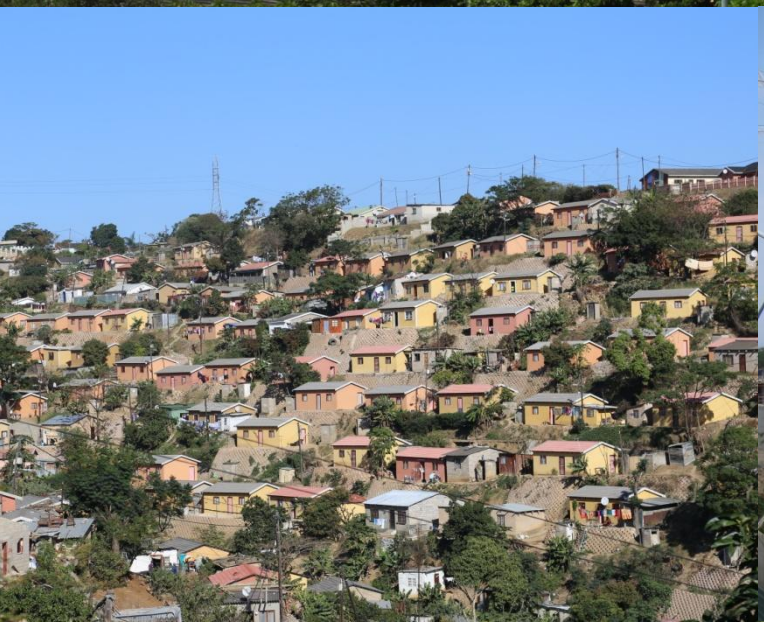
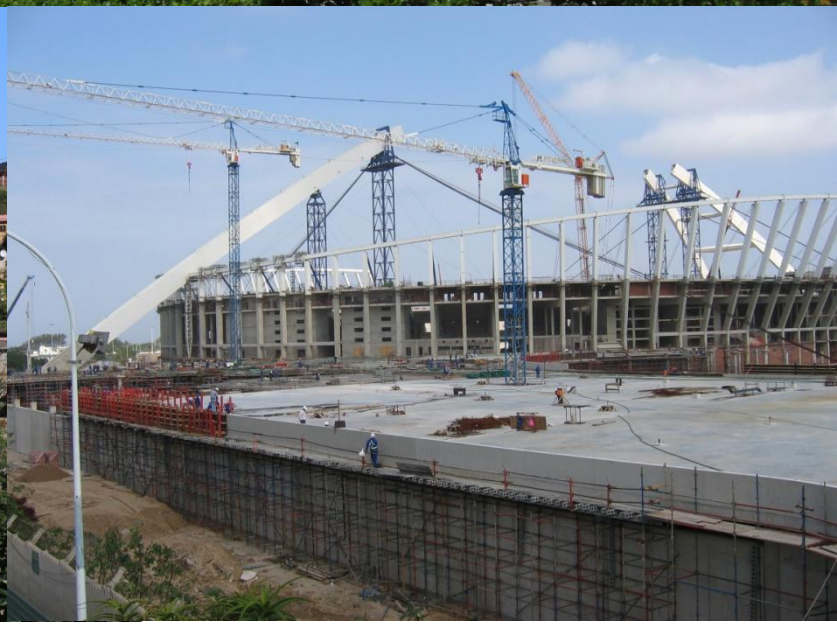
EXPLORING THE IMPACT OF THE APPLICATION OF THE NATIONAL BUILDING REGULATIONS AND PLANNING LEGISLATION ON DEVELOPMENT





Prepared for

RESEARCH & POLICY BRANCH

DEVELOPMENT PLANNING, ENVIRONMENT & MANAGEMENT UNIT

ETHEKWINI MUNICIPALITY

by John Forbes Associates - June 2014

This research project was commissioned by the Research and Policy Branch of the Environmental Planning and Management Unit of the Ethekwini Municiplaity.

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Report prepared by: John Forbes Associates

June 2014

Cover photos clockwise from the top are:-

1) The iconic Moses Mabhida World Cup 2010 Soccer Stadium taken during construction and after completion. Photos by John Forbes. The photos symbolise:-
   - The iconic heights we can both aspire to and achieve if we all pull together.
   - Reinforcing that both planning and building are required to cooperate to achieve the desired outcomes.
2) The Cornubia Housing Presidential Housing Project, with “new style” housing units situated around a central courtyard with playground equipment. Photo by Gugu Mqadi: eThekwini Communications Unit.
3) Housing in Umlazi located on steep land where there is very limited opportunity to vary the orientation of units. Photo by Gugu Mqadi: eThekwini Communications Unit.

Executive Summary

There have been concerns raised regarding the decrease in the rate of development within the eThekwini Municipal area. This in turn has resulted in layoffs in the building industry at a time when South Africa has an alarming unemployment rate and can ill afford it. While one may link this to a generally unfavourable world-wide economic climate, this is only part of the story. The object of this study primarily is to ascertain the extent to which the legal framework within which the building industry operates is in any way impacting on the pace of development with regard to the necessary approvals to leading up to and the commencing of building activities. While this is a KwaZulu-Natal based study, some external input has been sought so that a more universal or countywide understanding may be obtained, particularly as a lot of the legislative framework within which the building industry operates is nationally based.

The approval process for development to occur has two main aims: the initial approval to undertake certain land uses on land *viz.* the planning approval and secondly, the approval necessary to undertake actual development on the ground *viz.* the building plan approval. These occur within a context which requires compliance with environmental legislation and policies, without which approval, silent or otherwise, planning and ultimately building cannot proceed.

Two particular aspects are allegedly at the heart of the problem according to a chorus of external planning and building professionals, namely:-

- Planning legislation, both at a national and provincial level, which has been undergoing a metamorphose from 1996 and which transformation is still far from being complete and which is shortly to be joined at a municipal planning bylaw level, and
- Part XA of the National Building Regulations and its companion SANS 10400 Part XA and SANS 204, which became fully effective in May 2013 after an 18 month maximum window period expired.

In particular, concern has been expressed at the appropriateness of applying Part XA to the lower end of the housing market in that the requirements may be too onerous for small sites, where top structure budgets are limited, where the need for maximum structure is paramount and where there is an enormous backlog to serve people still living in shacks under unhygienic conditions.

This study set out to test the validity of these allegations *via* both an internet circulated questionnaire distributed nationally by a variety of actors, and by one-on-one interviews and focus group meetings conducted both locally and in the Western Cape and Gauteng with both professionals and municipal officials. Lessons are also drawn in Annexure A from planning and building legal cases which may be useful. The outcomes of the project were then analysed and discussed and certain conclusions drawn.

Recommendations were made to address certain of these aspects.

In summary, it may be said that despite the ongoing turmoil and uncertainty in planning legislation it would seem that the impact is not as significant on development as at first thought. Part XA is

however, far more controversial and a good response was obtained to this aspect from the architectural fraternity. While it would seem that some reluctant parties are slowly adapting to the new reality, it seems that it would still be desirable to do some tweaking to the regulations and in particular to treat low cost housing, and perhaps housing below a certain minimum threshold, a little differently. Certainly, such consideration is warranted in a climate which is a lot more amenable and forgiving than that found in countries on which Part XA is modelled. There are also concerns that an avid enforcement of Part XA at the building plan approval stage, without an adequately staffed enforcement personnel complement, might be driving a considerable number of individuals to consider building illegally, which will defeat the entire object of energy conservation in buildings.

John A Forbes Pr.Pln.
Reg. No. A/457/1986
June 2014.

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List of Acronyms

ABCB – Australian Building Code Board

AMAFA – Amafa / Heritage KwaZulu Natali - provincial heritage conservation agency for KwaZulu Natal.

ASAQS - Association of South African Quantity Surveyors

ASHRAE – American Society of Heating, Refrigerating and Air Conditioning Engineers

BCA – Building Code of Australia

BCSA – Building Control South Africa

BRICS – Brazil Russia India China South Africa

BST - Building Science and Technology

CIA – Cape Institute for Architecture

COAG - Council of Australian Governments

CoGTA – National Department of Cooperative Governance and Traditional Affairs

CPD – Continuing Professional Development

CSIR – Council for Scientific and Industrial Research

DAEARD – KZN Department of Agriculture and Environmental Affairs and Rural Development

DAFF - National Department of Agriculture, Forestry and Fisheries

DEAT – National Department of Environment and Tourism

DFA – Development Facilitation Act & Regulations

DMEA – National Department of Mineral and Energy Affairs

D'MOSS - Durban Metropolitan Open Space System

DPEMU – Development Planning and Environmental Management Unit – eThekwini Municipality

DRDLR – National Department of Rural Development and Land Reform

ECBC – Indian Energy Conservation Building Code

EIA – Environmental Impact Assessment

EMP - Environmental Management Plan

EnEV – German Energy Conservation Regulations – Energieeinsparverordnung

EPBD - European Union Energy Performance of Buildings Directive

EU – European Union

GDP – Gross Domestic Product

GIPO – Geographical Information and Policy Office of the eThekwini Municipality

GIS – Geographic Information System

HVAC – Heating Ventilation and Air Conditioning

IEA – International Energy Agency

JAC – Joint Advisory Committee (officials of the DPEMU of eThekwini Municipality)

KVA – Kilovolts Ampere – 1KVA = 1000 volts amps.

KZN – KwaZulu-Natal

KZN CoGTA – KZN Department of Cooperative Governance and Traditional Affairs

LeFTEA – Less Formal Township Establishment Act

NatHERS – Australian Nationwide House Energy Rating Scheme

NBC – Canadian National Building Code

NBRBSA (or NBRs) – National Building Regulations and Building Standards Act & Regulations

NBRI – National Building Research Institute

NCC - Australian National Construction Code

NCOP - National Council of Provinces

NECB - Canadian National Energy Code of Canada for Buildings

NEMA – National Environmental Management Act & Regulations

NRCS – National Regulator for Compulsory Specification

OECD - Organisation for Economic Co-operation and Development

PCA – Plumbing Code of Australia

PDA – Planning and Development Act

PDB – Planning and Development Bill

PIRB – Plumbing Industry Registration Board

RDP – Reconstruction and Development Programme

SABS – South African Bureau of Standards

SACAP – South African Council for the Architectural Profession

SACPLAN – South African Council of Planners

SAGI - South African Geomatics Institute

SAIA – South African Institute of Architects

SAIAT – South African Institute of Architectural Technologists

SAIBD – South African Institute of Building Design

SANS – South African National Standard

SAPI – South African Planning Institute

SHGC – solar heat gain coefficient – passive solar gain

SPLUMA – Spatial Planning and Land Use Management Act

SPLUMB - Spatial Planning and Land Use Management Bill

TPO – (Natal) Town Planning Ordinance

1 Introduction

1.1 Background

The Oxford Dictionary defines development in relation to buildings as "a piece of land with new buildings on it" or "the process of using an area of land especially to make a profit by building on it". The factors that need to be considered when building on a portion of land are illustrated in **Figure 1.1**.

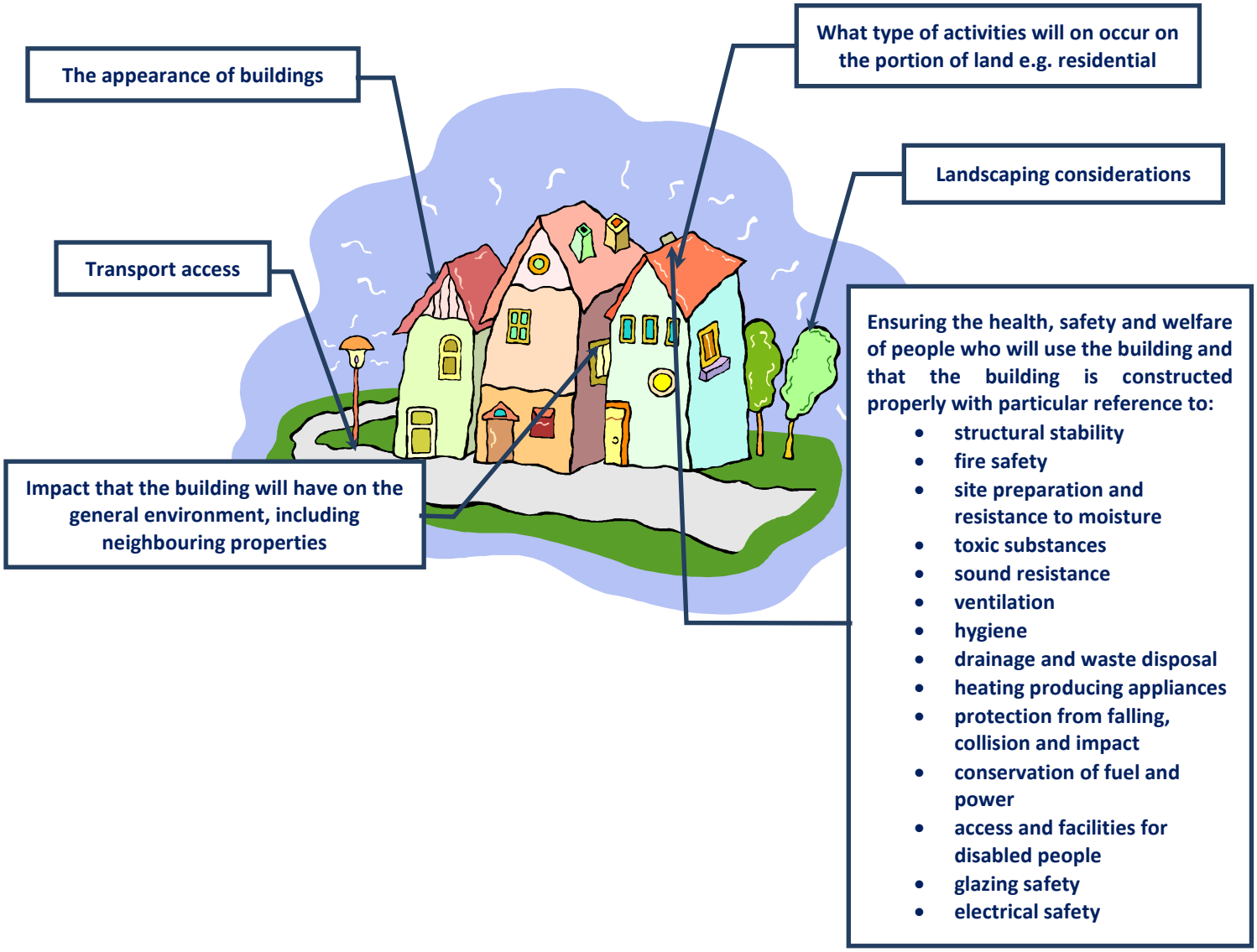

Figure 1.1of land, i.e.consider when building on a portion of land i.e. a development.[1]

[1] http://www.planningportal.gov.uk/permission/responsibilities/buildingregulations/difference
http://www.harborough.gov.uk/info/200011/building_control/84/frequently_asked_questions/3
http://www.planningni.gov.uk/index/policy/supplementary_guidance/dcans/dcan11_draft/dcan11_draft_relationship.htm
http://www.richmond.gov.uk/home/environment/building_control/building_regulations_explained/the_differences_between_building_regulations_and_planning_permission.htm

The sequence in which the factors are evaluated during the project life-cycle is illustrated in **Figure 1.2**.

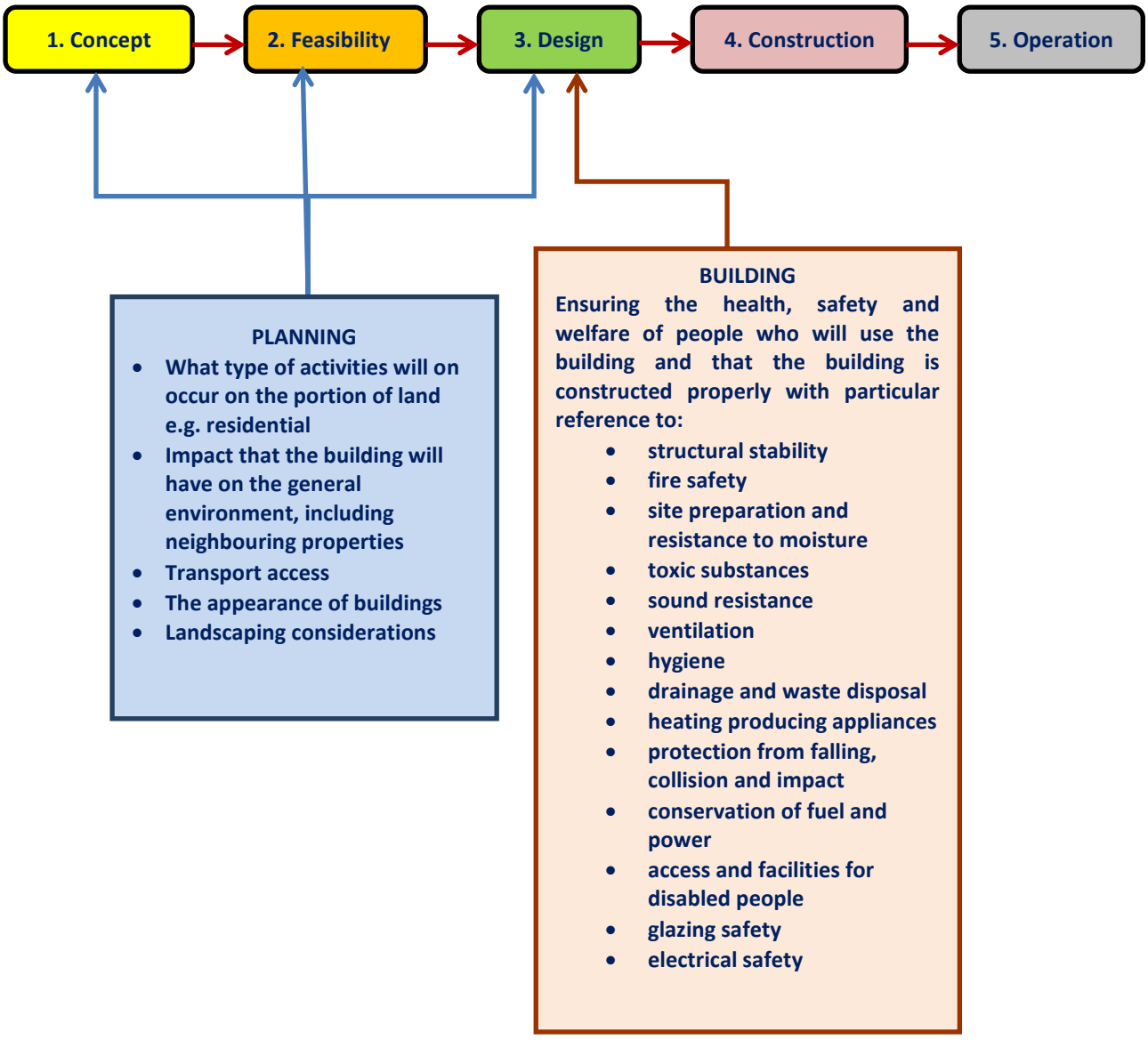

Figure 1.2 Sequence of evaluation during the project life-cycle.

It is also shown in **Figure 1.2** that the factors which are commonly referred to as "Planning" include:

- What type of activities will occur on the portion of land, e.g. residential;
- The impact that the building will have on the general environment, including neighbouring properties;
- Transport access;
- The appearance of buildings, and
- Landscaping considerations.

The following factors are commonly referred to as "Building":

- Ensuring the health, safety and welfare of people who will use the building and that the building is constructed properly with particular reference to:
  - structural stability
  - fire safety
  - site preparation and resistance to moisture
  - toxic substances
  - sound resistance
  - ventilation
  - hygiene
  - drainage and waste disposal
  - heating producing appliances
  - protection from falling, collision and impact
  - conservation of fuel and power
  - access and facilities for disabled people
  - glazing safety
  - electrical safety

The definition provided by the Oxford dictionary shows that there is a monetary component to "development" and therefore a contributor to the economy. It is therefore important to ensure that the evaluation of the above factors is undertaken in a fair and transparent manner. Hence legislation has been developed prescribing how each of the factors need to be determined. With the recognition of the importance of sustainable development, particular emphasis is placed on the impact that the proposed building will have on the general environment, and one therefore has what is commonly referred to as the *environmental, planning and building legislation*.

After that of Gauteng, the KwaZulu-Natal (KZN) economy is South Africa's second largest, contributing on average 15.7% (2011) to the country's Gross Domestic Product (GDP), which amounts to about R78 billion annually"[2]. The trends in KZN's GDP as well as for eThekwini Municipality and some Water Service Authorities for the 1996 – 2012 period are shown in **Figure 1.3**.

[2] Coetzee, C. 2014. Modelling and Forecasting KwaZulu-Natal's Potential (Average) GDP Data with a Time Series Arima Model. Working Paper 2a: January 2014, pp.3.

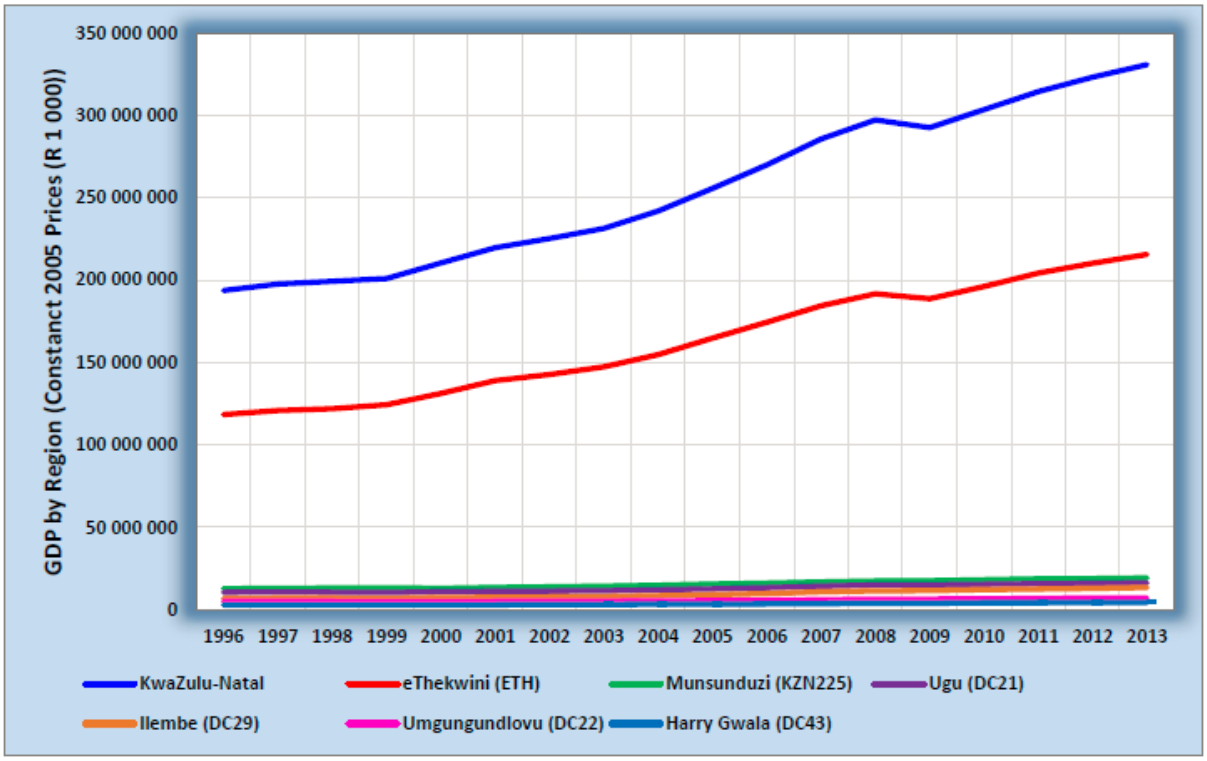

Figure 1.3 **The Gross Domestic Product by Region (GDP-R) for the Water Service Authorities in Umgeni Water's area of operation for the 1996 – 2012 period (KZN Treasury after Global Insight 2014).**[3]

The trend for eThekwini Municipality for the 2007 – 2013 period is shown in **Figure 1.4**. Both **Figure 1.3** and **Figure 1.4** show that there was a drop economic growth in the 2008 – 2009 period.

The contributions of the different sectors to the KZN GDP are shown in **Table 1.1**. It is shown in **Table 1.1** that construction is a significant contributor to the KZN economy.

[3] Umgeni Water. 2014. Umgeni Water Infrastructure Master Plan 2014 Volume 1, pp. 22.

