Expenses	355,683	71,816	72,519
% of Total Expenses	.1	1.1	1.3
Function Expenses/ Function Assets	3	1.8	2.4
Total Expenses/ Total Assets	18.3	9.7	10.2

Drains in Table 7.2 as a percentage of total assets are considerably lower than roads and bridges. The City of Melbourne only had .9% of drains to total assets with the other two municipals had 5.5% and 6.2%. City of Melbourne recorded no bridges and it appears their drains are limited in length and number when compared to the other two municipalities value of drains when compared to total assets. Depreciation expenses ranged from 1.8% to 3% to their value which again was higher than the straight-line rate given. The drains in some cases are much older than the roads and bridges. One possible reason is the age and usage of these assets; when comparing total expenses to total assets, they are significantly lower.

7.2.1 Inner Metropolitan Municipalities Depreciation Rate Review

The City of Melbourne depreciation was recognised using the straight-line method and the rates are reviewed each year according to their GPFR. There was a 25 percent strongly agree response and 51 percent agree response from the questionnaire on municipals using straight-line. There was a 7 percent strongly agree response and 58 percent agree response from the questionnaire on municipal's revising depreciation annually. Depreciation rates for roads and bridges were recorded in Table 7.3.

IAs	Years
Roads & Laneways	10-50
Footpaths	5-50
Kerb & Channels	50
Bridges	10-80
Drains	30-90

(GPFR 2001/02, p.8).

These rates were compared to the City of Yarra and the City of Stonnington. The City of Yarra depreciation for roads and bridges were recognised using the straight-line method on the residual useful life determined each year and were recorded in Table 7.4.

Table 7.4 City of Yarra Depreciation Rates

IAs	Years
Roads -Substructure	100
Roads -Seal	20
Footpaths -Substructure	75
Footpaths -Seal	15
Kerb & Channels	50
Lanes -Substructure	100
Lanes -Seal	20
Bridges	100
Drains	100

(GPFR 2001/02, p.7).

The City of Stonnington depreciation for roads and bridges was recognised using the straight-line method which reflects the consumption of the service potential embodied in these assets. The rates were calculated to allocate the cost or valuation, less estimated residual value at the end of the useful lives of the assets, against revenue or service potential of these useful lives commencing from the month following purchase or construction and were recorded in Table 7.5.

Table 7.5 City of Stonnington Depreciation Rates

IAs	Years
Road Surface	25
Road Substructure	100
Sealed Footpaths	25-50
Kerb & Channel	60
Bridges	80
Road extras	10-25
Car Parks	50
Rights of Way	60
Drainage Pits	50
Drains	100

(GPFR 2001/02, p.86).

The three municipalities had different ways in the presentation of depreciation rates. Differences in depreciation rates should occur depending on local variables such as:

- climate;
- traffic volume;
- quality of materials used to construct/maintain roads
- topography; and
- funds available for maintenance programs (Pilcher 2000, p.55).

The level of maintenance is very important to these IAs maximising their useful lives and should be periodically reviewed and reflected in the depreciation rates used:

councils surveyed are not adhering to Requirement 9.2.2 of the Local Government Asset Accounting Manual which outlines the treatment of deferred maintenance. According to the Manual (Requirement 9.2.2: Provision for Deferred Maintenance) when deferred maintenance is carried out, the accumulated depreciation is to be adjusted by the amount of the cost of restoration. This, in turn, would adjust the useful life and the future depreciation expense. From the study, only one council comes anywhere near accounting for depreciation and maintenance in this way. However, the survey was not explicit enough to draw any further conclusions (Pilcher 2000, p. 55).

As all three municipalities are inner metropolitan, the rates should not be significantly different which is the situation in most cases. There was a significant difference in the depreciation rate for bridges where the City of Melbourne (had no bridges according Victorian Grants Commission) had 10 to 80 years where the other two municipals were 80 to 100 years this also applies

to the difference in drain depreciation rates. The depreciation of drains at 30 to 90 years is higher for the City of Melbourne which may help explain the difference in the value of drains when compared to total assets. The question remains is why is the rate of depreciation for drains significantly difficult when all three municipalities are of the same age. Another difference is the level of detail shown on the depreciation charges in GPFRs.

7.2.2 Inner Metropolitan Municipalities Reconciliation Review

Another area causing concern when GPFR were first prepared under AAS27 requirements was reconciliation of IA and depreciation accounts:

I am also concerned that many councils have not determined appropriate capitalisation and depreciation policy. In some instances, interpretation of AAS27 as to when expenditure represents an asset or an operating cost, has been left to engineers—this has resulted in significant errors or audit qualifications in some cases.....lack of schedules reconciling movements in asset and depreciation accounts to support balance sheet figures (Harry 1994, p.2).

The researcher did have difficulty reconciling these accounts in the 1990s GPFRs of local government municipalities. This problem appeared to be overcome with these reconciliations being given in the notes to accounts in GPFRs (City of Melbourne) but on closer examination these accounts used net figures (less depreciation) that could not be reconciled. There was a considerable amount of reconciliation details so part of the Table is shown for

the reader to review with the Table 7.6 in Appendix 7.1. An extract of Table 7.6 is shown.

Table 7.6 City of Melbourne IAs Accounts Reconciliation		
Roads & Laneways	2001	2000
	\$'000s	\$'000s
Opening balance (carrying amount)	499,440	445,250
Plus additions	2,244	5,127
Plus/(less) net valuation increment/(decrement)	0	74,240
Less disposals/transfers to external parties	0	(6,663)
Less depreciation	(13,931)	(18,514)
Closing amount	487,753	499,440
Footpaths	2001	2000
Opening balance (carrying amount)	51,098	42,078
Plus additions	3,153	6,406
Plus/(less) net valuation increment/(decrement)	0	10,290
Less disposals/transfers to external parties	0	(568)
Less depreciation	(6,403)	(7,108)
Closing amount	47,848	51,098
Complete Table in Appendix 7.1	(GPFR 2000/01, p.17)	

These reconciliations look very comprehensive but all the information on roads and bridges cannot be reconciled. This type of reconciliation did not appear in the other two municipals' GPFRs with their accounts using gross figures that could be reconciled. The City of Melbourne revalue IAs annually and that was the reason for net figures. This was not openly revealed in the note to accounts.

7.2.3 Inner Metropolitan Municipalities Non-financial Review

In the GPFRs information given on non-financial information on IAs varied considerably. Examples of the types of information were examined for its usefulness to financial users. In a summary on the maintenance of local roads and footpaths this appeared in the City of Yarra's GPFR:

A significant amount of the council's operating expenditure was spent improving the condition of roads and footpaths throughout the city. We are also working to improve the responsiveness of our road maintenance program (GPFR 2000/01, p.37).

This statement was very important to users to assess whether maintenance programs are being carried out and the amounts being spent in this area but the financial detail was not given, only in aggregate data. This supports Lee's conclusion of giving more detailed information in both financial and non-financial sections of the GPFRs for IAs. However, in the City of Stonnington's GPFR more detail was given on IA non-financial information. This appeared in the index with a detailed summary and page numbers to locate the information. A brief extract of this information is given Table 7.7.

Table 7.7 City of Stonnington Non-financial Information	
Index.....	Completion of footpath maintenance program (p. 60) \$
Page 60.....Footpath Works—Residential	
Chomley St—Dandenong Rd to High St both sides	46,000
Tooronga Rd Malvern East—Beaver St to Wattletree Rd	48,000
Culshaw St Toorak—off Malvern Rd	10,000
Footpath Works—Commercial	
Toorak Rd Sth Yarra—Punt to Surrey Rd South ongoing	1,429,000
--streetscape upgrade and footpath replacement (GPFR 2000/01 p.60)	

This was very comprehensive and detailed information which would benefit GPFR users in their assessment of the condition of footpaths and amount of maintenance being spent. Also, amongst many IA non-financial disclosures in the annual report comments was a bar graph that showed the level of maintenance spent on sealed roads per kilometre over a five-year period. This showed a reduction in the amount spent which may have some influence on the roads condition if this level of maintenance continued over a prolonged period

and would need to be used in the up-dating of economic lives and depreciation rates of local roads as indicated by Pilcher (2000). The way the information was presented highlighted that municipalities can provide this type of information. This type of information was not compulsory and showed the level of detail a municipality can provide and should be used as a benchmark minimum for the reporting of financial and non-financial information which is more than AAS27 requirements in GPFRs as indicated by Lee (1999).

7.3 Outer Metropolitan Municipalities IAs Review

The Melton Shire Council has a population of 58,580 and an area of 527.3 square kilometres. The Frankston City has a population of 115,519 and an area of 129.5 square kilometres. The City of Whittlesea has a population of 120,506 and an area of 490.0 square kilometres.

Function/activity	Melton Shire Council Roads & Bridges	Frankston City Roads & Bridges \$000s	City of Whittlesea Roads & Bridges \$000s
Function Assets	127,711,433	250,763	314,781
Total Assets	270,032,015	527,253	641,622
% of Total Assets	47.3	47.6	49.1
Function Expenses	4,230,015	3,890	9,578
Total Expenses	37,272,643	60,387	65,808
% of Total Expenses	11.3	6.4	14.6
Function Expenses/ Function Assets	3.3	1.6	3
Total Expenses/ Total Assets	13.8	11.5	10.3

The data provided in Tables 7.8 and 7.9 give an indication of the size of road, bridge and drain asset bases, across of sample of outer metropolitan municipalities. The municipalities include: Melton Shire Council; Frankston City and City of Whittlesea.

There was no significant difference between outer metropolitan municipals in the percentage of roads and bridges with their total assets, however, these assets at 47 to 49 percent are significant and are significantly higher than inner metropolitan municipals. All three municipals used written-down replacement cost as their basis of valuation for IAs. The Melton Shire Council has an area of 527.3 square kilometres, the total length of roads is 644 kilometres and the total bridge area is 2,173 square metres of concrete and 70 square metres of timber. The Frankston City has an area of 129.5 square kilometres, the total length of roads is 640 kilometres and the total bridge area is 1,423 square metres of concrete. The City of Whittlesea has an area of 490.0 square kilometres, the total length of roads is 730 kilometres and the total bridge area is 5,380 square metres of concrete and 234 square metres of timber. These municipalities' roads were both kerbed and guttered and unkerbed. The Frankston City has a much smaller square area but the total length of roads is similar to the other two municipalities. This information may help to explain the similarities in the value of roads and bridges. However there was a difference in the number of bridges between municipalities with the City of Whittlesea having 5,614 square metres of concrete so a financial statement user may assume that a higher percentage in

the value of roads and bridges to total assets. Looking at the notes to accounts no reasons for the similarities could be found.

The depreciation of these assets when compared to total expenses indicated a significant difference between the three municipals and inner metropolitan municipals. The City of Frankston had 6.4 percent which is similar to the inner metropolitan municipals while Melton Shire Council had 11.3 percent and the City of Whittlesea was even higher at 14.6 percent which indicated the consumption of these assets may have been demanding on financial resources. Depreciation for roads and bridges ranged from 1.6 percent to 3.3 percent of the value for roads and bridges which was higher than the straight-line rates given. The City of Frankston was the lowest at 1.6 percent of the depreciation expense to the value of the roads and bridges which appears very low when compared to all other inner and outer metropolitan municipalities.

Function/activity	Melton Shire Council Drains	Frankston City Drains	City of Whittlesea Drains
Function Assets	58,833,939	85,538	90,964
Total Assets	270,032,015	527,253	641,622
% of Total Assets	21.8	16.2	14.2
Function Expenses	798,821	1,714	1,478
Total Expenses	37,272,643	60,387	65,808
% of Total Expenses	2.1	2.8	2.2
Function Expenses/ Function Assets	1.4	2	1.6
Total Expenses/ Total Assets	13.8	11.5	10.3

Drains shown in Table 7.9 as a percentage of total assets were again considerably lower than roads and bridges. The three outer metropolitan municipalities ranged from 14.2 percent to 21.8 percent of drains to total assets; the two inner metropolitan municipalities had 5.5 percent; and 6.2 percent. The drains in some cases are much newer than the drains of inner metropolitan municipalities which may be the reason for valuation and lower depreciation expenses when compared to total expenses. Depreciation expenses ranged from 1.4 percent to 2 percent of their value; when comparing total expenses to total assets they are significantly lower.

7.3.1 Outer Metropolitan Municipalities Depreciation Rate Review

The Shire of Melton depreciation was recognised using the straight-line method and residual useful life are reviewed each year according to their GPF. Depreciation rates for roads, bridges and drainage were recorded in Table 7.10.

Asset Class	Threshold	Limit	Depreciation	Period	Depreciation Period
	\$		2001		2000
Roads Surface	15,000		5-40 years		5-40 years
Unsealed Roads	15,000		5-10 years		5-10 years
Carpark Surface	10,000		5-20 years		5-20 years
Bridges	25,000		50 years		50 years
Kerb & Channels	25,000		50 years		50 years
Footpaths	15,000		50 years		50 years
Roads Pavement	50,000		50-75 years		50-75 years
Carpark Pavement	50,000		50-75 years		50-75 years
Culvert	25,000		60 years		60 years
Drainage	25,000		20/100 years		20/100 years

(GPF 2000/01, p.64)

These rates will now be compared to the Frankston City and the City of Whittlesea. The Frankston City depreciation for roads, bridges drainage was recognised using the straight-line method and reviewed each year which is shown in Table 7.11.

Roads	Asset Useful Life	Capitalisation Threshold
Road Pavements	100 years	\$10,000
Unsealed Roads	20 years	\$10,000
Kerb and Channel	80 years	\$10,000
Footpaths	80 years	\$10,000
Bridges	100 years	\$10,000
Traffic Management Devices	50 years	\$10,000
Car Parks	50 years	\$10,000
Bicycle Paths	20 years	\$10,000
Drainage	75 years	\$10,000

(GPFR 2000/01, p.48)

The City of Whittlesea depreciation for roads, bridges and drainage is in Table 7.12.

IAs	Useful Life (Years)	Depreciation Rate
Bridges	70	1-4%
Drainage	50-100	1-2%
Roads	20-70	1.4-5%
Road Assets/ Street furniture	10-100	1-10%
Reserve assets	10-100	1-10%
Land Improvements	10-20	5-10%

(GPFR 2000/01, p.10)

The City of Whittlesea depreciation for roads, bridges and drainage was recognised using the straight-line method and is based on the assessed useful lives which are reviewed on an annual basis, which reflects the consumption of the service potential embodied in these assets in Table 7.12.

The three municipalities have different ways in the presentation of depreciation rates. Differences in depreciation rates should occur depending on local variables. As all three municipalities are outer metropolitan the rates should not be significantly different which was the situation. There was a significant difference in the depreciation rate for road pavements where the City of Frankston used 100 years where the other municipals used a much shorter period.

7.3.2 Outer Metropolitan Municipalities Reconciliation Review

Another area causing concern in GPFRs from the review of inner metropolitan municipalities GPFRs reported under AAS27 requirements was reconciliation of IA and depreciation accounts. This problem appears to have been overcome with these reconciliations in the three outer metropolitan municipals by using gross figures in their notes to accounts in GPFRs. At first glance at the IA and depreciation accounts it appeared that completing a reconciliation would be difficult because in the note to accounts the depreciation expenses were not separated for different IAs but consisted of one total for all IAs depreciation. On closer examination it was found there was detailed information on each IA using gross figures with another reconciliation being included. An example of this information from the Melton Shire Council is given. There was a considerable

amount of reconciliation details so part of the Table is shown for the reader to review with the Table 7.13 in Appendix 7.2. The extract of Table 7.13 is shown.

Roads & Streets	2001	2000
At cost	1,341,600	616,891
At valuation 1 January 2000	nil	151,749,881
At valuation 30 June 2001	9,041,864	nil
At valuation 1 July 2000	171,585,109	nil
Less Accumulated depreciation	(56,389,667)	(41,275,411)
Closing amount	125,578,906	111,091,361
Bridges	2001	2000
At Cost	25,407	25,407
At valuation 1 January 2000	4,467,515	4,467,515
Less Accumulated depreciation	(2,360,395)	(2,273,175)
Closing amount	2,132,527	2,219,747

(GPFR 2000/01, p.75)

Another reconciliation was very comprehensive and all the information included for: roads; bridges; and drainage (this type of reconciliation appears in the other two municipals' GPFRs) with the main transfers in and out of the IA accounts which is shown in Table 7.14.

Asset Class 2001	Roads \$	Bridges \$	Drainage \$
WDV at the end of last period	111,091,361	2,219,747	51,421,093
Additions	1,341,600		
Developer contributed assets	9,041,864		5,101,315
Transfer to/from other classes	(1,439,698)		
Disposals			
Assets previously recorded but not valued			3,619,613
Note 1			
Net revaluations increments	(7,928,204)		236,524
Depreciation expense	(4,142,795)	(87,220)	(798,821)
Other movements Note 2	17,614,778		(745,785)
Balance	125,578,906	2,132,527	58,833,939

Note 1 Assets previously recorded but not valued represent a fundamental error discovered in the current reporting period. The revaluation of these assets represent an increase in the various asset classes outlined above, and a corresponding increase in the asset revaluation reserve.

Note 2 Other movements mainly representing newly identified assets are fundamental errors and are recorded in the Statement of Financial Performance (also refer to Note 5(b)).

7.3.3 Outer Metropolitan Municipalities Non-financial Review

In the GPFRs information given on non-financial information on IAs was very limited for all three municipals. Examples of the types of information were examined for usefulness to financial users. A summary of the maintenance of local roads and footpaths appeared in the Melton Shire Council GPFR:

Melton Shire Council spent 30% of its \$7.4 million capital works budget on roads and infrastructure in 2000/01. Approximately \$4.2 million in total was spent on roads in the Shire of Melton in 2000/01. This includes funding from Federal, State and Shire resources (GPFR 2000/01, p.9).

This statement was very important to users to assess whether capital works and maintenance programs are being carried out and the amounts being spent in this area, but the financial detail is not given; only in aggregate data. Maintenance was mentioned but on park assets with roads not mentioned. This omission was significant considering the amount spent on roads out of the capital works budget. This supports Lee's (1999) conclusion for the need of more detailed non-financial information.

7.4 Regional City Municipalities IAs Review

The data provided in Tables 7.15 and 7.16 provide some indication of the size of road, bridge and drain asset bases, across sample of regional city

municipalities. The municipalities include: Greater Shepparton; City of Greater Bendigo and City of Ballarat.

Greater Shepparton has a population of 58,830 and an area of 2,421.6 square kilometres. The City of Greater Bendigo has a population of 91,545 and an area of 2,999 square kilometres. The City of Ballarat has a population of 84,580 and an area of 740.0 square kilometres.

	Greater Shepparton	City of Greater Bendigo	City of Ballarat
Function/activity	Roads & Bridges	Roads & Bridges	Roads & Bridges
		\$000s	\$000s
Function Assets	NA	192,602	304,027
Total Assets	295,762,803	489,727	573,526
% of Total Assets	NA	39.3	53
Function Expenses	9,981,883	6,151	9,092
Total Expenses	51,573,033	71,120	72,047
% of Total Expenses	19.4	8.6	12.6
Function Expenses/ Function Assets	NA	3.2	3
Total Expenses/ Total Assets	17.4	14.5	12.6

Only two of the municipals were analysed because of the lack of detail in Greater Shepparton GPFR and no reconciliation could be completed which will be discussed later. There was a significant difference with City of Greater Bendigo having 39.3 percent of these IAs of their total assets whereas the City of Ballarat had 53 percent. All three municipals used written-down replacement cost as their basis of valuation for IAs. This showed that roads and bridges also

make up a significant proportion of regional city municipalities' asset bases. Greater Shepparton has an area of 2421.6 square kilometres, the total length of roads is 2,444 kilometres and the total bridge area is 4,045 square metres of concrete and 1,165 square metres of timber. The City of Greater Bendigo has an area of 2,999 square kilometres, the total length of roads is 2,887 kilometres and the total bridge area is 8,217 square metres of concrete and 1,944 square metres of timber. The City of Ballarat has an area of 740.0 square kilometres, the total length of roads is 1,247 kilometres and the total bridge area is 9,353 square metres of concrete and 201 square metres of timber. All these municipalities' roads were both kerbed and guttered and unkerbed. There is a significant difference in the percentage of roads and bridges between the City of Greater Bendigo at 39.3 percent and the City of Ballarat at 53 percent. The information on the length of roads showed that the City of Greater Bendigo is over double that to the City of Ballarat but has a lower value \$192,602 million (compared to \$304,027). The municipalities are of similar age. Looking at the notes to accounts no reasons for the differences could be found.

The depreciation expense percentage which represents the consumption of roads and bridges to total expenses was significantly different for all three municipals. The City of Ballarat had a significant proportion in value of roads and bridges at 53 percent of total assets and their depreciation expense for these assets was 12.6 percent of total expenses. Depreciation for roads and

bridges ranged from 3 percent to 3.2 percent of the value for roads and bridges which was higher than the straight-line rates given. Greater Shepparton had a very high depreciation expense for roads and bridges of 19.4 percent to other expenses.

Table 7.16 Regional City Municipal's Drains

	Greater Shepparton	City of Greater Bendigo	City of Ballarat
Function/activity	Drains	Drains	Drains
		\$000s	\$000s
Function Assets	NA	77,290	NA
Total Assets	295,762,803	489,727	573,526
% of Total Assets	NA	15,8	NA
Function Expenses	NA	965	NA
Total Expenses	51,573,033	71,120	72,047
% of Total Expenses	NA	1.4	NA
Function Expenses/ Function Assets	NA	1.2	NA
Total Expenses/ Total Assets	17.4	14.5	12.6

Drains as a percentage of total assets were considerably lower than roads and bridges but much higher than the previous categories of municipals at 15.8 for City of Greater Bendigo. The values for the other two municipals could not be found. Depreciation expense was 1.2 percent to their value which was lower than the straight-line rate given.

7.4.1 Regional City Municipalities Depreciation Rate Review

Greater Shepparton depreciation was recognised using the straight-line method and the rates are reviewed each year. Only limited information was given with only one rate for IAs:

- Infrastructure 5 to 80 years (GPFR 2001/02, p.26).