	Durban Quarterly GDP	Durban Quarterly Rate	Durban Annual Rate
2009q1	R 39 847 638 347	-5.61	-4.18
2009q2	R 40 899 757 858	2.64	-6.55
2009q3	R 41 630 096 107	1.79	-5.03
2009q4	R 41 830 381 245	0.48	6.27
2010q1	R 41 563 503 083	-0.64	4.31
2010q2	R 43 465 303 978	4.58	6.27
2010q3	R 43 929 000 964	1.07	5.52
2010q4	R 43 890 811 029	-0.09	4.93
2011q1	R 43 197 467 928	-1.58	3.93
2011q2	R 44 886 983 041	3.91	3.27
2011q3	R 45 402 277 006	1.15	3.35
2011q4	R 45 390 055 960	-0.03	3.42
2012q1	R 44 336 130 914	-2.32	2.64
2012q2	R 46 061 180 610	3.89	2.62
2012q3	R 46 229 040 720	0.36	1.82
2012q4	R 46 467 822 917	0.52	2.37
2013q1	R45 134 299 320	-2.87	1.80
2013q2	R47 417 299 431	5.06	2.94
2013q3	R47 026 542 030	-0.82	1.73
2013q4	R47 291 722 509	0.56	1.77

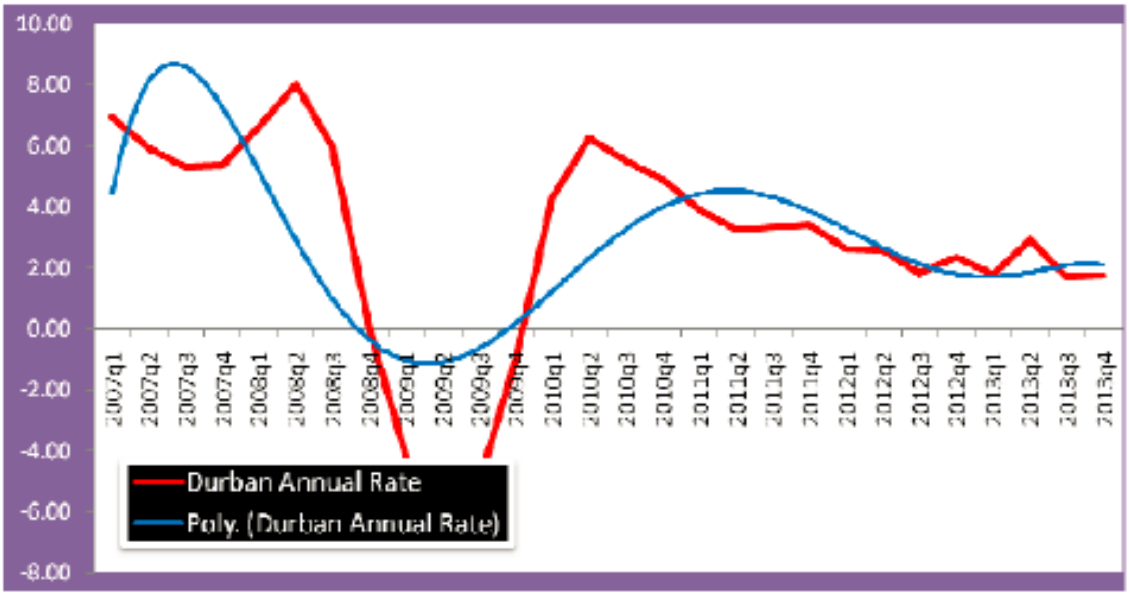

Figure 1.4 eThekwini Municipal Gross Domestic Product.[4]

[4] Coetzee, C. 2014. The KwaZulu-Natal Economy – A Performance Overview Update 19. Working Paper 1.18: 13 March 2014, pp. 11.

Industry	2012Q4	2013q1	2013q2	2013q3	2013q4
Primary Industries	**-0.49**	**5.01**	**5.80**	**-1.29**	**1.76**
Agriculture, forestry and fishing	-1.77	6.01	7.93	-1.89	-0.86
Mining and quarrying	2.51	1.83	-4.34	1.02	7.64
Secondary Industries	**2.88**	**-0.21**	**2.33**	**0.02**	**1.39**
Manufacturing	3.40	0.30	2.55	-0.36	1.09
Electricity, gas and water	-4.15	-3.00	-0.23	0.61	-0.30
Construction	3.79	2.18	2.39	2.57	4.63
Tertiary industries	**2.30**	**2.09**	**2.57**	**2.56**	**1.75**
Wholesale & retail trade; hotels & restaurants	3.04	2.89	3.08	2.67	2.71
Transport , storage and communication	2.04	1.63	1.56	1.86	1.81
Finance, real estate and business services	2.02	1.74	3.67	3.43	1.17
Personal services	1.01	2.16	1.71	2.00	2.10
General government services	2.64	2.22	1.75	1.03	1.21
GDP at constant 2005 prices (non-seasonal adjusted annualized)	**2.42**	**1.44**	**2.53**	**1.38**	**1.60**
GDP at constant 2005 prices (seasonal adjusted annualized)	**2.58**	**1.52**	**2.01**	**1.59**	**1.83**

Table 1.1 **KZN GDP and Economic Growth Rate – Year-on-Year**[5]

Mirroring the trend in **Figure 1.3** and **Figure 1.4**, it is shown in **Figure 1.5** that the number of development applications, i.e. planning applications, received also dropped in the 2008 – 2009 period in the municipalities examined below.

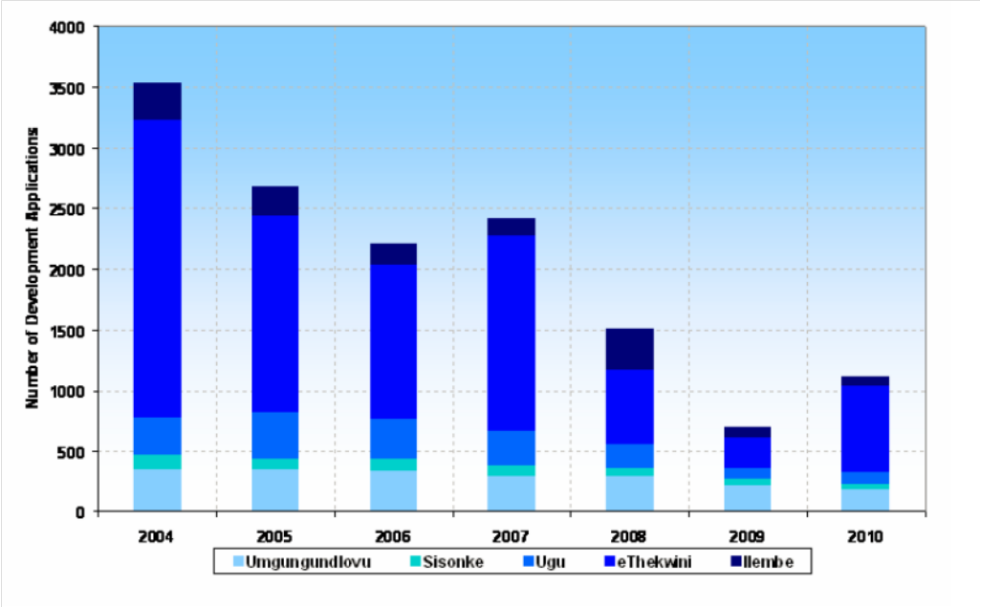

Figure 1.5 **Number of development applications received per year per district municipality (CoGTA's Application Filing System database 2010).**[6]

[5] Coetzee, C. 2014. The KwaZulu-Natal Economy – A Performance Overview Update 19. Working Paper 1.18: 13 March 2014, pp. 9.

The number of building plans approved and completed for the 1996 – 2012 period is shown in **Figure 1.6**. The downward trend shown in **Figure 1.6** is from 2009 – 2012.

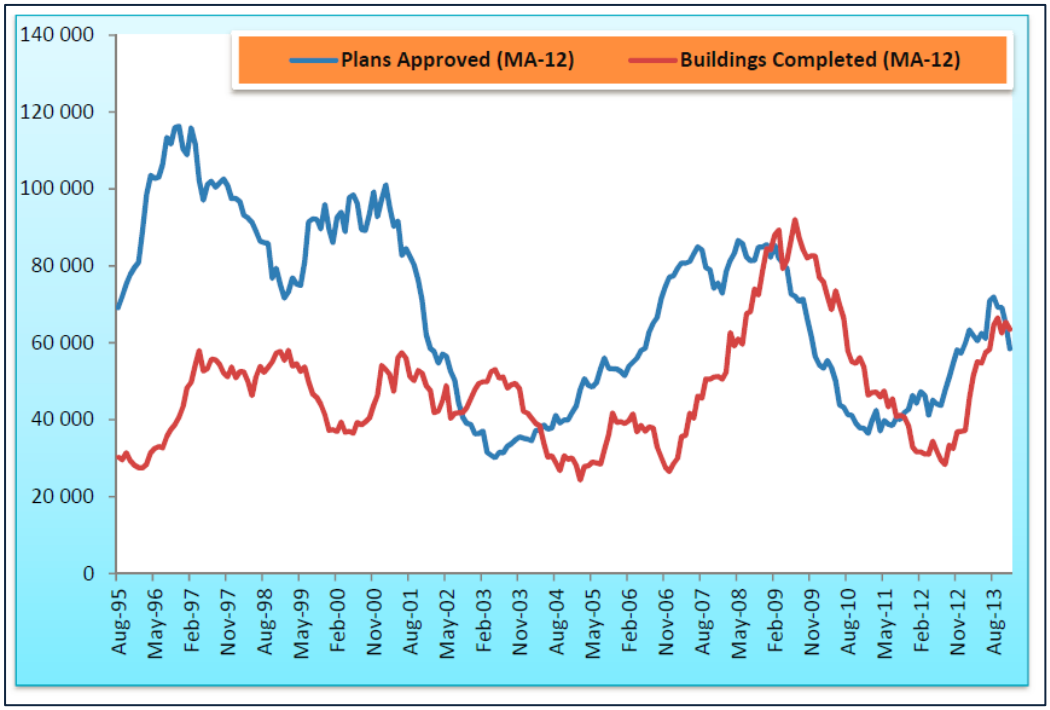

Figure 1.6 **Building plans approved and completed for non-residential buildings, offices and banking space – South Africa.**[7]

Concerns have been raised by the general public, politicians, the unions, economists, estates and the built environment professionals about the potential reasons for the decreasing trends shown in **Figure 1.3**, **Figure 1.4**, **Figure 1.5** and **Figure 1.6**.

1.2 Problem Statement

It has been shown above that the number of applications, both planning applications and building plans in KZN and eThekwini Municipality have fallen significantly in recent times. The question that is being asked: Why has there been this decline? Is the economy feeling an impact of the worldwide recession, or are there other reasons which have also added to the problems of the worldwide recession?

Another key event which occurred during the downward trend in development applications was the operationalisation of the KwaZulu-Natal Planning and Development Act, 2008 in May 2010 which came fully into operation except for Special Consent applications. Shortly after it commenced, a

[6] Umgeni Water, 2011. Umgeni Water Infrastructure Master Plan 2011, pp. 46.

[7] Coetzee, C. 2014. The KwaZulu-Natal Economy – A Leads and Lags Analysis Update 8 Working Paper 3.8 27 February 2014, pp. 2.

variety of problems emerged which hadn't been obvious in the prior Natal Town Planning Ordinance. Almost immediately proposals were made to introduce amendments to the Act.

The proposed amendment, however, has been a long drawn out process and today in 2014, there are no less than two amendment bills in the wings. The one bill, the KZN Planning and Development Act Amendment Bill, 2013 catering for critical and urgent amendments and the other bill for a complete rewrite of the existing Act. This process has been further complicated, by the fact that at national level, the Department of Rural Development and Land Reform (DRDLR), after a period of more than 10 years, finally produced a Bill to replace the Development Facilitation Act. This Bill was signed into law by the President as the Spatial Planning and Land Use Management Act (SPLUMB), 2013 and was gazetted in August 2013. However, it has yet to be operationalised. Currently, a number of initiatives have been jointly arranged between the DRDLR and the KwaZulu-Natal Department of Co-Operative Governance and Traditional Affairs (CoGTA) whereby workshops are being held to deal with different aspects of implementation of the Act. When the Act will finally be operationalised is unknown at this stage, but it is tentatively planned for August or September 2014.

It is clear, that many aspects of the current KZN Planning and Development Act, 2008 and indeed both the two 2013 amendment bills, are not in accordance with the new, and as yet, un-operationalised Spatial Planning and Land Use Management Act, 2013 (SPLUMA). This will now require a considerable rewrite of portions of the bills.

To further complicate matters, the Western Cape government, published in early February 2014, a Western Cape Land Use Management Bill, which envisages that each municipality in that province adopt their own municipal planning bylaw. In this regard, the City of Cape Town has already prepared a draft municipal planning bylaw, which in turn has allegedly been utilised by the Western Cape provincial government in the preparation of a model municipal planning bylaw for adoption by other municipalities in that province. A factor to consider is that the capacities of many municipalities other than the major metropolitan local authorities are stretched at present, and that the introduction of a totally new and unfamiliar municipal planning bylaw is likely to put them under even greater stress. Furthermore, even though these model bylaws may start off identical, in time there will be a drift and they will diverge one from the other. The possibility also exists in this scenario that different time frames will be required for identical actions to be undertaken in different municipalities much to the consternation of the service providers and planning professionals submitting applications to the respective municipalities[8]. It has been reported that the DRDLR has supported this initiative[9]. Therefore it seems very likely that the DRDLR will require that the other provinces follow suit, and prepare their own provincial Planning and Development Acts that will follow the model of the current Western Cape Land Use Management Bill, and perhaps prepare model bylaws for their respective municipalities to adopt. There is accordingly a host of alternative

[8] Roos, G. gert.roos.sa@gmail.com "Is 52 (or 46) municipal PDAs the answer?" 12 September 2013. < https://groups.google.com/forum/?hl=en#!searchin/kznpda/municipal$20planning$20bylaw/kznpda/uSx40o3koHM/e97WO3Z5rYIJ>

[9] Roos, G. gert.roos.sa@gmail.com "Is 52 (or 46) municipal PDAs the answer?". 12 September 2013. < https://groups.google.com/forum/?hl=en#!searchin/kznpda/municipal$20planning$20bylaw/kznpda/uSx40o3koHM/e97WO3Z5rYIJ>

scenarios for the future of planning law, much of which remains unknown at present and for which scenarios seem to evolve almost by the week.

In an under or limited resourced country such as South Africa where planning professionals both in municipalities and in the private sector are in short supply, can this degree of sophistication be afforded? There is also the legal aspect to consider as to whom shall advise the municipalities on how to prepare and to modify their bylaws over time.

Obviously, there will also be cost concerns relating to the preparation, modification and interpretation of the bylaws. The KZN Department of Cooperative Governance and Traditional Affairs (KZN CoGTA) and the KZN office of the Department of Rural Development and Land Reform (DRDLR) will be sorely pressed in its support role to offer the necessary advice as compared to advising on a single provincial Act common to all. It will undoubtedly significantly complicate the holding of regular forum meetings as held at present, as it will require the intricacies of the new planning Acts and Regulations, plus with the possibility of a multiplicity of various municipal bylaws, to be meaningfully explained or shared between the respective municipalities and the planning professionals.

In respect of building plan applications, there is a situation whereby South Africa, in keeping up with the developed world, e.g. Germany, Canada, Australia, etc., has developed a set of sustainable building regulations to add to the existing national building regulations. These are known as Part XA -- Energy Usage in Buildings. They have an accompanying partner in SANS 10400 Part XA which spells out in far greater detail the requirements of the regulation, including its deemed to satisfy requirements. Part XA of SANS 10400 is in turn based on SANS 204 which provides the detailed requirements and the basis on exactly how to calculate to meet the aspirational requirements. These are based upon first world German standards working towards having all buildings theoretically off the national grid or contributing towards it. The German intention is to ratchet up the requirements in four-year tranches. In South Africa, some acknowledgement has been made to the fact that this may be more difficult to achieve, and the current intention is to ratchet up the requirements in five-year tranches. However, it seems likely that this strenuous timetable may slide somewhat given the realities of a third world country. Part XA has been in place for more than 18 months and is now fully operational across the country, as all transitional periods for its implementation have expired.

In tandem with national and provincial legislation, the policies and bylaws of the local authority are also applicable. However, potential conflict may arise when municipalities' own legislation, e.g. its planning schemes, building bylaws, etc. formulated in terms of its assigned municipal planning and building regulations Constitutionally assigned functions included in Schedule 4 Part B, and which may allow certain flexibility to facilitate alternative development scenarios, dependent on topography, economic conditions, etc., are at odds with laws promulgated at a National level such as the National Building Regulations and which do not consider local conditions and context to the same extent. As a result, changes made at a local level, which may be both desirable and necessary to address changing needs at a social, economic and sustainable level, may conflict with national or provincial legislation and which the local authority has no power to change.

The eThekwini Municipality has identified a need to conduct research to test the application and the appropriateness of the National Building Regulations. The eThekwini Municipality's Development Planning Management and Environment Unit has been specifically challenged by industry players and certain sectors of the public with alleged inappropriate implementation by the municipality of National Building Regulations, Act 103 of 1977. This allegation is often based on an alleged conflict with the SA Constitution, furthermore, to the challengers understanding, their proposals are also fully in compliance with both the Local Authorities Ordinance and the provincial planning legislation.

This research will also test the notion that the NBRs are also less responsive to the duality (different types of built spatial area, systems townships versus schemes area and variations within scheme areas – smaller lots sizes etc.). The eThekwini Municipality's Planning Unit needs to explore and understand the impact of new regulations (SANS Code) and the compliance ability of the same, for example: in previously non-scheme areas where there are smaller sites. The main hypothesis in this regard could be that bigger and more spacious homes are more capable of complying with new codes compared to smaller residential sites whilst taking into consideration the socio-economic situation of those townships and established neighbourhoods. This will also determine where compliance is most likely to happen as well as taking cognisance of the constraints existing in different neighbourhoods.

This research will also test the legal prescription of the NBRs and lack of flexibility to local authorities, restricting incremental upgrades, personal factors and utilization of land, and densification. The cost of compliance with the NBRs also restricts low income housing areas and former township areas from further developing their properties. There is a potential negative impact on the streetscape, and surveillance and general non-alignment with crime prevention through environmental design practices due to the stringent requirements of the NBRs.

1.3 Purpose

This project seeks to acquire a clear understanding of the synergy/non-alignment of the aforementioned legislation, to ensure that the Unit is compliant whilst providing maximum satisfaction of citizens through efficient planning and development practices. This will contribute to enhancing service delivery whilst being practical and reasonable in approach. This will also allow the Unit to revisit past limitations and the need for improved housing development, densification, public transport, and mixed use buildings, in response to the recession and climate change. More importantly, revision of legislation will create a responsive and proactive approach, promoting local government flexibility in development, sustainability, fairness and planning justice.

The recent introduction of the new National Building Regulations Part XA and associated codes of practice (i.e. SANS 10400) has given rise to complaints from the architectural and related industry that it causes delays, increases cost; compromises the practicality of standards, challenges developers and in particular small developers. These complaints are most commonly raised when developing small sites (in areas such as Chatsworth, Newlands, Wentworth, KwaMashu, etc.) or commercial ventures such as guest houses, etc., thus further prejudicing the smaller developer and the owner on what would be small developments and renovations.

There is therefore a need to better understand the National Building Regulations, Act 103 of 1977, its regulations and standards and its impacts on development measured in terms of affordability, efficiency, sustainability, coverage, alignment to planning and environmental legislation, the City's Integrated Development Plan (IDP) goals (the Spatial Development Framework (SDF); the Housing Plan; the Built Environment Performance Plan (BEPP) and its economic plan) and general relevance and applicability to a city like eThekwini Municipality.

The need for a study has been identified to examine problem areas and suggest possible solutions where the NBRs and the planning legislation (in this case the provincial KZN Planning and Development Act, 2008 and the Town Planning Ordinance in terms of special consents) and environmental legislation – National Environmental Management Act, 107 of 1998 are in conflict or rather not aligned and in support of each other. The study should also examine the impacts of the NBRs in terms of contemporary and relevant development practices of the City, such as densification and transit orientated development, mixed uses, inclusionary housing and a full service and uniform standards for all types of development (public and private, low income housing, traditional land) throughout eThekwini Municipality.

The study will also test the relevance of the NBRs, its applicability across the City and its practicality for a metropolis such as eThekwini. It should test the current application of NBRs on public and private housing sectors with specific examination of low income Township Establishment Areas and including development in former declared Townships (such as R 293) and the areas under traditional ownership.

Finally, the study should also recommend clear and possible changes to the NBRs so as to advance its relevance and applicability for current South African cities, using eThekwini as the test case.
This study does not look at environmental legislation.

1.4 Aims and Objectives

The aims of this project are:

- To investigate the impact of the National Building Regulations and planning legislation on development in the eThekwini Municipality.

The objectives of this study are:

- To identify all pertinent legislative (national, provincial, local) requirements in the planning and building controls.
- To understand the imperatives/ interdependence of each, so that the (desired) outcome is achieved, viz. "Citizens will be able to access and use resources to meet their needs without compromising the amenity for others and the resource base of the Municipality in the present and in the future" (eThekwini Municipality's IDP: 2011: 46) so as to promote development of the built environment, ensuring a well-managed, safe, healthy and sustainable environment for all.

- To identify misalignment (if any) with the identified legislations in development practices within the eThekwini Municipal area.
- To understand the impact of non-compliance (if any) with either or all of the aforementioned legislation.
- To make recommendations on how to enable cohesive development practices to meet the outcome and purpose of the Development Planning and Environmental Management Unit based on the findings of the study.

1.5 Research Questions

The terms of reference posed questions to help guide the enquiry for the study:

- Are the current legislative requirements relevant and practical, given the social, economic and developmental circumstances that South African cities have to respond to?
- What is the relationship between planning legislation and the National Building Regulations and Building Standards Act, with particular regard to hierarchy of legislation and Section 7 of the National Building Regulations and Building Standards Act?
- What were other comparative analyses of development practices prior to the compliance with Part XA for small, medium and large developments from a cost perspective, skills requirements, and the time it takes to process plans, using comparative examples of plans submitted to the eThekwini Municipality (before and after the introduction of Part XA)?
- Is the local authority in full compliance with the National Building Regulations and Building Standards Act (and whether so called exemptions areas are in terms of the Act or in terms of the provisions required by the Act such as low income housing, traditional areas; and development undertaken by the public sector)?
- What are the conflicts associated with the National Building Regulations and Building Standards Act, planning legislation (in terms of schemes) and environmental legislation (is it due to conflicts in legislation, interpretation and or practice)?
- What is the practical intent of the National Building Regulations, standards and regulations and is the eThekwini Municipality applying it as required?
- What degree of flexibility is the Municipality allowed when applying the National Building Regulations and Building Standards Act?
- What areas of the National Building Regulations and Building Standards Act, Planning Acts and National Environmental Management Act need to be lobbied with Government to reconsider certain changes in the Act and associated standards to be more supportive, relevant and practical to implement with the South African context, using the eThekwini Municipal area as the pilot?

2 Legislation and Literature Review

2.1 Legislation

2.1.1 The Legislative Context

Section 1.1 explained the context in which a development occurs. The legislative context for this is summarised in **Figure 2.1.**

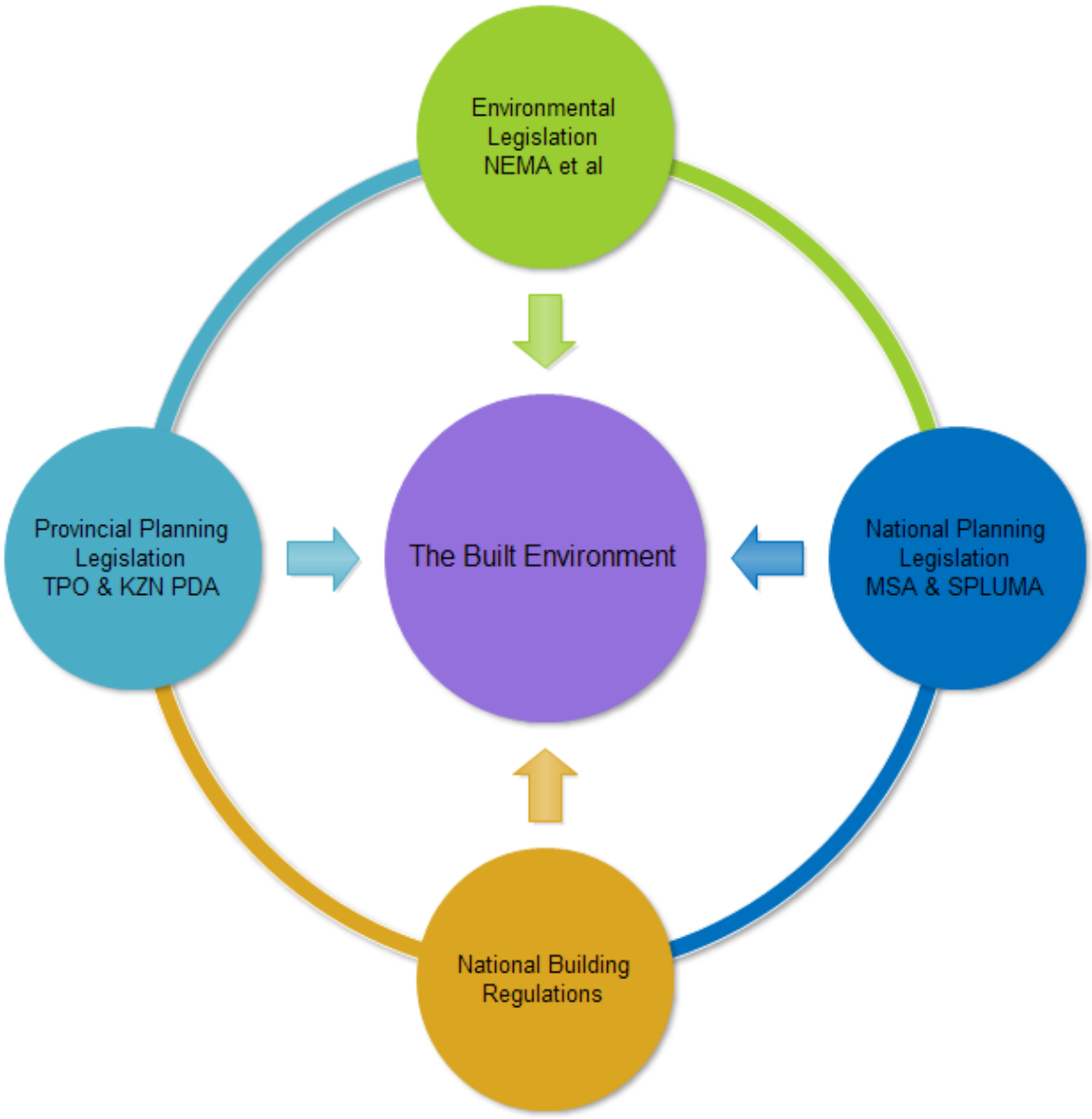

Figure 2.1 Interrelationship of Planning, Environmental and Building Legislation on the Built Environment.

The following sections elaborate on the planning, building and environmental legislation.

2.1.2 Planning Legislation

Planning Legislation in South Africa

Prior to 1990, when the African National Congress, the Pan African Congress and the South African Communist Party were unbanned, town planning in South Africa was undertaken in terms of four provincial town planning ordinances. They were the Cape Land Use Planning Ordinance No 15 of 1985, the Transvaal Town and Township Ordinance No 15 of 1986, the Orange Free State Township Ordinance No 9 of 1969 and the Natal Town Planning Ordinance, No 27 of 1949. In addition, there were a host of so-called Homeland and other Acts that controlled planning in the black areas under the Apartheid regime and the national Physical Planning Act, No 88 of 1967. The national Physical Planning Act, 125 of 1991 was subsequently added to the array of planning Acts.

In order to facilitate the rapid regularisation of irregular and informal development which was then occurring around the country following the lifting of influx control[10] from the rural areas, the Less Formal Township Establishment Act No 113 of 1991 was put in place. Later, the Development Facilitation Act No 67 of 1995 was put in place as a temporary measure to facilitate in particular rapid development of housing - RDP[11] housing in the main. The latter Act was subsequently used for all forms of development.

In 1999 a Green Paper on Development and Planning was published by the National Planning Commission with a view to changing the planning regime in the country. This was duly followed by a Land Use Management Bill, 2002 which was to provide for a uniform, effective, efficient and integrated regulatory framework for planning in the country. This bill was to be published in several forms, the most recent being in 2008, but was never converted into an Act. It was finally to take a successful challenge in the Constitutional Court against the Development Facilitation Act by the City of Johannesburg against the Gauteng Development Tribunal that in June 2010 galvanised a new national planning initiative. This was to culminate in the Spatial Planning and Land Use Management Act No 16 of 2013 (SPLUMA) which was signed into law and gazetted in August 2013, and which would see to the final demise of The Less Formal Township Establishment Act, the Development Facilitation Act, the two Physical Planning Acts and the Removal of Restrictions Act. SPLUMA, however, still has to be operationalised with August or September 2014 being the possible date. The Act also still lacks the necessary companion regulations. Although initial draft regulations are known to have been prepared, they are yet to be placed in the public realm for comment.

At the provincial level, consequent to the new provincial dispensations post the 1996 demarcations with nine provinces, new Planning and Development Acts were prepared for the North West (No. 7

[10] Influx Control refers to the regulation of the movement of people from the rural areas to the urban areas in terms of various Acts which commenced with the Native (Black) Urban Areas Act No 21 of 1923. These Acts were commonly known as the Pass Laws. These restrictions were finally lifted by the Abolishment of Influx Control Act No 68 of 1986.

[11] Reconstruction and Development Programme or RDP – the master policy framework of the ANC designed to address the many social and economic problems facing South Africa when it assumed power in 1994. This included the provision of basic housing for the poor and which consequently became known as RDP housing.

of 1998), KwaZulu-Natal (No 5 of 1998), the Western Cape (No 7 of 1999) and Gauteng (No 3 of 2003). The Western Cape, Gauteng and the initial KwaZulu Natal Planning and Development Acts, although signed into law, were never operationalised. KwaZulu-Natal subsequently prepared a new Planning and Development Act (No 6 of 2008) which was eventually adopted in 2008 and progressively brought into operation. Certain aspects of this Act are however potentially liable to constitutional challenge centred on municipal planning being a responsibility solely assigned to local government in terms of the SA Constitution.

On 7 April 2014 the Premier of the Western Cape Government assented to a new Land Use Planning Act No 3 of 2014 that will replace both the Cape Land Use Planning Ordinance and the stillborn Western Cape Planning and Development Act. The new bill is framework legislation providing for the individual municipalities to each adopt their own municipal planning bylaws, enabling them to overcome any constitutional concerns.[12] Cape Town already has a draft municipal planning bylaw[13] and the Western Cape Government is working on a standard municipal planning bylaw for municipalities without the wherewithal to prepare their own bylaws. This new direction in planning legislation apparently has the support of the national Department of Rural Development and Land Reform and may yet be held up as a model for other provinces to emulate, including KwaZulu-Natal.

The Department of Rural Development and Land Reform has initiated projects to prepare individual Planning and Development Bills for the provinces of Limpopo, the North West, Mpumalanga, the Eastern Cape, the Free State and the Northern Cape, as they had made no progress of their own in moving away from the old provincial town planning ordinances (other than for the Northern Cape).

None of the current operative planning legislation in South Africa is compliant with SPLUMA, and at this juncture there is significant uncertainty as to how these various legislative scenarios will eventually play out, be it in KwaZulu-Natal or elsewhere in South Africa.

A further national planning bill that will impact on planning and the 'normal' approval processes is the Infrastructure Development Bill, 2013 which is aimed at the facilitation and coordination of projects of significant economic and social importance. This clearly seems to indicate the state's own frustration with the normal time frames required to obtain planning approval and subsequently implement projects and its awareness of the need to increase the pace of delivery.

In short, the transformation of planning legislation in South Africa that commenced in the early 1990s is far from complete or certain throughout the country. There is accordingly a host of alternative scenarios for the future, much of which is unknown at present and which seems to evolve ongoingly.

[12] Western Cape Land Use Planning Act No 3 of 2014 has still to be operationalised. The Land Use Planning Ordinance No 15 of 1985 accordingly still operates for the present.

[13] The City of Cape Town Municipal Planning Bylaw is expected to be published for comment in May or June 2014.

Planning Legislation in KwaZulu-Natal

Planning approvals have been and continue to be in a state of transition or flux in KZN in that the old Natal Town Planning Ordinance No 27 of 1949, as amended, was superseded by the KZN Planning and Development Act No 6 of 2008 (KZN PDA). The operationalisation of the KZN Planning and Development Act occurred in a number of separate phases and is still not entirely completed; suffice to mention that by May 2010 the majority of the Ordinance had been superseded. Since then there has been an ongoing intention to modify certain problematic aspects of the KZN Planning and Development Act, and there are currently two bills in this regard; one containing critical amendment to the current Act that are urgently required and another comprising an entire replacement of the existing Act.

To compound this situation, at a National level the much delayed Land Use Management Bill, following the landmark ruling of the Constitutional Court declaring the Development Facilitation Act unconstitutional, was finally reactivated and emerged as the Spatial Planning and Land Use Management Bill. Following several iterations prepared by the Department of Rural Development and Land Reform, the bill was finally signed into law on 2 August 2013 and gazetted on 5 August 2013 as the Spatial Planning and Land Use Management Act No 16 of 2013 (SPLUMA). It is intended that this national so-called "framework planning" Act will be progressively brought into action, but the time frame for this has as yet not been set and accompanying regulations are yet to be advertised for comment let alone be put in place. The most recent suggested date is for implementation is August or September 2014, and various workgroups involving all levels of government, the private sector and the professions, have been set up to work towards this goal.

It has further been noted that the view at a national level is that aspects of the current replacement KZN Planning and Development Bill is not in conformity with SPLUMA and will have to change. KwaZulu-Natal is, however, not unique with its provincial planning problems. If anything, it is more advanced than the other provinces with operational post 1994 legislation; both Gauteng and the Western Cape reached advanced stages with new Planning and Development Acts some years ago, but these were never operationalised.

This however has been a long drawn out process, and today in 2014, there are no less than two amendment bills in the wings. The one bill, the KZN Planning and Development Act Amendment Bill, 2013 caters for critical and urgent amendments and the other bill for a complete rewrite of the existing Act[14]. Currently a number of initiatives have been jointly arranged between the DRDLR and the KwaZulu-Natal Department of Co-Operative Governance and Traditional Affairs (CoGTA). Workshops are being held to deal with different aspects of implementation of the Act. When the Act will finally be operationalised is unknown at this stage.

[14] The most recent iteration of the KZN Planning and Development Bill, 2014 is dated 26 March 2014 and is currently being worked upon the KZN SPLUMA Workgroup 1 with a view to making it not inconsistent with SPLUMA.

A new draft KZN Planning and Development Bill, 2014 was presented on 14 March 2014 at the KZN Planning and Development Act Forum meeting. The changes in the Bill, which are aimed at achieving alignment with SPLUMA, include provisions for the appointment of municipal planning tribunals made up of officials and private sector professionals, delegations by municipal councils to their committee structures, and to the municipal planning tribunal and individuals, a SALGA appeal tribunal for the establishment of a municipal planning bylaw (if a municipality were to elect to follow this route and had the necessary capacity to prepare such a bylaw). This appears to meet the framework requirements of SPLUMA, with the exception of the appeal tribunal, which may have to revert to District Council level appointed appeal bodies if it is not to reside within the specific municipality.

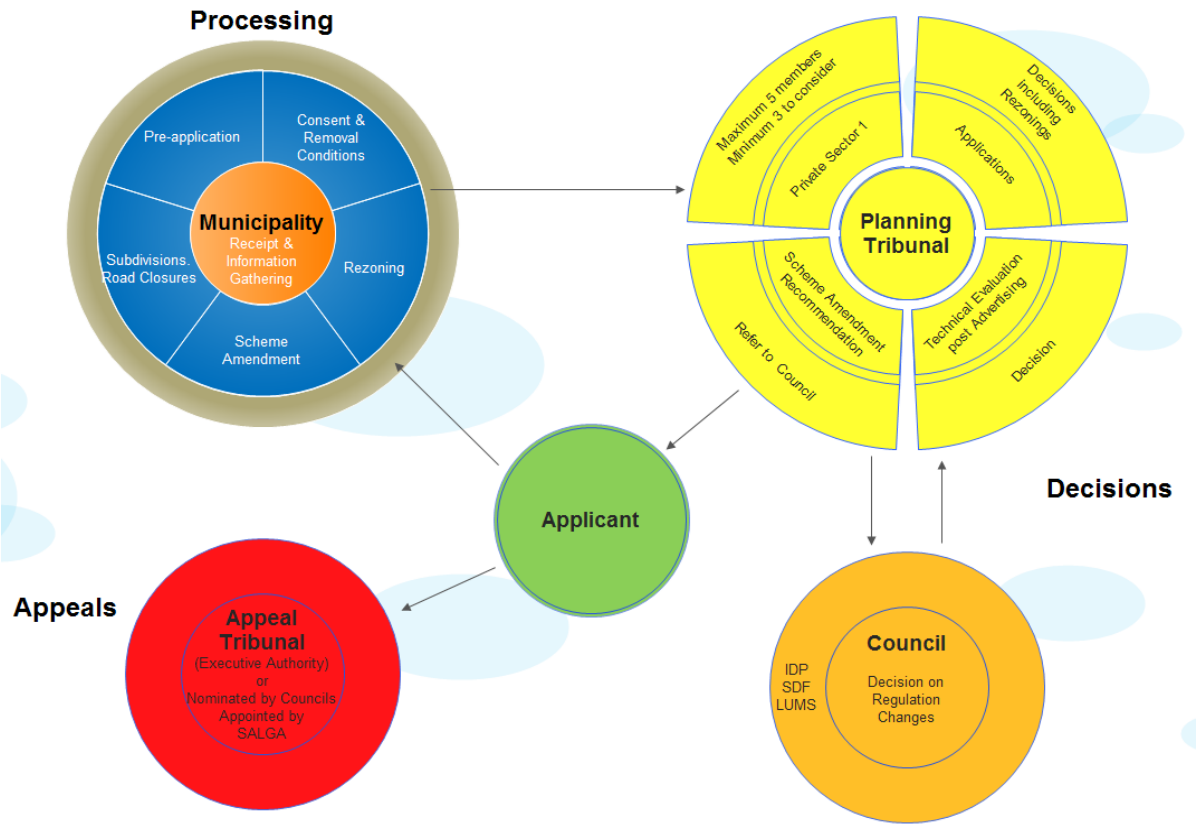

Figure 2.2 Schematic representation of proposed relationships in the KZN Planning and Development Bill, 2014.

2.1.3 Building Legislation

In stark contrast to the way planning legislation is apparently proceeding in the Western Cape with the intention of establishing individual planning bylaws for each municipality, the National Building Regulations and Building Standards Act No 103 of 1977 and its regulations when first introduced in the 1980s, prime motivation was to move away from the then myriad of individual building bylaws, found in each town around the country, with a single comprehensive national standard. This was to help facilitate development with up-to-date standards, making it easier for architects and building designers who would only have to be *au fait* with a single set of rules.

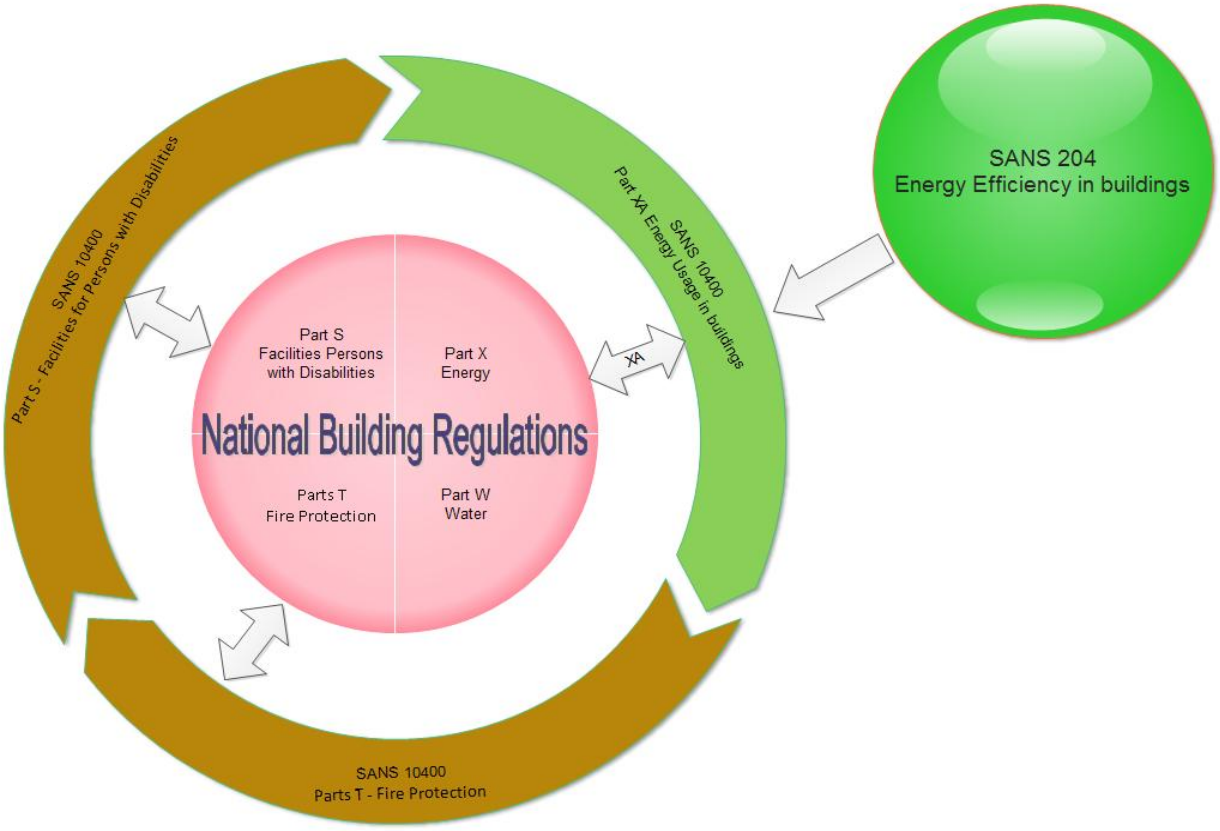

Figure 2.3 **Schematic representation of the inter-relationship of National Building Regulations to the SANS 10400 and that in turn to the SANS 204.**
Note: Only some of the many Parts of the National Building Regulations and the SANS 10400 are indicated above.

In recent time a new section or Part has been added to the Act's regulations. This has been a relatively radical departure from the past building practice in that it now makes obligatory to minimise energy usage in buildings – Part XA. This Part is in turn read with Part XA of SANS 10400 (**Figure 2.3**) which gives greater definition on the requirements and relates to orientation, fenestration, shading, the thermal performance of materials and water heating. The introduction of this Part has reportedly led to great unhappiness amongst certain sections of the architectural profession in the eThekwini Municipal area. It has also been said that this is impacting acutely on small properties in the so-called townships of South Africa, those which do not have the luxury of

greater space about buildings; particularly when alterations and additions are undertaken by the owners to better their living situations.

2.1.4 Environmental Legislation

There is a variety of environmental and related legislation applicable in South Africa. These include the:-

- Environmental Conservation Act No 73 of 1989,
- National Environmental Management Act No 107 of 1998 and its regulations,
- The National Environmental Management: Protected Areas Act No 57 of 2003,
- National Environmental Management: Biodiversity Act No 10 of 2004,
- National Environmental Management Act: Air Quality Act No 39 of 2004,
- National Environmental Management: Integrated Coastal Management Act No 24 of 2008,
- National Environmental Management: Waste Act No 59 of 2008,
- National Forestry Act No. 84 of 1998,
- National Water Act No 36 of 1998,
- Mineral and Petroleum Resources Development Act No. 28 of 2002, and
- National Heritage Resources Act No 25 of 1999.

All of these national Acts are relevant to planning, and have to be borne in mind to a lesser or greater degree by planners when considering planning applications, albeit not necessarily all in each instance.

Several of these Acts reside under the mantle of the National Environmental Management Act, commonly known as NEMA. NEMA while primarily relating to matters of the environment also contains certain principles directly relating to planning where the environment may be affected. The Act requires sustainable development, i.e. where the integration of social, economic and environmental factors in the planning, implementation and evaluation of decisions, ensuring that development serves both present and future generations. The Act, amongst others, provides for the establishment of regulations listing activities that require an appropriate level of environmental assessment, the defines the extent of such assessment and thereby ensures that an integrated environmental management approach is followed. This assessment would take the form of a basic assessment, a scoping report or a full environmental impact assessment report with specialist inputs. The most recent version of the regulations with contained listed activities, i.e., R543-547, came into effect on 2 August 2010.

The National Environmental Management: Integrated Coastal Management Act makes provision for the preparation of coastal planning schemes in which the relevant environmental Minister or MEC and the municipality are required to collaborate on schemes specifying set back lines from the high water mark. The Act provides for a coastal planning scheme to be a part of a municipality's land use scheme. It further indicates that a land use scheme may not be adopted which is inconsistent with a coastal management plan. These schemes have to be approved by both the Minister and the municipality, although it may form part of the municipality's schemes.

Planners need to consider carefully environmental matters, irrespective of whether or not they have previously been ruled upon by an environmental authority. They need to consider the need for placing possible further restrictions or requirements during the adjudication of a planning application and not just assume that everything necessary has been previously adequately covered by the environmental authority. Planning and environment practitioners commonly have slightly different opinions or views on environmental matters and the one's position may not necessarily fully cover the other's position. Furthermore, SPLUMA now requires that the environment be specifically considered in a planning context. Even more so when an application has escaped the need for an environmental assessment on the basis of the application not meeting the minimum threshold set in the listed activities in the NEMA regulations to warrant a specific environmental assessment, but while the application possibly still raising significant environmental concerns which need to be addressed.

2.2 Literature Review

2.2.1 The International Experience – Energy Efficiency in Buildings and Building Codes and Standards

Energy usage in buildings accounts for a large proportion of total energy consumption. Especially in the residential and commercial sectors where the major portion of consumption occurs. This includes energy for the internal climate control of buildings and the energy for the buildings themselves, including appliances, lighting and other installed equipment. The International Energy Agency ascribes 27 per cent of the total consumption of energy to residential usage and 9 per cent to commercial usage, i.e. a little short of 40 per cent of the total (**Figure 2.4**).

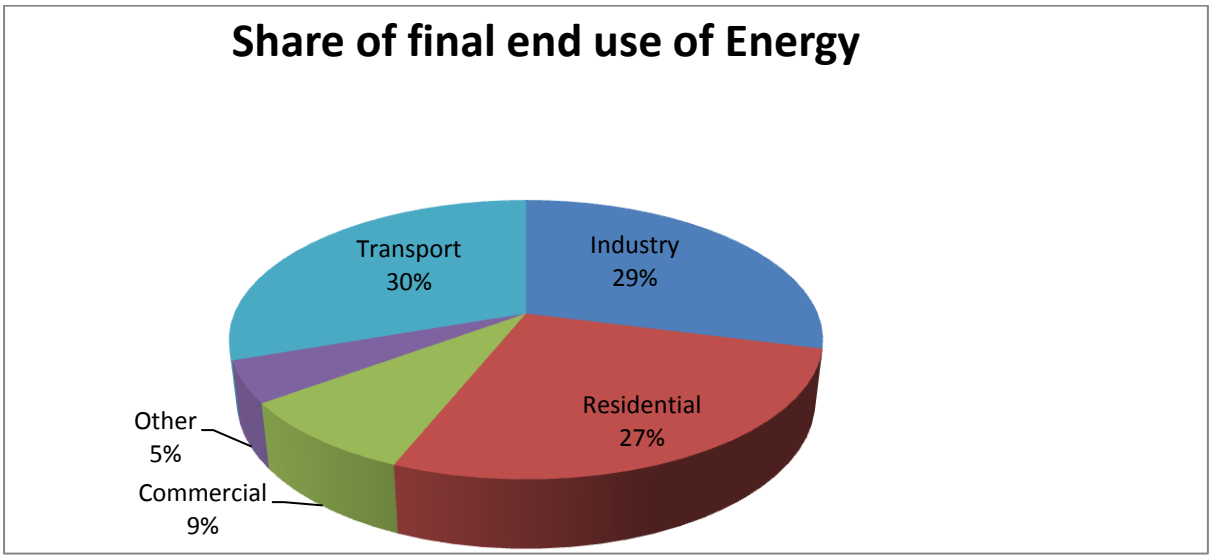

Figure 2.4 Relative percentages of Energy Consumed in Different Sectors.

Energy efficiency requirements in building codes or energy standards for new buildings are therefore among the most important single measures to achieve buildings' energy efficiency. This is more so in times of high construction activity or in fast developing countries[15].

[15] Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings, IEA Information Paper, Jens Laustsen, International Energy Agency March 2008 In Support of The G8 Plan of Action.