These rates were compared to the City of Greater Bendigo and the City of Ballarat. The City of Greater Bendigo depreciation for roads and bridges was recognised using the straight-line method on the residual useful life determined each year which were significantly changed in 2000/01 financial year. It was also interesting that the municipality indicated how they allocated straight-line depreciation on the cost or valuation **against revenue** over the IAs useful lives. Service potential should have been used instead of revenue because some IAs do not earn revenue and SAC4 indicates that revenue inflows are not needed for an infrastructure item to be an asset in GPFRs and the rates were recorded as shown in Table 7.17.

Table 7.17 City of Greater Bendigo Depreciation Rates

IAs	Depreciation Rates 2001 Straight-line %	Depreciation Rates 2000 Straight-line %
Sealed Roads—Pavements	1	1.43
Sealed Roads—Seals	5	1.43
Unsealed Roads—Base	2	-
Unsealed Roads—Sheeting	10	-
Bridges	1	1.25
Cycleways/Walking Tracks	5	10
Drainage—Underground	1	1.25
Drainage—Open	1	1.25
Drainage—Manholes/Pits	1	1.25
Drainage—Retention Basins	1	1.25

(GPFR 2000/01, p.34)

The City of Ballarat depreciation for roads and bridges was recognised using the straight-line method, the assets are systematically depreciated over their useful lives in a manner which reflects the consumption of the service potential embodied in these assets. The amount of detail was very limited on rates of depreciation. The rates were calculated to allocate the cost or valuation, less estimated residual value at the end of the useful lives of the assets which are re-estimated each year and were recorded as:

- Road Pavements 15 to 200 years
(GPFR 2000/01, p.8).

The three municipalities had different ways in the presentation of depreciation rates and in two cases were very limited.

7.4.2 Regional City Municipalities Reconciliation Review

Another area causing concern when GPFRs were first prepared under AAS27 requirements was reconciliation of IA and depreciation accounts.

Table 7.18 IA accounts Depreciation Reconstruction	
Note 8 Depreciation—Roads, streets & bridges	\$9,981,883
Depreciation—Drainage	\$1,326,539
Note 19 Infrastructure Council Valuation 1 January 2000	
Roads	287,372,351
Drainage	78,638,952
Footpaths	17,847,961
(continued in Appendix 3)	
	413,260,131
At Cost	
Roads	3,351,215
Drainage	2,114,675
Footpaths	1,362,938
(Continued in Appendix 3)	
	8,312,751
Total Infrastructure	421,572,882
Less Total Accumulated Depreciation	256,556,521
	165,016,361
Total Written Down Value	270,646,179
	(GPFR 2000/01, p.35)

The researcher did have difficulty reconciling these accounts for Greater Shepparton as mentioned earlier and details are given in Appendix 7.3. There was a considerable amount of reconciliation details so part of the Table is shown for the reader to review with the Table 7.18 in Appendix 7.3. The extract of Table 7.18 is given.

The reconciliations for the other two municipalities (similar to outer metropolitan) are very comprehensive and all the information is included so roads and bridges can be easily reconciled.

7.4.3 Regional City Municipalities Non-financial Review

In the GPFRs very significant differences in information on non-financial information on IAs was disclosed. Examples of the types of information were examined for its usefulness to financial users. In a summary on the maintenance of local roads and footpaths that appeared in Greater Shepparton GPFR is shown in Table 7.19.

**Table 7.19 Greater of Shepparton Non-financial Information
Year 2000 Valuation and 2000/01 Rating Strategy**

The Year 2000 Valuation was formally returned to the Council in June 2000. It was performed using mass computerized valuation techniques, as required by the State Government's best practice valuation legislation, and it has a 2 year life cycle, commencing with the 2000/01 rating year (GPFR 2000/01, p.7).

Asset Systems and Infrastructure Maintenance

This year was the first instalment of Roads to Recovery funding, and although there was already a full program of road maintenance works, these additional projects were carried out within time and budget. (GPFR 2000/01, p.8).

This statement is very important to users to assess whether maintenance programs are being carried out and the amounts being spent in this area. This is where the financial detail is not given. This is consistent with earlier lack of non-financial information and Lee's (1999) recommendation of giving more detailed information in both financial and non-financial. However, in the City of Greater Bendigo's GPFR more detail was given on IA non-financial information. This information was contained in Appendix 4. There was a considerable amount of

reconciliation details so part of the Table is shown for the reader to review with the Table 7.20 in appendix 7.4. A brief extract from Table 7.20 follows.

<p>Table 7.20 City of Greater Bendigo Non-financial Information Report of Operations & Major Achievements Physical Plan, develop, maintain and manage Greater Bendigo's physical assets which will contribute to the amenity, safety, mobility and other needs of the local and wider community.</p> <p>Roads and Bridges The development, maintenance and implementation of programs for road maintenance and construction.</p> <p>Major Achievements Comprehensive survey completed of Council bridge stock and subsequent development of a maintenance program; Installation of new bridges at three rural locations on roads, and two new bridges on the main road network; Capital expenditure on roads and bridges totalling \$11.7M, including \$834,000 of <i>Roads to Recovery</i> funding being spent on road improvement works; Total expenditure of \$7.6M. on urban and unsealed road maintenance (including street lighting and drainage). (GPFR 2000/01, p.12).</p>

This was very comprehensive and detailed information which would benefit GPFR users in their assessment of the condition of footpaths and amount of maintenance being spent. Also this information has the amounts for *Roads to Recovery* and maintenance programs about which Greater Shepparton had very limited details. The way the information was presented highlighted that municipals can provide this type of information. This type of information was not compulsory and showed the level of detail a municipality can provide and should be used as a benchmark minimum for the reporting of financial and non-financial information which is more than AAS27 requirements in GPFRs as indicated by Lee (1999).

7.5 Large Shire Municipalities IAs Review

The data provided in Tables 7.21 and 7.22 provide some indication of the size of road, bridge and drain asset bases, across of sample of large shire municipalities. The municipalities include: Horsham Rural City Council; Ararat Rural City; and Swan Hill Rural City Council.

The Horsham Rural City Council has a population of 18,647 and an area of 4,249 square kilometres. The Ararat Rural City has a population of 11,714 and an area of 4,209.8 square kilometres. The Swan Hill Rural City Council has a population of 21,375 and an area of 6,116.5 square kilometres.

Function/activity	Horsham Rural City Council Roads	Ararat Rural City Roads & Bridges	Swan Hill Rural City Council Roads & Bridges
Function Assets	166,035,939	67,426,429	94,274,554
Total Assets	219,638,900	102,557,873	180,549,978
% of Total Assets	75.6	65.7	52.2
Function Expenses	4,879,876	4,166,289	NA
Total Expenses	18,838,558	13,277,056	25,658,005
% of Total Expenses	25.9	31.4	NA
Function Expenses/ Function Assets	2.9	6.2	NA
Total Expenses/ Total Assets	8.6	12.9	14.2

There was a significant difference with the Swan Hill Rural City Council having 52.2 percent of these IAs of their total assets whereas the Horsham Rural City Council had 75.6 percent. All three municipalities used written-down replacement cost as their basis of valuation for IAs. The Ararat Rural City have 65.7 percent IAs of their total assets. This showed that roads and bridges make up a significant proportion of asset bases when compared to inner metropolitan, outer metropolitan and regional city municipalities. An examination of different factors: length; condition; and age of roads and bridges was undertaken to try to determine why the differences in financial information occurred. All three municipalities are of a different age. Another reason for the difference with the percentage of roads and bridges between the Horsham Rural City Council and Swan Hill Rural City Council could be the lengths of roads and number of bridges and the area of these municipalities. The Horsham Rural City Council has an area of 4,249 square kilometres, the total length of roads is 2,879 kilometres and the total bridge area is 5,537 square metres of concrete and 57 square metres of timber. Ararat Rural City has an area of 4,209.8 square kilometres, the total length of roads is 2,387 kilometres and the total bridge area is 14,417 square metres of concrete. The Swan Hill Rural City Council has an area of 6,116.5 square kilometres, the total length of roads is 3,141 kilometres and the total bridge area is 1,151 square metres of concrete and 28 square metres of timber. All these municipalities roads are both kerbed and guttered and unkerbed. This information does not help explain the differences in the value of roads and bridges as the Horsham Rural City Council has less length of

roads and lower number of bridges than Swan Hill Rural City Council. Looking at the notes to accounts no reasons for the difference could be found. The application in the method of valuation may be a reason for the differences according to literature and interviewees.

The depreciation which represents the consumption of roads and bridges is 6.2 percent of total expenses for the Ararat Rural City Council. The Horsham Rural City Council had a significant proportion in value of roads and bridges at 65.7% of total assets and their depreciation expense for these assets was only 2.9% of total expenses. This appears to be a low percentage for depreciation when compared to the other municipal in comparing the value of roads and bridges to their total asset bases and their depreciation percentage.

Table No. 7.22 Large Shire Municipal's Drains

Function/activity	Horsham Rural City Council Drains	Ararat Rural City City Drains	Swan Hill Rural City Council Drains
Function Assets	NA	5,435,761	18,279,486
Total Assets	219,638,900	102,557,873	180,549,978
% of Total Assets	NA	5.3	10.1
Function Expenses	NA	91,359	NA
Total Expenses	18,838,558	13,277,056	25,658,005
% of Total Expenses	NA	.7	NA
Function Expenses/ Function Assets	NA	1.7	NA
Total Expenses/ Total Assets	8.6	12.9	14.2

Drains as a percentage of total assets were considerably lower than roads and bridges. The Ararat Rural City had 5.3 percent of drains to total assets with the Swan Hill Rural City Council had 10.1 percent. Depreciation expenses was only .7 percent. One possible reason is the age and usage of these assets; when comparing total expenses to total assets they are significantly lower.

7.5.1 Large Shire Municipalities Depreciation Rate Review

Information about the Horsham Rural City Council depreciation was very limited in detail. It uses the straight-line method and the rates are reviewed each year according to their GPFR. Depreciation rates for roads and bridges were recorded as:

Road assets (1-10%)(GPFR 2001/02, p.10).

These rates were compared to the Ararat Rural City and the Swan Hill Rural City Council. The Ararat Rural City depreciation for roads and bridges was recognised using the straight-line method on the residual useful life determined each year and shown in Table 7.23.

IAs	Years	%
Roads--substructure	50-80	1.25-2
Roads—Original Surfacing & Bituminous Reseals	7-10	10-14.3
Roads—Asphalt overlays	15-20	5-6.67
Roads--Unsealed	5-10	10-20
Bridges	80	1.25
Main Drains	100	1
Footpath	50	2
Kerb & Channel	50	2

(GPFR 2001/02, p.29).

The Swan Hill Rural City Council depreciation for roads and bridges was recognised using the straight-line method which reflects the consumption of the service potential embodied in these assets. The rates were calculated to allocate the cost or valuation, less estimated residual value at the end of the useful lives of the assets, against revenue or service potential of these useful lives commencing from the month following purchase or construction and were recorded as shown in Table 7.24.

Table 7.24 Swan Hill Depreciation Rates		
Drainage	40 to 80 years	1.25%-2.50%
Roads, Streets & Bridges—Sealed	20 to 50 years	2% to 5%
Roads, Streets & Bridges—Gravel	100 years	1%
(GPFR 2001/02, p.32).		

The three municipalities have different ways in the presentation of depreciation rates. All three municipalities are large shires and the rates should not be significantly different which is the situation. Another difference is the detail shown in GPFRs for users of this information.

7.5.2 Large Shire Municipalities Reconciliation Review

Another area causing concern when GPFR was reconciliation of IA and depreciation accounts: The researcher did have difficulty reconciling the Swan Hill Rural Council GPFR on the information provided is shown in Table 7.25.

**Table 7.25 Swan Hill Rural Council IA Accounts Reconstruction
Note 8 Depreciation and Amortisation Expense**

	2001	2000
Infrastructure	3,749,291	3,444,826
Note 24 Non-current assets—infrastructure		
Roads, Streets & Bridges (Valuation 2000)	57,992,878	177,492,349
Less Accumulated Depreciation	(31,331,516)	(83,803,643)
Roads, Streets & Bridges (Valuation 2001)	118,264,343	nil
Less Accumulated Depreciation	(50,759,078)	nil
Total	94,166,627	93,688,706
Roads, Streets & Bridges (Cost)	107,927	1,497,720
Less Accumulated Depreciation	nil	(4,300)
Total	107,927	1,493,420
(GPFR 2000/01, p.43)		

This reconciliation was not very comprehensive and accounts cannot be reconciled with the information. The Horsham Rural City Council and the Ararat Rural City Council reconciliations were very comprehensive and provided a separate reconciliation of IAs which was very user-friendly.

7.5.3 Large Shire Municipalities Non-financial Review

In the GPFRs non-financial information on IAs varies considerably. Examples of the type of information were examined for its usefulness to financial statement users. In a summary on the maintenance of local roads and footpaths this appeared in the Ararat Rural City Council GPFR:

infrastructure renewal is a major challenge. The Council has been able to increase its expenditure on roads and bridges and has adopted a four year \$19 million local roads program (GPFR 2000/01, p.4).

This statement is very important to users to assess whether maintenance programs are being carried out and the amounts being spent in this area; the financial detail is not given; and only aggregate data. This supports the recommendation of giving more detailed information in both financial and non-financial areas. However, in the Swan Hill Rural City Council GPFR more detail was given on IA non-financial information and included costs to ratepayers if depreciation was included in assessments to ratepayers. This information was contained in Appendix 7.5. A brief extract of this information is shown in Table 7.26.

Table 7.26 Swan Hill Rural Council Non-financial Information Services

Average Operating Expenditure per Assessment

This indicator represents the total operating expenses of the Council (including depreciation and asset write off), divided by the total number of property assessments, and seeks to identify the amount expended on services per assessment being **\$2,413.28 (2000/01) and \$2,205.71 (1999/00)**.

The total expenditure is derived after **charging of depreciation**, and **the writing off \$860,000 of road infrastructure improved** during the year, and therefore includes accounting treatments, **which do not represent actual services delivered to the community**. When these accounting treatments are **removed**, the result is **\$1,663.21 (2000/01) and \$1,569.48 (1999/00)**, and indicates that there has been a \$93.72 increase in the cost of expenditures on services per assessment. (GPFR 2000/01 p.17)

Infrastructure

Average Capital Expenditure per Assessment

This indicator represents total funds expended on infrastructure to review, enhance or extend the current infrastructure network divided by the total number of property assessments, and seeks to identify whether Council is spending more or less on **maintaining infrastructure base being \$294.52 (2000/01) and \$366.55 (1999/00)** (GPFR 2000/01, p.17).

This was very comprehensive and detailed information which would benefit GPFR users in their assessment of rates being charged. It is interesting that the municipality does not recognise depreciation as an expense that provided a

service to the community. This suggests a lack of knowledge or understanding of the purpose of depreciation. However, in the notes to accounts for depreciation it was stated that:

All non-current assets having a limited useful life are systematically depreciated over their useful lives in a manner which reflects the consumption of the service potential embodied in those assets to Council (GPFR 2000/01, p.32).

The way the information was presented highlighted that municipalities can provide this type of information. The researcher asked a senior local government official about the lack of understanding for reporting depreciation shown in the GPFR by senior accounting staff at Swan Hill. The official indicated that the senior accounting staff were very competent.

7.6 Small Shire Municipalities IAs Review

The Indigo Shire Council has a population of 14,844 and an area of 2,043.8 square kilometres. The Loddon Shire Council has a population of 8,547 and an area of 6,694.1 square kilometres. Moyne Council has a population of 15,776 and an area of 5,478.2 square kilometres.

The data provided in Tables 7.27 and 7.28 provide some indication of the size of road, bridge and drain asset bases, across of sample of small shire

municipalities. The municipalities include: Indigo Shire Council; Loddon Shire Council; and Moyne Council.

Table 7.27 Small Shire Municipal's Roads and Bridges

Function/activity	Indigo Shire Council Roads & Bridges	Loddon Shire Council Roads & Bridges	Moyne Council Roads & Bridges \$000s
Function Assets	36,978,378	74,010,250	149,110
Total Assets	59,185,800	98,222,892	199,677
% of Total Assets	62.5	75.3	74.7
Function Expenses	1,625,555	2,624,189	4,036
Total Expenses	15,837,139	14,530,990	20,645
% of Total Expenses	10.3	18.1	19.5
Function Expenses/ Function Assets	4.4	3.5	2.7
Total Expenses/ Total Assets	26.8	14.8	10.3

All three municipalities had a significant road and bridge total of their IAs of their total assets. All three municipals used written-down replacement cost as their basis of valuation for IAs. The Loddon Shire Council had 75.3 percent of these assets as their total assets. This showed that roads and bridges make up a very significant proportion of small rural municipalities' asset bases. An examination of different factors: length; condition; and age of roads and bridges was undertaken to try to determine why the differences in financial information occurred. All three municipalities are of a different age. Another reason for the difference with the percentage of roads and bridges could be the lengths of

roads and number of bridges and the area of these municipalities. The Indigo Shire Council has an area of 2,043.8 square kilometres, the total length of roads is 1,832 kilometres and the total bridge area is 5,933 square metres of concrete and 875 square metres of timber. The Loddon Shire Council has an area of 6,694.1 square kilometres, the total length of roads is 4,732 kilometres and the total bridge area is 10,381 square metres of concrete and 3,189 square metres of timber. The Moyne Council has an area of 5,478.2 square kilometres, the total length of roads is 3,471 kilometres and the total bridge area is 9,336 square metres of concrete and 2,168 square metres of timber. All these municipalities' roads were both kerbed and guttered and unkerbed. This information does help explain the differences in the value of roads and bridges as the Indigo Shire Council has the smallest total length of roads. Looking at the notes to accounts no reasons for the difference could be found. The application in the method of valuation may be a reason for the differences according to literature and interviewees.

The depreciation which represents the consumption of roads and bridges was also very significant for two municipalities. The depreciation for the Indigo Shire Council was 10.3 percent which appears low compared to the other two municipalities. The Loddon Shire Council had a significant proportion in value of roads and bridges at 75.3 percent of total assets and their depreciation expense for these assets was 18.1 percent of total expenses. Depreciation for roads and

bridges ranged from 10.1 percent to 19.5 percent of the value for roads and bridges which was significantly higher than the straight-line rates given.

Table 7.28 Small Shire Municipal's Drains

Function/activity	Indigo Shire Council Drains	Loddon Shire Council Drains \$000s	Moyne Council Drains
Function Assets	2,380,630	4,677,701	2,328
Total Assets	59,185,800	98,222,892	199,677
% of Total Assets	4	4.8	1.2
Function Expenses	NA	92,076	713
Total Expenses	15,837,139	14,530,990	20,645
% of Total Expenses	NA	.6	3.5
Function Expenses/ Function Assets	NA	2	30.6
Total Expenses/ Total Assets	26.8	14.8	10.3

Drains as a percentage of total assets were considerably lower than roads and bridges. The Moyne Council only had 1.2 percent of drains to total assets while the other two municipalities had 4 percent and 4.8 percent. Depreciation expenses ranged from 0.6 percent to 3.5 percent to their value which shows a significant difference. The depreciation of drains for the Indigo Shire Council could not be calculated because this class of asset was only valued in the 2000/01 financial year on the totals in their GPFR.

7.6.1 Small Shire Municipalities Depreciation Rate Review

The Indigo Shire Council depreciation was recognised using the straight-line method but it did not mention whether the rates were reviewed each year. Depreciation rates for roads and bridges were recorded as shown in Table 7.29.

IAs	Years
Sealed Roads—surface	2 to 50
Sealed Roads—structure	100
Unsealed Roads	20 to 25
Bridges—Concrete	100
Bridges—All Others	80
Drains	50 to 80
Pipes	80
Culverts	50 to 80
Manholes/Pits	20 to 80

(GPFR 2000/01, p.43)

These rates will now be compared to the Loddon Shire Council and the Moyne Shire. The Loddon Shire Council depreciation for roads and bridges was recognised using the straight-line method on the residual useful life determined each year and were recorded as shown in Table 7.30.

IAs	2000/01 Years
Roads—Pavement (Unsealed)	20
Roads—Formation	100
Roads—Seal	14
Roads—Pavement (Sealed)	40
Roads—Formation (Sealed)	100
Kerbs & Channels	70
Footpaths	50
Bridges & Culverts	100
Rural Drains	Nil
Urban Drains	80
Street-Furniture	10 to 80

(GPFR 2000/01, p.42)

An interesting inclusion was a note showing an increase in useful lives of roads as shown in Table 7.31.

Table 7.31 Loddon Shire Council Change of Economic Life of Roads		
The financial effect of changes to the depreciation expense for the year as a result of the measurement of useful lives of assets are:		
Class of Asset	Change in depreciation rate	Net Financial Effect
Roads—Sealed Local Road Reseals (GPFR 2000/01, p.42)	increase 4.5%	increase \$264,137

The level of maintenance is very important in these IAs maximising their useful lives and should be periodically reviewed and reflected in the depreciation rates used as in Table 7.31.

The Moyne Council depreciation for roads and bridges was recognised using the straight-line method which reflects the consumption of the service potential embodied in these assets. The rates were calculated to allocate the cost or valuation, less estimated residual value at the end of the useful lives of the assets and were recorded in Table 7.32.

Table 7.32 Moyne Council Depreciation Rates			
Asset Category	Estimated Useful Life	Depreciation Rates	
	Years	%	
Roads Pavements	50	2	
Roads Seals	10	10	
Bridges	50	2	
Drainage	33	3	
Other Structures			
Footpaths/Culverts	33	3	
Other Structures			
Signs/Bus Shelters	10	10	
(GPFR 2000/01, p.34)			

The three municipalities have different ways in the presentation of depreciation rates. Differences in depreciation rates should occur depending on local variables. As all three municipalities are small rural municipalities the rates should not be significantly different which is the situation.

7.6.2 Small Shire Municipalities Reconciliation Review

Another area causing concern when GPFR were first prepared under AAS27 requirements was reconciliation of IA and depreciation accounts. These reconciliations were very comprehensive and all the information in the notes to accounts in GPFRs is included for roads and bridges that can be easily reconciled for all three municipalities.

7.6.3 Small Shire Municipalities Non-financial Review

The Indigo Shire Council had many interesting summaries on the maintenance of local roads and footpaths as shown in Table 7.33.

Table 7.33 Indigo Shire Council Non-financial Information

Future issues before our Council are:

maintenance of infrastructure assets (GPFR 2000/01, p.3)

Infrastructure Management

Council is placing a great deal of emphasis on analysing the assets that we currently have, be they roads, drains, building or our natural environment.