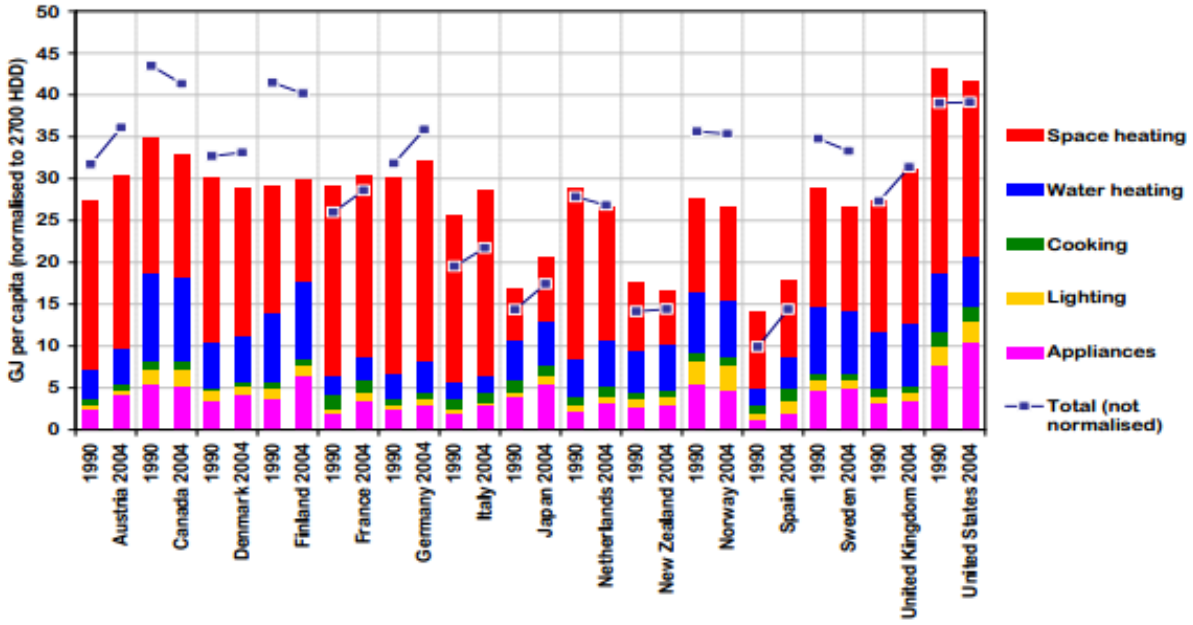

Figure 2.5 Breakdown of energy consumption in residential buildings.

The International Energy Agency (IEA) has indicated in **Figure 2.5** above the breakdown of energy consumption for the years 1990 and 2004 in residential buildings for selected member countries of the Organisation for Economic Co-operation and Development (OECD)[16].

It will be noted that the major proportion of energy consumed is for space heating, usually followed by water heating. Cooking and lighting are relatively minimal by comparison. Appliance consumption varies in different countries. For instance, in the USA in 2004 consumption was very significant, whereas in Germany it was far less. It should be noted that in the USA residential buildings consume far more energy in total than any other, while Spain displayed the lowest overall consumption. Obviously, there is a certain correlation with affluence in the respective countries.

Given the long life of new buildings, the potential for countries to save energy by deploying energy saving technology at relatively minimal cost is considerable. This may then strategically improve the position of residential building in a world beset by increasing energy prices, declining raw materials necessary to generate energy and accelerating climate change.

The inclusion of energy efficiency requirements in building codes ensures that attention is paid during the design phase, and will help to realise the large potentials for energy efficiency in new buildings. Building codes and standards may be set nationally, regionally or at a local level. Where there are large variations in climate, a national level is perhaps more appropriate.

[16] The OECD member countries are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Republic of Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States. The European Commission takes part in the work of the OECD.

The initial appreciation of the need to conserve energy originated in the Nordic countries in the 1950s; then with a view to improving comfort. It was however the oil crisis of the mid 1970s that finally galvanised attention on the need to save energy. The Kyoto Protocol and concerns about rising carbon dioxide (CO_2) levels in the 1980s and 1990s led to energy efficiency requirements being widely introduced in other countries or firmed up further where they were already in place. Mandatory standards now exist in all OECD countries; however, substantial differences persist between the legislation of the states, regions and cities. In rapidly developing countries such as India and China the push has been to improve comfort and to reduce the dramatic increases in energy consumption associated with both a growing population and an increasingly sophisticated population.

Most countries have started with one common standard for energy efficiency, but have over time developed separate standards for small and simple residential buildings and for large, complex or non-residential buildings.

When buildings are designed and constructed, energy efficiency is but one concern amid many. Others concerns include structural, fire safety, room size, and the view from the windows. Energy efficiency in buildings may be low on the list of requirements of the designer. Initial construction costs may be considered more important by the designer than lifecycle costing. These all tend to act as barriers to implementing energy efficiency in buildings.

Energy efficiency requirements can be set in different ways, prescriptive, trade off, model building, energy frame or energy performance. Requirements are set either on a building part or at a component level or as an overall maximum for a calculated value. The different methods all have different advantages and disadvantages. U-value and efficiency based codes, in particular the prescriptive model, is often the easiest to understand for most designers, since the values are given at a disaggregated level. Standard construction and installation methods which comply with the energy efficiency requirements may be given, and buildings may then be constructed without undertaking onerous calculations or using complicated computer models.

It is not easy to determine which type of code is optimal as it is often dependent on the actual experience in the country and the development of the construction industry. Often, several types of energy efficiency requirements exist side by side as alternatives. Comparison of building codes are difficult between the different types of codes, and can only be justified for codes based either on individual values or performance.

Russia

Russia is the world's tenth largest economy, but it is the third largest energy consumer. In terms of GDP, Russia's energy consumption is more than three times that of its closest peers, Spain and Brazil. Russia is more than twice as energy intensive as the next most energy-intensive BRIC(S) country, China, in terms of energy consumed per unit of GDP, and nearly four times as energy intensive as China in terms of energy consumption per capita. In 2008 Russia had not yet embraced the concept of energy efficiency. As evidence of this fact, there existed no coordinated, defined national energy

efficiency strategy or policy, nor any authority responsible for improving energy efficiency. The former President Medvedev made several public statements identifying Russia's inefficient use of energy, and the associated economic and ecological consequences. If this is translated into policy, the policy implemented as law, and the laws implemented in the form of funding or enforceable regulations, Russia may well be able to effectively reduce its energy intensity[17].

As the Russian building energy codes have strengthened since 1998, the demand for more efficient windows and insulation has also grown. The current code (with 24 different requirements by climate zone) is Construction Norm and Regulation 23-02-2003 (Ministry of Regional Development of Russian Federation 2002). Among factors expected to help drive sustainable property development in Russia in the future are Government policies and initiatives to promote energy efficiency, including stronger implementation of building energy codes and requirements for substantial energy efficiency improvements in all government buildings.[18]

India

The Government of India has produced the 'Energy Conservation Building Code (ECBC)' code. This code is voluntary and applicable to all buildings or building complexes that have a connected load of 500 KW or a contract demand of 600 KVA, whichever is the greater. The code addresses the minimum performance standards for energy efficiency in a building covering the building envelope, the mechanical systems and equipment, hot water heating, interior and exterior lighting and electrical power and motors.[19]

In India, the residential building stock holds the greatest potential of energy savings, but its energy use will increase by 800% without any action. This confirms the urgent need to develop solid energy-efficient policy-packages in India to prevent the building sector's energy use from dramatically impacting on climate change and in particular the residential sector, which is much larger than the commercial sector. The ECBC has yet to be adopted by most of India's states and therefore the majority of new commercial buildings are not built under the requirements of the ECBC. However, the Indian Bureau of Energy Efficiency has outlined particular areas where the code could become mandatory. Two states (Rajasthan & Odhisha) have already mandated the ECBC, six others (Gujarat, Karnataka, Punjab, Kerela, Uttar Pradesh & Uttarakh and) have initiated the process and seven additional states (MP, Haryana, Chhattisgarh, Andhra Pradesh, Tamil Nadu, West Bengal & Maharashtra) have been identified as focus states by the BEE for the year 2012-13. Although the ECBC does cover a small part of the residential sector, the majority do not apply, and their energy and emissions savings potential are not addressed. Residential buildings, which represent the largest share of India's future building stock, have no dedicated building code: this must become a national priority.[20]

[17] Energy Efficiency in Russia: Untapped Reserves; The World Bank & International Finance Corporation, 2008
[18] Analysis of the Russian Market for Building Energy Efficiency; US Department of Energy, 2012
[19] Confederation of Indian Industry CII-Sohrab ji Godrej Green Business Centre
[20] GBPN, 2012

Australia

The Australian National Construction Code (NCC) is an initiative of the Council of Australian Governments (COAG) that incorporated all on-site construction requirements into a single code from 2011. The NCC comprises the Building Code of Australia (BCA) and the Plumbing Code of Australia (PCA). All three volumes comprising the code are drafted in a performance format, allowing a choice of deemed-to-satisfy provisions or flexibility to develop alternative solutions based on existing or new innovative building, plumbing and drainage products, systems and designs.[21]

The building sector is viewed as both a significant contributor and one of the fastest growing sources of greenhouse gas emissions, with energy used in buildings accounting for approximately 20% of all energy related emissions. Since 2006, the BCA has contained energy efficiency measures for all building classifications. The inclusion of energy efficiency measures in the BCA is part of a comprehensive strategy being undertaken by the Australian, State and Territory Governments to reduce greenhouse gas emissions. These provisions apply to all classification of buildings covered in the NCC. The ABCB has produced information handbooks to assist users in understanding the energy efficiency provisions and has also developed a series of Awareness Resource Kits to assist training providers. Modules 3 and 4 relate to the energy efficiency provisions in the BCA.

Australia has a varied climate, which leads to different locations around the country having different heating and cooling requirements. In the energy efficiency provisions of the NCC, these varying requirements are addressed through the use of climate zone maps. The climate zone maps consist of eight climate zones and were created using Bureau of Meteorology climatic data with two supplementary zones added to accommodate an additional temperate zone and an alpine area. The climate zone boundaries are also aligned with local government areas and are therefore subject to change from time to time. Alternatively, one can use the software of the Nationwide House Energy Rating Scheme (NatHERS) which recognises 69 distinct climate zones.

It is noted that the equivalent of Durban on the Australian eastern seaboard, viz. 30 degrees south, falls within Zone 2. Climate Zone 2 is classified as having warm and humid summers with mild winters where a desire for cooling is likely to predominate for most of the year. Within each main zone are many regional sub-zones determined by local geographic features including wind patterns and height above sea level.[22]

Canada

The Canadian National Energy Code of Canada for Buildings 2011 (NECB) provides minimum requirements for the design and construction of energy-efficient buildings and covers the building envelope, systems and equipment for heating, ventilating and air-conditioning, service water heating, lighting, and the provision of electrical power systems and motors. It applies to new buildings and additions.[23] The document is targeted for adoption by the provinces and territories.

[21] http://www.abcb.gov.au/
[22] http://www.yourhome.gov.au/australian-climate-zones
[23] http://www.nationalcodes.ca/eng/necb/index.html

However, it can also be used as a reference document by designers and owners in order to see the effects of varying certain components.

The NECB applies to all buildings that do not fall within the application of Part 9 (houses and small buildings) of the National Building Code (NBC) and to energy-consuming elements on the building property, such as landscape lighting. For residential buildings, this means all buildings that are more than 600 m^2 in building area or more than 3 storeys in building height.

The NECB also apply to some Part 9 buildings; specifically all buildings containing medium hazard industrial occupancies (F2) and other buildings containing non-residential occupancies where the non-residential spaces are more than 300 m^2 floor area.

The NECB provides three approaches to compliance:-

- Prescriptive Path – "simple" prescriptive requirements.
- Trade-Offs - allowed between related building elements (e.g., higher roof insulation levels may be traded off against lower wall insulation levels).
- Performance Compliance Paths – full-building energy-use modelling.[24]

The NECB is very closely related to the **American** ASHRAE 90.1-2007 standard, but there are a number of differences:-

- Both have traditional prescriptive compliance paths.
- Both have performance, compliance paths (whole building modelling/simulation), however:
    - NECB is energy-based.
    - ASHRAE is energy-cost based.
- Both have trade-off paths, however:
    - ASHRAE has the trade-off paths in the building envelope only.
    - NECB has the trade-off paths in the building envelope, lighting, HVAC and hot water heating.[25]

Germany

The Energieeinsparverordnung (EnEV), or Energy Conservation Regulations, is Germany's energy efficiency building code. One of the most stringent codes in the world, the EnEV sets standards for insulation, fenestration, envelope, and HVAC. The code originally was passed in 2002, and meets the requirements of the European Union - Energy Performance of Buildings Directive (EU EPBD)).[26]

[24] The National Energy Code for Buildings: Overview and Issues: Canadian Home Builders' Association, 2011
[25] http://www.buildingprofessionals.com/2013/07/16/british-columbia-adopts-new-building-code-requirements/
[26] http://energycodesocean.org/code-information/germany-energy-conservation-regulations-buildings-enev-2009

European Union

Reducing energy consumption and eliminating wastage is one of the main goals of the European Union (EU). EU support for improving energy efficiency is expected to prove decisive for competitiveness, security of supply and meeting its commitments on climate change to the Kyoto protocol. Based on 40 per cent of energy being consumed in buildings the EU has introduced legislation to ensure less energy is consumed. The EPBD was first published in 2002 and requires all EU members to enhance their building regulations and introduce energy certification schemes for buildings. The introduction of national laws meeting EU requirements has, however proved challenging, as the legislation had many advanced aspects. It was a great opportunity to mobilise energy efficiency in EU buildings, but also a formidable and continuing challenge for many EU countries to transpose and implement the Directive.[27]

[27] www.epbd-ca.eu

2.2.2 The South African Experience - Energy Efficiency in Buildings and Building Codes and Standards

In creating its energy efficiency in building regulations or standards, South Africa has borrowed from best practice gained from the international experience. It is based on work undertaken by a team of technical experts operating as the National Committee SABS SC 59G, "*Construction standards – Energy efficiency and energy use in the built environment*" under the auspices of the SABS Standards Division and at the request of the Department of Energy. After a period of 8 years, this effort finally led to the publication of energy efficiency guidelines prepared by the committee and known as SANS 204 – *Energy Efficiency in Buildings*.

SANS 204:2011 - Energy Efficiency in Buildings is an aspirational document that sets out a direction or intent to ensure energy efficiency in buildings in South Africa. It is not a document to be strictly complied with *per se*, although there are certain exceptions where the mandatory SANS 10400 Part XA directly refers to it. It includes a climatic map of South Africa, which is broken into 6 climatic regions or zones. Durban falls in climatic Zone 5 – Sub-tropical Coastal which runs from south of East London to the Mozambique border, and includes the inland towns of Umtata (Mthatha), Pietermaritzburg and Ulundi.

SANS 10400 Part XA:2011 on the other hand, is part of the overarching SANS 1040 standard that supports the National Building Regulations and Building Standards Act No 103 of 1977, as amended, and specifically Part XA of its regulations. Part XA being but the first part of Part X; the other Parts XB, XC, etc. are still to follow. SANS 10400 Part XA sets out in detail the requirements of Part XA of the National Building Regulations. Like some of the international codes, it enables alternative routes to be followed in conforming to its requirements, *viz*. using deemed-to-satisfy rules (the prescriptive route), the undertaking of a rational design by a competent person or by using approved software. It has leaned heavily upon the German Energy Conservation Regulations in intending to follow a ratcheting up of standards at regular intervals.[28]

As part of the introduction or roll out of Part XA a number of publications and presentations have been produced by various parties, ranging from the NRCS, professional bodies, and municipalities to consumer bodies and companies. Some focus on a narrow field, while some are presented in greater depth and cover the broader topic. These are all available following a search on the internet. Some of these are listed below as downloadable PDF e-files or as html pages.

- **Architectural Continuing Professional Development (CPD)** – Presentation by John "Butch" Grewar, McCoy's Glass Solutions.
- **Fenestration Calculations Guideline: SANS 10400-XA2011 & SANS 204:2011** – M Keuter, 2012.
- **Guidance on How to Comply with Regulation XA**: South African Institute of Architectural Technologists (SAIAT), Swiss Agency for Development and Cooperation SDC, State Secretariat for Economic Affairs SECO & National Regulator for Compulsory Specifications (NRCS). *

[28] Per. comm. Rudolf Opperman, NRCS.

- **Regulating Energy Efficiency in Buildings** - South Africa – Presentation by Rudolf Opperman, NRCS, 2011.
- **Regulation X & SANS10400 XA - Energy Usage in Buildings**: Presentation by Frans Dekker, SAIAT.
- **SANS 10400-XA Energy usage in Buildings**: An Architect's Guide to Compliance in Home Design: SANS 10400-XA Guide: A Nedbank 'Greener Buildings' Initiative: Sustainability Institute. *
- **SANS 204 - Energy Efficiency in Buildings**: Insulation Products (InsulPro), South Africa – Internet Information Sheet.
- **Selection Guide for Glazed Architectural Products introducing Energy Efficiency in Fenestration**: AAAMSA Fenestration, 2008.
- **The Guide to Energy Efficient Thermal Insulation in Buildings**: Thermal Insulation Association of South Africa (TIASA), 2010.
- **The National Building Regulations Part XA**: Energy Efficiency – Presentation By Peter Henshall-Howard: Head: Building Development Management, City of Cape Town.

***Gives a broad overview.**

2.2.3 The International Experience – Planning and Planning Legislation

Much of the present legal system applied to planning throughout the world, has its roots in English Planning Law; this has had an inordinate influence on planning, particularly where the United Kingdom established colonies throughout the world. These planning laws have obviously evolved over time.

United Kingdom[29]

Town and country planning in the United Kingdom is the part of land law which concerns land use planning with a view to achieving sustainable economic development and a better environment. Each country composing the United Kingdom has its own planning system that is responsible for town and country planning and which is devolved to the Northern Ireland Assembly, the Scottish Parliament and the Welsh Assembly. The main planning legislation is: -

- Town and Country Planning Act 1990, for England and Wales
- Town and Country Planning (Scotland) Act 1997
- Planning (Scotland) Act 2006
- Planning (Northern Ireland) Order 1991
- Planning and Compulsory Purchase Act 2004
- Planning Act 2008

Historically the UK town and country planning system emerged in the immediate post-war years following concerns raised over industrialisation and urbanisation. The main concerns included pollution, urban sprawl, and ribbon development.

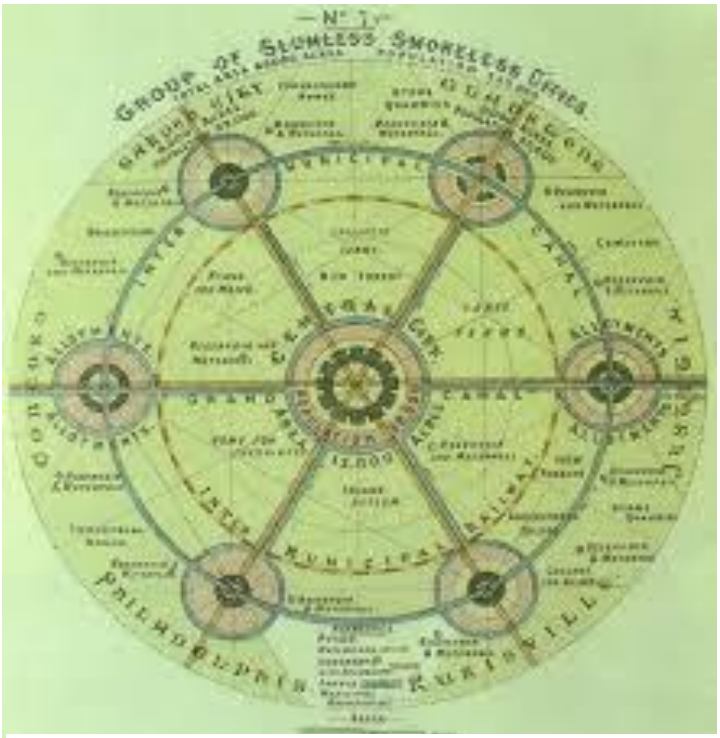

Figure 12- Garden Cities Concept – central city with surrounding satellite garden cities or towns.

These concerns were largely expressed through the works of Ebenezer Howard (1850-1928), a self taught planner and free thinker, who led the garden city movement that sought to separate land uses and bring the country into the town. Also very instrumental in planning's evolution in this direction were the philanthropic actions of industrialists such as the Lever Brothers and the Cadbury family who implemented Howard's thinking in establishing respectively the new model towns of Port Sunlight (1888) and Bourneville (1900) and in the

[29] http://en.wikipedia.org/wiki/Town_and_country_planning_in_the_United_Kingdom

works of architect/planners such as Raymond Unwin (1863-1940) and Patrick Abercrombie (1879-1957). The former was responsible for Letchworth Garden City and the latter for the replanning of post-World War II London leading to the construction of the New Towns of Harlow, Crawley and Harold Hill. Abercrombie, together with Robert H Mathews, also proposed the Scottish New Towns of East Kilbride and Cumbernauld in their Clyde Valley Regional Plan.

The Housing and Town Planning Act, 1909, the Housing and Town Planning Act, 1919, the Town Planning Act, 1925 and the Town and Country Planning Act, 1932 were initial moves made towards modern legislation. At the outbreak of the Second World War a series of Royal Commissions looked at the problems of urban planning and development control. Patrick Abercrombie developed the Greater London Plan for the reconstruction of London, which envisaged moving some 1.5 million people from London to new and expanded towns. This resulted in the New Towns Act 1946 and the Town and Country Planning Act, 1947.

The Town and Country Planning Act, 1947 in effect, nationalised the right to develop land. It required all proposals, with a few exclusions, to secure planning permission from the local authority, with provision to appeal against a refusal. It introduced a *development charge* to capture the planning gain, which arises when permission to develop land was granted. This Act was abolished by the Town and Country Planning Act, 1954. Green Belts were added in 1955 *via* a government circular.

The Town and Country Planning Act, 1947 introduced a requirement, which still exists, for local authorities to develop Local Plans or Unitary Development Plans to outline what kind of development is permitted where, and to mark special areas on Local Plan maps. It did not introduce a formal system of zoning as used in the United States. Counties developed Structure Plans that set broad targets for the wider area. Structure Plans were always problematic and were often in the process of being replaced by the time they were formally adopted. The planning system underwent a number of alterations, which were consolidated in the Town and Country Planning Act, 1990.

Three further Acts related to planning are associated with this primary Act: The Planning (Listed Buildings and Conservation Areas) Act, 1990, the Planning (Hazardous Substances) Act, 1990, and the Planning (Consequential Provisions) Act, 1990. Almost immediately after parliament passed these four Acts, the government had further thoughts on the control of land development, which led to the Planning and Compensation Act, 1991, which made important alterations to many of the Planning Acts provisions.

The Planning and Compulsory Purchase Act, 2004 made substantial changes to the English Development Plan system. It did away with both Structure Plans and Local Plans, in favour of Local Development Frameworks (LDFs), which are made up of a number of Local Development Documents (LDDs) and Supplementary Planning Documents (SPDs). The Regional Spatial Strategy (RSS), which is produced by Regional Assemblies in England, replaced the Structure Plan as the strategic planning document. A variation on this approach exists in Wales.

Local Authorities are now required to produce Local Development Schemes (LDS) - which outlines the work the LDDs/SPDs they intend to produce over a three-year period, and Statements of Community

Involvement (SCI), which outline how the Council will involve the local community. All LDDs and SPDs have to be accompanied by a Sustainability Appraisal (SA) and a Strategic Environmental Assessment (SEA). The SEA is a requirement under European law. Planning Policy Guidance Notes are also gradually being replaced by Planning Policy Statements.

Russia[30]

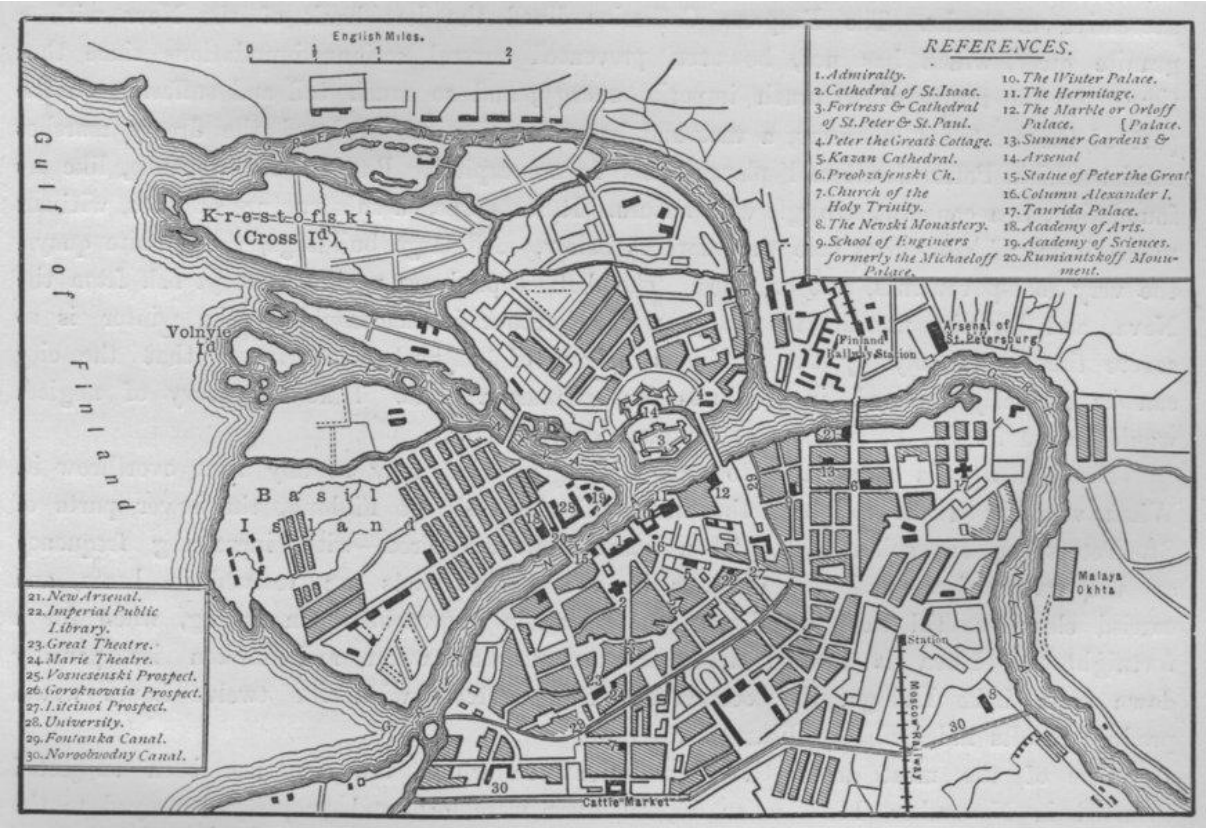

Figure 13 - Saint Petersburg - 1882

Tsar Peter the Great founded Saint Petersburg in the early 18th century (1703) based on the idea of regularity. In the second half of the 18th century, this regular planning method spread to many cities of the then Russian Empire. These were used in building new cities and reconstructing old ones. Both new construction and re-planning violated existing land use boundaries and required pulling down buildings which had been put up earlier. In the first part of the 19th century urban planning became even stricter when the **Building Code** was approved; this was active until the Revolution of 1917.