A **major infrastructure study** is being undertaken in conjunction with other Shires to ensure that we have the best system of recognising our assets, and also providing for **increasing rates over the next five years**, with the aim to bridge a \$900,000 gap that has been identified between what is really needed on our maintenance systems.

Council has very real pressure on it to both provide additional infrastructure and services and to maintain what it has already. Council's long term financial strategy means that Council will be increasing rates over the next five years, with the aim to bridge a **\$900,000 gap that has been identified between what we currently spend on infrastructure maintenance and renewal and what is really needed** (GPFR 2000/01, p.5).

This statement is very important because this may have been an unusual year to assess non-financial information. It appears most of this information was used in the *Facing the Renewal Challenge Study (1998)* and this may explain why drains were valued for the first time since AAS27 requirements began. In the GPFRs information for non-financial information on IAs varied considerably as in the previous municipalities reviewed. Examples of the types of information were examined for usefulness to financial statement users.

However, in the Loddon Shire Council GPFR more detail was given on IA non-financial information which was not from or for the study mentioned above. This information appeared in the index with a detailed summary and page numbers to locate the information. A brief extract of this information is shown in Table 7.34.

Table 7.34 Loddon Shire Council Non-financial Information

Index.....Report of operations (p. 23-27)

Page 24.....13.6 km of gravel roads were sheeted or resheeted;

27.8 km of narrow sealed road shoulders were gravel sheeted;

.....(GPFR 2000/01 p.60.)

This was comprehensive but more detailed financial information would benefit GPFR users in their assessment of the condition of footpaths and amount of maintenance being spent. The way the information was presented highlighted that municipalities can provide this type of information. This type of information was not compulsory and showed the level of detail a municipality can provide.

Chapter VIII

Summary, Conclusion and Recommendations

8.1 Introduction

The issue of accrual accounting in the public sector has been the subject of controversy for many years. The most frequently debated area is the charging of depreciation especially on IAs under the accrual accounting method. This study concentrated on the attitudes of local government municipalities' senior accounting staff in reporting depreciation under *AAS27 Financial Reporting in Local Government* and decisions made regarding this information. The reason for concentrating on IAs in the change from modified accrual to full accrual accounting is the vast investment and their implications on decision-making whether by internal or external users of this accounting information highlighted in Chapter 1.1. The critical test of the change in accounting methods is depreciation, however calculated, in the decisions made from this information.

Previous studies in this area have concentrated on using a particular depreciation method and then defending the decisions that were or could be made from this information; often criticising traditional methods of depreciation (often straight-line) that they claim do not match the loss of service potential of IAs. This presents the view to readers of these studies that accrual accounting must only use the straight-line depreciation method because of the present accounting standards if accrual accounting is applied to IAs. However, researchers (Ma & Mathews 1992; Pallot 1995; Currie, 1987; Burns, 1993; Burns et al., 1998; & Sing, 1998) have shown poor compliance with the requirement, dissatisfaction with reports and widespread lack of understanding of the information disclosed. Other studies have looked at certain areas of IA accounting as in Section 2.8 and the results were that the information in GPFRs were sending out different signals of usefulness to both internal and external users.

Conceptual and practical issues were raised in the literature review and interviews and then pursued in a questionnaire where feedback was obtained on how councils viewed these issues. Attempts were made in the questionnaire to determine if the issues were common or isolated cases. The purpose of this study was not to defend any depreciation method but investigate the practical implications of how Victorian local authorities depreciate IAs and what type of financial decisions are made on these costs. This will allow conclusions to be made on the **accountability** of the local government reporting entities on the

utility and relevance of IA depreciation information. The data generated by this study relate to the reporting of depreciation on IAs and the use of this information in internal (accrual budgets and rating estimates) and external (GPFRs) reports. From this information conclusions are drawn on the consequences of current practices and recommendations for change are given to assist local government and accounting authorities. There appears to be confusion and reluctance by local authorities' senior accounting staff to appreciate the use of an accrual accounting method which has led to the contentious issues of the appropriate method of depreciation and its application to IAs. In this study a descriptive approach is used to discover how Victorian local government authorities use *AAS27 and the SACs* as the theory and for the application of recording and reporting IAs and their relevant depreciation in GPFRs. The study concentrates on how this knowledge is used in depreciating IAs and how senior accounting staff then apply this information in decision-making on different financial reports.

As the mandating of depreciation charges has given rise to debate at several levels, the central research problem to investigate is.

AAS27 and accountability with emphasis on depreciation as the critical test.

Subsidiary problems which relate to this include the following.

- What information is necessary and sufficient for decisions relating to the use, maintenance and replacement of IAs?
- Has the charging of depreciation affected rating and policy decisions?
- Has the charging of depreciation affected day-to-day management decisions? and
- What are the implications of depreciation charges for intergenerational equity?

The following sections contain summaries and conclusions arising from the investigation of how councils addressed the issues involved in the identification, valuation and depreciation of infrastructure assets under AAS27 IA requirements. Recommendations for action are also provided.

8.2 Summary on the Up-dating of IA Information for Efficient Decision Making

Some of the main results relating to the up-dating of information that is necessary and sufficient for decisions about the use, maintenance and replacement of IAs and relevant depreciation are as follows. The interviews, GPFRs and questionnaire all indicated that IA asset registers needed thorough review. This shows there was a need to change accounting methods. Perrin (1984) mentioned this point (Chapter 2). Both the interviews and questionnaire

recognised that engineers have most control in the information used under the accrual accounting method for IAs. This is where engineers need to have sufficient education about the requirements of *AAS27 and the SACs* to understand the difference between a cash method and accrual method. The cash method is what engineers are used to and may explain some of the resistance to accrual accounting for IAs. Engineers tend to find a problem in understanding the concept of depreciation and its purpose.

Communication between engineers and accountants is important for reliable and relevant information. Interview responses indicated that communication between departments had improved, however, questionnaire responses indicate differently. Only forty-nine percent of responses indicated improvement. This is an area that needs to be addressed because of the input by engineers in IAs details. There was a difference between interviews and questionnaire responses on the education and training given on accounting for IAs. The majority of interviewees indicated that education and training was satisfactory but more practical examples were needed. Questionnaire responses indicated that educators/consultants did not provide relevant or practical IA information. This could be one of the reasons why senior accounting staff are resisting the benefits in accrual accounting for IAs. Most of the difficulties with identifying IAs were practical issues and can be overcome with more experience in recording and reporting these assets. The review of GPFRs found the valuation of bridges for the first time in the City of Frankston GPFR whether they had been

unidentified or not was not stated. Also the City of Melbourne GPFR did not have any value of bridges until 2003/2004 whether this was an identification or valuation issue was not stated.

Sixty-eight percent of IA components were aggregated but sixteen percent did not know. For reliable and relevant information less aggregated the better. This is an area where this information was not included in the GPFRs as non financial information. Users of IA information have no knowledge of how the IA network was aggregated which would be needed for depreciation policies for each of the economic lives of the components which make up the IA network.

According to questionnaire responses seventy-eight percent of internal council policies on IAs were up-dated. This is an area where the importance of accrual accounting is evident. This corresponds with interviews. Both interviewees and respondents to the questionnaire indicated that accountability had improved. This shows that the reporting of IAs has significantly improved accountability according to respondents. This improved information was also recorded in GPFRs which helped users of this information acknowledge the significant investment in IAs.

Following on from the previous issue on accountability there was a marked difference to interviewees and respondents to the questionnaire on the benefits gained from this accrual accounting information. Interviewees indicated that

tangible benefits would outweigh costs. However only a minority of respondents indicated that tangible benefits outweigh tangible costs. This response does not correspond with the previous response and shows that the respondents do not or refuse to acknowledge the full extent of tangible benefits to be obtained from recording and reporting IAs particularly in certain decision-making areas. At this stage there is no evidence of the impact on users using this information in GPFRs, however, this may change as increases in rates may be needed to maintain and replace IAs.

8.2.1 Conclusion on the Use of IA Information

It is clear that senior accounting staff are having difficulties appreciating the benefits that accounting authorities and the Victorian Office of Local Government expected to result from the change to accrual accounting. This is a worrying area and needs attention from accounting and local government authorities. Accountability under AAS27 implies a particular type of accountability but senior accounting staff have other ideas. These ideas have no theoretical defence and show a certain amount of reluctance to change. These differences in ideas include communication, accounting method used and public versus private IA information uses. The accountability in depreciating IAs question from senior accounting staff appears to apply only to what to be accountable about but *not* to whom and what the users of this information need to know. This is where staff have their own ideas. Different views to what the

community as users wants but these staff attitudes only want to explain what they do. Few do not accept the change but more senior accounting staff completing AAS27 IA reporting requirements under instruction rather than willingly. Applying depreciation as the critical test to acceptance of accrual accounting shows this reluctance or unwillingness of senior accounting staff to the change in accounting methods. These points will be highlighted further in this chapter. The process of identification then valuation of IAs has a significant influence on the depreciation that is accounted for then reported either internally or externally. This is an area where education has not had the desired results required by accounting authorities and the Victorian Office of Local Government in that senior accounting staff in municipalities do not fully realise or acknowledge what decisions are now required in this accrual accounting environment. Aggregation causes differences in valuation and, hence, in depreciation.

8.2.2 Recommendations on the Use of IA Information

The methods of identification used cause significant differences in valuation and depreciation so accounting authorities or the Victorian Office of Local Government need to give clear direction on the practical application in this area for all councils to follow. The cost needs to be known and understood in an attempt to gain the benefits of the knowledge of how to use this information in both efficient internal and external decision-making. Education costs and

communication between departments especially accounting and engineering for IA information should be monitored by local government officials.

8.3 Summary of the Technical Knowledge on AAS27 IA Information

This is an area where there was a huge difference in the acceptance or knowledge between *AAS27 and the SACs* by senior accounting staff in the questionnaire responses. Interviews and questionnaire responses both indicated similar results. Respondents to the questionnaire did not realise that the definitions in AAS27 were the same as in SAC4. Ninety percent of respondents' accepted that IAs were assets under AAS27 definitions whereas only forty-eight percent accepted IAs were assets under SAC4 definitions. Only sixty-five percent accept that AAS27 is useful in accounting for IAs. While forty-four percent found AAS27 confusing in accounting for IAs and forty percent did not know if the SACs are confusing in accounting for IAs. Seventy-seven percent thought IAs were different in the public sector to the private sector. Seventy-eight percent indicated that IAs are different from other physical assets. These responses show senior accounting staff do not accept or only record and report IAs and their relevant depreciation for compliance with AAS27 requirements.

8.3.1 Conclusions of the Technical Knowledge on AAS27 towards IA Information

These results show that there is significant reluctance or lack of knowledge to accept the theory and issues addressed in the requirements of AAS27 IA reporting. Senior accounting staff regard IAs different from other physical assets. This may also be the position of senior engineers who may not be competent with accounting standards required in recording and reporting IAs. Clearly the respondents do not or refuse to acknowledge the issues resolved in the accounting standards in accounting for IAs and their relevance. The Report of the Victorian Parliament in 2002, Public Accounts and Estimates Committee, acknowledged that the current accounting standards had resolved the issues raised in accounting for IAs. The valuation of IAs is another area that affects the application in depreciation issues. The Asset Accounting Manual (1992) was not adequate for this purpose. The changes have lead to increased accountability. It is not clear that they have made decision-making more efficient and effective.

8.3.2 Recommendations of the Technical Knowledge on AAS27 IA Information

There needs to be an accounting standard so that all councils complete the process in the same way thus enabling financial statement users to compare and evaluate financial information from different councils. There is a need for

research to develop measures of accountability and to assess efficient and effective decision-making. By having standards on what is required in practical terms in accounting for these assets, there could be a greater appreciation by councils of the improved means of asset management resulting from the implementation of AAS27.

The attitudes of senior accounting and other senior council staff on the purpose of why IAs and relevant depreciation are recorded and reported for both efficient internal and external decision-making needs to be properly addressed. Local government organisation accounting authorities need to review the manual to make it more comprehensive and provide practical instruction, with examples, on how to identify and value infrastructure assets. This was an area mentioned in the Report of the Victorian Parliament in 2002:

the Committee Inquiry was initiated because of the concerns of some agencies about the appropriateness of applying aspects of accounting standards to IAs. The Committee believes that the adoption of new strategy will lay the foundations for a more consistent, reliable and cost-effective valuation and management approach for the future. To successfully implement this strategy, ongoing commitment from senior management within agencies will be crucial (Oct 2002, p.14).

8.4 Summary on the Valuation of IAs

There is a significant difference in the attitudes to valuation issues between interviews, questionnaire responses and GPFs. Following on from the identification process only thirty-five percent of financial staff were involved in

valuation issues from questionnaire respondents. This follows on from earlier where engineers were mainly involved in recording and reporting IAs. In the interviews senior accounting staff indicated they could be more involved in recording and reporting IAs than what the questionnaire responses indicate. In the interviews senior accounting staff indicated that the Asset Accounting Manual (Victorian Institute of Municipal Management, 1992) would be used regularly but questionnaire responses indicated sixty-two percent of these financial staff use the Asset Accounting Manual. As earlier identified, communication between senior accounting staff and engineers was limited so senior accounting staff may not know what the engineers are doing which is highlighted where only thirty-two percent of questionnaire respondents did not know if deprival cost valuation method is used. Whereas eight-one percent of councils use written-down replacement cost to value IAs according to senior accounting staff. The review of GPFRs could locate no other method used.

There was a significant difference in attitudes by senior accounting staff in where IAs information could be reliable and relevant to make decisions. Seventy-three percent of questionnaire respondents' indicate that valuations are fully justified but only fifty-six of respondents thought that the Statement of Financial Position have reliable values for IAs. In the interviews more positive feedback was given on the reliability and relevance of IA information. One reason why questionnaire respondents gave earlier negative comments is that seventy-five percent have difficulties in valuation method used. Both in

interviews and questionnaire responses found difficulties establishing the current condition of existing IAs. This information is not reported in GPFR non-financial information. As with identification in the valuation process difficulties were found in valuation of IA components.

Ninety percent of questionnaire respondents' indicate that valuation methods need further refinement. Following from the last issue eighty percent of respondents claim that valuation methods do not reflect actual values. The question that needs to be asked is either this is a methodology or practical related issue. This negative attitude will impact on the reliability and relevance of depreciation information by senior accounting staff using this information in internal decision-making. Also because engineers have most of the input on recording and reporting IAs their attitude towards accrual accounting and depreciation must also be questioned. In GPFRs the ratio of roads and bridges to total assets indicated 13.9%, 18.7% and 33.9% for inner metropolitan municipals. Depreciation of IAs as a percentage to total expenses was 5.8%, 8.8% and 5.3% for inner metropolitan municipals. This shows the importance of IAs and why accrual accounting is needed to record and report these assets with their relevant depreciation for efficient decision-making. As the municipals become smaller in population the ratio's become larger. Outer metropolitan municipals had 47.3%, 47.6% and 49.1% for their IAs to total assets ratio. Depreciation of IAs as a percentage to total expenses was 47.3%, 47.6% and

49.1% for outer metropolitan municipals. The small municipals ratios were 62.5%, 75.3% and 74.7% for IAs to total assets.

Depreciation of IAs as a percentage to total expenses was 10.3%, 18.1% and 19.5% for small shire municipals. This shows the importance of budgeting for maintenance and depreciation for the present and future generation. Having this information highlights the need for positive attitudes towards accrual accounting and depreciation.

8.4.1 Conclusions on the Valuation of IAs

It, however, appears that senior accounting staff do not have the major influence in valuation policies and values. From the earlier responses from the identification issues engineers had the major influence in IA policies and information. This was the position in the previous accounting method that engineers had the control on IA information. This information was found to have been insufficient for recording and reporting in an accrual accounting environment which revealed that engineers took IA information needs for granted or felt threatened by the new AAS27 IA requirements which has caused negative attitudes to valuation of IAs. Earlier research results found that IA communication between departments has not improved as a result of AAS27. These results also show that the majority of accounting staff do not accept the changes but only are completing the requirements under instruction rather than

willingly. The foregoing indicates how some councils were identifying and valuing their assets. The reliability of these estimates must be questioned and there is the issue of how decisions on asset management and depreciation can be made based on these valuations. The ratios indicate the vast investment in IAs and this information needs to be reliable and accurate for both internal and external decision-making. The councils need to devote the time and resources to determining more reliable and accurate valuations of these assets. An earlier quotation from the Victorian Parliament Report is appropriate:

an interesting comment from the Committee was that the Inquiry would be difficult and was not disappointed on that score. Not only did it expect to be confronted with a range of complex technical issues, but an overlay of professional sensitivities and the re-opening of some **bottom-line-mentality** debates that had accompanied the original policy introduction. Added to this was the fact that the rest of the Western World had effectively left the valuation of IAs in the **too-hard** basket....with recording that Australia's initiative for inclusion of IA valuations and depreciation in GPFs was to be followed. It appears to the Committee that existing accounting standards, including the recent guidance by the UIG, address most of the depreciation and maintenance cost difficulties identified by the proponents of CBD methods. The accounting rules are quite clear and consistent with those adopted by other major countries (2002, p.34).

8.4.2 Recommendations on the Valuation of IAs

This reluctance or refusal to accept the new recording and reporting requirements needs to be investigated by accounting authorities and the Victorian Office of Local Government. Development of an accounting standard or regulations, by the accounting authorities or local government, to regulate how these assets should be identified and what standard form of valuation is to be applied. Further monitoring and guidance to ensure that the competing

demands do not delay refinement of the valuations is needed. Monitor whether councils do actually review these valuations under the present workload of councils. If necessary, provide additional resources needed for the refinement of these estimated valuations leading to more reliable and accurate valuations. Investigate control criteria in accounting for IAs to provide clear direction on valuation methods by accounting authorities. More technical and practical educational guidance in the identification and valuation of infrastructure assets to be given.

8.5 Summary of Depreciation Issues

This section of the study is related to the main issue concerning depreciation. Most of the answers to the secondary problems that relate to my research problem are answered in this section. The previous sections on identification and valuation of IAs were needed because depreciation is so reliant on this being reliable and accurate information. From the results of the identification and valuation of IAs procedures there is confusion and reluctance to accept the accrual method in recording and reporting these assets. This has had and will in the future have significant influence on whether senior accounting staff accept depreciation of IAs as being meaningful for both internal and external decision-making. The study indicates that there is considerable confusion or reluctance by senior accounting staff to accept that depreciation should be used for both internal and external reports. The list of secondary problems which were

addressed by most of these responses to the issues (some were not mutually exclusive to one problem) in the questionnaire are listed and a positive or negative score on senior accounting staff attitudes is given. This score however could be both positive and negative depending on the purpose for that attitude.

8.5.1 What information is necessary and sufficient for decisions relating to the use, maintenance and replacement of infrastructure assets?

A list of the main issues for respondents in depreciation with a positive or negative score is given.

- 90% of depreciation issues are prepared by engineers staff. Accounting staff should have more input. **Negative;**
- 76% of councils used the straight-line method to depreciate IAs. **Positive;**
- 21% of councils did not use straight-line method to depreciate IAs. The method used seemed to be impossible to locate. **Negative;**
- 75% thought that traditional methods of depreciation are not appropriate for IAs. This is an important response and shows that respondents do not accept traditional depreciation. Whether engineers influence has dominated this issue may have caused this response because in the previous response respondents thought that depreciation was needed to reflect the cost of services. **Negative/Positive;**

- 89% thought Condition-Based-Depreciation (CBD) provides more relevant and reliable information on IAs. This has been discussed before and again CBD theory is not fully known by either senior accounting or engineering staff. **Negative**;
- 71% indicated that CBD could be used for both internal and external decisions rather than traditional methods of depreciation. **Negative**;
- 75% thought that in CBD calculations there was a difference between depreciation and maintenance. This shows that respondents do not understand CBD theory and application. **Negative**;
- 83% indicated that straight-line depreciation was not appropriate for roads. Again no alternative method has found acceptance from all relevant parties. **Negative/Positive** ;
- 83% thought components of a road network need different depreciation rates and need to be regularly reviewed. **Positive**;
- 24% did not know that in CBD calculations there was a difference between depreciation and maintenance. **Negative**;
- only 43% thought that maintenance schedules should be included in financial statements for external users. This is where more information is needed to give GPFR users more guidance on whether the rates of depreciation being charged on IA components are appropriate. **Negative**;
- 91% indicated that there was a difference between depreciation and maintenance for internal users. This an area where indirectly there is a

positive correlation between maintenance and depreciation. The amount spent on maintenance can cause depreciation rates to either go up or down. **Negative**;

- 87% indicated that depreciation does not use maintenance costs in traditional depreciation methods. This follows on from the previous statement. **Negative**;
- only 24% thought that depreciation is used for various internal purposes. This is an area that needs to be clarified if depreciation is used in rating estimates. **Negative**; and
- 92% indicated that there was a difference between depreciation and maintenance in financial statements. Again there needs to be more detail on how the charges and rates were calculated. **Positive**.

There are some encouraging signs but also some negative signs in the attitudes of senior accounting staff in accepting depreciation in accrual accounting for IAs in this secondary problem. The relationship between maintenance and depreciation has not been accepted or there is a problem with senior accounting staff being unaware.

8.5.2 Has the charging of depreciation on IAs affected budgets, rating estimates and policy decisions?

A list of the main issues for respondents in depreciation with a positive or negative score is given.

- only 48% thought depreciation fully reflected service consumption of IAs. **Negative;**
- 20% of respondents did not know if depreciation fully reflected service consumption of IAs. **Negative;**
- only 65% of councils revised depreciation of IAs annually. **Negative;**
- 63% thought that depreciation should be based on an industry standard. **Positive/Negative;**
- 70% of respondents thought that depreciation was needed to reflect the cost of services. This is an important area where the majority thought it was. **Positive;**
- 62% thought depreciation should not be used in rating estimates. This is an important area and indicates the reluctance of senior accounting staff to accept depreciation of IAs as an important internal budgeting cost which should also be reflected in rating estimates. **Negative;**
- only 13% thought depreciation costs rather than capital expenditure should be in rating estimates. This is an area of concern to the Victorian Office of Local Government. **Negative;**

- 74% thought that ratepayers should be paying for the cost of services. **Positive;**
- 87% indicated that depreciation causes significant differences between cash and accrual budgets. This should be the situation. **Positive;**
- only 17% indicated that a reserve should be used for depreciation. This shows that accrual accounting has changed the majority on the purpose of depreciation. **Positive;**
- only 43% thought that maintenance schedules should be included in financial statements for external users. This is where more information is needed to give GPFR users more guidance on whether the rates of depreciation being charged on IA components are appropriate. **Negative;**
- 91% indicated that there was a difference between depreciation and maintenance for internal users. This an area where indirectly there is a positive correlation between maintenance and depreciation. The amount spent on maintenance can cause depreciation rates to either up or down. **Negative;**
- 87% indicated that depreciation does not use maintenance costs in traditional depreciation methods. This follows on from the previous statement. **Negative;**
- 91% indicated that there was a difference between depreciation and maintenance for internal users. **Positive;**

- 87% indicated that depreciation does not use maintenance costs in traditional depreciation methods. **Positive**;
- only 24% thought that depreciation is used for various internal purposes. This is an area that needs to be clarified if depreciation is used in rating estimates. **Negative**; and
- 92% indicated that there was a difference between depreciation and maintenance in financial statements. Again there needs to be need detail on how the charges and rates were calculated. **Positive**.

The responses to the issues to this secondary problem reveal that there remains reluctance or a lack of knowledge to accept depreciation of IAs in internal budgets, rating estimates and policy decisions. This would be particularly disappointing to the Victorian Office of Local Government and accounting authorities.

8.5.3 Has the charging of depreciation on IAs affected day-to-day management decisions?

A list of the main issues for respondents in depreciation with a positive or negative score is given.

- 77% thought depreciation was very useful in asset management. **Positive**;

- 71% thought depreciation was useful in internal decision-making. **Positive;**
- 66% thought that traditional depreciation was only for external decision-making. **Negative;**
- however, 75% thought that maintenance of IAs was more relevant than depreciation for internal decision-making. **Negative;**
- only, 56% thought that maintenance of IAs was more relevant than depreciation for external decision-making. **Negative;**
- only, 54% thought depreciation in financial statements are useful for external users. **Negative;**
- 28% indicated that depreciation should not be in the operating statement. The majority accept depreciation as an operating expense. **Positive;**
- however, 67% indicated that if IAs are properly maintained depreciation should still be in financial statements. There is still a reluctance from the minority of respondents to depreciation. **Positive;**
- 91% indicated that there was a difference between depreciation and maintenance for internal users. **Positive;**
- 87% indicated that depreciation does not use maintenance costs in traditional depreciation methods. **Positive;**
- only 24% thought that depreciation is used for various internal purposes. This is an area that needs to be clarified if depreciation is used in rating estimates. **Negative;** and

- 92% indicated that there was a difference between depreciation and maintenance in financial statements. Again there needs to be more detail on how the charges and rates were calculated. **Positive.**

The responses to the issues in this problem show encouraging signs on the acceptance of depreciation of IAs by the majority of senior accounting staff. The problem of senior accounting staff acceptance of depreciation used for decision-making is highlighted where maintenance is thought to be more relevant.

8.5.4 What are the implications of depreciation charges on IAs for intergenerational equity?

A list of the main issues for respondents in depreciation with a positive or negative score is given. Some of these issues also appear under other secondary problems because they are not mutually exclusive.

- 62% thought depreciation should not be used in rating estimates. This is an important area and indicates the reluctance of senior accounting staff to accept depreciation of IAs as an important internal budgeting cost which should also be reflected in rating estimates. **Negative;**
- only 13% thought depreciation costs rather than capital expenditure should be in rating estimates. This is an area of concern to the Victorian Office of Local Government. **Negative;**

- 74% thought that ratepayers should be paying for the cost of services. This where attitudes towards depreciation need to improve. Following on the last statement there is a huge difference on depreciation being a cost of service to the ratepayers and included in rating estimates. **Positive;**
- only 27% thought that depreciation causes intergenerational equity problems. This response has two outcomes. Either senior accounting staff do not realise that there is an issue or that depreciation solves this issue. **Positive/Negative;**
- 32% did not know if depreciation causes intergenerational equity problems. **Negative;**
- 87% indicated that depreciation causes significant differences between cash and accrual budgets. This should be the situation. **Positive;**
- only 17% indicated that a reserve should be used for depreciation. This shows that accrual accounting has changed the majority on the purpose of depreciation. **Positive;**

This problem shows that out of the four secondary problems the responses indicate that senior accounting staff do not fully understand what depreciation has to do with intergenerational equity issues.

8.5.5 Conclusion to Depreciation Issues

Senior accounting staff should have more input on depreciation policies and decisions for IAs. The engineers have the responsibility to build, repair, maintain, rehabilitate, enhance, and finally replace physical assets—particularly assets such as IAs. Once the IA has been put into service it begins to wear out due to usage and deterioration over time due to a number of factors. The issue for engineers then becomes one of determining the optimal level of maintenance work which should be carried out from year to year. It is important that maintenance is taken into consideration when depreciation rates are revised each year to reflect the current situation and condition of the IA networks. This is where both accounting and engineering staff should work together on depreciation issues and policies. This appears not to be the position with the communication between senior accounting and engineering staff according to the study. Depreciation should also be used in accrual budgets and rating estimates.

The Victorian Office of Local Government have implemented programs to make senior accounting staff aware that simply accounting for depreciation, either under the historic cost convention or under current cost concepts, will not of itself ensure that funds for asset replacement are retained in the business. Management may decide not to fund depreciation, or to use the funds generated

by depreciation unwisely for purposes other than asset replacement. As a result, accumulated capital or operating capability would then be depleted or dissipated. Continuous reinvestment of funds generated by depreciation in like assets will ensure that the physical stock of assets is maintained over time because the increasing depreciation charges will be invested in assets which grow at the same (or similar) rates to the assets being depreciated. Traditional methods of depreciation for IAs is not appropriate according to senior accounting staff, however, the Victorian Parliamentary Report finding was that:

generally, agencies have found the depreciation methods prescribed in the accounting standards to be suitable for performance assessment, asset management and pricing/funding decisions within the Victorian public sector (2002, p.107).

However the Victorian Parliamentary Report did indicate that:

some agencies still have concerns about the practical application of depreciation methods. Examples of concerns are: the difficulty of establishing accurate useful lives for long-lived assets; the potential for manipulation of depreciation and maintenance charges; and inconsistent approaches to depreciating similar assets (2002, p.107).

This study did not find any manipulation but more confusion or reluctance to accept depreciation whatever method used for IAs.

The situation between the different interested parties is repeated again. In the 19 century depreciation and accounting for IAs was very contentious for treasurers, municipality accountants, auditors, town councillors, engineers, ratepayers and academics. Discussions on depreciation of large IAs in the

public sector were mainly the responsibility of municipal corporations other than the municipality itself. Edwards (1992) summed up the situation with the managers and external users different views on information contained in financial statements. Coombs & Edwards (1992) point out that in presenting their arguments, these individuals were naturally influenced by their background and experience, with some being extremely stubborn. This position may not have improved for the issues being debated in the 1990s and early 2000s for the depreciation of IAs in General Purpose Financial Reports (GPFRs) for local government reporting. Lapsley, Parkes and Perrin also argue for change to accrual accounting for IAs and relevant depreciation raising many of the issues that were highlighted in the responses to the questionnaire.

8.5.6 Recommendations to Depreciation Issues

Auditors should make sure that depreciation rates do fully reflect the consumption of the assets concerned. This should be monitored by Local government authorities.

There is a need for education and more compulsory requirements are required on this contentious area of depreciation. Senior accounting staff need to realise that depreciation and its implications on IAs will seriously affect local authorities' budgets. This is already being reflected with local authorities having to increase

rates because IAs are not being fully maintained or the capital base of IAs is being increased without more funds to maintain the existing base.

If the approach is uniform by all councils in accounting for IAs then arguments can be made on changing the rating system from the cash budget to the accrual budget basis in determining rates. Rates determined from the accrual budget would include a component for the consumption of service potential from IAs at the time of usage, based on reliable and accurate identification, valuation and depreciation of these assets.

8.6 Summary of IA Accounting Theory

A lack of education or knowledge about the assumptions has been cited as a reason for incorrectly or not reporting IAs. In the survey respondents were unaware of the SACs or were unwilling to use these Statements which have more detail for applying the theory of recording and reporting IAs in GPFRs than AAS27. Only forty percent indicated that the SACs were useful, whereas sixty-five percent indicated that AAS27 was useful in accounting for IAs.

A discussion of the theory including the objectives and assumptions behind them for preparers to use when providing IA information in GPFRs is in Table 8.1.

Standards	Objective	Assumption
SAC 2 par. 26/27, AAS27par.9	Purpose of GPFRs	Decision-making by users
AAS27par.35, AAS29par.7.1.1	Broad Definition of IAs	Provide an IA definition
SAC1par.13	Private and Public sectors	Same for GPFRs purposes
SAC4par.14 and AAS27par.12	Definition of Assets	IAs are assets for reporting
SAC4par.38 and AAS27par.33	Recognition of assets	IAs can be measured
SAC4par.24 to 28	Control of assets	Ownership not necessary
SAC3par.8 to 26AAS27par.35	Reliability and relevance	IA information for users
AAS27par.40to43AAS10par39	Valuation and Revaluation	Cost&Accum.Dep. separate
AAS27par.48 AAS4	Depreciation	IAs depreciation recorded
SAC4par117to121AAS2756/58	Recognition of Depreciation	IAs deprec. an expense
AAS27par.22 and Appendix1	Format for a GPFR	To improve reporting

The objective for IA information is provided in *SAC2 par. 26 to 27* and *AAS27 par.9*. The assumption is that GPFRs provide information for decision-making by users of these reports. A comprehensive summary on the purpose of the SACs to providing information in GPFRs is in Chapter 2.8 and Chapter 2.9. In 1992 a series of articles was produced by Lapsley, Jones, Rutherford and Mayston about the benefits of having a conceptual framework. These articles reinforced why IA information is very important for both internal and external decision-making.

In AAS27 there is limited reference made to IAs but a more recent standard for the public sector AAS29 *par.7.1.1* did state a limited definition for IAs. The definition of IAs is in AAS27 *par.35* states that all assets including those which yield their economic benefits over a long period of time (for example, building, monuments, roads, bridges and underground pipes). This is a very broad definition and there needs to be a definition that makes reference to what constitutes an IA for financial reporting purposes. A summary of this debate is in Chapter 2.10.1.

There are differences between the private and public sectors in achieving certain objectives but there are similarities in information needed by internal and external users. In Chapter 2.10.2 reasons are given for having the same IA information in GPFs for both private and public sectors. Seventy-one percent of respondents indicated there should be a difference in IA information requirements in GPFs between these sectors.

The definition of an asset with the three characteristics is discussed in Chapter 2.8.1 to 2.8.3. In AAS27 *par. 33 and 35* IAs can only be recognised when future economic benefits will occur and can be reliably valued. There was an issue with control of IAs according to forty-three percent of respondents.

The survey indicated that IAs only had minimal physical details in municipality asset registers and identification was difficult. One of the benefits of accrual

accounting is IAs are recognised in up to-date asset registers and this information should be conceptually easy to record. The *AAS27 par.111* indicated that significant practical problems may be encountered but this should not result in IAs not being reported in GPFRs. The engineering department carried out this process and the new computerised records should be linked with both the physical details and the values for these components.

The valuation of IAs was written-down replacement cost according to eight-one percent of respondents with sixty-five percent indicating there were difficulties using the valuation method. The *AAS27 par.40* indicates that if possible the current cost and accumulated depreciation should be reported separately. Some reasons for this from the survey in difficulties in achieving this objective were establishing the current condition of IAs and valuation of the IA components. In the survey ninety per-cent of respondents indicated that valuation methods need further refinement. Twenty-eight percent of respondents indicated that the Statement of Financial Position was not reliable and sixteen percent did not know.

Contained in *AAS27* is a format for GPFRs which was the result of significant differences in IA reporting. In Chapter 7 the analysis of GPFRs highlighted that even having this format there were still areas where both financial and non-financial information was not or partially reported. In a note to accounts there is a reconciliation of rating estimates. This is an area of confusion which the ICAA

(Institute of Chartered Accountants in Australia) recommended its removal from GPFRs. The ICAA also produced a report in 1998 which stated that preparers of GPFRs were not providing all the information needed by users for decision-making. This Committee indicated that there was significant improvement since 1998 GPFRs with the information recorded 2001 GPFRs.

Depreciation has not only caused confusion and resistance in local government reporting in the 1990's to 2000's period of time but other time periods which was highlighted in Chapter two. From the questionnaire ninety percent of respondents indicated that engineers were the main influence on depreciation issues. Depreciation is the expense associated with the consumption or loss of future economic benefits embodied in non-current assets with limited useful lives. Pallot's (1995) definition states that IAs are made up of ordinary assets that have finite lives. Forty-eight percent of senior accounting staff respondents indicated that depreciation expenses of IAs reflected this asset service potential consumption. The depreciation rates are revised annually according to sixty-five percent respondents and the method used according to seventy-six percent of respondents was straight-line depreciation. However eight-three percent of respondents indicated that straight-line method was not appropriate for roads. The UIG released a detailed abstract outlining what methods were appropriate for depreciation on IAs.

Preparers of GPFRs report things that they think financial users of GPFRs need and not what the theory requires. It appears compliance rather than accountability is the main objective for preparers in recording and reporting IAs and depreciation in GPFRs.

8.6.1 Conclusion for IA Accounting Theory

In Table 8.2 there is a summary on whether preparers of GPFRs in local government are following the theory and assumptions for IA information.

Standards	Objective	Acceptance by Preparers
SAC 2 par. 26/27, AAS27par.9	Purpose of GPFRs	No acceptance
AAS27par.35, AAS29par.7.1.1	Broad Definition of IAs	Limited acceptance
SAC1par.13	Private and Public sectors	No or limited acceptance
SAC4par.14 and AAS27par.12	Definition of Assets	No or limited acceptance
SAC4par.38 and AAS27par.33	Recognition of assets	Not reliable
SAC4par.24 to 28	Control of assets	Ownership more relevant
SAC3par.8 to 26AAS27par.35	Reliability and relevance	IA information not reliable
AAS27par.40to43AAS10par39	Valuation and Revaluation	Not reliable
AAS27par.48 AAS4	Depreciation	IAs deprec. only book entry
SAC4par117to121AAS2756to58	Recognition of Depreciation	Straight-line not relevant
AAS27par.22 and Appendix1	Format for a GPFR	Only for Compliance

The attitudes of preparers of GPFRs for IA purposes have shown that they do not always use the theory (SACs and accounting standards) to provide information that users need to make financial decisions. Forty percent still do not acknowledge that infrastructure networks are assets that should be used for financial accounting purposes. It is important that the change to accrual accounting information about IAs be accepted and can be used for both efficient and effective decision-making by internal and external users.

Education has been given as a reason for a lack in knowledge required for recording and reporting IAs but the SACs have very detailed criteria in accounting for IAs. Also the AAS's and UIG literature contain solutions to many recording and reporting problems faced by municipalities for reliable and relevant IA information. Education with the theory is available but senior accounting staff are reluctant or do not want to accept the change to accrual accounting for IAs and depreciation.

According to the survey only forty-nine percent of respondents indicated that communication had improved between departments. There needs to be more communication especially between the accounting and engineering departments for IA information to be reliable and relevant which *SAC3 and AAS27* require.

There are academics and local government senior staff still reluctant to classify IAs as non-current assets. At present there are numerous definitions for IAs in

accounting theory and this has caused different interpretations of what an IA consists of for financial accounting purposes. This was discussed in Chapter 2.10.1 and concluded that Pallot's definition was the most appropriate for financial accounting theory purposes:

IA's are those stationary systems where the system as a whole is intended to be maintained indefinitely (not infinite life) at a particular level of service potential by continuing replacement and refurbishment of its components. The total system is therefore a network which can include normally recognised ***ordinary assets*** as components (Pallot 1995, p.9).

In the survey ninety per-cent of respondents indicated that valuation methods need further refinement. The definition provided by Pallot indicates that these components are ordinary assets each having a finite life. Accrual accounting has and will achieve significant improvement in decision-making by both internal and external users with the recording and reporting IAs in GPFRs. The survey indicated that preparers are not willing to accept the change for various reasons mentioned in Chapter 6.

The ICAA Committee (2001) found that the council annual budgets were on a cash basis and recommended that budgets should be completed on an accrual basis as GPFRs are required. They indicated that a sample format needed to be developed for budgets as GPFRs had a format which councils are encouraged to use. The area of significant difference between preparers and accounting local government authorities were attitudes towards depreciation of IAs in an accrual accounting environment.

All council accounting and engineering staff involved in determining IA and depreciation policies need to read UIG abstracts, the SACs and the related standards on IA issues. The UIG Committee rejected that CBD and renewal accounting approaches are appropriate for recording and reporting depreciation of IAs in GPFRs. This is where both maintenance and depreciation information is necessary in determining and revising IA lives outlined in Chapter 2.13.5.2. This is an area that is neglected in GPFRs and needs more financial and non-financial information for users of these reports.

8.6.2 Recommendations for IA Accounting Theory

To adopt Pallot's definition for financial reporting of IAs will indicate to preparers that IAs and their relevant depreciation should be included in GPFRs and used by both internal and external users. IAs make-up a significant percentage of assets and their relevant depreciation as an expense in municipalities GPFRs. Depreciation is the expense associated with the consumption or loss of future economic benefits embodied in non-current assets with limited useful lives. Pallot's definition states that IAs are made up of ordinary assets that have finite lives. These ordinary assets do have consumption or loss of future economic benefits which can be measured using depreciation methods allowable under *AAS27 and AAS4*.

There needs to be more communication especially between the accounting and engineering departments for IA values and depreciation information is to be reliable and relevant which is required in the *SAC3 and AAS27*.

It recommended that rating estimates are useful for external users and this information should be in GPFRs. As Lee (1999) suggested maintenance and renewal schedules should be included in GPFRs. Pilcher (2000) also suggested industry indices are needed so comparisons can be made about the efficiency of municipalities. *AAS27* states that comparison is not one of the objectives. In Chapter seven the researcher collected further information from the Victoria Grants Commission when trying to find out why significant differences in GPFR IA valuations and depreciation occurred when the municipalities had similar characteristics. No answer could be found for these differences. IAs are becoming or have reached the time when these networks require significant maintenance and renewal programs (billions of dollars has been mentioned in the media in both the city and country areas). Depreciation of IAs in recent times has been cited as one of the major reasons for rate increases. Some literature mentions that local government needs up to eight or ten percent increase in rate income to cover the use of IAs. The issue of intergenerational equity has also been mentioned as a problem with this generation leaving the next generation IAs in worse condition than this generation received them. According to a leading local government official council rates are the major non-discretionary income that municipalities receive.

The findings of this research reveal that local government preparers of GPFRs are not willing or reluctant to embrace the change to full accrual accounting of IAs. The critical test of accepting IA depreciation by municipality senior accounting staff has not occurred in the current environment. This position must change with reliable recording and reporting of IAs and their relevant depreciation so both internal and external users of this information can make informed decisions.

Accrual accounting has achieved more awareness of the financial position of municipalities. IAs and their related depreciation need to be accepted by both senior accounting and engineering staff. As mentioned earlier these assets are significant. Education has been mentioned as one of the solutions however a change in culture needs to occur before considerable benefits are achieved.

8.7 Future Research Issues

The issues were generally positively acknowledged by senior council accounting staff and showed that if properly applied, AAS27 will achieve more than just reporting improvements but better asset management and decision-making than under previous reporting requirements. While this can be the result of AAS27, there still remains confusion on the reasons to depreciate these assets and

include these figures in internal decision-making. This is an area where further research could be completed.

8.8 Limitations in Research

In this study there were no limitations as the senior accounting staff represented in Victorian local authorities have similar regions and characteristics of other local authorities in other states and territories (Section 1.2). The response from the questionnaire was ninety-six percent.

Bibliography

Ackerhurst, C., 1989, Spending Dollars Wisely on Maintenance, 45th Conference of Municipal Engineers, Melbourne.

Accounting Research Committee and Auditing Standards Committee, 1980, Financial Recording for Non-Profit Organisations, Ontario, Canada.

American Accounting Association, 1957, Committee on Accounting Concepts and Standards, Accounting and Reporting Standards for Corporate Financial Statements and Preceding Statements and Supplements, American Accounting Association, Columbus, Ohio.

American Institute of Certified Public Accountants, 1981, Accounting and Reporting by State and Local Government - An Experiment, New York.

American Accounting Association, 1966, *A Statement of Basic Accounting Theory*.

Anthony, R.N., 1978, Financial Accounting in Nonbusiness Organisations-An Exploratory Study of Conceptual Issues, Financial Accounting Standards Board, Research Report, FASB, Stamford, Connecticut.

Anthony, R.N., 1985, *Games Government Accountants Play*, Harward Business Review, pp. 161-170, September-October.

Ararat Rural City Council, 2001, Annual Report 2000 - 2001, September.

Arthur Andersen & Co., 1980, *Guide for the Development and initial Audit of Property Records for State and Local Governments*, Internal Document, America.

Australian Accounting Research Foundation, 1984, Working Guide for Statement of Accounting Practice SAP 1 Current Cost Accounting, Melbourne.

Australian Accounting Research Foundation, 1989, Australian Accounting Standard AAS4 Depreciation of Non-Current Assets, Melbourne.

Australian Accounting Research Foundation, 1989, Proposed Australian Accounting Standard Exposure Draft ED 50 Financial Reporting by Local Governments, Melbourne.

Australian Accounting Research Foundation, 1990, ED50 - Financial Reporting by Local Governments, Seminar, University of Sydney.

Australian Accounting Research Foundation, 1990, Statement of Accounting Concepts SAC1 Definition of the Reporting Entity, Melbourne.

Australian Accounting Research Foundation, 1990, Statement of Accounting Concepts SAC2 Objective of General Purpose Financial Reporting, Melbourne.

Australian Accounting Research Foundation, 1990, Statement of Accounting Concepts SAC3 Qualitative Characteristics of Financial Information, Melbourne.

Australian Accounting Research Foundation, 1991, Australian Accounting Standard AAS27 Financial Reporting by Local Governments, Melbourne.