The search for new urban planning solutions which had started in the 19th century Europe also spread to Russia. Many projects of "garden-cities" and "cities for workers" appeared, which were partially implemented. However, the main obstacle to their implementation was the existence of private property. Land nationalization in 1918 made it possible to conduct large-scope experiments

[30] Russian Urban Planning: modern ideas (Legislative Base, Spatial Planning, Transport and Ecology, GIS Technology) - Anna Beregovskih, Irina Grishechkina, Dghamilia Shalakhina, Sergey Miller, Mikhail Petrovich: http://www.corp.at/archive/CORP2010_239.pdf

in this direction without this obstacle. The example followed was largely based on Le Corbusier's[31] planning philosophy of freely spaced buildings standing in green areas between motorways.

When the subsidies for housing construction were cut and private property on land restored in the 1990s, urban planning based on former standards came to an abrupt standstill. Attempts made by the architects of the "Soviet" school to work with new customers using old traditions failed dismally. The new customers needed, first, to register their right to land ownership and, second, to obtain authorization for site development. The social infrastructure, ecological requirements and space organization were looked upon as obstacles to new socio-economic relations and investment.

Reconsideration of relations in urban planning resulted in the **Urban Planning Code of the Russian Federation** being adopted in 2004. It passed on the initiative of **General Plans** development to the municipal bodies (up until 2004 the planning documentation of the lower level could only be based on those of the upper level).

The General Plans of city districts and settlements became the main basis for developing a new type of document: **The Rules of Land Use and Development**. These Rules are a law developed by the local administration and are functionally very close to the European and North American Zoning Plans. The General Plans and Rules are the basis for developing Planning Design and Land Surveying Projects for a particular area. A boost to the development of General Plans, Planning Designs and Land Surveying Projects was given when they were included in the obligatory document package for obtaining a construction permit.

The **Urban Planning Code of 2004** was innovative in that it specified the titles, purpose and content of the documents dealing with territorial planning at national level. Instead of a single document – the Population Distribution Scheme of the Russian Federation – it envisages the development of a large number of Territorial Planning Schemes by branch.

Succinctly the code[32] covers and includes the following: -

- Town-planning activities, including the cities and other settlements, town-planning zoning, the planning of the territories and architectural and construction design;
- Territorial mapping - development planning of the territories, including the establishment of functional zones, the determination of planned allocation of objects of federal value, objects of regional value, objects of local value; etc.;
- The sustainable development of the territories;

[31] Le Corbusier (1887-1965), was a Swiss-French architect, designer, painter, urban planner, writer, and one of the pioneers of what is now called modern architecture. His career spanned five decades, with his buildings constructed throughout Europe, India, and America. Corbusier prepared the master plan for the planned city of Chandigarh in India.

[32] Town Planning Code of the Russian Federation: http://cis-legislation.com/document.fwx?rgn=7632

- Zones with special conditions for the utilization of the territories, including security, sanitarian protected zones, zones for the protection of objects of the cultural heritage, water preserving zones, inundated areas, flooding, zones of sanitarian protection of sources of drinking water;
- Functional zones - zones for defining borders and the functional purpose;
- Town planning zoning - zoning of the territories of municipalities for the purpose of determination of zones and establishment of town-planning regulations;
- Territorial zones - zones in which land-use regulations and site development borders are defined. These are fixed town-planning regulations.

India[33]

Figure 14 - Mohenjo-Daro

India, and in particular the Gujarat State, has some of the oldest examples of town planning in the world, with laid out towns such as Harappa and Mohenjo-Daro dating back to the Indus Valley civilization (3300–1300 BCE). There is however no evidence of this planning having been codified. During the period ranging from the 5th century to the 19th century, several kingdoms and dynasties ruled the Gujarat region, the most predominant being that of Solanki dynasty and Mugal period.

[33]Town Planning & Valuation Department: Government of Gujarat: Town Planning History: http://townplanning.gujarat.gov.in/planning-development-policies/town-planning-history.aspx

During this period, though the city planning had an approach of defensive planning to protect citizens from the attacks of invaders, but it also recognized spatially various classes of people and their activities, which were basic factors in determining planning and development. This could be termed as various zones, which were located in appropriate places having direct access from all directions of the settlement. The major administrative areas as well as trading areas were located in such a way that they could cater to the needs of town/city as well as the hinterland.

During modern times, the organized efforts of town planning commenced during the British period (1858-1947), which not only provided legal support, but also provided a guideline for preparing planning proposals. The Gujarat State, as an example, was a part of the then Bombay State which enacted the Bombay Town Planning Act, 1915. This empowered the local authorities to prepare town planning schemes for fast developing areas of the city or town. The town planning scheme was micro level planning with cadastral numbers, but was restricted to only portions of the city. New legislation was enacted in the form of a Bombay Town Planning Act, 1954, which empowered the local authorities to prepare Development Plans for city or town as a whole. With this new legislation, there was a sudden increase in Town Planning activities. Many local authorities undertook the preparation of a Development Plan. Both these Acts provided legal support, and a guided process in preparing Development Plans or Town Planning Schemes. An important aspect of this process was that it allowed for public participation in planning.

In 1960, the erstwhile Bombay State was split into two separate states - Maharashtra and Gujarat. Both states inherited the laws and Acts prevailing at the time for Bombay State. The State of Gujarat therefore, enacted a new Act – The Gujarat Town Planning and Urban Development Act, 1976, which has very comprehensive planning legislation. The Act encompassed a wide range of planning, starting from regional planning at macro level to the Town Planning Scheme at a micro level. The Act empowers the State Government to recognize, identify and delineate areas having the potential for development. The planning process was therefore no longer necessarily attached to any existing settlement or local body.

With rapid urbanization, often with associated problems exhibited, planning for future urban development is considered very essential. The general confusion of haphazard and non-conforming land use patterns, lack of adequate and efficient services / facilities and an overall deteriorating environment demanded a systematic approach in the planning and development of urban areas, which the legislation sought to provide.

Australia [34]

Urban planning in Australia has evolved from the time of early British colonial settlement, and has been heavily influenced by contemporary planning movements in Britain, the USA and Western Europe. However, over the past century distinctly Australian responses and solutions to Australian urban issues have developed.

The first examples of town planning in Australia occurred during the early phases of the Colonial era, where critical decisions locked in 'path dependency' for the future form of cities. Typically, this involved colonial governors undertaking surveying for land grants and subdivisions, and making executive decisions on the location and construction of basic infrastructure to support the early penal and military settlements which were the functional and practical needs of the Colonial administration, as opposed to satisfying more lofty civic or aesthetic ideals.

Figure 15 - Adelaide City Centre Plan 1837 – A Grid Layout surrounded by open space.

Despite these humble, utilitarian beginnings, there were places where clear planning and design of settlements occurred. One of the earliest forms of a planned settlement in Australia involved the work of a Colonel William Light, the Colonial Surveyor and the Surveyor-General of the colony of South Australia in the planning and designing of the original city centre grid for Adelaide in 1837. While Light's plan was not entirely realised, it is widely regarded as a fine achievement of the Colonial Era civic design.

Australia's rapid urbanisation meant urban planning became an increasingly important issue. Early town planners focused on the orderly planning of cities, closely following international contemporary town planning and urban reform movements (especially from the UK), where urban planning aimed to improve urban health, efficiency and aesthetics.

[34] Urban Planning in Australia - http://en.wikipedia.org/wiki/Urban_planning_in_Australia

In New South Wales the desire to improve planning resulted in the establishment of a Royal Commission for the Improvement of Sydney which commenced in 1908, focusing on transportation, slums clearance, future growth and aesthetics. The Garden City movement of the UK was also influential and was adopted as a design strategy in several areas of Australian cities.

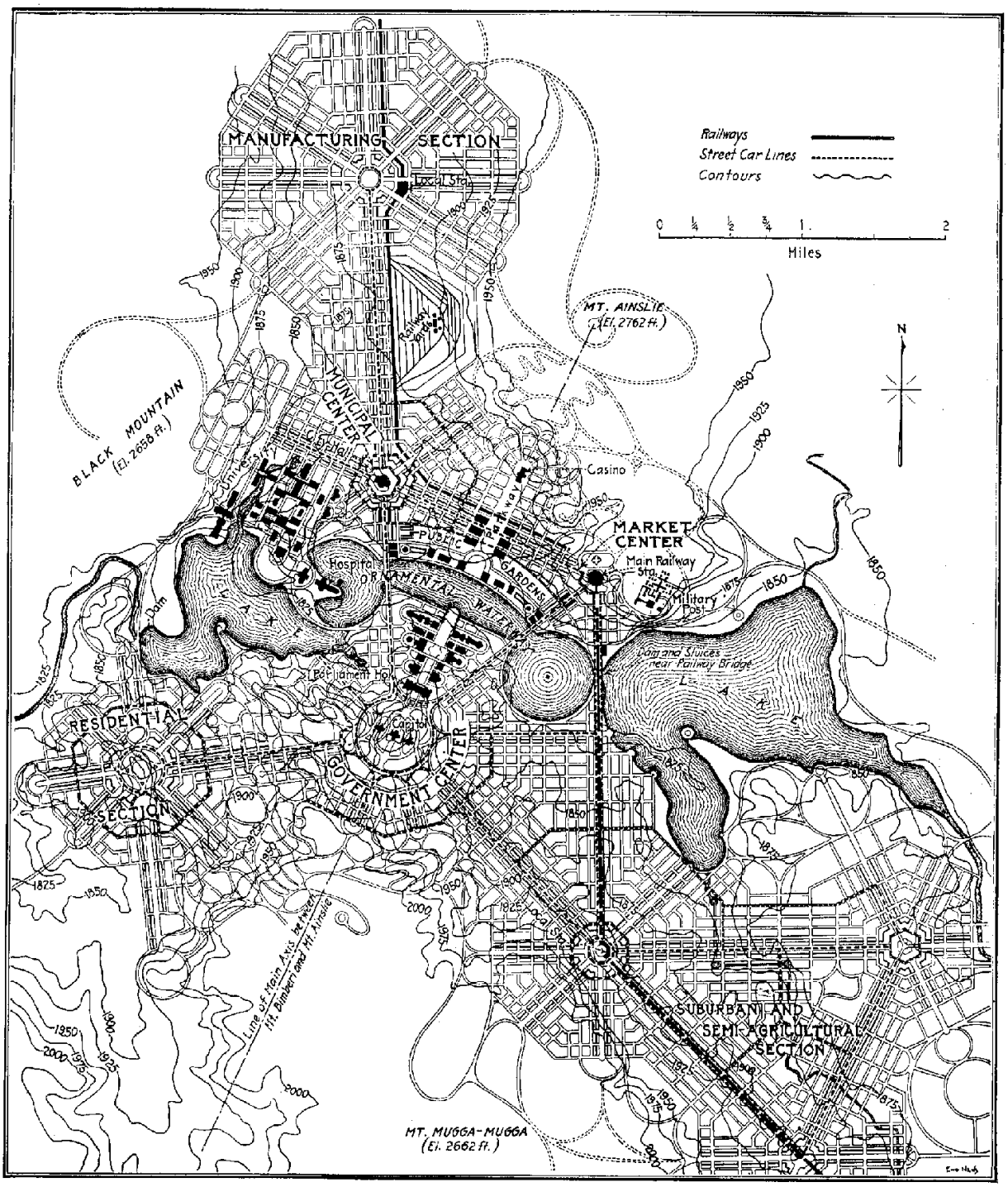

Figure 16 - Canberra

Between 1911 and 1912, one of the earliest international contributions made by Australia to urban planning theory and practice resulted from an international competition held to design Australia's

new federal capital, Canberra. The winning design was submitted by the American architects Walter Burley Griffin and Marion Mahoney, with the design reflecting state of the art planning concepts of the time and which represented an early international example of a planned city.

Australia's extended period of post war economic growth resulted in negative aspects associated with rapid urban growth. Typically, many capital cities engaged in creating metropolitan wide spatial plans to guide development over long periods of up to 20 years or more. Particular focus was given to land release on the rural-urban fringe, establishing a hierarchy of urban centres, the construction of new public housing estates and a preference towards building car based infrastructure (such as new highways, etc.). Examples include the Sydney County of Cumberland Plan of 1948 (regarded as the first metropolitan plan for Sydney) and the Sydney Region Outline Plan of 1968.

From the early 1970s the Australian Federal Government became directly involved in urban policy, establishing a federal Department of Urban and Regional Development. Federal government involvement included addressing sewage servicing backlogs in major metropolitan centres, the establishment of growth centres and new towns de-centralisation, funding infrastructure and public housing.

Although urban planning is not specifically referred to in the Constitution of Australia as a Federal Government responsibility, the Federal Government does play a role in the urban planning process in Australia, largely through the regulation of development in areas that are of national environmental significance, or through development activities on federal owned land. Examples include where the Federal Government has actively sought to provide strategic guidance and direction in urban policy in the early 1970s, the “Building Better Cities Program” of the mid-1990s, and, more recently in 2011 the release of a National Urban Policy. The latter established for the first time the Australian Government's overarching goals for the nation's cities, and how to make them more productive and sustainable.

The principal piece of Australian Commonwealth legislation impacting on urban planning decisions was the Environment Protection and Biodiversity Conservation Act, 1999 which established a framework for assessing impacts on threatened species of national significance, such as world heritage sites, nuclear actions, and national heritage places, amongst other considerations

Australia's federal system of governance with six states and two territories involves each have their own urban planning laws and procedures, resulting in separate systems of planning and land use management, including separate administrative departments that oversee and regulate planning and land use activities. Consequently, there is no single urban planning system for Australia – rather, there are a number of planning systems that operate largely independently of each other along state based lines. Land use planning in New South Wales is principally controlled by the Environmental Planning and Assessment Act, 1979. However, in Western Australia urban planning is primarily directed by the Western Australian Planning Commission and the implementing legislation is the Environmental Protection Act, 1986 and the Planning and Development Act, 2005.

United States of America[35]

Figure 17 - Washington DC

In the United States, early New England towns were formally laid out along wide elm-lined central roadways or commons exhibiting conscious planning. Annapolis, Philadelphia, and Paterson, were built around such plans; but the most prominent example is the City of Washington, D.C., laid out according to a plan prepared by Pierre Charles L'Enfant in 1791, under the supervision of George Washington and Thomas Jefferson. It is a rectangular plan with diagonal main thoroughfares superimposed with the Capitol Building as the central focus of an elongated central open space or mall lined with public buildings along the axis and with the Lincoln Memorial as a focal point at the

[35] City Planning in the United States http://www.infoplease.com/encyclopedia/world/city-planning-city-planning-united-states.html

opposite end of the mall. The Washington Monument is centrally located within the mall approximately opposite the off-set White House, which is located on a transverse open space axis.

In the 19th century, Frederick Law Olmsted was a pioneer in city planning, especially focusing on the development of parks. State legislation enabling cities to appoint planning commissions and in some cases giving them the authority to carry out the plans, beginning in Pennsylvania in 1891. The work of Daniel Hudson Burnham for the World's Columbian Exposition in Chicago, 1893, was a stimulus to city planning, and Burnham, with Edward Bennett, drew up a plan for Chicago, much of which was put into execution. In 1901 Burnham, Charles Follen McKim, and Frederick Law Olmsted, Jr., devised a scheme for the modern development and beautification of Washington, D.C., adhering to L'Enfant's original plan as a basis for all new operations.

A wide influence on planning in U.S. cities was exerted by the zoning laws adopted in New York City in 1916, which controlled the uses of each district in the city and regulated the areas and heights of buildings in relation to street width. The important Regional Survey of New York and Environs, completed in 1929, took into consideration legal and social factors as well as internal transit problems and various modes of approach to the metropolitan area.

Governmental efforts to provide employment during the depression of the 1930s led to the building (under the Federal Resettlement Administration) of three experimental model communities—Greenbelt in Maryland, Greendale in Wisconsin, and Greenhills in Ohio. Among the many subsequent planned communities built by private developers are Columbia in Maryland and Reston in Virginia. The increase in traffic and the crowding together of tall buildings has crippled the street plans of many cities—especially U.S. cities that have been handicapped by their rectangular or checkerboard layouts.

During the 1860s, a specific state statute prohibited all commercial activities along Eastern Parkway in Brooklyn in New York, setting a trend for future decades. In 1916, New York City adopted the first zoning regulations to apply citywide as a reaction to construction of the Equitable Building which still stands today at 120 Broadway.[36] The building towered over the then neighbouring residences, completely covering all available land area within the property boundary, blocking windows of neighbouring buildings and diminishing the availability of sunshine for those in the affected area. These laws, prepared by a commission, eventually became the blueprint for zoning in the rest of the country, and were accepted almost without change by most States. This was partially due to Edward Bassett, the drafter of the New York zoning regulations, also heading up the group of planning lawyers who wrote the Standard State Zoning Enabling Act that was issued by the U.S. Department of Commerce in 1924.

There was a separate origin of zoning regulations in the West. Land use zoning laws in Colorado have their roots in Denver's Capitol Hill Improvement Association and Robert Speer League, both of which were KKK organizations supported by KKK member, Mayor Stapleton. Their goals, of regulating what kinds of businesses could be located in a neighbourhood and who ran them, as well as what kinds of housing and who could live in them, translated into the modern zoning regulations, adopted in 1925.

[36] Zoning in the United States: http://en.wikipedia.org/wiki/Zoning_in_the_United_States

The constitutionality of zoning ordinances was upheld in 1926 by the US Supreme Court. This followed the zoning ordinance of Euclid, Ohio being unsuccessfully challenged by a local landowner who contended that restricting the use of property violated the 14th Amendment to the United States Constitution.

By the late 1920s most of the cities of the United States had developed a set of zoning regulations. New York City went on to develop more complex zoning regulations encompassing floor area ratio regulations, air rights, and others according to the density specific needs of neighbourhoods.

Among larger populated cities in the United States, Houston is unique in that it is the largest city in the country with no zoning ordinance. Houston voters rejected efforts to implement zoning in 1948, 1962, and 1993. It is commonly believed that "Houston is Houston" because of the lack of zoning laws. Houston is however similar to other large cities found throughout the Sun Belt, all of which experienced the bulk of their population growth during the "Age of the Automobile". These cities, Los Angeles, Atlanta, Miami, Tampa, Dallas, Phoenix and Kansas City, have all experienced urban sprawl such as that experienced by the unzoned Houston, despite having zoning systems in place.

While Houston has no official zoning ordinance, many private properties have title deed restrictions that limit the future uses of land, which have effects similar to those of zoning systems. The city has also enacted development regulations that specify how lots are subdivided, standard setbacks, and parking requirements. These regulations have contributed to the city's car-dependent urban sprawl by requiring the existence of large minimum residential lot sizes and large commercial parking lots.

Without land use based zoning, many inner-ring suburbs, such as Montrose feature small businesses, such as bars, restaurants, mechanics and hardware stores, mixed in among residential streets.

Canada[37]

The close connection between conservation and urban and regional planning in Canada began with the Commission of Conservation in the years before World War 1. At this time, Canada was caught up in a wave of reform enthusiasm that drew its inspiration from several international sources: from British town planning including the Garden City movement; from the progressive reform movement in the US with its attacks on political corruption and public mismanagement of all kinds; from the housing reform movements in both countries; and from the City Beautiful movement which offered the ideal of well-ordered cities, with handsome buildings and public spaces as symbols of the progress of industrial civilization. Groups of citizens across Canada had organized themselves into "city planning commissions" and "civic improvement leagues", but it was the Commission of Conservation interest in public health that finally galvanised these concerns into national prominence. Town planning was thought to be one way of ensuring a healthy and productive population. The first British Planning Act of 1909, and the Garden City ideals advanced in the UK by Ebenezer Howard, was seen as the model for achieving the development of healthy, attractive communities in Canada.

[37] Urban and Regional Planning: http://www.thecanadianencyclopedia.ca/en/article/urban-and-regional-planning/

Thomas Adams, a British planner was appointed in 1914 by the Commission of Conservation. He prepared "model planning legislation," which he urged provincial governments to adopt. Planning law establishes rules and procedures by which communities can act on matters affecting their physical environments. He was of the view that rural communities were as much in need of planning as urban ones. This marked the beginning of regional planning in Canada.

In 1914 only three provinces in Canada had planning statutes: Nova Scotia, New Brunswick and Alberta. By 1925 every province except Québec had a statute of some kind, although professional planners thought they were all inadequate. For one thing, the Acts did not make it mandatory that municipalities should prepare plans; for another, they did not provide for provincial governments to take an active part in planning. Municipal governments also tended to be critical, because they were mainly interested in having stronger powers to regulate construction and land development.

The new American technique of zoning looked particularly attractive, and the city of Kitchener adopted Canada's first zoning bylaw in 1924. It was however not until 1925, when British Columbia adopted its first planning statute, that zoning was recognized in planning law. Other provinces followed suit, but the most complete statute of this early period was Alberta's Town and Rural Planning Act, 1929. The Canadian planning law has evolved continuously since then, and the modern administrative systems of urban and regional planning are far larger and more complex than anyone could have foreseen in 1929.

The essential purposes of all provincial and territorial planning Acts are to secure the orderly, coherent growth and development of municipalities, based on sound forethought and considerations of public interest; to bring about and conserve physical environments, including buildings and other works which are satisfying to human needs and community concerns; to regulate how private and public lands may be used; and to allow for public participation in planning decisions.

In addition to their planning Acts, all provinces provide for other types of planning and environmental or land-use regulation not conferred specifically to municipalities - in statutes dealing with energy, environment, forestry, heritage protection and parks. The province of Québec, for example, has an Act to protect agriculture; Alberta has a Special Areas Board to plan for and administer over one million hectares of public lands in agricultural use; the Prince Edward Island Development Corporation undertakes comprehensive land planning with powers to acquire, sell and lease lands for several kinds of purposes; Manitoba operates an Interdepartmental Planning Board for the planning and management of the province's crown lands. The federal government performs planning functions for Canadian crown lands through many statutes and a number of Cabinet policies, such as the Federal Policy on Land Use and the Federal Environmental Assessment and Review Process.

Germany[38]

Public construction law in Germany is divided between federal and state governments. Zoning law is federal law. It determines the purpose for which a property may be used and whether a building project fits into its surroundings.

Federal states are responsible for building regulations law which determine how buildings may be designed and constructed in order to meet planning law requirements**.** Each state issues its own building regulation. However, most of the states have adopted a specimen building regulation issued by the state ministries which also makes provision for certain standardization within this field.

A building permit is required for the construction, alteration, demolition, or change in the use of a building. The building permit is granted if the project complies with the planning and building regulation law as well as with all other applicable laws such as **e**nvironmental laws. An application for a building permit must be submitted to the local building authority or the building supervisory authority. The application must include a detailed plan of the project, accompanied by necessary supporting documentation. The documentation required for the application must also be presented to adjacent property owners.

German law recognizes the principle of procedural merger in order to simplify and coordinate the permit procedure. Repeat procedures are therefore avoided whereby there is only one contact necessary to be made by the applicant with the authorities.