Australian Accounting Research Foundation, 1991, Australian Accounting Standard AAS10 Accounting for the Revaluation of Non-Current Assets, Melbourne.

Australian Accounting Research Foundation, 1992, Statement of Accounting Concepts SAC4 Definition and Recognition of Elements of Financial Statements, Melbourne.

Australian Accounting Research Foundation, 1992, Definition, Recognition and Measurement of Non-Current Physical Assets by Public Sector Reporting Entities: A Guide to Applying Professional Pronouncements, Melbourne.

Australian Accounting Research Foundation, 1992, Proposed Australian Accounting Standard Exposure Draft ED55 Financial Reporting by Government Departments, Melbourne.

Australian Accounting Research Foundation, 1992, Proposed Amendments to Accounting Standard Exposure Draft ED56 Applicability of the Recoverable Amount Test and Public Sector Application of the Depreciation Standard AAS4, Melbourne.

Australian Accounting Research Foundation, 1995, Statement of Accounting Concepts SAC4 Definition and Recognition of Elements of Financial Statements, Melbourne.

Australian Accounting Research Foundation, 1996, Australian Accounting Standard AAS27 Financial Reporting by Local Governments, Melbourne.

Australian Accounting Research Foundation, 1997, Australian Accounting Standard AAS4 Depreciation of Non-Current Assets, Melbourne.

Australian Accounting Research Foundation, 1998, Accounting Theory Monograph 10, Measurement in Financial Accounting, Melbourne.

Australian Accounting Research Foundation, 1998, Australian Accounting Standard AAS29 Financial Reporting by Government Departments, Melbourne.

Australian Accounting Research Foundation, 1998, Australian Accounting Standard AAS31 Financial Reporting by Governments, Melbourne.

Australian Accounting Research Foundation, 1999, Urgent Issues Group, Abstract 26 Accounting for Major Cyclical Maintenance, June.

Australian Accounting Research Foundation, 2000, Urgent Issues Group, Abstract 30 Depreciation of Long-Lived Physical Assets, including Infrastructure Assets: Condition-Based Depreciation and Other Related Methods, January.

Australian Accounting Standards Board, 1997, Accounting Standard AASB 1021, Depreciation, Melbourne.

Australian Accounting Standards Board, 1999, Accounting Standard AASB 1015, Accounting for the Acquisition of Assets, Melbourne.

Australian Accounting Standards Board, 1999, Accounting Standard AASB 1010, Recoverable Amount of Non-current Assets, Melbourne.

Australian Accounting Standards Board, 1999, Accounting Standard AASB 1041, Revaluation of Non-current Assets, Melbourne.

- Australian Institute of Chartered Accountants Association, 2000, *New UIG Consensus Views, Charter*, p.18, February.
- Australian Society of CPAs, 1989, Submission to ED50, Melbourne.
- Australian Society of CPAs, 1992, Corporation in Victoria- The Question of Accountability in the Reform of Public Authorities, Melbourne.
- Australian Society of CPAs, 1993, Best Practice Case Studies, Melbourne.
- Australian Society of CPAs 1994, Recognition and Reporting of Crown Land by Government Entities, Melbourne.
- Babbie, E.R., 1986, The Practice of Social Research (4th edn.), Wadsworth, California.
- Babbie, E.R., 1990, Survey Research Methods (2nd edn.), Wadsworth, California.
- Balding, R., 1991, Implementation of AAS27: Capitalisation of Roads and Bridges, Australian Society of CPA's Seminar, Sydney.
- Baldwin, T., 1994, *Management Aspiration Audit Opinion: Fixed Asset Accounting at the Staveley Coal & Iron Company 1863—1883*, Accounting and Business Research, pp. 3-12, Winter.
- Baxter, W.T., 1971, Depreciation, Sweet and Maxwell, London.
- Beedle, A., 1981, Accounting for Local Government in Canada : The State of Art, General Accountants Research Foundation, Canada.
- Bellamy, S., 1990, Fiscal Equalisation Methodology : Effects on Small Rural Shires in Victoria, Working Paper No. 1, November, RMIT, Melbourne.
- Bellamy, S., 1992, The Reform of Local Authority Financial Reporting: Some Theoretical and Practical Considerations, AAANZ Conference, New Zealand.
- Bellamy, S., 1992, The Reform of Local Authority Financial Reporting Practices, RMIT, Melbourne.
- Beresford, D.R., 1993, *Frustrations of a Standards Setter*, Accounting Horizons, pp. 70-76, December.
- Black, J.A., and Champion, D.J., 1976, Methods and Issue in Social Research, John Wiley & Sons, Inc, New York.
- Blore, D.G., 1989, Accounting for Roads, IMC Action Learning Management Program, Melbourne.
- Bone, K., Rufford, P. and Morgan, T., 1992, Strategic and (?) Community Choice Roads Maintenance Evaluation in the Australian Capital Territory, Internet Conference, Melbourne.
- Boreham, T., 1992, *Federal Accrual Push Under Fire*, Business Review Weekly, pp. 97-98, December.

Brisbane City Government, 1993, Accounting Concepts for Management : Accountability in Local Government, Annual Report, February, Brisbane.

Brisbane City Council, 1994, AAS27 Financial Reporting by Local Governments - An Opportunity for World Best Practice, Sydney.

Broad, P., 1999, Accounting for Infrastructure, Public Sector Centre of Excellence, CPA Australia.

Burns, P., 1989, *A Matter of Maintenance*, Chartered Accountant, pp.22-24, March.

Burns, P., 1993, Condition based Depreciation for Infrastructure Assets, AAANZ Conference, West Point, Hobart.

Burns, P., 1994, Asset Accounting Quarterly, March, South Australia.

Burns, P., Hope, D., and Roorda, J., 1998, Facing the Renewal Challenge, Victorian Local Government, July.

Burns, P., Hope, D., and Roorda, J., 1998, Asset Management—the hidden key to improved performance, CPA Congress, August.

Byrne, R., 1990, Organising for Asset Management (Are we getting it right?) , Canberra, July.

Canadian Institute of Chartered Accountants (CICA), 1985, Local Government Financial Reporting, A Research Study, Canada.

Canadian Institute of Chartered Accountants (CICA), 1989, Accounting and Reporting for Physical Assets by Governments, Canada.

Carnegie, G., 1992, *Timelines of Reporting in the Public Sector*, Charter, pp. 50-53, November.

Carpenter, G.J., 1990, Accrual Accounting - Issues and Policy Implications for Departments Non-Business Government Entities, in *The Public Sector -Contemporary Reading in Accounting and Auditing*, Guthrie, J., Parker, L., Shand, D., Harcourt Brace Jovanovich Australia Pty Limited, Marrickville, New South Wales.

Chartered Institute of Public Finance and Accountancy, 1975, Local Authority Accounting \ Accounting Principles, Exposure Draft, London.

Chartered Institute of Public Finance and Accountancy, 1989, Capital Accounting in Local Authorities: The Way Forward: A Guide to the Proposals, February.

Choy, E., 1996, Asset Valuation by Government Trading Enterprises: An Evaluation of Pricing Issues, Public Sector Centre of Excellence, CPA Australia.

Churchill, M., 1992, *The Winds of Change*, Australian Accountant, pp. 16-20, March.

Churchill, M., 1992a, *Public Sector Asset Valuation*, Australian Accountant, pp. 35-39, April.

Churchill, M., 1992b, *Assets Valuation Methods*, Australian Accountant, pp. 30-34, May.

Churchill, M., 1992c, *Accrual Accounting in the Public Sector*, Australian Accountant, pp. 39-42, June.

- City of Ballarat, 2001, Annual Report 2000 - 2001, September.
- City of Greater Bendigo, 2001, Annual Report 2000 - 2001, September.
- City of Melbourne, 2001, Annual Report 2000 - 2001, September.
- City of Stonnington, 2001, Annual Report 2000 - 2001, September.
- City of Whittlesea, 2001, Annual Report 2000 - 2001, September.
- City of Yarra, 2001, Annual Report 2000 - 2001, September.
- Clare, R., 1994, *Accrual Accounting Fad or Necessity?*, Directions in Government, pp.30-32, May.
- Clatsworthy, M., Jones, M., and Mellett, H., 1997, *The Accounting Policies of British Gas and the Water Companies—A Conundrum*, Management Accounting, May, pp.36-38.
- Connolly, T., Tower, G., and Holloway, D., 1999, The Measurement and Depreciation of Infrastructure Assets by the Western Australian Local Councils, AAANZ, New Zealand.
- Coombs, H.M., and Edwards, J.R., 1992, *Capital Accounting in Municipal Corporations 1884—1914: Theory and Practice*, Financial Accountability & Management, pp. 181-201, Autumn.
- Coombs, H.M., and Edwards, J.R., 1995, *The Financial Reporting Practices of British Municipal Corporations 1835—1933: A Study in Accounting Innovation*, Accounting and Business Research, Vol. 25, No.98, pp. 93-105, Spring.
- Coopers and Lybrand, 1991, Review of Current Cost Asset Valuation Methodology, December, Melbourne.
- Coopers and Lybrand, 1992, AAS27 - Financial Reporting by Local Government - An Implementation Guide, Koala Financial Reporting Series.
- Coopers and Lybrand, 1992, Koala Local Government Financial Report, Koala Financial Reporting Series.
- Copeland, R.M., and Ingram, R.W., 1983, Municipal Financial Reporting and Disclosure Quality, Addison - Wesley Publishing Company, United States.
- Corporation of the City of Launceston, 1990, Statement of Account.
- Currie, B., 1987, Accounting for Infrastructure Assets Public Finance and Accountancy, pp. 7-10, May.
- Deegan, C., 2000, Financial Accounting Theory, 1st Edition, McGraw-Hill, Australia.
- Department of Local Government, 1991, Capitalisation of Infrastructure Assets, Discussion Paper, New South Wales, Sydney.
- Department of the Victorian Treasury, 1991, APS 4, Recording and Reporting of Non-Current Physical Assets, August, Melbourne.

Department of the Victorian Treasury, January 1995, Reforming Victoria's Water Industry, State Government of Victoria, Melbourne.

Dillio, J.T., 1990, The Practice of Questioning, Routledge, London.

Dixon, K., 1988, *Depreciation in Non-Profit Organisations*, Public Finance and Accountancy, pp. 64-71, 12 February.

Dolley, C., and Priest, A., 1994, *Voluntary Financial Disclosures Prior to the Introduction of AAS27*, Accounting Research Journal, Vol. 7, No.2, pp.42-52.

Doyle, J., and Thompson, G., 2000, Accounting for Infrastructure: The Fall and Rise of Renewal Accounting, AAANZ Conference, Adelaide.

Drebin, A.R., Chan, J.L. and Ferguson, L.C., 1981, Objectives of Accounting and Financial Reporting for Governmental Units : A Research Study - Volume 1, National Council on Governmental Accounting, Chicago.

Drebin, L.A., Chan, J.L. and Ferguson, L.C., 1981, Objectives of Accounting and Financial Reporting for Governmental Units: A Research Study - Volume 2, National Council on Governmental Accounting, Chicago.

Edwards, J.R., 1986, *Depreciation and Fixed Asset Valuations in British Railway Company Accounts to 1911*, Accounting and Business Research, pp. 251-263, Summer.

Edwards, J.R., 1992, *Companies, Corporations and Accounting Change, 1835—1933*, Accounting and Business Research, Vol. 23, No.89, pp. 59-73, Winter.

Elliott, F., 1991, Latest Developments and Issues in Accounting for Local Government, NSW Department of Local Government, Sydney.

Ellwood, J., 1994, Road Asset Management Report, Unpublished, October.

English, L., 1990, *Redefining Public Accountability*, Australian Accountant, pp. 16-25, March.

English, L., 1990, *The Decline of Public Corporations*, Australian Accountant, pp. 16-23, May.

Falk, H., and Neilson, J., 1993, *Financial Reporting by Local Government and the Disappropriate Requirements of AAS27*, Australian Accounting Review, p.55, Vol. 3, No. 2.

Fox, K., 1992, *AAS27 will bring councils into financial focus*, Australian Accountant, p. 48, October.

Frankston City, 2001, Annual Report 2000 - 2001, September.

Fremgen, J.M., 1985, *On the of Depreciation in Governmental Accounting*, The Government Accountants Journal, pp.10-23, 34, Winter.

Gittins, R., 1991, *Sorting out Sense on Infrastructure*, Sydney Morning Herald, 24 June.

Glazer, A.S., & Jaenicke, H.R., 1991, *The Conceptual Frameworks, Museum Collections and User-Oriented Financial Statements*, Accounting Horizons, pp. 28-43, December.

- Glynn, J.J, 1987, Public Sector Financial Control and Accounting, Basil Blackwell, United Kingdom.
- Goldberg, L., 1960, Concepts of Depreciation, The Law Book Co. Ltd. Melbourne.
- Greater Shepparton, 2001, Annual Report 2000 - 2001, September.
- Greenall, D.T., Paul, J., and Sutcliffe, P., 1988, Financial Reporting by Local Governments, Discussion Paper No. 12, Australian Accounting Research Foundation, Melbourne.
- Guthrie, J., Australian Public Sector Accounting: Transformation and Managerialism, University of New South Wales, Sydney.
- Guthrie, J., Parker, L., and Shand, D., 1990, The Public Sector - Contemporary Readings in Accounting and Auditing, Harcourt Brace Jovanovich Australia Pty Limited, Marrickville, New South Wales.
- Gutteridge, Haskins, and Davey Pty. Ltd., 1990, ED50 - What it can do for your municipality, Seminar Paper, Melbourne.
- Gutteridge, Haskins, and Davey Pty Ltd, 1992, Report on Municipal Asset Management Stage 1 Needs Analysis Study, October, City of Whittlesea.
- Gutteridge, Haskins, and Davey Pty Ltd, 1993, Accounting for and Economics of Infrastructure Assets, July, Melbourne.
- Gutteridge, Haskins, and Davey Pty Ltd, 1993, Model Consolidated Financial Statements, August, Melbourne.
- Gynther, R.S., 1982, Some Thoughts on What Local Government Accounting Should be About, Local Government Annual Conference, Townsville.
- Hall Chadwick, 1992, Financial Reporting by Local Governments, July, Melbourne.
- Hallam, R., 1993, Planning for Survival Beyond 2000, Institute of Municipal Management, Melbourne.
- Harris, T., 1995, *A Critical Look at Annual Reports*, Directions in Government, August, pp.12-16.
- Harry, G.D., 1991, Recognition of Assets and Liabilities, Recognition of Revenue and Expenses, Accounting Reform for Local Government, Melbourne.
- Harry, G.D., 1994, The First Year Under AAS27, Coopers & Lybrand Report, Melbourne.
- Hastie, L., 1995, *A Matter of Appreciating Depreciation*, Accountancy, p.82, December.
- Hay, D., 1994, *Accounting for Infrastructural Assets*, Chartered Accountants Journal, pp.35-39, July.
- Hebert, M.G., and Freeman, R.J., 1992, *Governmental Fund Operating Statements: Should the Format be standardised?*, Accounting Horizons, pp. 18-35, March.
- Henke, E., 1987, *Government Financial Statements-Generational Equity Reporting*, The Government Accountants Journal, Summer, pp. 18-22.

- Heritage, B., 1997, *Non-financial Reporting*, Chartered Accountants Journal, pp. 27-31, December.
- Holder, W.W., 1981, *A Study of Selected Concepts for Government Financial Accounting and Reporting*, National Council on Governmental Accounting, Chicago.
- Horsham Rural City Council, 2002, *Annual Report 2000 - 2001*, January.
- Howard, R.J., 1991, *Local Government Modernisation*, Local Government Conference, December, Hobart.
- Hughes, J.W., 1994, *Accounting for Maintenance Costs on Governmental Infrastructures, in Perspectives on Performance Measurement and Public Sector Auditing*, Ed. Buschor, E., and Schedler, K., Paul Haupt Publishers, pp.117-228.
- Indigo Shire Council, 2001, *Annual Report 2000 - 2001*, October.
- Ingram, R.W. and Robins, W.A, 1987, *Financial Reporting Practices of Local Government*, Governmental Accounting Standards Board, Connecticut.
- Institute of Chartered Accountants, 1998, *Survey of Victorian Local Government Annual Reporting*, May.
- Institute of Chartered Accountants, 2001, *Survey of Victorian Local Government Annual Reporting*, May.
- Jaenicke, H.R., and Glazer, A.S., 1991, *Accounting for Museum Collection and Contributions of Collection Items*, American Association of Museums, pp. 43-49, Washington.
- Jensen, G., 1996, *Accounting for Infrastructure Assets*, Chartered Accountants Journal, pp.63-66, August.
- Johnson, L.T., Robbins, B.P., Swieringa, R.J. & Weil, R.L., 1993, *Expected Values in Financial Reporting*, Accounting Horizons, pp.79-90, December.
- Jones, M., 1989, *Managing Local Government - Leadership for the 21st Century*, Hargreen Publishing Company, Melbourne.
- Jones, R., 1985, *Accruals Accounting in UK Local Government*, Financial Accountability & Management, pp. 145-160, Winter.
- Jones, R., 1992, *The Development of Conceptual Frameworks of Accounting for the Public Sector*, Financial Accountability and Management, pp.249-264, Winter.
- Jones, R., and Pendlebury, M., 2004, *A Theory of the Published Accounts of Local Authorities*, Financial Accountability & Management, pp. 305-325, August.
- Kelagher, M., 1991, *Commercialising the public sector*, Australian Accountant, pp. 36-39, March.
- Kern, B.B., 2000, *The Role of Depreciation and the Investment Tax Credit in Tax Policy and their influence on Financial Reporting during the 20th Century*, Accounting Historians Journal, pp.145-164, December.

KPMG Peat Marwick Management Consultants, 1991, Accounting and Financial Management Manuals, Local Government, November , Melbourne.

KPMG Peat Marwick, 1993, *AAS27 The new standards in accounting*, MAPS Trade Link, p. 18, September.

Lapsley, I., 1981, *A Case for Depreciation Accounting in UK Health Authorities*, Financial Accountability & Management, pp. 21-29, Winter.

Lapsley, I., 1986, *Capital Asset Accounting in UK Non-trading Organisations*, Financial Accountability & Management, pp. 273-294, Winter.

Lapsley, I., 1992, *User Needs and Financial Reporting: A comparative Study of Local Authorities and the National Health Service*, Financial Accountability and Management, pp. 281-298, Winter.

Lapsley, I., 1988, *Research in Public Sector Accounting: An Appraisal*, Accounting, Auditing and Accountability, pp.21-33.

Lawrence, D., 1995, *International Comparisons of Infrastructure Performance*, Australian Journal of Public Administration, pp. 393-400, Vol.54, No.3, September.

Lebbon, T., 1992, *Government Accounting: The Way Ahead*, Australian Accountant, pp. 28-30, July.

Lee, B.C., and Bellamy, S., 1997, *Planning and Control in Australian Government Business Enterprises: Perceptions of Senior Managers*, The Journal of Contemporary Issues in Business and Government, pp.37-53, Vol.3, No.1.

Lee, J., 1999, *The reporting of Economic Infrastructure Assets by Public Sector Entities in New South Wales: An Exploratory Study*, Accounting, Accountability & Performance, pp. 17-39, Volume 5 Number 2.

Lee, J., Staunton, J., and Eddie, I., 1999, Reporting of Infrastructure Assets: Public Accountability and Reporting Practices in New South Wales, AAANZ Conference, New Zealand.

Loddon Shire Council, 2001, Annual Report 2000-2001, October.

McCrae, M., & Aiken, M., 2000, *Accounting for Infrastructure Services Delivery by Government: Generational Issues*, Financial Accountability & Management, pp. 265-287, August.

McGregor, W.J., 1993, Direction of Public Sector Accounting in 1990's, National Conference of Government Accountants, Hobart.

McHugh, J., 1991, The Latest Reforms of Local Government Accounting and Financial Management, AIC Conference, Brisbane.

McHugh, J., 1993, Accounting Concepts for Management & Accountability in Local Government, Commonwealth Bank, Brisbane.

McNally, G., 1989, Accrual Based Accounting Statements: Issues to Consider, Public Sector Conference, Wellington, New Zealand.

- McRae, I., 1991, Getting Ready for Radical Change - Implementing New Management Systems, Local Government Conference, Melbourne.
- Mc Sweeney, P., 1999, AAS27 Reporting on Parks and Recreation Assets, Public Sector Centre of Excellence, CPA Australia.
- Ma, R., and Matthews, R., 1992, ED55 - A Dissenting View, Discussion Paper, Monash University, August, Melbourne.
- Mayston, D., 1992, *Financial Reporting in the Public Sector and the Demand for Information*, Financial Accountability and Management, pp. 317-324, Winter.
- Mayston, D., 1992, *Capital Accounting, User Needs and the Foundations of a Conceptual Framework for Public Sector Financial Reporting*, Financial Accountability and Management, pp. 227-248, Winter.
- Mautz, R.K., 1981, *Financial Reporting: Should Government Emulate Business?*, Journal of Accounting, pp.53-60, August.
- Mautz, R.K., 1988, *Monuments, Mistakes and Opportunities*, Accounting Horizon, pp. 123-128, June.
- Melbourne Herald Sun, *Council Crisis Looms*, Wednesday, 12th January 2000, p.10.
- Melton Shire Council, 2001, Annual Report 2000 - 2001, September.
- Micallef, F., Sutcliffe, P., and Doughty, P., 1994, Financial Reporting by Governments, Discussion Paper No. 21, Australian Accounting Research Foundation, Melbourne.
- Miller, P.B., 1990, *The Conceptual Framework as Reformation and Counter-reformation*, Accounting Horizons, pp. 24-32, June.
- Millar, M., and Islam, M., 1988, Accounting Theory Monograph No. 7-The Definition and Recognition of Assets, Australian Accounting Research Foundation, Melbourne.
- Moyne Shire, 2001, Annual Report 2000 - 2001, September.
- Molland, and Bellamy, S., 1997, *Accounting for Infrastructure Assets: Reflections on the Victorian Experience*, The Australian Municipal Journal, August.
- Molland, A., and Bellamy, S., 2001, *Depreciation and/or Maintenance of Infrastructure Assets in Local Government*, Public Sector Bulletin, August.
- Mulgan, R., 1997, *The Process of Public Accountability*, Australian Journal of Public Administration, pp. 25-36, Vol.56, No.1, March.
- Municipal Association of Victoria, 1992, Victorian Local Government through the Recession, July, Melbourne.
- Municipal Association of Victoria, 1992, Victoria Local Government in 1992, July Melbourne.
- Municipal Association of Victoria, 1993, Local Government in 1993, July, Melbourne.