Urban land use planning is a self government function that is mandatory for a local authority to undertake. [39]

The German building law was codified in the second half of the 19th century and has since been supplanted and further developed by both state and federal legislation. Succinctly, looking at the Prussian example, the building control law and planning law are based on local law and the General Law of the Prussian States, 1794, which gave every owner a right to cover his land with buildings or alter a building, subject to various restrictions. This freedom to build arose under the then emerging liberalism of the 19th century. Various Acts in the early 20th century failed to produce a uniform urban development law. The Prussian Housing Act, 1918 added urban planning and design elements to the building control law and the Ruhr Regional Planning Authority Act, 1920 provided for large scale inter-municipal or regional planning. The former provided for the gradation of building development and the designation of specific land use areas (zoning). Little further progress was achieved during the Weimar Republic (1919-1933) and the Third Reich (1933-1945). The massive destruction and displacement of persons following the Second World War presented huge challenges because the then current laws were totally inadequate. This led to the passing of “rubble” and “reconstruction” Acts within the majority of states.

[38] Planning and Building: http://www.nrwinvest.com/Business_Guide_englisch/The_Legal_Framework/Planning_and_Building1/index.php

[39] The Planning System and Planning Terms in Germany – A Glossary, Elka Pahl-Weber, Dietrich Henckel, 2008: http://shop.arl-net.de/media/direct/pdf/ssd_7.pdf

After the Federal Republic of Germany was created, the Federal government was deemed responsible by the Federal Constitutional Court in 1954 for urban planning, land reallocation, survey, property transactions, and the provision of public services and valuations. In addition, it was determined that the Federation had exclusive competence in respect of Federal planning and concurrent framework legislation in outline state spatial planning. This eventually led to the Federal Spatial Planning Act, 1965 which was extensively modified in 1998. This Act contains four main divisions which, other than for one division, were required to be directly transposed into state laws within a specific timeframe. The law defined in detail the concepts, substance and binding effects of spatial planning, and provided for the possibility of prohibiting planning and measures contravening spatial planning for an unlimited period. It also provided an option of undertaking regional preparatory land use planning. Spatial planning procedures were reorganised and in an amended Spatial Planning Ordinance (ROV) the projects subjected to spatial planning procedures were enumerated. In 2004 the Federal Planning Act was modified to provide for Exclusive Economic Zones.

The adoption of the Federal Building Act, 1960 provided for a uniform urban development law replacing many other earlier isolated laws and clearly delimited the functions between spatial planning, urban planning and building control laws and regulations. This law required local authorities to organise and control urban development through urban land use planning in conformity with the Federal spatial planning and state spatial planning. The Federal Building Act was supplemented by the Urban Development Promotion Act, 1971 with a view to facilitate the development of dilapidated areas and developing the edges of agglomerations. These two Acts were later combined under the Federal Building Code, 1986 which emphasised inner city development, environmental protection and the conservation of historic monuments.

The Building and Spatial Planning Act, 1998 unified the Federal Building Code and spatial planning across West and East Germany and further modification were made to the code. These were motivated to meet then new objectives in urban planning and to further the reunification of the country. Amendments to the Federal Building Code were made in 2001 and 2004 to meet the requirements of European Union law, amongst others requiring environmental impact assessments for certain land uses. The Facilitating Planning Projects for Inner Urban Development Act, 2007 was later introduced with the aim of reducing land take, speeding up important planning projects (in safeguarding and creating jobs) and in meeting housing and infrastructure needs by simplifying building and planning law.

2.2.4 The South African Experience – Planning and Planning Legislation [40]

The colonial period saw the European powers export their culture and technology throughout the world. They established new towns, created largely along their traditional lines, but sometimes building on to or adjacent to earlier settlements of the indigenous peoples. These early towns often became the hub around which major future cities would grow in time. In the case of South Africa the new towns were usually formally set out in a very rigid grid iron pattern with little or no respect for the underlying physiology of the land. Zoning for different land use types played little or no part. It was only in the mid twenty century, as towns expanded outwards from the original core, that layouts, more sympathetic to the natural environment, emerged.

In the case of Durban, for example, it was not until the early nineteen fifties, following the Second World War that mainly British born and educated town planners were brought out to South Africa to introduce more modern and formal town planning controls. The first formal town planning scheme with zoning was adopted in 1953 in the Berea area of Durban, and only in the sixties were zoning schemes expanded outwards for the so-call “added areas” of Durban. Ironically, the required setbacks from boundaries do not reflect that of the typical European towns, but more that of the garden new towns such as Bourneville in the UK established by Cadbury in the countryside in 1861 for its industrial workers.

The majority of the nine provinces are still relying on pre-1994 legislation formulated for the prior four province arrangement as illustrated below (in date of enactment order):-

- Free State – Townships Ordinance No 9 of 1969
- Eastern Cape - Cape Land Use Planning Ordinance No 15 of 1985
- North West – Cape Land Use Planning Ordinance No 15 of 1985
- Western Cape – Cape Land Use Planning Ordinance No 15 of 1985
- Gauteng – Transvaal Town Planning and Townships Ordinance No 15 of 1986
- Limpopo – Transvaal Town Planning and Townships Ordinance No 15 of 1986
- Mpumalanga – Transvaal Town Planning and Townships Ordinance No 15 of 1986
- Northern Cape – Northern Cape Planning and Development Act No 7 of 1998.
- KwaZulu-Natal - KwaZulu-Natal Planning and Development Act No 6 of 2008 (and vestiges of the Natal Town Planning Ordinance No 27 of 1949 for special consents)

[40] An Introduction to Municipal Planning within South Arica: SALGA - SAPI – MILE –eThekwini Municipality, Durban, 2011.

As of 2011, future Legislation[41] then included the following:-

- Spatial Planning and Land Use Management Bill – National legislation. Any new order provincial legislation in place it is envisaged will be able to exist in parallel. The two eventual Acts in each case will obviously need to be dovetailed where necessary to avoid potential conflict.
- Western Cape Planning and Development Act No 7 of 1999.
- Gauteng Planning and Development Bill.

Other Planning related Legislation includes the following:-

- Subdivision of Agricultural Land Act 70 of 1970.
- National Building Regulation, Act 103 of 1977
- Physical Planning Act No 125 of 1991.
- Less Formal Townships Establishment Act No 113 of 1991
- Development Facilitation Act No 67 of 1995
- Housing Act No 107 of 1997.
- National Environment Management Act No 107 of 1998 (NEMA) and its suite of associated Acts *viz.* NEM: Protected Areas Act, 2003; NEM: Biodiversity Act, 2004; NEM: Air Quality Act, 2004; NEM: Integrated Coastal Management Act, 2008; NEM: Waste Act, 2008.
- National Heritage Resources Act No 25 of 1999
- Promotion of Administrative Justice Act No 3 of 2000.
- Planning Professions Act No 36 of 2002.
- Social Housing Act of No 16 of 2008.
- National Land Transport Act 5 of 2009.

[41] In 2013 the framework Spatial Planning and Land Use Management Act No 16 of 2013 (SPLUMA) was finally signed into law. In late June 2014 although not operationalised, it was expected to be progressively brought into action from 1 July to 1 September 2014 although its accompanying Regulations had only just been published for comment. The Western Cape Planning and Development Act had been dropped and replaced by a new Western Cape Land Use Planning Act, which is largely framework legislation requiring individual municipal planning bylaws. This is still to be operationalised. The Gauteng Planning and Development Bill seems to have died a quiet death and the KwaZulu-Natal Planning and Development Act is proposed to be replaced by a new Bill fully consistent with SPLUMA. SPLUMA will also see the final phasing out of the Development Facilitation Act, as well as the Less Formal Townships Establishment Act, which between them enabled the fast-tracking of housing projects, and the two Physical Planning Acts. A number of metropolitan municipalities have indicated their intension to prepare their own municipal planning bylaws as permitted by SPLUMA. Councils taking planning decisions on applications will be replaced under SPLUMA by municipal planning tribunals made up of officials and experts. Finally, the Infrastructure Development Act No 23 of 2014 was gazetted in June 2014 to fast-track national priority infrastructure projects. Significant changes are in store for planning and planners in South Africa.

3 Methodology

The methodology for the study proposed at initiation involved the following:-

- The preparation of a Project Inception Report
- The preparation of a suitable questionnaire covering the range of issues
- The holding of Focus Group Discussion meetings – this was to be with both internal and external parties.
- The interviewing of Key Informants
- A document analysis
- The writing up of documented learning notes on case studies
- The writing up the research report, and finally
- Provision of recommendations arising out of the findings.

As the project evolved, certain changes were made as deemed appropriate to the circumstances.

After the preparation of the project inception report and its initial approval at a management committee level, a draft questionnaire was prepared which was then circulated to members of the Land Use Management Branch and to the Development Assessment and Approval Branch of the Development Planning Environment and Management Unit, including the Regional Coordinators, for their respective input. In respect of the planning issues, the matters went far wider than just the net planning legislation, and investigated satisfaction with services rendered. In respect of building issues, the satisfaction of service levels was also investigated. Unfortunately, other than in a few instances, very little feedback was received from the parties circulated. The feedback/suggestion that was received was, however, incorporated within the draft questionnaire.

A concern raised was that the questionnaire had become very long and complicated, and that as a result, it might be preferable to reduce the scope to something more manageable for persons completing the form. Another alternative considered, was to restrict certain portions of the form to a certain group, i.e. a common portion to be completed by all, a portion to be completed by just the planners and a portion to be completed by just the architects and building designers. In the end, it was decided to go with the latter, while still providing an opportunity, if people so chose, to complete both portions.

A major problem, however, was how best to distribute the form, and how best to do this; in a hard copy, electronically as a Microsoft Excel file, at a focus session with (say) the building designers – as a captured audience as was originally suggested by a member of the South African Institute of Building Design (SAIBD), or in some other way. All of these options presented certain challenges. In order to seek a wider participation another option explored involved posting the questionnaire on the Internet using either Google Forms or Survey Monkey. After studying both these alternatives, it was finally decided to go with Google Forms which seemed the more adaptable.

[Unfortunately, post the dissemination by email, it was established that certain institutions blocked social media sources, including email linked or associated with Google].

Although there were initially concerns that the extent of the questionnaire would have to be significantly reduced, it was found that the majority of the questions could be accommodated and in addition further queries were added which hadn't been initially considered. The advantage of using the Internet as a distribution vehicle is that, *via* email lists of professional bodies and other organisations, a far larger number of individuals could be contacted than would otherwise have been the case. The disadvantage is that it is very easy for individuals to ignore or forget e-mails after initially thinking they had responded to them. A further disadvantage is that there is little control over the data that people insert in a questionnaire. However, when conducting one-on-one interviews with various parties the main issues should emerge, enabling any potential unreliable comments received *via* the Internet to be discounted.

Accordingly, the Internet-based questionnaire was mailed out to the following parties with the request that they circulate to their respective members on their mailing lists:

- All people with whom one-on-one interviews had been conducted.
- The South African Institute of Architects (SAIA)
- The South African Institute of Architectural Technicians (SAIAT)
- The South African Institute of Building Design (SAIBD)
- The South African Council for the Architectural Profession (SACAP)
- The South African Council of Planners (SACPLAN)
- The South African Planning Institute (SAPI)
- The KwaZulu Natal Planning and Development Act Forum run by COGTA
- The South African Geomatics Institute (SAGI) (land surveyors)
- The Association of South African Quantity Surveyors (ASAQS)
- Attorneys known to be operating in the planning field
- The Cape Institute of Architects.
- The Pietermaritzburg Chamber of Business
- The Durban Chamber of Commerce
- South African Property Owners Association (SAPOA)
- In addition, posts were directly placed on LinkedIn group sites of SACPLAN, SAPI and the KZN Planners Network.

All in all, it is believed that the advice on the availability of the questionnaire for completion together with an accompanying introductory section detailing the purpose and object of the study was received by a vast number of individuals. In addition, prior to the closing off of the questionnaire, reminders were sent out to the same parties to urge on their respective members. In this process in excess of 4000 respondents should have received the questionnaire.

Given the number of people who should have been aware of the questionnaire the number of completed questionnaires is perhaps disappointing. A very poor response was obtained from planners compared to that from architects and building designers. Perhaps, one can also read into this less than enthusiastic response a certain level of satisfaction with the existing *status quo*. Apathy unfortunately (without someone leaning directly over an individual's shoulder) is difficult to counteract. Nevertheless, a broad section of individuals, in their respective professions, did complete

the questionnaire and this has highlighted and confirmed some issues previously brought up in one-on-one interviews, and in addition has brought up some previously unknown factors. For example, that the Department of Health is conducting a project *via* the Council for Scientific and Industrial Research (CSIR), investigating national legislation that may impact *via* the building codes, and specifically Part XA, on the health of persons in hospitals and in private homes.

The individuals, organisations and institutions approached for one-on-one interviews and where such interviews were finally conducted comprised the following: -

- An Architectural Perspective:
  - Four architects
  - One urban designer
  - South African Institute of Building Design – a focus group discussion
- A Developers Perspective
  - Tongaat Hulett Developments – a planner and large developer
  - Waterfall Shopping Centre –a medium sized developer
  - Maxprop – a small developer
- An Economic Perspective
  - One valuer and property economist
- A Municipal Perspective
  - Building Control, Department of the Development Planning and Urban Management, City of Johannesburg
  - Building Control, City Planning and Development Department, City of Tshwane
  - Planning and Building Development Management - City of Cape Town
  - Development Assessment and Approval Section of the Development Planning Environment and Management Unit of the eThekwini Municipality.
  - Land Use Management Section of the Development Planning Environment And Management Unit of the eThekwini Municipality
- The National Regulator for Compulsory Specification Perspective
  - The Regulator

A number of other individuals, organisations and institutions were approached during the course of the project to have one-on-one sessions or to attend same, but these interviews did not materialise for one or another reason. This included a meeting with Frans Dekker, the President of the South African Institute of Architectural Technicians who had been holding the majority of the courses presented countrywide on Part XA, and Llewellyn van Wyk of the Building Science and Technology component of the CSIR who chairs the SANS 204 technical committee, and who sits on the SANS 10400 committee dealing with Part XA. Due to full schedules, overseas trips by some, etc. setting up and arranging interviews took up a far longer period of time than originally anticipated. With many reminders being sent out before a meeting eventuated. This led to significant delays in finalising the project. While this was frustrating, it is believed that in the end this led to a far rounder and better informed project than if it had been closed off earlier as originally planned.

While questions and responses were solicited primarily around Part XA of the National Building Regulations, SANS 10400 Part XA and SANS 204 and planning legislation, it emerged from a number of these interviews that there were a host of issues for the interviewees which fell immediately outside the main concerns of the project, which they wanted to resolve. These other issues were documented as they may be of interest and/or ultimately be used to improve the general service provided to be public.

All the one-on-one interviews and focus sessions were written up, and, where considered necessary, or where there was still uncertainty or controversy, were referred back to the interviewee for ratification. In some cases, where no further comment was received, the original notes remained unaltered.

The parties consulted for interviews were selected on the basis of providing as far as possible a representative cross-section of views in both the private and public sectors. It will be noted that sometimes conflicting views were expressed between one interviewee and another or even within a joint session. In one case in particular, where members of the South African Institute of Building Design were consulted, some totally opposing views were expressed.

By having had both the one-on-one and questionnaire responses, both qualitative and quantitative results respectively have been obtained. In the former case, when a particular issue had been raised, it was then possible to query and seek elaboration on the topic. In the latter case, the comment cannot be challenged or further interrogated but can only be taken at its face value.

As it was not possible in the case of the questionnaire to predict who was going to respond, it was decided to include a number of questions to qualify the background, experience, location and profession of the person completing the questionnaire. The individual contact details were also requested, but this was merely to enable verification in the case of any major uncertainty.

Information was also sought on the familiarity of the respondent with the South African Constitution, the National Development Plan, the KwaZulu-Natal Growth and Development Strategy and Plan and the Integrated Development Plan of the municipality. The latter two, of course, would depend on where the respondents resided and/or most commonly operated. This was to obtain a general understanding of how familiar the respondents were with matters that guide planning policy and the laws controlling planning.

Given the considerable length of the questionnaire, the respondents were given the opportunity to proceed to the architectural related queries or to continue with the planning related queries. Following the conclusion of the planning related queries they similarly received an option to continue with the architectural queries or proceed to the conclusion. At the conclusion, they were given an opportunity to raise any other matter before exiting the questionnaire.

It was found that very few individuals completed both sections of the questionnaire, opting to complete either the planning or the architectural section alone.

4 Results and Discussion

4.1 Results

This section presents the findings of the study.

4.1.1 Response Rate

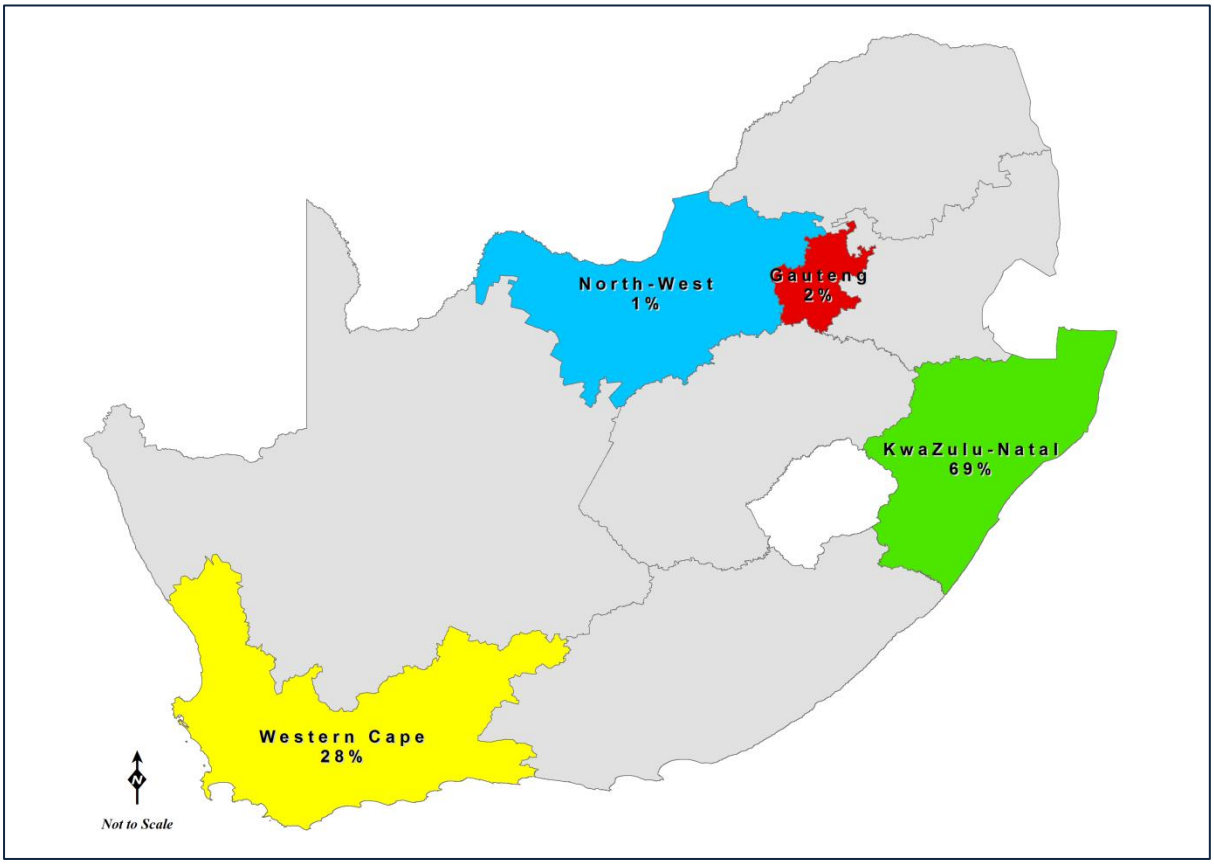

Figure 4.1 Geographic distribution of respondents.

As detailed in the Methodology in Section 3, the study consisted of a questionnaire being distributed *via* various professional networks and interview groups. The number of respondents to the questionnaire was **96**, of which the majority were from KwaZulu-Natal (66 respondents) and the Western Cape (27 respondents). As depicted in **Figure 4.1** the sample included two respondents from Gauteng and one from the North-West (**Figure 4.1**) with no response received from the remaining five provinces of South Africa.

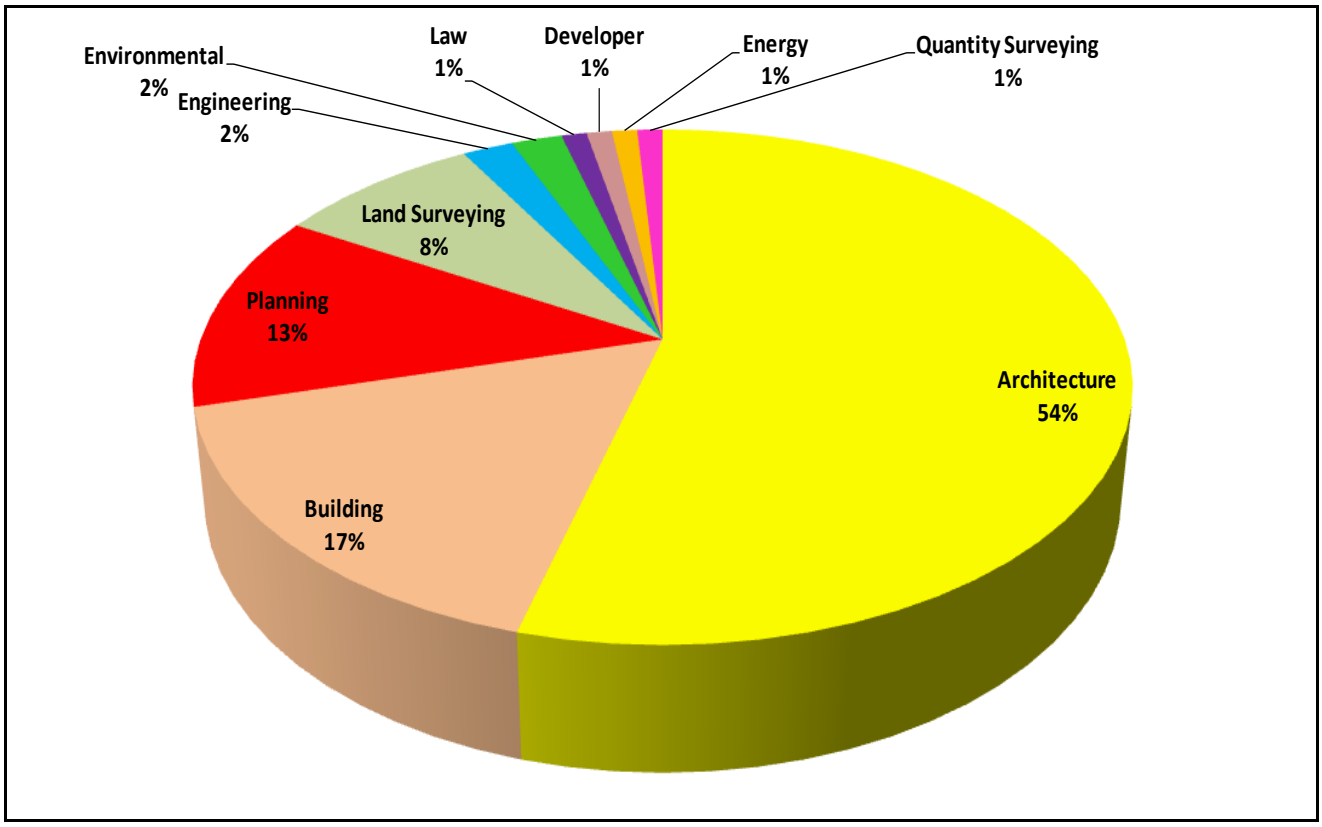

Figure 4.2 **Distribution of respondents per professional discipline.**

The professional distribution of the sample is illustrated in **Figure 4.2** and **Table 4.1**. It is shown in **Figure 4.2** and **Table 4.1** that the largest number of respondents to the questionnaire were from the architectural discipline at 54% (52 respondents), followed by the "building" discipline at 17% (16 respondents), the planning discipline at 13% (12 respondents) and the land surveying discipline at 8% (8 respondents).

Table 4.1 Distribution of respondents per professional discipline and category.