- National Council on Government Accounting (NCGA), 1979, Statement 1, Government Accounting and Financial Reporting Principles, Chicago.
- Neilson, J., 1993, *AAS27: Expensive & Unnecessary*, Charter, pp. 53-55, March.
- New South Wales Treasury, 1989, Accounting for Physical Non-Current Physical Assets, June, Sydney.
- New South Wales Treasury, 1990, Policy Guidelines for Valuation of Physical Non-Current Assets in NSW Public Sector, September, Sydney.
- New South Wales Local Government Reform, 1992, The Australian Accounting Standard AAS27 - Audit Requirements, Sydney.
- Nillumbik Shire Council, 2001, Annual Report 2000 - 2001, September.
- Ogden, S.G., and Watson, R., 1999, *Corporate Performance and Stakeholder Management: Balancing Shareholder and Customer Interests in the U.K. Privatised Water Industry*, Academy of Management Journal, pp. 526-538, Vol.42, No. 5.
- O'Shea, M., 1991, Infrastructure Assets: Accounting for Roads, ARRB Conference, Sydney.
- Pallot, J., 1987, *Are Public Sector Assets Different ?*, Accountants Journal, pp. 117-125, May.
- Pallot, J., 1990, *The Nature of Public Assets: A Response to Mautz*, Accounting Horizons, pp. 79-85, June.
- Pallot, J., August 1990, Community Assets in Public Sector Accounting: Conceptual Frameworks and Definition, Doctor of Philosophy, Wellington New Zealand.
- Pallot, J., 1992, *Elements of a Theoretical Framework for Public Sector Accounting*, Accounting, Auditing & Accountability Journal, pp. 38-59, Vol. 5, No. 1.
- Pallot, J., 1995, Infrastructure Accounting for Local Authorities: Technical Management and Political Context, AAANZ Conference, July.
- Parker, L., and Gould, G., 1999, *Changing Public Sector Accountability: Critiquing New Directions*, Accounting Forum, , pp.109-135, Vol.23, No.2, June.
- Parkes, J., 1989, *Local Authority Capital Accounting—Towards Reform*, Financial Accountability & Management, pp.107-118, Summer.
- Parliament of the Commonwealth of Australia, November 1987, Constructing and Restructuring Australia's Public Infrastructure, Canberra.
- Paul, J., 1991, How will AAS27 affect you?, Accounting Reform for Local Government, Melbourne.
- Peirson, G., 1990, *Reforming Standard Setting*, Australian Accountant, pp. 89-92, November.
- Peirson, G. and Ramsey, A., 1994, Depreciation of Non-current Assets, Discussion Paper No. 20, Australia Accounting Research Foundation, Melbourne.

- Pendlebury, M.W., 1985, Management Accounting in Local Government, Research Study, London.
- Perrin, J., 1984, *Accounting for Public Sector Assets*, Issues in Public Sector Accounting, Ed. Hopkins, A., and Tomkin, C., pp. 61-84, Oxford.
- Peters, B., Dagwell, R., and Park, D., 1997, *Implementation of AAS27 Financial by Local Government: Problems with Accounting for Infrastructure Assets*, Accountability & Performance, pp. 35-47, Volume 3, Number 1.
- Pilcher, R., 2000, *AAS27: An Issue of Implementation*, Australian CPA, pp. 54-56, March.
- Pilcher, R., 2002, *Reporting of Roads by NSW Local Councils—Survival of the Fittest*, Accounting, Accountability & Performance, pp. 23-41, Volume 8, Number 2.
- Price Waterhouse, 1989, Comprehensive Commercial Accounting, Report for Ausroads, October, Melbourne.
- Price Waterhouse, 1991, Capitalisation of Roads and Bridges, a Study for the Road and Traffic Authority of NSW, February, Sydney.
- Priest, A.N., Ng, J., and Dolley, C., 1999, *Users of Local Government Annual Reports: Information Preferences*, Accounting, Accountability & Performance, pp. 49-62, Volume 5 Number 3.
- Purdie, D.M., 1969, Local Government Accounting in Victoria, The Law Book Company, Melbourne.
- Queensland Audit Office, 1994, Land under Roads, Policy Paper, August, Brisbane.
- Regan, E.V., 1987, Can Accrual Accounting Work in Government, Australian Society of CPA's Conference, Melbourne.
- Robinson, M., 1998, *Accrual Accounting and the Efficiency of the Public Sector*, Financial Accountability & Management, pp. 21-37, Vol. 14, No.1.
- Rowles, T., 1991, *Infrastructure and Heritage Asset Accounting, Sorting out the problems*, Counting House, pp. 46-48, June.
- Rowles, T., 1991, *Accounting for Infrastructure and Heritage Asset*, Charter, pp. 48-53, July.
- Rowles, T., 1991a, *Infrastructure and Heritage Asset Accounting*, Australian Accountant, pp. 69-73, July.
- Rowles, T.R., 1992, Financial Reporting of Infrastructure and Heritage Assets by Public Sector Entities, Discussion Paper No. 17, Australia Accounting Research Foundation, Melbourne.
- Rutherford, B.A., 1992, *Developing a Conceptual Framework for Central Government Financial Reporting: Intermediate Users and Indirect Control*, Financial Accountability and Management, pp. 265-280, Winter.
- Ryan, C., Dunstan, K., and Stanley, T., 2000, *Local Government accounting Standard-Setting in Australia: Did Constituents Participate*, Financial Accountability and Management, pp.373-396, November.

- Ryan, C., Stanley, T., and Nelson, M., 2002, *Accountability Disclosures by Queensland Local Government Councils: 1997—1998*, Financial Accountability and Management, pp. 373-396, August.
- Scales, B., 1996, *Measurement and Evaluation of Government Business Enterprise Performance*, Public Sector Centre of Excellence, CPA Australia.
- Schmidt, M., 1993, The Nature and Purpose of Items held in Museum Collections, Research Paper, Deakin University, Geelong.
- Schuetze, W.P., 1993, *What is an Asset?*, Accounting Horizons, pp. 66-70, September.
- Shaoul, J., 1997, *The Power of Accounting: Reflecting on Water Privatisation*, Accounting, Auditing & Accountability, pp.382-405, Vol.10, No.3.
- Shire of Campaspe, 2000, Annual Report 1999 - 2000, September.
- Shire of Lilydale, 1994, Assets Accounting Procedures Manual.
- Shire of Hampden, 1990, *ED50 Submission*, March.
- Simms, M., and Keating, M., 1999, *Accountability in Australian Government: Towards the Year 2000*, Australian Journal of Public Finance, pp.33-47, Vol.58, No.1, March.
- Simpson, P., 1993, *Amalgamation: The Tasmanian Experience*, The Australian Municipal Journal, p.20, August.
- Sing, J., 1998, *Depreciating Infrastructure: which way to go*, Australian CPA, pp.56-58, July.
- Stacey, M., 1969, Methods of Social Research, Pergamon Press, Oxford, London.
- Standing Committee on Local Government Financial Management, 1992, Implementation of Local Government (Reporting and Accounting) Regulations, Minister of Local Government, Melbourne.
- Standing Committee on Financial Management, 1993, Infrastructure Assets Report, Draft Report, Melbourne.
- Swan Hill Rural City Council, 2001, Annual Report 2000 - 2001, October.
- Sutcliffe, P., 1985, Accounting Theory Monograph No.5-Financial Reporting in the Public Sector-A Framework for Analysis and Identification of Issues, Australian Accounting Research Foundation, Melbourne.
- Sutcliffe, P., Micallef, F., and Parker, L.D., 1991, Discussion Paper No.16-Financial Reporting by Government Departments, Australian Accounting Research Foundation, Melbourne.
- Sutcliffe, P., 1990, *Financial Reporting by Local Government (ED50)*, Australian Accountant, pp.183-185, February.
- Sudman, S., and Bradburn, N.M., 1983, Asking Questionnaire Design, Jossey - Bass Inc., California.

Tasmanian State Government, 1998, Auditor-General Special Report No 26, Capitalisation and Reporting of Road Assets in Tasmania, May.

Thomas, G., 1991, *The Inappropriateness of AAS27 - There is a better way*, Charter, pp. 36-39, November.

Turner, D.J., 1992, Case Study Analysis: Infrastructure Valuation—Vic Roads, Public Sector Accounting TTC Conference, April, Melbourne.

Turner, D.J. and Kontantopoulos, S., 1990, Vicroads - Capitalisation of Road Infrastructure Assets, June, Melbourne.

Van Daniker, R.P., and Kwiatkowski, V., 1986, Infrastructure Assets: An Assessment of User Needs and Recommendations for Financial Reporting, Governmental Accounting Standards Board, October.

Van Daniker, R., and Harris, J., 1999, *Reporting about Infrastructure: A Preparer Perspective*, Public Budgeting & Finance, pp. 111-117, Summer.

Vicroads 1989 to 1993, Annual Reports, Melbourne.

Victoria Grants Commission, 2000-01, Annual Report, October, Melbourne.

Victoria Grants Commission, 2003-04, Annual Report, October, Melbourne.

Victorian Institute of Municipal Management, 1992, Tendering for Financial Statement Audits, July, Melbourne.

Victorian Institute of Municipal Management, 1994, Compulsory Competitive Tendering Procedures Manual, Melbourne.

Victorian Institute of Municipal Management, 1992, Asset Accounting Manual, May, Melbourne.

Victorian Institute of Municipal Management, 1992a, Asset Accounting, August, Victorian Division.

Victorian Local Government Act 1958, 1984 Statutory Rules No. 272, Municipal Accounting Regulation 1985, Victoria.

Victorian Local Government Act 1958, 1992 Statutory Rules No. 272, Local Government (Reporting and Accounting) Regulations 1992, Victoria.

Victorian Local Government Board, 1986, The Restructure of Local Government in Victoria. Principles and Program, October, Melbourne.

Victorian Local Government Board, 1993, Compulsory Competitive Tendering, Final Report December, Melbourne.

Victorian Local Government Board, 1994, Middle and Outer Melbourne Review, Final Report November, Melbourne.

Victorian Local Government Board, 1994, Bannockburn Area, Final Report February, Melbourne.

Victorian Local Government Board, 1994, North East Victoria Review, Interim Report, September, Melbourne.

Victorian Local Government Board, 1994, North West Victoria Review, Interim Report, November, Melbourne.

Victorian Minister for Planning, 1993, Planning a Better Future for Victorians, August, Victoria.

Victorian Municipal Accounting and Audit Practices Review Committee, 1990, Review of Municipal Accounting Regulations, January, Melbourne.

Victorian Office of Local Government, 1982, Manual of Accounting Procedures, Melbourne.

Victorian Office of Local Government, 1991, Local Government (Accounting) Regulations 1991 Draft Explanatory Notes, June, Melbourne.

Victorian Office of Local Government, 1991a, Issues and Implementations, Consultation Seminars, July-August, Melbourne.

Victorian Office of Local Government, 1991b, Review of Local Government Financial Requirements, October, Melbourne.

Victorian Office of Local Government, 1992, Accounting for Assets, Final Report, April, Melbourne.

Victorian Office of Local Government, 1992a, Regulatory Impact Statement, July, Melbourne.

Victorian Office of Local Government, 1993, Manual of Accounting Procedures, August, Melbourne.

Victorian Office of Local Government, 1993a, Model Consolidated Financial Statements, August, Melbourne.

Victorian Office of Local Government, 1993b, Results of the first year of implementation of accrual accounting in local government, October, Melbourne.

Victorian Office of Local Government, 1993c, Rating Review - Let's work it through, Seminar Workshop, Melbourne.

Victorian Office of Local Government, 1993d, Accounting for Assets Report 3, December, Melbourne.

Victorian Office of Local Government, 1994, Municipal Restructure Bulletin, August, Melbourne.

Victorian Office of Local Government, 1994a, Municipal Restructure Bulletin, October, Melbourne.

Victorian Office of Local Government, 1994b, Budget Notices 1993/94, October, Melbourne.

Victorian Office of Local Government, 1994c, Accounting for Assets, Report 4, October, Melbourne.

Victorian Office of Local Government, 1994d, Local Government in Victoria. Key Reform Initiatives, October, Melbourne.

- Victorian Office of Local Government, 1994e, Municipal Restructure Bulletin, November, Melbourne.
- Victorian Office of Local Government, 1998, Patterns in Local Government, August, Melbourne.
- Victorian Office of Local Government, 2001, Local Government in Victoria 2001, Department of Infrastructure, Melbourne.
- Victorian State Government, 1999, Public Accounts and Estimates Committee: Report on the Inquiry into Annual Reporting in the Victorian Public Sector, 21st Report, May.
- Victorian State Government, 2002, Public Accounts and Estimates Committee: Report on the Valuation and Reporting of Cultural, Heritage and Infrastructure Assets, 49th Report, October.
- Wales, J., 1990, *The Reliability of Reported Profits and Asset Values, 1890—1914: Case Studies from the British Coal Industry*, Accounting and Business Research, Vol. No. 79, pp. 253-267, Summer.
- Walker, R.G., 1988, Accrual accounting - necessary but not sufficient, in *The Public Sector - Contemporary Reading in Accounting and Auditing*, Guthrie, J., Parker, L., Shand, D., Harcourt Brace Jovanovich Australia Pty Limited, Marrickville, New South Wales.
- Walker, R.G., 1989, Should there be common standards for the public and private sectors?, in *The Public Sector - Contemporary Reading in Accounting and Auditing*, Guthrie, J., Parker, L., Shand, D., Harcourt Brace Jovanovich Australia Pty Limited, Marrickville, New South Wales.
- Walker, R.G., Clarke, F.L., and Dean, G.W., 1999, *Reporting on the State of Infrastructure by Local Government*, Accounting, Auditing & Accountability, pp. 441-458, Vol 12 No. 4.
- Walker, R.G., Dean, G.W., and Edwards, P.J., 2004, *Infrastructure Reporting: Attitudes of Preparers and Potential Users*, Financial Accountability & Management, pp. 351-376, Vol 20, No. 4, November.
- West of England Members' Section of CIPFA, 1982, Accounting Methods in Local and Public Authorities, June, England.
- Yin, K.R., 1987, Case Study Research Design and Methods, Sage Publications, Beverley Hills.

Appendix 3.1

FirstName	LastName	JobTitle	Company	Address1	City	State	PCode
Roy	Hetherington	Chief Executive Officer	Alpine Shire Council	PO Box 139	BRIGHT	VIC	3741
Bill	Braithwaite	Chief Executive Officer	Ararat Rural City Council	PO Box 246	ARARAT	VIC	3377
John	McLean	Chief Executive Officer	Ballarat City Council	PO Box 655	BALLARAT	VIC	3353
Doug	Owens	Chief Executive Officer	Banyule City Council	PO Box 51	IVANHOE	VIC	3079
Allan	Bawden	Chief Executive Officer	Bass Coast Shire Council	PO Box 118	WONTHAGGI	VIC	3995
John	Dyer	Chief Executive Officer	Baw Baw Shire Council	PO Box 304	WARRAGUL	VIC	3820
Ian	Wilson	Chief Executive Officer	Bayside City Council	PO Box 27	SANDRINGHAM	VIC	3191
Peter	Johnstone	Chief Executive Officer	Boroondara City Council	Private Bag No. 1	CAMBERWELL	VIC	3124
Marilyn	Duncan	Chief Executive Officer	Brimbank City Council	PO Box 70	SUNSHINE	VIC	3020
Peter	Overington	Chief Executive Officer	Buloke Shire Council	PO Box 1	WYCHEPROOF	VIC	3527
Phil	Pearce	Chief Executive Officer	Campaspe Shire Council	PO Box 35	ECHUCA	VIC	3564
Don	Welsh	Chief Executive Officer	Cardinia Shire Council	PO Box 7	PAKENHAM	VIC	3810
Michael	Tyler	Chief Executive Officer	Casey City Council	PO Box 1000	NARRE WARREN	VIC	3805
Mark	Johnston	Chief Executive Officer	Central Goldfields Shire Council	PO Box 194	MARYBOROUGH	VIC	3465
Glenn	Patterson	Chief Executive Officer	Colac-Otway Shire Council	PO Box 283	COLAC	VIC	3250
Peter	Johnston	Chief Executive Officer	Corangamite Shire Council	PO Box 84	CAMPERDOWN	VIC	3260
Philip	Shanahan	Chief Executive Officer	Darebin City Council	PO Box 91	PRESTON	VIC	3072
Robert	Dobrzynski	Chief Executive Officer	Delatite Shire Council	PO Box 227	BENALLA	VIC	3672
Joseph	Cullen	Chief Executive	East Gippsland Shire Council	PO Box 1618	BAIRNSDALE	VIC	3875
Jon	Edwards	Chief Executive Officer	Frankston City Council	PO Box 490	FRANKSTON	VIC	3199
Peter	Bollen	Chief Executive Officer	Gannawarra Shire Council	PO Box 252	COHUNA	VIC	3568
Andrew	Newton	Chief Executive Officer	Glen Eira City Council	PO Box 42	SOUTH CAULFIELD	VIC	3162
Geoff	Kohlman	Chief Executive Officer	Glenelg Shire Council	PO Box 152	PORTLAND	VIC	3305
Rod	Nicholls	Chief Executive Officer	Golden Plains Shire Council	PO Box 111	BANNOCKBURN	VIC	3331
Andrew	Paul	Chief Executive Officer	Greater Bendigo City Council	PO Box 733	BENDIGO	VIC	3550
Warwick	Heine	Chief Executive Officer	Greater Dandenong City Council	PO Box 200	SPRINGVALE	VIC	3171
Geoff	Whitbread	Chief Executive Officer	Greater Geelong City Council	PO Box 104	GEELONG	VIC	3220
Bill	Jaboor	Chief Executive Officer	Greater Shepparton City Council	PO Box 1000	SHEPPARTON	VIC	3632
Victor	Szwed	Chief Executive Officer	Hepburn Shire Council	PO Box 21	DAYLESFORD	VIC	3460
Neil	Jacobs	Chief Executive Officer	Hindmarsh Shire Council	PO Box 250	NHILL	VIC	3418
Ken	McNamara	Chief Executive Officer	Hobsons Bay City Council	PO Box 21	ALTONA	VIC	3018
Kerryn	Shade	Chief Executive Officer	Horsham Rural City Council	PO Box 511	HORSHAM	VIC	3402
Darrell	Treloar	Chief Executive Officer	Hume City Council	PO Box 119	BROADMEADOWS	VIC	3047
John	Costello	Chief Executive Officer	Indigo Shire Council	PO Box 28	BEECHWORTH	VIC	3747
Robert	Skinner	Chief Executive Officer	Kingston City Council	PO Box 1000	MENTONE	VIC	3194
Terry	Maher	Chief Executive Officer	Knox City Council	Priv. Bag Knox 1 MDC	WANTIRNA SOUTH	VIC	3152
Penny	Holloway	Chief Executive Officer	Latrobe City Council	PO Box 345	TRARALGON	VIC	3844
Craig	Niemann	Chief Executive Officer	Loddon Shire Council	PO Box 21	WEDDERBURN	VIC	3518
Lydia	Wilson	Chief Executive Officer	Macedon Ranges Shire Council	PO Box 151	KYNETON	VIC	3444

FirstName	LastName	JobTitle	Company	Address1	City	State	PCode
John	Bennie	Chief Executive	Manningham City Council	PO Box 1	DONCASTER	VIC	3108
Kay	Rundle	Chief Executive Officer	Maribyrnong City Council	PO Box 58	FOOTSCRAY	VIC	3011
Mike	Marasco	Chief Executive Officer	Maroondah City Council	PO Box 156	RINGWOOD	VIC	3134
Michael	Malouf	Chief Executive	Melbourne City Council	PO Box 1603M	MELBOURNE	VIC	3001
Adrian	Pennell	Chief Executive Officer	Melton Shire Council	PO Box 21	MELTON	VIC	3337
Leonie	Burrows	Chief Executive Officer	Mildura Rural City Council	PO Box 105	MILDURA	VIC	3502
Garry	Cecil	Chief Executive Officer	Mitchell Shire Council	113 High Street	BROADFORD	VIC	3658
Gavin	Cator	Chief Executive Officer	Moira Shire Council	PO Box 132	NUMURKAH	VIC	3636
David	Conran	Chief Executive Officer	Monash City Council	PO Box 1	GLEN WAVERLEY	VIC	3150
June	Dugina	A/Chief Executive Officer	Moonee Valley City Council	PO Box 126	MOONEE PONDS	VIC	3039
Chris	Gillard	Chief Executive Officer	Moorabool Shire Council	PO Box 18	BALLAN	VIC	3342
Maria	Mercurio	Chief Executive Officer	Moreland City Council	Locked Bag No. 10	MORELAND	VIC	3058
Michael	Kennedy	Chief Executive Officer	Mornington Penin. Shire Council	PO Box 1000	ROSEBUD	VIC	3939
Ivan	Gilbert	Chief Executive Officer	Mount Alexander Shire Council	PO Box 185	CASTLEMAINE	VIC	3450
Graham	Shiell	Chief Executive Officer	Moyne Shire Council	PO Box 51	PORT FAIRY	VIC	3284
Daniel	Hogan	Chief Executive Officer	Murrindindi Shire Council	PO Box 138	ALEXANDRA	VIC	3714
Catherine	Dale	Chief Executive Officer	Nillumbik Shire Council	PO Box 476	GREENSBOROUGH	VIC	3088
Peter	Brooks	Chief Executive Officer	Northern Grampians Shire Council	Town Hall, Main Street	STAWELL	VIC	3380
David	Spokes	Chief Executive Officer	Port Phillip City Council	Private Bag No. 3	ST KILDA	VIC	3182
Stephen	Cornish	Chief Executive Officer	Pyrenees Shire Council	Lawrence Street	BEAUFORT	VIC	3373
Gary	Price	Chief Executive Officer	Borough of Queenscliffe	PO Box 93	QUEENSCLIFF	VIC	3225
Peter	Bull	Chief Executive Officer	South Gippsland Shire Council	Private Bag 4	LEONGATHA	VIC	3953
Graham	Mostyn	Chief Executive Officer	Southern Grampians Shire Council	PO Box 685	HAMILTON	VIC	3300
Hadley	Sides	Chief Executive Officer	Stonnington City Council	PO Box 21	PRAHRAN	VIC	3181
Kevin	Hannagan	Chief Executive Officer	Strathbogie Shire Council	PO Box 2	EUROA	VIC	3666
Diana	Patterson	Chief Executive Officer	Surf Coast Shire Council	PO Box 350	TORQUAY	VIC	3228
John	Webb	Chief Executive Officer	Swan Hill Rural City Council	PO Box 488	SWAN HILL	VIC	3585
Lyndon	Webb	Chief Executive Officer	Towong Shire Council	PO Box 55	TALLANGATTA	VIC	3700
Graeme	Emonson	Chief Executive Officer	Wangaratta Rural City Council	PO Box 238	WANGARATTA	VIC	3676
Lindsay	Merritt	Chief Executive Officer	Warrnambool City Council	PO Box 198	WARRNAMBOOL	VIC	3280
Leigh	Harrison	A/Chief Executive Officer	Wellington Shire Council	PO Box 506	SALE	VIC	3850
Dale	Thornton	Chief Executive Officer	West Wimmera Shire Council	PO Box 201	EDENHOPE	VIC	3318
Noelene	Duff	Chief Executive Officer	Whitehorse City Council	Locked Bag 2	EASTERN MC	VIC	3110
Graeme	Brennan	Chief Executive Officer	Whittlesea City Council	Locked Bag No. 1	BUNDOORA	VIC	3083
Peter	Marshall	Chief Executive Officer	Wodonga City Council	PO Box 923	WODONGA	VIC	3689
Ian	Robins	Chief Executive Officer	Wyndham City Council	PO Box 197	WERRIBEE	VIC	3030
Deborah	Cole	Chief Executive Officer	Yarra City Council	PO Box 168	RICHMOND	VIC	3121
Robert	Hauser	Chief Executive Officer	Yarra Ranges Shire Council	PO Box 105	LILYDALE	VIC	3140
Jennifer	Tod	Chief Executive Officer	Yarriambiack Shire Council	PO Box 243	WARRACKNABEAL	VIC	3393