Discipline	Professional Category	Number of Respondents
	Architect	44
	Architectural Technologist	3
	Architect and Urban Designer	1
	Prof. Senior Architectural Technician	1
	Professional Architectural Technologist	1
	Senior Architectural Technologist	1
	Draughtsperson	1
Architecture		**52**
	Building Designer	15
	Building Control Officer	1
Building		**16**
	Professional Planner	6
	Candidate Planner	4
	Planning Technician	2
Planning		**12**
Land Surveying	Land Surveyor	**8**
Engineering	Engineer	**2**
	Environmental Consultant	1
	Plant Physiologist	1
Environmental		**2**
Law	Attorney	**1**
Developer	Developer, Planner & Land Surveyor	**1**
Energy	Energy Assessor	**1**
Quantity Surveying	Quantity Surveyor	**1**
Total Number of Respondents		**96**

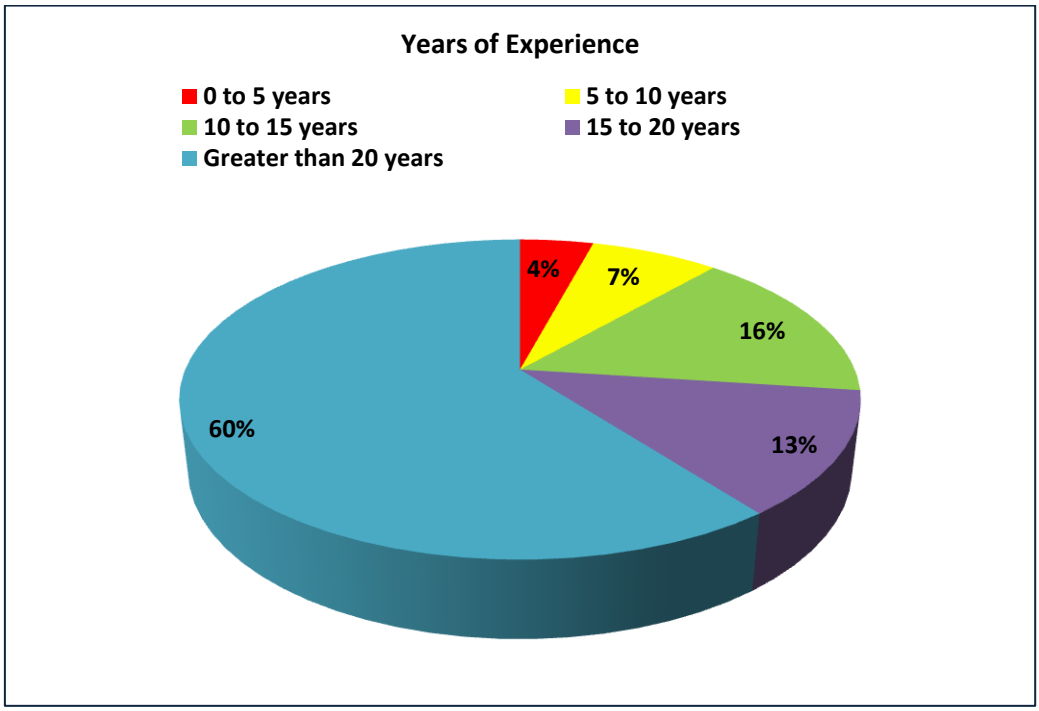

Figure 4.3 **Distribution of respondents per years of experience.**

In terms of experience, it is shown in **Figure 4.3** that 60% of the respondents have 20 or more years' experience, whereas 29% fell between 10 and 20 years' experience. It can therefore be said that the respondents were in the main very experienced, and cognisance should accordingly be taken of their views on the topics raised.

4.1.2 Knowledge on the Suite of Strategic Planning Tools

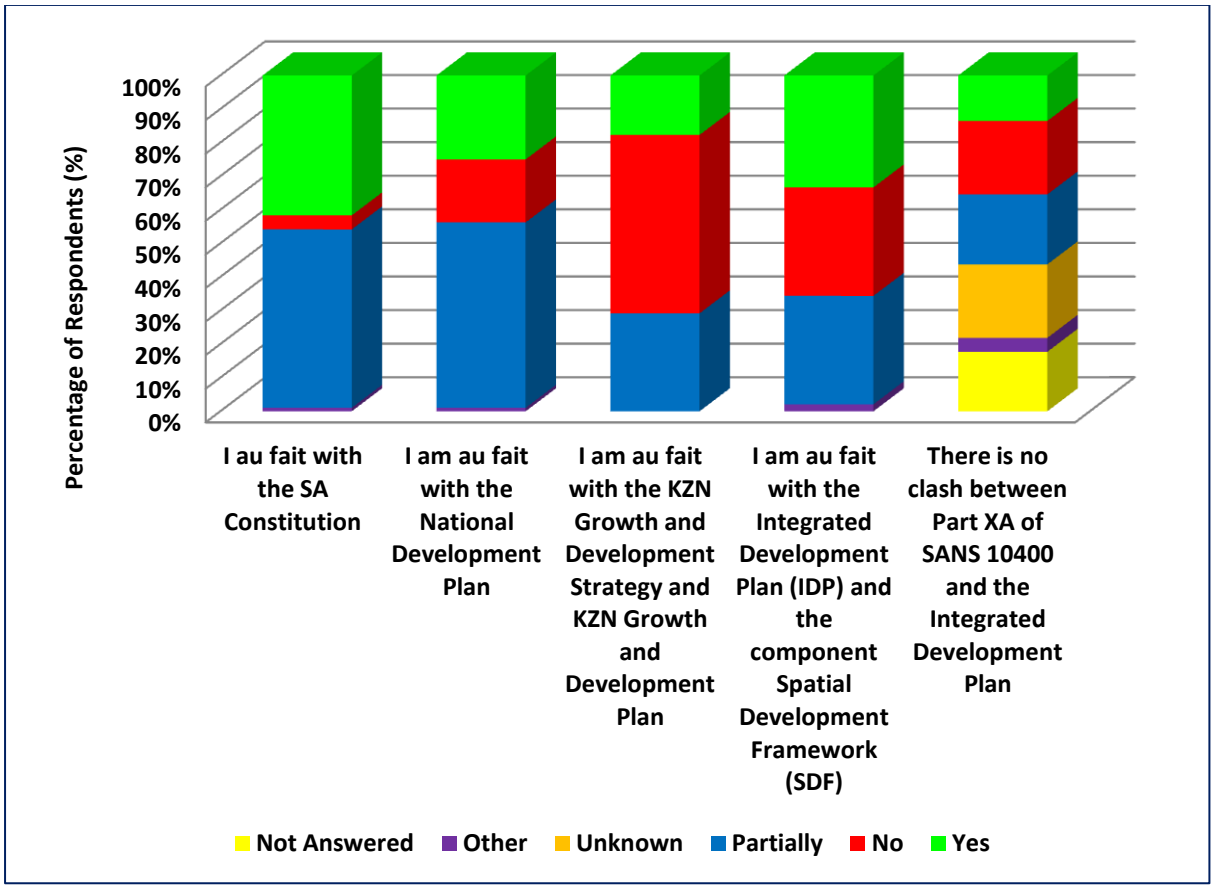

Figure 4.4 Knowledge of the suite of strategic planning tools.

The respondents' knowledge on the South African suite of strategic planning tools viz. the South African Constitution, the National Development Plan, the KZN Growth and Development Plan and the Integrated Development Plan is summarised in **Figure 4.4**. It shows that some 44 percent of the respondents stated that they were *au fait* with the South African Constitution, while a further 51 percent said they were partially *au fait*. Knowledge of the National Development Plan dropped to 29 percent with 53 percent being partially aware.

Only 22 per cent were familiar with the KZN Growth and Development Plan and 30 per cent were partially *au fait*. This is perhaps not surprising given that 30 per cent of the respondents were from outside KwaZulu-Natal. If this factor is taken account of, the numbers would change to 32 and 42 per cent respectively. This is perhaps still disappointing from a provincial perspective, bearing in mind the wide distribution in KZN in particular.

Those familiar with their local integrated development plan's spatial development framework reflected 36 percent as being *au fait* and 32 per cent being partially *au fait*.

When comparing the level of knowledge, a pattern thereby emerges of a decreasing level of knowledge of the SA Constitution, to the National Development Plan, to the KZN Growth and Development Plan as compared to the integrated development plan.

Approximately 20% of the respondents believed that there is a clash between Part XA of SANS 10400 and the Integrated Development Plan whilst approximately 21% felt there was a partial clash. Only 13% felt there was no clash.

None of the focus group interviews referred to any of the strategic planning tools in their discussions.

4.1.3 Planning Legislation

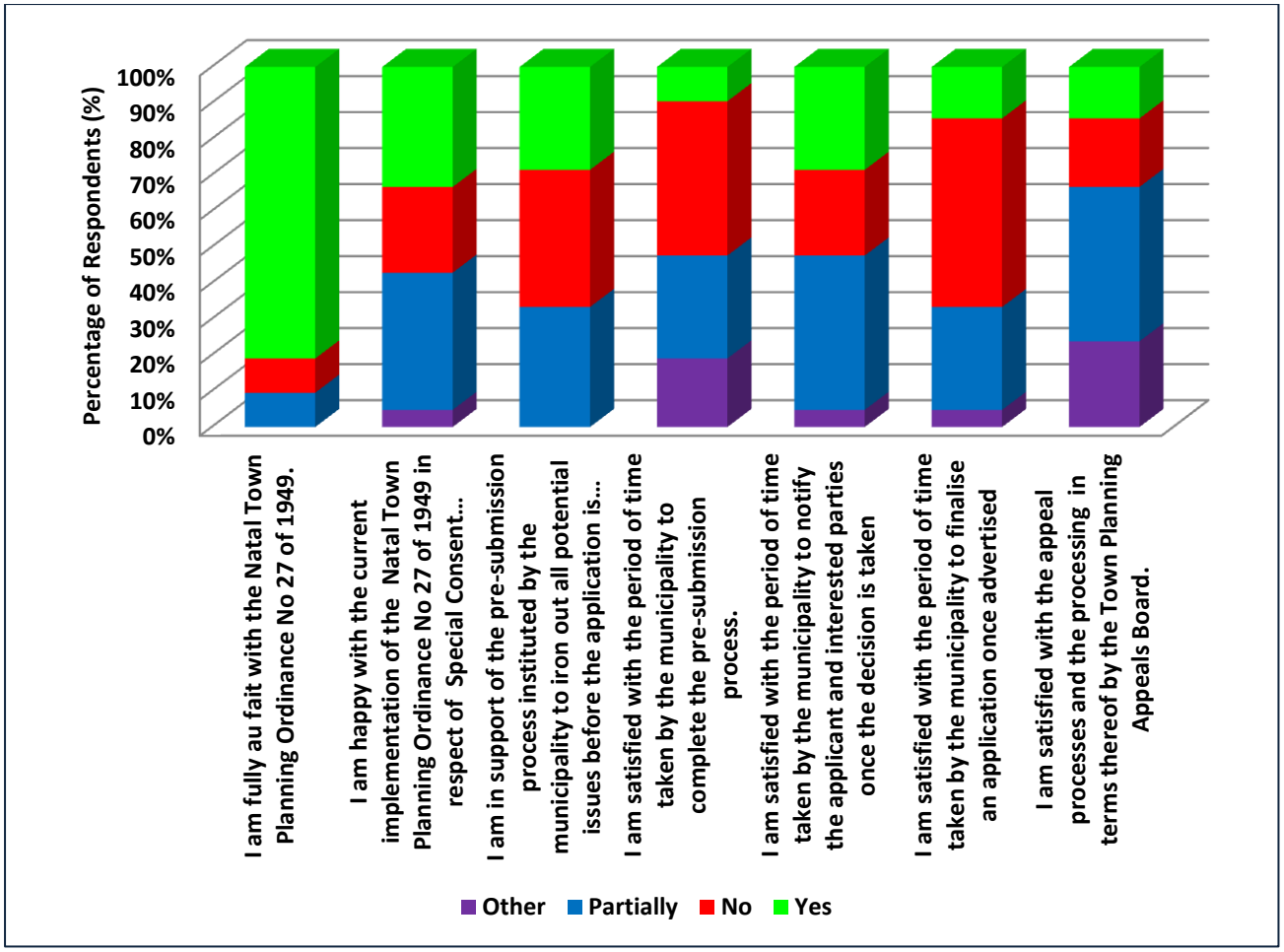

Figure 4.5 Views on the Natal Town Planning Ordinance.

While some 90% of the respondents said that they were *au fait* with the Natal Town Planning Ordinance (**Figure 4.5**), less than 40% indicated support for the current implementation and a similar amount was only partially satisfied. Only a quarter were happy with the pre-submission process and only some 10% were satisfied with the time taken to complete that process. The pre-submission process was completed in time spans ranging from less than one month to 6 months or more. Post

advertising, more than half the respondents indicated that they were unhappy with the time taken to finalise the application.

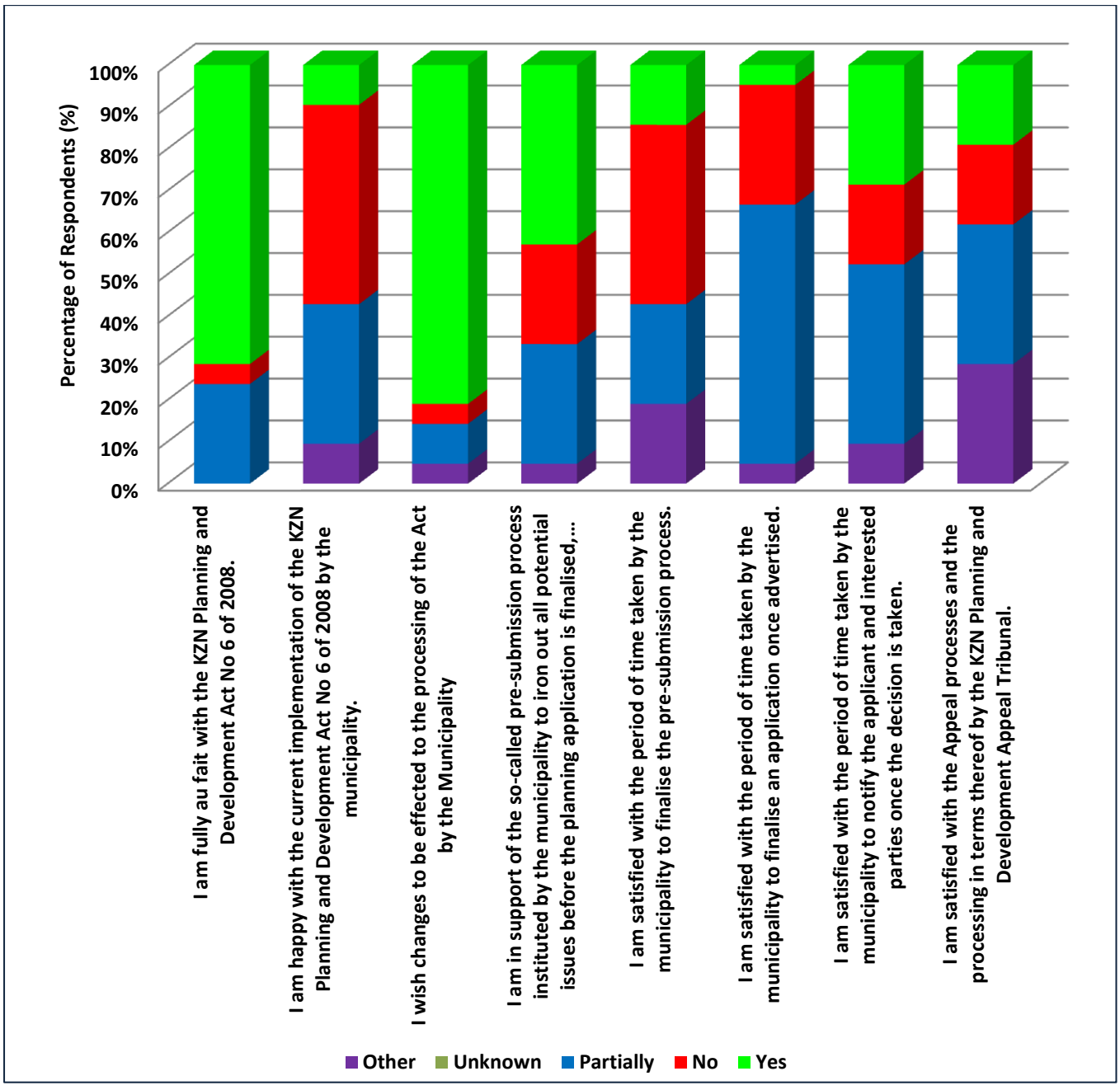

Figure 4.6 **Views on the KZN Planning and Development Act, 2008.**

In **Figure 4.6**, some 75% of the respondents said that they were *au fait* with the KZN Planning and Development Act, some 40% indicated support for the current implementation and a similar amount was only partially satisfied. Some 40% were happy with the pre-submission process and none were satisfied with the time taken to complete that process. The pre-submission process was completed in time spans ranging from less than one month to 3 years or more. Post advertising, more than 20% of

the respondents indicated that they were unhappy with the time taken to finalise the application, while roughly half were only partially satisfied.

Table 4.2 List of changes requested by respondents to the Planning and Development Act, 2008[42].

Category	As Specified by Respondent
Timing	• Strict timing adherence required. • If Government Departments do not comment within the time the application should proceed as is. The Act provides the applicant with 90 days to submit any outstanding information to the municipality, but government department like Dept. Of Transport, Agriculture etc. Do not deem themselves subject to the legislation. • Keep to time frames set out in the Act. • The time limits are far too long, and are totally impractical and unrealistic. Simple subdivisions complying with Town Planning Scheme requirements, and consolidations, have turned into a nightmare of red tape. • Strict adherence to time frames legislatively placed upon the municipalities; with punitive measures should they transgress. • Ability to extend the time frames beyond 90 days allowable, or be able to appeal, i.e. choice given. • Excessive time delays over the December vacation period.
Communication	• Effective communication with officials, co-ordination is required. • Answer to phone calls, emails, faxes is required. • Issue tracking numbers and contact person's details upon submission. There is a complete lack of knowledge and understanding by people who are supposedly "Town Planners" – they know not what they do – so people managing the process are incompetent. • Closer and appropriate liaison with applicants and more efficiency in the processing procedures is required.
Interpretation	• Not so much the processing as the interpretation thereof, which causes the frustration. There should be an easy system that all parties can access (common to all parties) which can be used to clarify interpretations.
Pre-application	• Provide comprehensive requirements at a pre – application meeting of what is required to accept an application as being comprehensive so Pre-Submission quicker. • Pre-scrutiny should not be required by the Act where no Special Consent, Relaxation, Rezoning, etc. Therefore the Application should go straight to NBR application.
Fees	• The exorbitant application fees are a barrier to development. • Accept payment upon submission. • The application fees are totally unreasonable and are, at times, more than the value of the land under application. • The whole planning system is probably unaffordable to 95% of our population and is just being ignored, with transgressions, (even by municipalities), becoming the norm.
Consolidation and Sub-Division	• Consolidation applications take too long – there is no need for pre-circulation. • I would like to see subdivision and consolidation applications being signed off by the Regional Planning Manager without having to go to the Joint Advisory Committee at all. This would make the Planning Manager accountable for this kind of mistake, and save considerable time in the processing of these applications. • Subdivisions inside urban areas removed from the PDA.

[42] List of requests have been captured verbatim from the respondents. Some comments are general and some are specific to a municipality, e.g. references to pre-application or pre-submissions in eThekwini.

Category	As Specified by Respondent
	• Less formal applications required for consolidations.
Conditions of Approval	• The Conditions of Approval leading to the registration of rights in the Deeds Office (and the survey of diagrams of these real rights) are often very poorly written, and in many cases are not registerable. The amendment process (Sec 26(6)) to correct these errors has become particularly tedious, and in some cases, the corrections we have requested have been incorrectly implemented. My suggestion is that the Conditions be submitted to the Applicant in Draft for comment before being signed and dated by the municipality. Corrections can then be made before the Approval in terms of Sec 26(1). In some cases, we have prepared the Conditions in Microsoft Word format for the planner dealing with the approval, and the Conditions received back have been changed, and in thus doing, have become unregisterable. • In the case of Consolidation Approvals, some of the planners have inserted wording taken from the scheme into the Conditions, which is unnecessary. In a recent Consolidation case we received from the Town Planner who had submitted the Application, the Approved Conditions incorrectly listed the owner as the Conveyancer who appeared before the Registrar of Deeds, omitted one of the Holding Title Deeds, referred to the property as "Erf ..." instead of "Remainder of Erf ...", stated the approval to be in terms of the incorrect Section of the PDA, used an incorrect reference on the approval notice, referred to a non-existent plan, plus a number of other careless mistakes.
Capacity	• An application to be accepted as complete, final and approved should a municipality be unable to process it due to their own systems, administrative breakdown. • Provide the municipalities with the capacity required to deal with applications. • Delegation of powers to decide over processes and powers for approval of applications.
Public consultation	• Notification only to adjacent neighbours and affected people. • Less registered letters to surrounding owners. (Half the letters are always returned).
Revision of PDA	• Revision of the PDA. Sooner rather than later.

A comprehensive list of changes was requested by the respondents to the Act and this is summarised in **Table 4.2** per categories identified from the analysis of the requests.

A comparison of Figures 4.5 and 4.6, *viz.* the Town Planning Ordinance No 27 of 1949 versus the Planning and Development Act No 6 of 2008, do not reveal major differences from the respondents from eThekwini and KZN, other than changes to the latter are required (the question was not asked of the former). Generally, however there seems to be a view that the Ordinance applications are more expediently dealt with by the municipality than applications made under the Act.

Approximately 40% of the respondents indicated that they would like amendments to be made to the KZN Planning and Development Act Amendment Bill. Approximately a quarter saw no need for amendments. It may have been confusing in that the question did not ask if the current amendments achieved their wishes, as some of the issues requested are already contained in the critical amendments. However, doubt was expressed by some as to whether this bill will ever be implemented. Perhaps surprisingly, given the push to have this bill enacted, only 30% indicated that they considered the pace of development would accelerate when amendments are put into effect, i.e. become law.

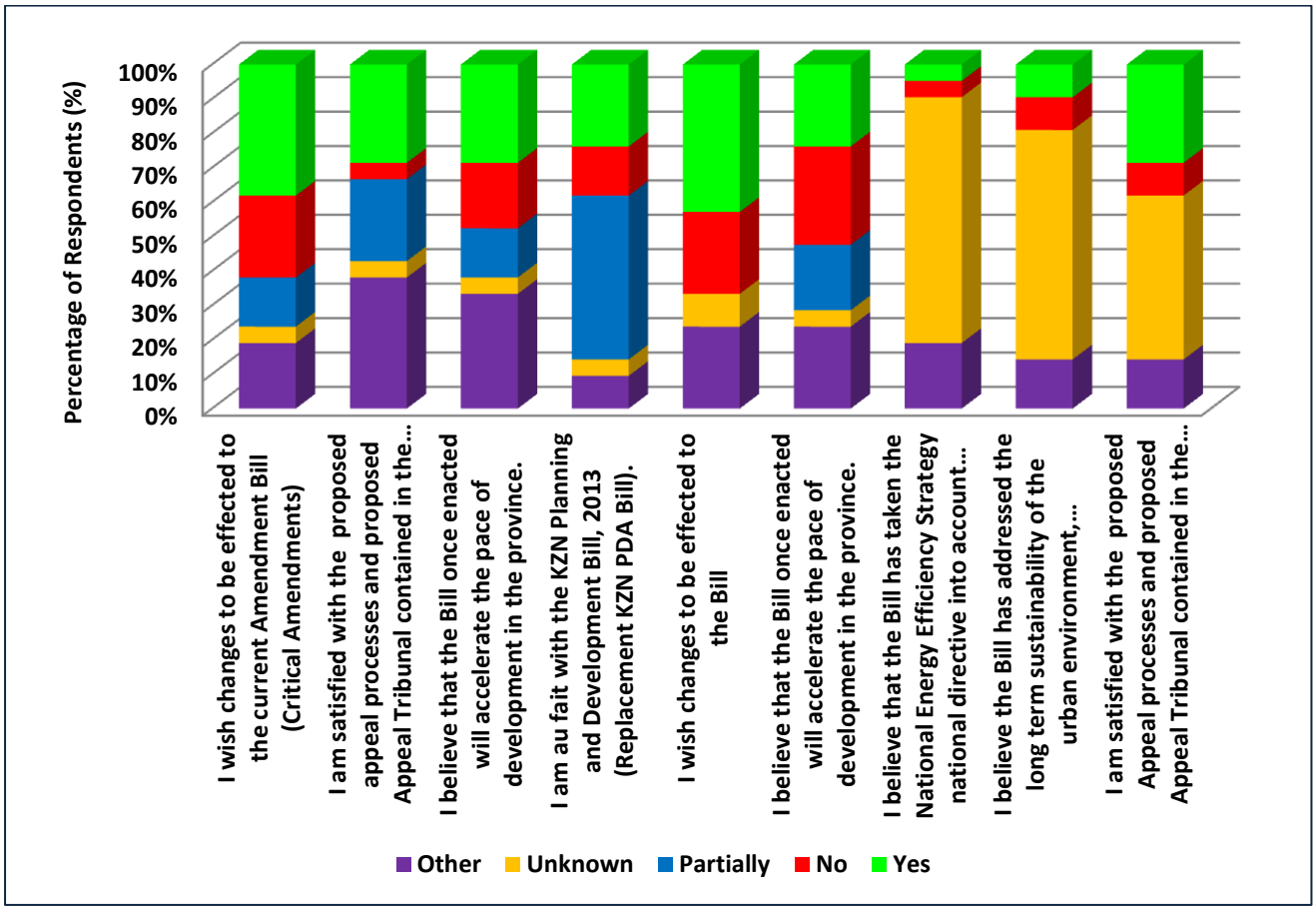

Figure 4.7 **Views on the KZN Planning and Development Bill.**

Approximately only a quarter of the respondents were familiar with KZN Planning and Development Bill (**Figure 4.7**) while 40% were partially familiar. Some 40% indicated that certain changes were needed. Suggestions included:

- The Planning Tribunal should be a committee of the municipal council.
- That the matter of amenity should be addressed.
- That recognition should be given to the fact that planning is dynamic, and uniformity of norms and standards is inappropriate.