Appendix 3.2

Appendix 3.2

CHIEF FINANCE OFFICER
PORT PHILIP CITY COUNCIL
PRIVATE BAG NO 3
ST. KILDA VIC 3182

CHIEF FINANCE OFFICER
MOIRA SHIRE COUNCIL
PO BOX 132
NUMURKAH VIC 3636

CHIEF FINANCE OFFICER
MONASH CITY COUNCIL
PO BOX 1
GLEN WAVERLEY VIC 3150

CHIEF FINANCE OFFICER
MELBOURNE CITY COUNCIL
GPO BOX 1603M
MELBOURNE VIC 3001

CHIEF FINANCE OFFICER
MELTON SHIRE COUNCIL
PO BOX 21
MELTON VIC 3337

CHIEF FINANCE OFFICER
WANGARATTA RURAL CITY COUNCIL
PO BOX 238
WANGARATTA VIC 3676

CHIEF FINANCE OFFICER
FRANKSTON CITY COUNCIL
PO BOX 285
FRANKSTON VIC 3199

CHIEF FINANCE OFFICER
DAREBIN CITY COUNCIL
PO BOX 91
PRESTON VIC 3072

CHIEF FINANCE OFFICER
GLEN EIRA CITY COUNCIL
PO BOX 42
SOUTH CAULFIELD VIC 3162

CHIEF FINANCE OFFICER
BANYULE CITY COUNCIL
PO BOX 51
IVANHOE VIC 3079

CHIEF FINANCE OFFICER
WYNDHAM CITY COUNCIL
PO BOX 197
WERRIBEE VIC 3030

CHIEF FINANCE OFFICER
YARRA CITY COUNCIL
PO BOX 168
LILYDALE VIC 3140

CHIEF FINANCE OFFICER
WODONGA RURAL CITY COUNCIL
PO BOX 923
WODONGA VIC 3689

CHIEF FINANCE OFFICER
STONNINGTON CITY COUNCIL
PO BOX 21
PRAHRAN VIC 3181

CHIEF FINANCE OFFICER
NILLUMBIK SHIRE COUNCIL
PO BOX 476
GREENBOROUGH VIC 3088

Appendix 3.3

Questionnaire on Financial Reporting & Depreciation of Infrastructure Assets (IAs) by Victorian Local Councils

SECTION A PERSONAL PROFILE

Circle the appropriate response for each question.

1) Your age:

- a) 20-24.....X
- b) 25-29.....X
- c) 30-34.....X
- d) 35-39.....X
- e) 40-44.....X
- f) Over 45.....X

2) Your gender:

- a) male.....X
- b) female.....X

3) The length of experience with local councils is:

- a) less than 3 years.....X
- b) 3 to 5 years.....X
- c) 6 to 10 years.....X
- d) 11 to 15 years.....X
- e) over 15 years.....X

4) Your academic qualifications are (please circle whatever is appropriate):

- a) Secondary School graduate or Year 12 equivalent..... X
- b) TAFE diploma..... X
- c) Bachelors degree with accounting major..... X
- d) Bachelors degree with non-accounting major..... X
- e) Post graduate diploma..... X
- f) Master degree..... X
- g) Local government degree..... X
- h) Other (please specify)..... X

.....

5) Are you a member of a professional accounting association?

- a) yes.....X
- b) no.....X

6) Your position in the management structure of your organisation is best described as:

- a) CEO.....X
- b) 2nd level.....X
- c) 3rd level.....X
- d) 4th level or below.....X

SECTION B. IDENTIFICATION

Please circle the appropriate response for each statement: Strongly agree (*SA*), Agree (*A*), Not Known (*NK*), Disagree (*D*), and Strongly disagree (*SD*), according to your observations and opinions on the identification of Infrastructure Assets (*IAs*). Note that some statements relate to the time of changing the reporting method to full-accrual while others relate to the present time.

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
When identifying IAs under AAS 27:					
1. existing IAs asset registers were adequate	SA	A	NK	D	SD
2. IAs asset registers needed a thorough review	SA	A	NK	D	SD
3. engineers identified IAs and up-dated records	SA	A	NK	D	SD
4. educators/consultants provided relevant & practical information	SA	A	NK	D	SD
5. training was needed for staff involved	SA	A	NK	D	SD
6. the LG Asset Accounting Manual proved useful	SA	A	NK	D	SD
7. an infrastructure committee was helpful	SA	A	NK	D	SD
8. economic lives of IAs were difficult to estimate	SA	A	NK	D	SD
9. economic lives of IA <i>components</i> were difficult to estimate	SA	A	NK	D	SD
10. IAs components were aggregated	SA	A	NK	D	SD
11. discovering who controlled IAs was difficult	SA	A	NK	D	SD
12. a different information system was needed	SA	A	NK	D	SD
13. other issues delayed the identification process	SA	A	NK	D	SD
14. auditors were satisfied with the identification process	SA	A	NK	D	SD
15. the council used the full implementation period (1997)	SA	A	NK	D	SD
As a result of the identification process:					
16. decision-making has become more efficient	SA	A	NK	D	SD
17. communication between departments has improved	SA	A	NK	D	SD
18. internal council accounting policies have been updated	SA	A	NK	D	SD
19. accountability for IAs has improved	SA	A	NK	D	SD

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
20. the tangible benefits have outweighed the costs	SA	A	NK	D	SD
In my opinion, in accounting for IAs:					
21. IAs are assets under SACs (<i>Statement of Accounting Concepts</i>) definitions	SA	A	NK	D	SD
22. IAs are assets under AAS27 definition	SA	A	NK	D	SD
23. IAs are assets for financial purposes	SA	A	NK	D	SD
24. SACs are useful in accounting for IAs	SA	A	NK	D	SD
25. AAS27 is useful in accounting for IAs	SA	A	NK	D	SD
26. AAS27 is confusing in accounting for IAs	SA	A	NK	D	SD
27. SACs are too confusing in accounting for IAs	SA	A	NK	D	SD
28. IAs in the public sector are different from the private sector	SA	A	NK	D	SD
29. IAs are different from other physical assets for reporting purposes	SA	A	NK	D	SD
30. SACs have helped improve reporting IAs compared with the previous reporting system	SA	A	NK	D	SD
31. AAS27 has helped improve reporting IAs compared with the previous reporting system	SA	A	NK	D	SD

SECTION C. VALUATION

When valuing IAs under AAS27:					
1. all valuations were completed internally	SA	A	NK	D	SD
2. the Finance department was mainly involved	SA	A	NK	D	SD
3. the Local Government Asset Accounting Manual was used	SA	A	NK	D	SD
4. external consultants were used	SA	A	NK	D	SD
5. accounting software was used	SA	A	NK	D	SD
6. deprivial cost was used	SA	A	NK	D	SD
7. written-down replacement cost was used	SA	A	NK	D	SD

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
8. valuations were fully justified	SA	A	NK	D	SD
9. the Statement of Financial Position was reliable	SA	A	NK	D	SD
10. the council used the full phase-in period (1997)	SA	A	NK	D	SD
In valuing IAs, the following problems were encountered:					
11. there were difficulties in the valuation method used	SA	A	NK	D	SD
12. current costs methods were difficult to use	SA	A	NK	D	SD
13. establishing the current condition of IAs was difficult	SA	A	NK	D	SD
14. valuation of IAs components was difficult	SA	A	NK	D	SD
15. valuation of road components was difficult	SA	A	NK	D	SD
16. valuation of a new seal to an existing road network is difficult to record under written-down replacement cost	SA	A	NK	D	SD
17. valuation of land under roads was difficult	SA	A	NK	D	SD
18. land improvements to roads are difficult to record and value	SA	A	NK	D	SD
19. valuation of bridge components was difficult	SA	A	NK	D	SD
In my opinion:					
20. valuation methods need further refinement	SA	A	NK	D	SD
21. valuation methods do not reflect actual value to council	SA	A	NK	D	SD
22. IA values should not be in the financial statements at all	SA	A	NK	D	SD
23. IA values should only be included in the notes to the accounts in the financial statements	SA	A	NK	D	SD

SECTION D DEPRECIATION

When depreciating IAs:					
1. accountants worked on the issues	SA	A	NK	D	SD
2. engineers worked on the issues	SA	A	NK	D	SD
3. depreciation was not accounted for until after the phase-in period under AAS 27 (1997).	SA	A	NK	D	SD

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
The depreciation rates used by my council:					
4. fully reflect asset service potential consumption	SA	A	NK	D	SD
5. fully reflect asset consumption	SA	A	NK	D	SD
6. were obtained from auditors	SA	A	NK	D	SD
7. were obtained from the LG Asset Accounting Manual	SA	A	NK	D	SD
8. are revised annually	SA	A	NK	D	SD
9. need to be based on an industry standard	SA	A	NK	D	SD
10. are mainly straight-line	SA	A	NK	D	SD
11. are traditional methods (e.g. straight-line & reducing balance) used for external reporting purposes only and not for internal decision-making	SA	A	NK	D	SD
In my opinion:					
12. depreciation is very useful in asset management	SA	A	NK	D	SD
13. depreciation is very useful in internal decision-making	SA	A	NK	D	SD
14. maintenance of IAs is more relevant than depreciation for <i>internal</i> decision-making	SA	A	NK	D	SD
15. maintenance of IAs is more relevant than depreciation for <i>external</i> decision-making	SA	A	NK	D	SD
16. depreciation is needed to reflect the cost of services that the council provides	SA	A	NK	D	SD
17. traditional depreciation methods (eg.straight-line & reducing balance) are not appropriate for IAs.	SA	A	NK	D	SD
18. straight-line depreciation is not appropriate for roads	SA	A	NK	D	SD
19. roads need different depreciation rates for each layer and need to be reviewed regularly to reflect their consumption	SA	A	NK	D	SD
20. condition-based-depreciation (CBD) should be used to obtain more relevant and reliable information on IAs	SA	A	NK	D	SD
21. CBD could be used for external and internal decision-making whereas traditional depreciation methods cannot be used internally	SA	A	NK	D	SD

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
22. there is a difference between depreciation and maintenance costs in CBD calculations	SA	A	NK	D	SD
23. depreciation should not be included in rates budget determination	SA	A	NK	D	SD
24. depreciation costs rather than capital expenditure should be included in rate calculations	SA	A	NK	D	SD
25. ratepayers should be paying for the use of services	SA	A	NK	D	SD
26. depreciation causes intergenerational inequity problems	SA	A	NK	D	SD
27. depreciation can cause significant differences between cash and accrual budgets	SA	A	NK	D	SD
28. financial statements with depreciation of IAs are useful for external users	SA	A	NK	D	SD
29. depreciation should not appear in the operating statement	SA	A	NK	D	SD
30. if IAs are properly maintained they should be depreciated in financial statements.	SA	A	NK	D	SD
31. maintenance schedules should be included in the notes of financial statements so external users can make informed decisions	SA	A	NK	D	SD
32. an amount equal to the depreciation should be placed in a reserve	SA	A	NK	D	SD
33. there is a difference between depreciation and maintenance costs in internal management decision-making.	SA	A	NK	D	SD
In my council:					
34. there is a difference between depreciation and maintenance costs in traditional depreciation methods.	SA	A	NK	D	SD
35. an amount equal to the depreciation allowance is used to replace IAs	SA	A	NK	D	SD
36. an amount equal to the depreciation allowance is used for various internal purposes	SA	A	NK	D	SD
37. in my council's financial statements there is a difference between depreciation and maintenance costs	SA	A	NK	D	SD

Thank you for your cooperation in this research

Appendix 3.4

**Structured Interview Format on IAs Accounting Under AAS27
Requirements**

1. Technical issues in financial reporting under AAS27.

A)	Knowledge of the SACs helped in IA reporting.		
		Councils	%
A)	Yes	2	
B)	No	12	
C)	Too early to know	1	
B)	Knowledge of the AAS27 requirements helped in IA reporting.		
A)	Yes	13	
B)	No	2	
C)	Too early to know	0	
C)	Is there a difference between the private and public sectors in IAs?		
A)	Yes	2	
B)	No	2	
C)	Too early to know	11	
D)	Is there a difference between other physical assets and IAs?		
A)	Yes	9	
B)	No	2	
C)	Too early to know	4	
E)	Is AAS27 for IA reporting an improvement on fund accounting?		
A)	Yes	12	
B)	No	2	
C)	Too early to know	1	

2. When asset accounting under AAS27 what benefits will this information have for accountability, decision-making and internal management?

A) IA reporting under AAS27 has improved accountability.

	Councils	%
A) Yes	10	
B) No	3	
C) Too early to know	2	

B) IA reporting under AAS27 has improved decision-making.

A) Yes	8
B) No	2
C) Too early to know	5

C) IA reporting under AAS27 has improved internal management.

A) Yes	10
B) No	2
C) Too early to know	3

Several advantages were: more knowledge of age; condition; maintenance; and replacement needs for the IAs. According to some councils this would improve service potential of IAs and reduce costs. Communication between departments improved. Knowledge of IA values and depreciation helped reporting and decision-making. Problems included: resources required for identification; type of identification; methods of valuation; comprehensive rates and values for depreciation.

3. Practical identification and valuation problems.

Resources were a problem for both accounting and engineering staff. Computer systems needed to be used. Five councils contracted consultants. Twelve councils had auditors assistance. The time period between 1992/96 amalgamations and Compulsory Competitive Tendering took priority. Fourteen

councils needed to update their records. One council still needed more review. Fourteen councils indicated drains were a problem in valuation but roads if properly identified were not a valuation problem. IAs were easier to value than heritage assets. All councils used written-down replacement cost as their valuation method. Proper identification of components was important. All councils needed to review the current condition of IAs. Identification and valuation of IAs was a costly process. Ten councils used an aggregate approach to identify IAs. Workloads of the staff had delayed review of initial identification. Drains were also a problem in identification. Finding suitable software was a problem for ten councils. Twelve councils indicated software and information problems have been overcome. Valuation of land under roads was criticised by interviewees. Six councils at 1995 did not have accounting policies for IAs. Twelve interviewees indicated that initial problems have been overcome in determining accounting policies and reporting of IAs.

4. Was education needed for councilors, staff and ratepayers for IAs requirements under AAS27?

All interviews indicated some training was provided to staff in the finance and other departments. Thirteen respondents viewed education of AAS27 requirements as important for staff. Training was provided by OLG, MAV, PWC and senior council staff members. Six councils indicated that councilors also received education on AAS27 requirements. In these training sessions an important aspect was accounting for IAs. One council reported have an inquiry from an informed user of GPFRs about the change in accounting methods.

5. Training resources for staff on the requirements of AAS27?

Interviews commented that education and training resources were important but education was needed more by council staff to be able to use the resources. Two frequently mentioned resources were the AAM and FMM. The AAM was

used more extensively than other resources to identify, value and depreciate IAs. More practical issues in the AAM was a suggestion by four respondents.

6. To what extent did your information systems need to be developed to record and report on infrastructure assets, as a consequence of AAS27?

Eight councils indicated a PMS was in existence before AAS27 but six of these needed to update records. Policies on capitalisation and materiality needed review, especially on PMS data. The AAM did not have details on these issues for PMS conversion some interviewee reported. Amalgamation was a problem in information system requirements while four councils purchased on GIS. Two council's developed their own software.

7. Who in your council had the responsibility for valuing these assets?

Valuation of IAs was the responsibility for four councils the engineers, for nine councils it was the accountants, for one council it was the auditors and for one council it was the valuers. Valuation of land under roads was an issue which interviewees had negative opinions on recording this value in GPFRs. Thirteen interviewees thought valuation improved IA management.

8. Accounting policies for depreciation and threshold rates developed in implementing AAS27?

Seven councils used the AAM as a guide for depreciation and materiality rates. Two councils used the rates from the AAM. Auditors calculated these rates for three councils. Three councils calculated these rates without reference to other material or organisations. Interviewees had a range of views on straight-line depreciation and capitalisation used in the initial stages in accounting for IAs.

9. Has depreciation of IAs been a problem?

Most interviewees indicated that the method and calculation of depreciation was a problem. Interviewees appeared to lack knowledge on depreciation concepts. Also it appeared interviewees had limited knowledge in the following areas: CBD, maintenance and depreciation being dependent variables, user-pays principles and ratings using depreciation, internal decision-making and depreciation, reserves and relevance of straight-line depreciation. Different problems were mentioned which included: identification of IAs, estimating economic life of IAs, calculations used and depreciation in GPFRs.

10. Were the auditors satisfied with your financial statements prepared under AAS27 in accounting for your IAs?

Thirteen councils indicated that auditors were satisfied with IAs reporting. Assistance was given in a number of areas from auditors. Most interviewees indicated that IA reporting was a positive move for local government and communication had improved between departments in the councils. Also most interviewees mentioned that accounting for IAs was not just legislation driven but would benefit the council in the areas mentioned above.

Sample of a partial interview (representative of other interviews) on budgets, valuation & depreciation

Asked what appears in your accrual budget for IAs?

He mentioned the CPMS (Capital Project Management System) level of completion of assets. Capital Budget & Number Actual and Budget.

IAs Revenues? Expenses—Capital costs.

Capital Costs

- New Works--?
- Renewal—replacement of existing assets, e.g. drains and roads; and
- Strategic Projects—new works projects.

Council (Capital) Works Budget includes maintenance (operational expense).

Engineering: roads one figure shown in budget.

Analysis of projects: council records to make up total roads maintenance figure for budget.

Depreciation: Capital Expenditure Working Project when Project Completed.

Roads in General Ledger: Is shown in accrual budget because actual only in GPFRs.

Rates Determination Statement optional for GPFRs not in government legislation.

Confusing for users of GPFRs: Capital Expenditure and Depreciation. (on this issue Ross Millard OLG agreed)

Control Issue: roads reported in both council and Vicroads GPFRs, now only in Vicroads.

Valuation of properties completed internally by Melbourne Council for Rate Purposes.

Increase in rates greater than CPI then performance based where depreciation would be a consideration. City of Melbourne a growing council at 9% p.a. and strong rate base so not performance based.

Methodologies

Auditor-General move out to no where for valuation purposes, **green-fields** to build roads. Council argument: their valuation because of higher construction costs than rural areas and heavier traffic, **e.g. objection to green-fields approach.**

Depreciation—use of assets

Straight-line not reflective of use or wear/tear of roads. Wear/tear normally occurs later in roads life. Decision-making is more relevant for capital expenditure than depreciation. Capital replacement never aligned with depreciation. Roads depreciation too high. Next year first time depreciation charged on works programs to individual areas e.g. depreciation of roads instead of being in finance budget will now go to engineering department.

Mentioned Sydney Harbour Bridge being valued at \$1

Roads shown GPFRs at 100 years life but council believe longer than 100 years economic life for substructure, reason high level of maintenance on seals. This was also an issue Vicroads on the roads and different levels of maintenance programs. Maintenance program seals only. Substructure—book value approaching nil value so revaluation of roads and changed depreciation to lower rate for wear and tear.

Drains: Visible assessment difficult revaluation very expensive and reliability.

Changed 2000-2001 Roads 18.9%, Stonnington 13.2% and Yarra 33.4%.

Valuation Methodology Different. Less parklands than Melbourne more roads per square metres.

Accounting for roads a change in policy of Vicroads.

Engineers condition based assessment. Roads—substructure

Capitalisation or expense: resheeting of roads also use of materials in rehabilitation.

Roads revalued every year.

Method of Revaluation

Replacement Cost	20mil
Accumulated Depreciation	10mil
Written-down replacement cost	10mil

Revaluation of Roads 15mil

Treatment of accounts could not tell me method completed.

Auditor-General took over auditing of larger councils including City of Melbourne.

Do not need to know cost of using roads. Cost of using IAs not determined by costs.

Engineers: Building 60 to 70 mil depreciated to 50 mil Opinion Engineers different,

Finance department transferred Accumulated Depreciation to Engineers Department. Budget funded so Depreciation funded.

Appendix 3.5

Questionnaire on Financial Reporting & Depreciation of Infrastructure Assets (IAs) by Victorian Local Councils

SECTION A PERSONAL PROFILE

Circle the appropriate response for each question.

1) Your age:

- a) 20-24..... 1
- b) 25-29..... 3
- c) 30-34.....15
- d) 35-39.....14
- e) 40-44.....24
- f) Over 45.....43

2) Your gender:

- a) male.....85
- b) female.....15

3) The length of experience with local councils is:

- a) less than 3 years..... 6
- b) 3 to 5 years.....11
- c) 6 to 10 years.....16
- d) 11 to 15 years.....19
- e) over 15 years.....48

4) Your academic qualifications are (please circle whatever is appropriate):

- a) Secondary School graduate or Year 12 equivalent..... 3
- b) TAFE diploma..... 3
- c) Bachelors degree with accounting major..... 37
- d) Bachelors degree with non-accounting major..... 15
- e) Post graduate diploma..... 5
- f) Master degree..... 7
- g) Local government degree..... 1
- h) Other (please specify)..... 5
- i) more than one degree..... 24
-

5) Are you a member of a professional accounting association?

- a) yes.....57
- b) no.....43

6) Your position in the management structure of your organisation is best described as:

- a) CEO..... 7
- b) 2nd level.....24
- c) 3rd level.....49
- d) 4th level or below.....20

SECTION B. IDENTIFICATION

Please circle the appropriate response for each statement: Strongly agree (*SA*), Agree (*A*), Not Known (*NK*), Disagree (*D*), and Strongly disagree (*SD*), according to your observations and opinions on the **identification** of Infrastructure Assets (*IAs*). Note that some statements relate to the time of changing the reporting method to full-accrual while others relate to the present time.

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
When identifying IAs under AAS 27:					
1. existing IAs asset registers were adequate	7	19	2	44	28
2. IAs asset registers needed a thorough review	44	37	4	15	0
3. engineers identified IAs and up-dated records	20	58	4	17	1
4. educators/consultants provided relevant & practical information	3	35	21	40	1
5. training was needed for staff involved	23	59	5	12	1
6. the LG Asset Accounting Manual proved useful	4	55	25	13	3
7. an infrastructure committee was helpful	1	33	39	23	4
8. economic lives of IAs were difficult to estimate	27	50	4	19	0
9. economic lives of IA <i>components</i> were difficult to estimate	38	44	4	13	1
10. IAs components were aggregated	9	59	16	13	3
11. discovering who controlled IAs was difficult	5	38	4	52	1
12. a different information system was needed	27	55	5	12	1
13. other issues delayed the identification process	15	56	16	13	0
14. auditors were satisfied with the identification process	7	67	9	17	0
15. the council used the full implementation period (1997)	17	61	15	7	0
As a result of the identification process:					
16. decision-making has become more efficient	7	51	17	21	4
17. communication between departments has improved	1	48	17	31	3
18. internal council accounting policies have been updated	1	74	17	5	3
19. accountability for IAs has improved	10	73	5	12	0

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
20. the tangible benefits have outweighed the costs	8	31	19	33	9
In my opinion, in accounting for IAs:					
21. IAs are assets under SACs (<i>Statement of Accounting Concepts</i>) definitions	3	45	35	15	2
22. IAs are assets under AAS27 definition	7	83	2	5	3
23. IAs are assets for financial purposes	1	58	1	36	4
24. SACs are useful in accounting for IAs	0	40	32	24	4
25. AAS27 is useful in accounting for IAs	5	60	8	19	8
26. AAS27 is confusing in accounting for IAs	5	39	11	44	1
27. SACs are too confusing in accounting for IAs	4	30	40	25	1
28. IAs in the public sector are different from the private sector	33	38	17	8	4
29. IAs are different from other physical assets for reporting purposes	34	44	1	20	1
30. SACs have helped improve reporting IAs compared with the previous reporting system	0	25	52	20	3
31. AAS27 has helped improve reporting IAs compared with the previous reporting system	12	57	16	12	3

SECTION C. VALUATION

When valuing IAs under AAS27:					
1. all valuations were completed internally	11	36	0	45	8
2. the Finance department was mainly involved	1	34	0	57	8
3. the Local Government Asset Accounting Manual was used	3	59	18	19	1
4. external consultants were used	8	50	0	37	5
5. accounting software was used	4	45	3	43	5
6. deprivial cost was used	1	20	32	42	5
7. written-down replacement cost was used	17	64	6	11	1

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
8. valuations were fully justified	4	69	8	16	8
9. the Statement of Financial Position was reliable	4	52	16	23	5
10. the council used the full phase-in period (1997)	12	68	17	3	0
In valuing IAs, the following problems were encountered:					
11. there were difficulties in the valuation method used	12	63	5	20	0
12. current costs methods were difficult to use	7	49	11	33	0
13. establishing the current condition of IAs was difficult	21	54	1	23	1
14. valuation of IAs components was difficult	12	64	0	23	1
15. valuation of road components was difficult	17	54	3	25	1
16. valuation of a new seal to an existing road network is difficult to record under written-down replacement cost	23	36	12	29	0
17. valuation of land under roads was difficult	48	17	27	8	0
18. land improvements to roads are difficult to record and value	28	40	23	9	0
19. valuation of bridge components was difficult	9	46	17	27	1
In my opinion:					
20. valuation methods need further refinement	35	55	2	8	0
21. valuation methods do not reflect actual value to council	32	48	3	17	0
22. IA values should not be in the financial statements at all	23	16	5	40	16
23. IA values should only be included in the notes to the accounts in the financial statements	19	25	8	33	15

SECTION D DEPRECIATION

When depreciating IAs:					
1. accountants worked on the issues	11	55	2	25	7
2. engineers worked on the issues	20	70	1	7	2
3. depreciation was not accounted for until after the phase-in period under AAS 27 (1997).	11	48	21	20	0

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
The depreciation rates used by my council:					
4. fully reflect asset service potential consumption	4	44	20	27	5
5. fully reflect asset consumption	5	39	17	32	7
6. were obtained from auditors	1	9	7	57	26
7. were obtained from the LG Asset Accounting Manual	1	43	9	40	7
8. are revised annually	7	58	5	29	1
9. need to be based on an industry standard	12	51	8	23	6
10. are mainly straight-line	25	51	3	21	0
11. are traditional methods (e.g. straight-line & reducing balance) used for external reporting purposes only and not for internal decision-making	15	51	2	27	5
In my opinion:					
12. depreciation is very useful in asset management	13	64	0	16	7
13. depreciation is very useful in internal decision-making	13	58	3	21	5
14. maintenance of IAs is more relevant than depreciation for <i>internal</i> decision-making	21	54	9	16	0
15. maintenance of IAs is more relevant than depreciation for <i>external</i> decision-making	12	44	13	31	0
16. depreciation is needed to reflect the cost of services that the council provides	7	63	5	20	5
17. traditional depreciation methods (eg.straight-line & reducing balance) are not appropriate for IAs.	23	52	8	16	1
18. straight-line depreciation is not appropriate for roads	32	51	3	13	1
19. roads need different depreciation rates for each layer and need to be reviewed regularly to reflect their consumption	23	61	5	8	3
20. condition-based-depreciation (CBD) should be used to obtain more relevant and reliable information on IAs	41	48	7	3	1
21. CBD could be used for external and internal decision-making whereas traditional depreciation methods cannot be used internally	24	47	17	12	0

	Strongly Agree	Agree	Not Known	Disagree	Strongly Disagree
22. there is a difference between depreciation and maintenance costs in CBD calculations	19	56	24	1	0
23. depreciation should not be included in rates budget determination	16	46	9	21	8
24. depreciation costs rather than capital expenditure should be included in rate calculations	1	12	16	52	19
25. ratepayers should be paying for the use of services	15	69	4	12	0
26. depreciation causes intergenerational inequity problems	4	23	32	37	4
27. depreciation can cause significant differences between cash and accrual budgets	32	55	9	4	0
28. financial statements with depreciation of IAs are useful for external users	11	43	17	19	10
29. depreciation should not appear in the operating statement	12	16	12	37	23
30. if IAs are properly maintained they should be depreciated in financial statements.	5	62	13	12	8
31. maintenance schedules should be included in the notes of financial statements so external users can make informed decisions	1	42	11	33	13
32. an amount equal to the depreciation should be placed in a reserve	1	16	9	54	20
33. there is a difference between depreciation and maintenance costs in internal management decision-making.	24	67	4	4	1
In my council:					
34. there is a difference between depreciation and maintenance costs in traditional depreciation methods.	23	64	8	5	0
35. an amount equal to the depreciation allowance is used to replace IAs	1	13	12	54	20
36. an amount equal to the depreciation allowance is used for various internal purposes	0	24	12	55	9
37. in my council's financial statements there is a difference between depreciation and maintenance costs	20	72	3	4	1

Thank you for your cooperation in this research

Appendix 3.6

Bill Braithwaite
Chief Executive Officer
Ararat Rural City Council
PO Box 246
ARARAT 3377

John McLean
Chief Executive Officer
Ballarat City Council
PO Box 655
BALLARAT 3353

Jon Edwards
Chief Executive Officer
Frankston City Council
PO Box 490
FRANKSTON 3199

Andrew Paul
Chief Executive Officer
Greater Bendigo City Council
PO Box 733
BENDIGO 3550

Bill Jaboor
Chief Executive Officer
Greater Shepparton City Council
PO Box 1000
SHEPPARTON 3632

Kerryn Shade
Chief Executive Officer
Horsham Rural City Council
PO Box 511
HORSHAM 3402

John Costello
Chief Executive Officer
Indigo Shire Council
PO Box 28
BEECHWORTH 3747

Craig Niemann
Chief Executive Officer
Loddon Shire Council
PO Box 21
WEDDERBURN 3518

Michael Malouf
Chief Executive
Melbourne City Council
PO Box 1603M
MELBOURNE 3001

Adrian Pennell
Chief Executive Officer
Melton Shire Council
PO Box 21
MELTON 3337

Graham Shiell
Chief Executive Officer
Moyne Shire Council
PO Box 51
PORT FAIRY 3284

Hadley Sides
Chief Executive Officer
Stonnington City Council
PO Box 21
PRAHRAN 3181

John Webb
Chief Executive Officer
Swan Hill Rural City Council
PO Box 488
SWAN HILL 3585

Graeme Brennan
Chief Executive Officer
Whittlesea City Council
Locked Bag No. 1
BUNDOORA 3083

Deborah Cole
Chief Executive Officer
Yarra City Council
PO Box 168
RICHMOND 3121

Appendix 5.1



9 May 2001

Dear Chief Executive Officer

**SURVEY ON THE REPORTING OF
INFRASTRUCTURE AND HERITAGE ASSETS**

A Sub-Committee of the Victorian Public Accounts and Estimates Committee is presently undertaking an Inquiry into the Valuation and Reporting of Heritage and Infrastructure Assets.

During the course of our Inquiry we have been advised that the Standing Committee on Local Government in co-operation with Mr Allan Molland, a Lecturer from the Royal Melbourne Institute of Technology, has prepared a questionnaire seeking information from all Councils about the identification, valuation and depreciation of infrastructure and heritage assets. The responses to this questionnaire will form the basis for a report on the depreciation of infrastructure assets.

As the results of the research will give local government organisations and this Sub-Committee a greater insight into your experiences with reporting infrastructure, we encourage you to complete the attached questionnaire.

The research study will provide valuable information that will be of assistance to this Sub-Committee when we prepare our report later this year.

Yours sincerely

Roger M. Hallam, MLC
Chairman of the Sub-Committee
on the Valuation and Reporting of
Heritage and Infrastructure Assets

GPO Box 2476V
Melbourne 3001
Victoria AustraliaLevel 15, 239 Bourke Street
Melbourne 3000
Victoria AustraliaTel +61 3 9925 5700
+61 3 9925 5755
Fax +61 3 9925 5741

Dear Chief Executive Officer

***SURVEY ON THE DEPRECIATION AND REPORTING OF
INFRASTRUCTURE ASSETS.***

I am working towards a Doctor of Philosophy degree through the School of Accounting and Law at RMIT University. The research project being undertaken seeks to further the debate regarding the issues of the reporting and depreciation of infrastructure assets. To ensure the validity of results a reply to the attached questionnaire would be greatly appreciated.

With the support of the Public Accounts and Estimates Committee undertaking the Inquiry into the valuation and reporting of infrastructure assets the questionnaire is being sent to all C.E.O.s of Victorian councils. Whilst your co-operation in completing the questionnaire is valued, your participation is voluntary. The results will be used in an aggregated form and therefore your anonymity and the confidentiality of your responses are assured. The completed questionnaires will be securely stored and available only to my supervisors and myself. For administrative purposes the questionnaires have been coded and access to the code is restricted to me.

The research is being conducted by me, Allan Molland (Ph.D Student and Sessional Lecturer), supervised by Associate Professor Sheila Bellamy and Adjunct Professor Robert Clift of the School of Accounting and Law.

The results will be contained in the thesis, which will be available at the RMIT University library. It is hoped that aspects of the results will be published in various professional and academic journals also in local government publications made available to councils.

The success of the project depends on your contribution and I look forward to receiving your completed questionnaire. If you have any concerns or questions, please contact Allan Molland on 039925557 or 0407703495, Adjunct Professor Robert Clift on 0399255726, or Chair of the RMIT Business Human Research Ethics Sub-committee, Professor Robert Brooks on 039925593.

It would be appreciated if this questionnaire could be passed on to the appropriate officer in your council for a quick response. It should take up to a maximum of thirty minutes to complete the questionnaire. ***Thank you for your cooperation.***

Yours Sincerely

Head of the School of Accounting & Law

Allan Molland

Associate Professor Sheila Bellamy

Instructions for the Questionnaire

The questionnaire is designed to help explain changes that have occurred in local government accounting and reporting of infrastructure assets (IAs) and depreciation. The major change was the introduction of AAS27 *Financial Reporting by Local Government* and SACs *Statement of Accounting Concepts* since 1992, which required full accrual accounting to be used for reporting purposes. This led to most councils having to identify, value and depreciate their IAs and as a result were allowed a transition period to account for and report these assets. ***In answering these questions as at the time of the introduction of AAS27, the knowledge does not need to come from the council in which you are presently employed but can be from any council experience or previous knowledge.***

This Questionnaire has been divided into four sections. Section A is personal profiles. Section B seeks your observations and opinions on various aspects in the ***identification*** of infrastructure assets at the time of changing accounting methods (to AAS27 (*Financial Reporting by Local Governments*)) and in the present situation. Section C seeks your opinion on various aspects in the ***valuation*** of infrastructure assets at the time of changing accounting methods (to AAS27) and in the present situation. Section D seeks your opinion on various aspects in the ***depreciation*** of infrastructure assets at the time of changing accounting methods (to AAS27) and in the present situation.

Sections A, B, C and D require you to circle the most appropriate response. Legends are given below to indicate possible responses, for example, please circle the appropriate response: Strongly agree (SA), Agree (A), Not Known (NK), Disagree (D), and Strongly disagree (SD), according to your level of response from the statements given.

If there are any questions about the questionnaire please contact:

Allan Molland
School of Accounting & Law
RMIT
GPO Box 2476V
Melbourne 3001
Telephone: 0407703495

Thank you for your cooperation in this research.



20 February 2001

Mr Allan Molland
School of Accounting and Law
RMIT University
G P O Box 2476V
Melbourne Vic 3001

Dear Mr Molland

Thank you for making time available for your officers to meet with Members of the Sub-Committee undertaking the Inquiry into the valuation and reporting of heritage and infrastructure assets.. I confirm that the meeting will be held at **11.15 am on Wednesday, 7 March in the Legislative Council Committee Room, Parliament House**. It is expected that the meeting will take approximately 30 minutes.

Attached, as background information, is a copy of the terms of reference for the Inquiry and a profile of the members of the Sub-Committee.

Members appreciate the opportunity to discuss these matters with you, as your advice will provide useful information that will be of assistance to the Sub-Committee when it prepares its report later this year.

If you require any further information please contact me on 9651 3551 or email paec@parliament.vic.gov.au or fax 9651 3552.

Yours sincerely

Michele Cornwell
Executive Officer

Appendix 7.1

Appendix 7.1

City of Melbourne IAs accounts reconciliation

Table 7.6		
City of Melbourne IAs accounts reconciliation		
Roads & Laneways	2001	2000
	\$'000s	\$'000s
Opening balance (carrying amount)	499,440	445,250
Plus additions	2,244	5,127
Plus/(less) net valuation increment/(decrement)	0	74,240
Less disposals/transfers to external parties	0	(6,663)
Less depreciation	(13,931)	(18,514)
Closing amount	487,753	499,440
Footpaths		
	2001	2000
	\$'000s	\$'000s
Opening balance (carrying amount)	51,098	42,078
Plus additions	3,153	6,406
Plus/(less) net valuation increment/(decrement)	0	10,290
Less disposals/transfers to external parties	0	(568)
Less depreciation	(6,403)	(7,108)
Closing amount	47,848	51,098

Kerb & channel	2001	2000
	\$'000s	\$'000s
Opening balance (carrying amount)	105,868	95,537
Plus additions	197	1,463
Plus/(less) net valuation increment/(decrement)	0	13943
Less disposals/transfers to external parties	0	(1,727)
Less depreciation	(2,918)	(3,348)
Closing amount	103,147	105,868
Bridges	2001	2000
	\$'000s	\$'000s
Opening balance (carrying amount)	9,442	11,618
Plus additions	5	0
Plus/(less) net valuation increment/(decrement)	0	(119)
Less disposals/transfers to external parties	0	(1,663)
Less depreciation	(241)	(394)
Closing amount	9,206	9,442
	(GPFR 2000/01, p.17)	

Appendix 7.2

Appendix 7.2

Table 7.13 Melton Shire Council IAs Account Reconstruction

Table 7.13 Melton Shire Council IAs Account Reconstruction		
Roads & Streets	2001	2000
At cost	1,341,600	616,891
At valuation 1 January 2000	nil	151,749,881
At valuation 30 June 2001	9,041,864	nil
At valuation 1 July 2000	171,585,109	nil
Less Accumulated depreciation	(56,389,667)	(41,275,411)
Closing amount	125,578,906	111,091,361
Bridges		
	2001	2000
At Cost	25,407	25,407
At valuation 1 January 2000	4,467,515	4,467,515
Less Accumulated depreciation	(2,360,395)	(2,273,175)
Closing amount	2,132,527	2,219,747
Drainage		
	2001	2000
At valuation 1 January 2000	nil	63,311,007
At valuation 30 June 2001	5,101,314	nil
At valuation 1 July 2000	67,402,711	nil
Less Accumulated depreciation	(13,670,086)	(11,889,914)
Closing amount	58,833,939	51,421,093

(GPFR 2000/01, p.75)

Appendix 7.3

Appendix 7.3

Table 7.18 IA Accounts Depreciation & Reconstruction

Table 7.18	
IA Accounts Depreciation & Reconstruction	
Note 8 Depreciation—Roads, streets & bridges	\$9,981,883
Depreciation—Drainage	\$1,326,539
Note 19 Infrastructure Council Valuation 1 January 2000	
Roads	287,372,351
Drainage	78,638,952
Footpaths	17,847,961
Kerb & Channel	20,793,757
Bridges	2,259,505
Roundabouts	1,336,910
Regulatory Signs	1,367,494
Street Furniture	248,112
Natureship Trees	2,472,635
Bike Paths	922,454
	413,260,131

At Cost	
Roads	3,351,215
Drainage	2,114,675
Footpaths	1,362,938
Kerb & Channel	199,836
Bridges	164,307
Roundabouts	243,911
Regulatory Signs	160,151
Street Furniture	246,470
Natureship Trees	125,553
Bike Paths	343,695
	8,312,751
Total Infrastructure	421,572,882
Less Total Accumulated Depreciation	256,556,521
	165,016,361
Total Written Down Value	270,646,179
(GPFR 2000/01, p.35)	

Appendix 7.4

Appendix 7.4

Table 7.20 City of Greater Bendigo Non-financial Information

Table 7.20 City of Greater Bendigo Non-financial Information Report of Operations & Major Achievements
Physical
Plan, develop, maintain and manage Greater Bendigo's physical assets which will contribute to the amenity, safety, mobility and other needs of the local and wider community.
Roads and Bridges
The development, maintenance and implementation of programs for road maintenance and construction.
Major Achievements
Comprehensive survey completed of Council bridge stock and subsequent development of a maintenance program;
Installation of new bridges at three rural locations on roads, and two new bridges on the main road network;
Capital expenditure on roads and bridges totaling \$11.7M, including \$834,000 of <i>Roads to Recovery</i> funding being spent on road improvement works;
Total expenditure of \$7.6M. on urban and unsealed road maintenance (including street lighting and drainage);
Re-tendered the major Road Maintenance Contract, incorporating higher standards for road maintenance with in-house Business Unit <i>BenCon</i> the successful tenderer;
Absorbed reduction in Grants Commission funding for local roads of \$600,000 over three years;
Completed a detailed survey of the sealed road network, including a revised 3 year resurfacing program;
In State Government Survey, increased community satisfactory rating from 56 to 61.
In Council Survey, increased satisfaction 6.1 to 6.2 for unsealed country roads, and for sealed roads in urban areas from 7.1 to 7.5 (GPFR 2000/01, p.12).

Appendix 7.5

Appendix 7.5

Table 7.26 Swan Hill Rural Council Non-financial information

<p>Table 7.26</p> <p>Swan Hill Rural Council</p> <p>Non-financial information</p>
<p>Services</p>
<p>Average Operating Expenditure per Assessment</p>
<p>This indicator represents the total operating expenses of the Council (including depreciation and asset write off), divided by the total number of property assessments, and seeks to identify the amount expended on services per assessment being \$2,413.28 (2000/01) and \$2,205.71 (1999/00).</p>
<p>The total expenditure is derived after charging of depreciation, and the <i>writing off</i> \$860,000 of road infrastructure improved during the year, and therefore includes accounting treatments, which do not represent actual services delivered to the community. When these accounting treatments are removed, the result is \$1,663.21 (2000/01) and \$1,569.48 (1999/00), and indicates that there has been a \$93.72 increase in the cost of expenditures on services per assessment. (GPFR 2000/01 p.17)</p>
<p>Infrastructure</p>
<p>Average Capital Expenditure per Assessment</p>
<p>This indicator represents total funds expended on infrastructure to review, enhance or extend the current infrastructure network divided by the total number of property assessments, and seeks to identify whether Council is spending more or less on maintaining infrastructure base being \$294.52 (2000/01) and \$366.55 (1999/00) (GPFR 2000/01, p.17).</p>