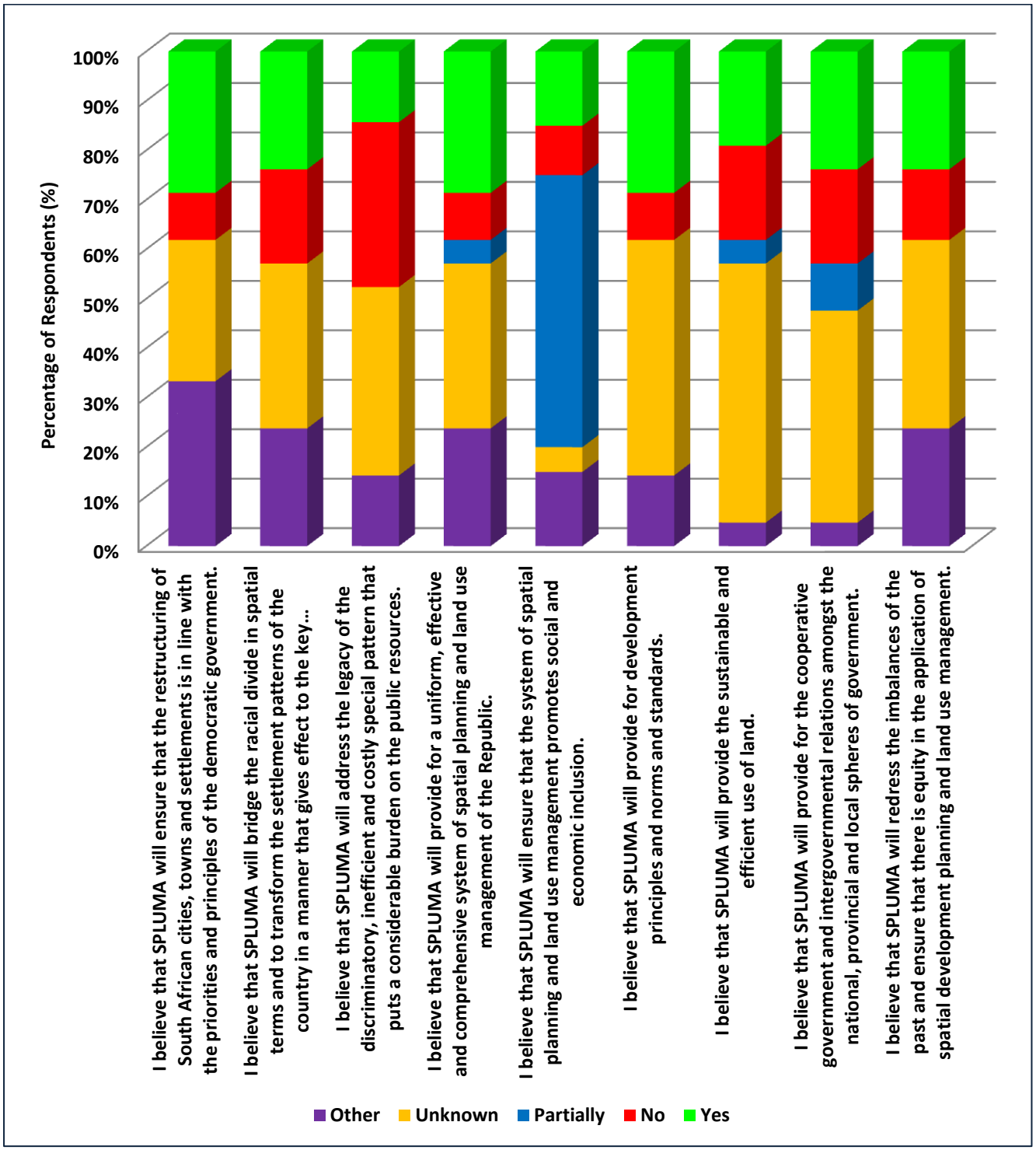

Figure 4.8 Views on the principles of the Spatial Planning and Land Use Management Act (SPLUMA).

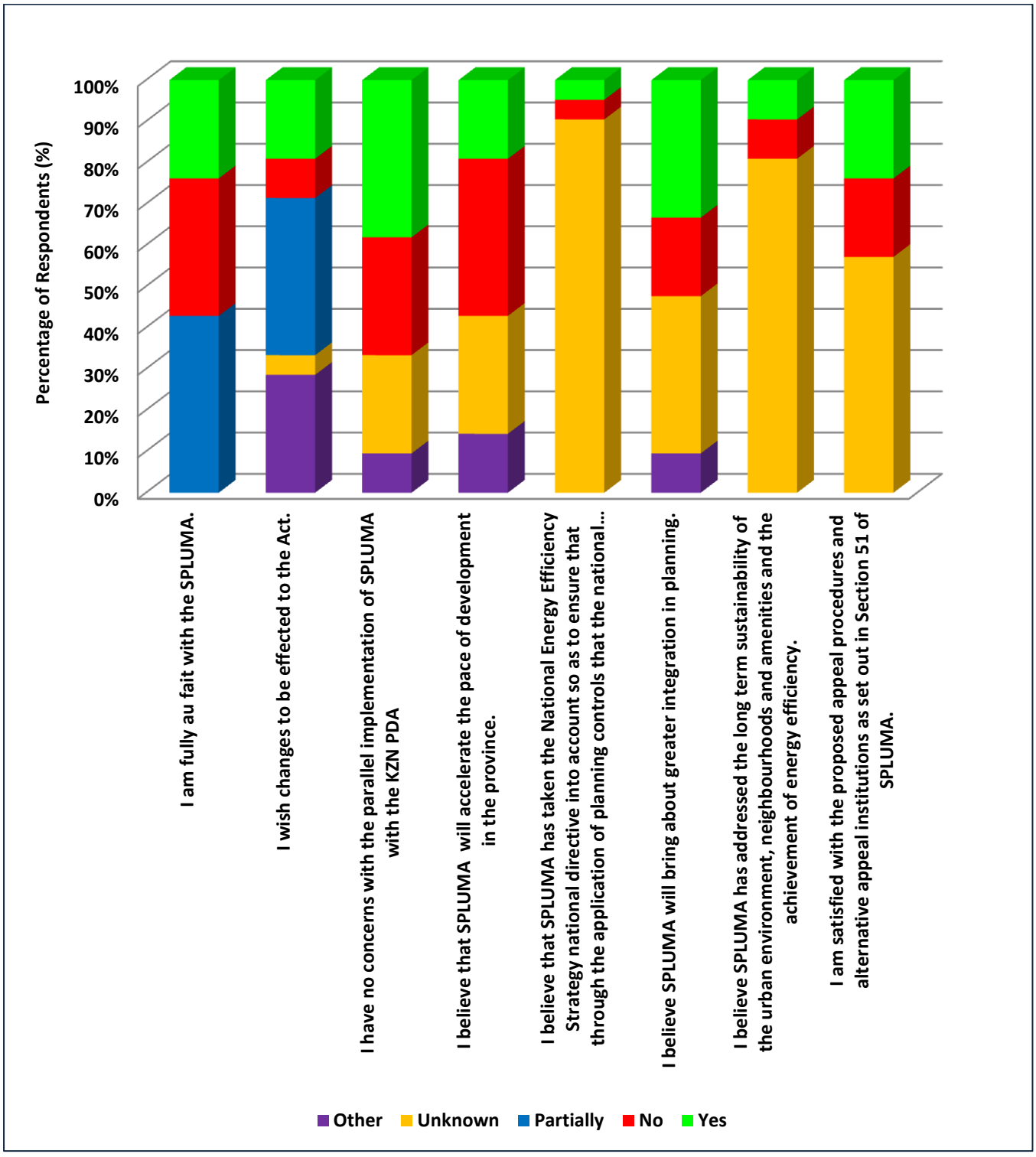

Figure 4.9 Views on the Spatial Planning and Land Use Management Act (SPLUMA).

Furthermore, concern was expressed that the Spatial Planning and Land Use Management Act will supersede the KwaZulu Natal Planning and Development Act and that the current bill will consequently never be enacted. Only 25% of the respondents were of the opinion that once the Bill was enacted it would help accelerate development within the province. Approximately, only

one third was satisfied with the Appeal Tribunal as contained in the Bill. Only 25% of respondents were familiar with the Spatial Planning and Land Use Management Act (SPLUMA) (**Figure 4.8** and **Figure 4.9**), while some 40% were partially familiar. Some 16% wished for changes to be effected.

Perceptions and requested changes to the Act include the following:-

- Time frames required for responses to properly circulate documents.
- Greater responsibility for enforcement required.
- More aggressive regularisations on scheme (especially in R293 and areas that fall out of the Urban Development Line).
- Schemes are required that are more varied and less restrictive.
- LUM that supports densification instead of stifling it, especially in the fast growing metropolis.
- The development objectives are mainly about restoring historical apartheid planning legacies - it should still have most of the previous DFA principles incorporate to facilitate ALL development.
- It must be rewritten taking account of the numerous submissions to the department which creates backlogs due to delays.
- Authority for decision-making should rest with a technically competent body.
- Comments/reporting from a registered professional planner should be mandatory for applications as well as appeals.
- Specific sanctions should be indicated against organisations that don't conform to legalised time frames.
- Appeal process should vest with an independent and technically competent body and not associated with the municipality.
- The government needs to list a hierarchy of Acts regarding planning and development; too often one Act claims to halt all processes, when in fact it is beholden upon another. This hierarchy needs to be clearly defined in terms of environmental/building/planning/spatial legislation in order to move forward coherently.

Approximately 40% of the respondents had no concern with the concurrent implementation of the Spatial Planning and Land Use Management Act and the KwaZulu-Natal Planning and Development Act. Only a quarter of the respondents voiced particular concern. Only 20% of the respondents shared the view that the Spatial Planning and Land Use Management Act would achieve the aim of accelerating the pace of development, i.e. a prime aim is unlikely to be achieved.

Respondents were queried on how they considered the Spatial Planning and Land Use Management Act would achieve the objectives as set out in its preamble of the Act. According to respondents, most of these the objectives are unlikely to be met. Only 30 to 40 % of respondents were positive in response to whether the Act would provide a uniform effective and comprehensive system of spatial planning and land use management would provide development principles and norms and standards and bring about greater integration in planning.

Approximately 25% indicated that they were happy with the appeal procedures and appeal institutions set out in Section 51 of the Act. However, the majority indicated uncertainty.

Respondent's additional comments on the Spatial Planning and Land Use Management Act include the following:-

- I want something that works, the rest will take care of itself.
- With implementation dates being constantly moved and an unknown and disjointed planning system in place, it is hard to commence any development with any knowledge of what will be applicable.
- We need to fast track development, which the DFA achieved, so why not replicate that proven model of success and cut out experimentation of new processes. Likewise, the Less Formal Township Establishment Act, (comprising only about a dozen pages), was highly successful in delivery - it just had an unfortunate name, implying the development was 'less formal', when actually, the planning process was what was 'less formal'. Why not focus on past 'best practice'? I do not believe it is the panacea or universal remedy for all the perceived social ills.
- Trying to force social change events through legislation is simply creating expectation amongst those who believe there is an easy fix for a dysfunctional society. Perpetuating the tragedy of apartheid, through reverse apartheid is not an effective solution for anything least of all spatial planning. It will merely reinforce the initiatives of the 'new elite' to exploit at every opportunity those who simply want a fair life.
- SPLUMA needs to consider that each province has its own unique challenges. In as much as apartheid planning was based on the ethos of segregation the implementation of such was done in different ways. It therefore would be advisable to be less directive in its systems and more advisory.
- It needs to be redrafted addressing detailed submission made in the 'consultation' process.
- The appeal authority should have a report from a registered professional planner upon which they can evaluate the merits of the appeal.

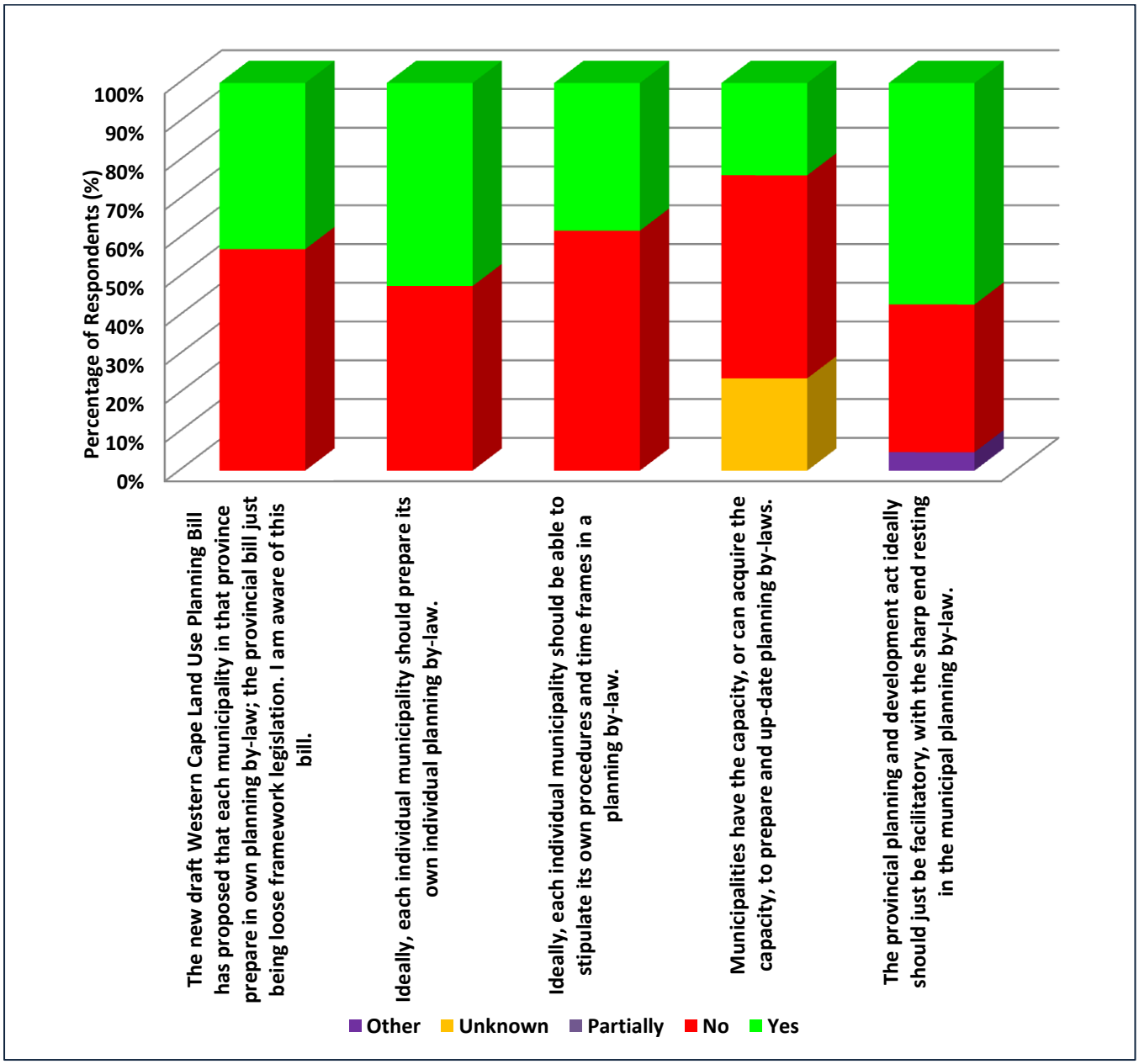

Figure 4.10 **Views on the proposal of a municipal planning bylaw.**

Only 40% of the respondents (**Figure 4.10**) were aware of the recent publication by the Western Cape government of the Land Use Planning Bill that makes provision for the establishment of municipal planning bylaws. This Bill was published in early February 2014 for comment. Slightly more than half of the respondents favoured this approach, viz. a municipal planning bylaw; however 60% did not support the municipality determining its own procedures and timeframes. The majority of the respondents, ironically, believed that the municipalities did not have the necessary capacity for preparing such municipal planning bylaws. Nearly 60% believed that the provincial planning Act should be there to facilitate and act as a framework with the operational details within the municipal planning bylaw.

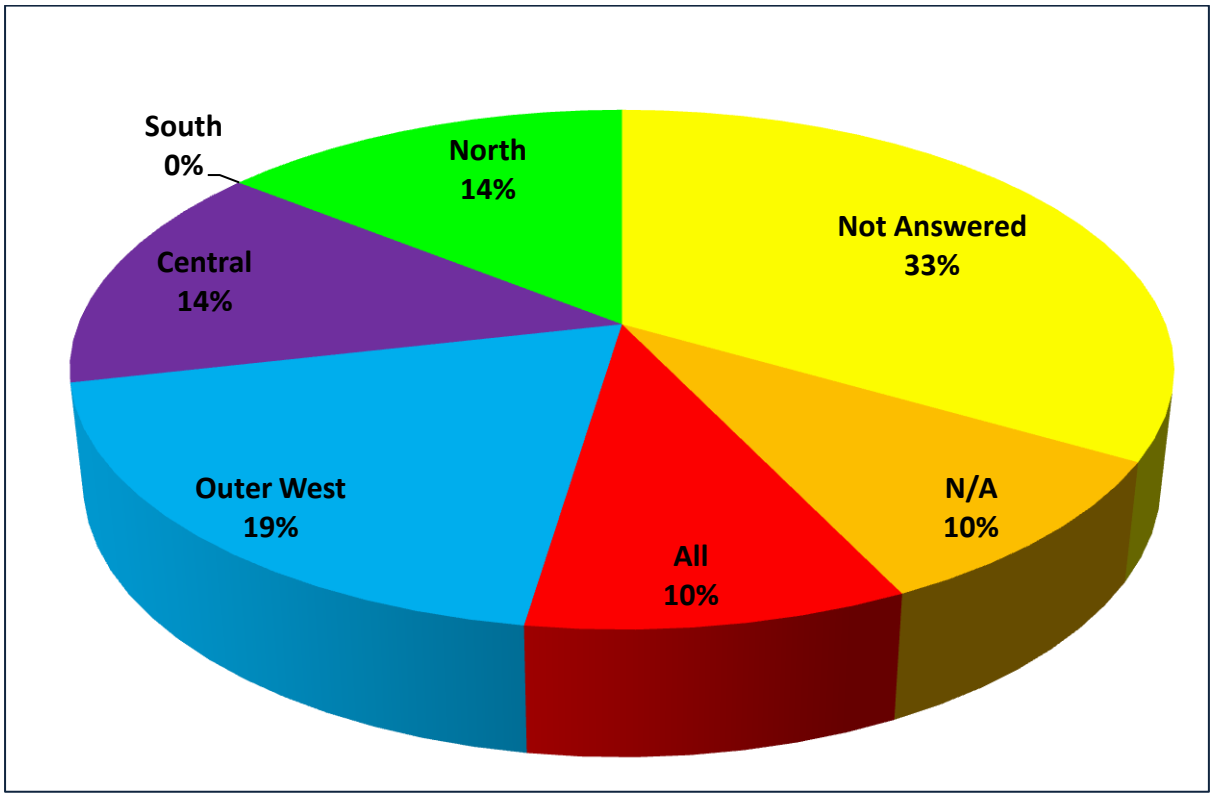

Figure 4.11 eThekwini Schemes predominantly used/normally worked with.

Nearly 50% of the respondents said they were familiar with the eThekwini Schemes (**Figure 4.11** and **Figure 4.12**). Note must be taken that a large number of the respondents are not Durban based. Suggestions made to improve the schemes included the following: --

- Energy efficiency should be contained in a specific chapter or section in the LUMS to address the long term vision of the principle.
- There should be a general revision of schemes in most areas. (The prior zoning should be revisited in the newly adopted schemes).
- There needs to be a pro-active approach in creating schemes instead of a reactive one.
- Schemes need to be adopted to support densification. This provision should be revisited in the scheme amendment and consolidation.
- There needs to be less of a blanket approach when creating these schemes and a thorough prior situational analysis is required to inform the norms and standards that are currently implemented.
- Impact on amenity needs to be specifically considered.
- Less political interference in the decision process is required.

4.1.4 Views on the Inclusion of Energy Efficiency Measures in the Schemes

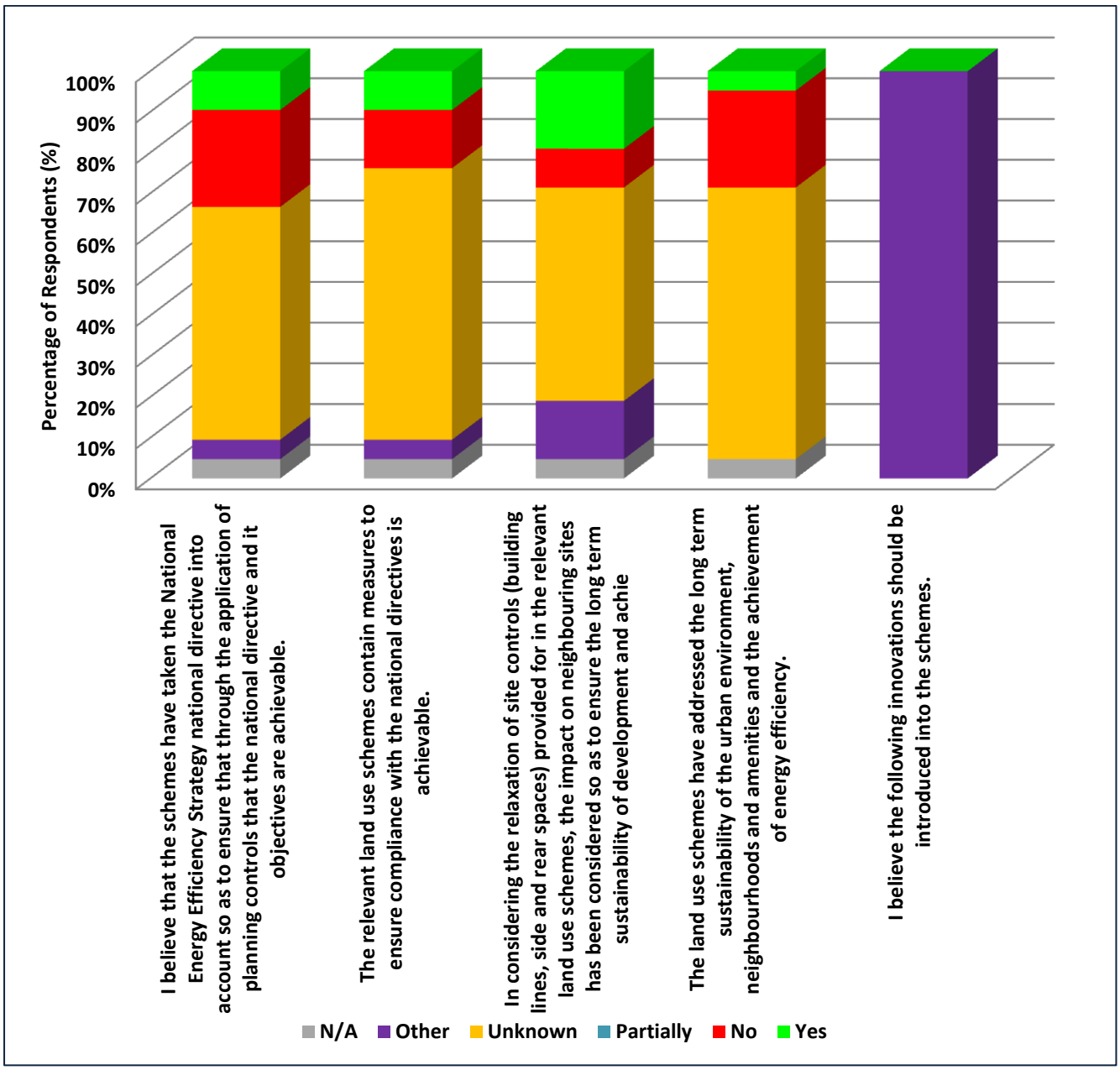

Figure 4.12 Views on the inclusion of energy efficiency measures in the schemes.

4.1.5 Views on the Impact of Planning Legislation on the Rate of Development

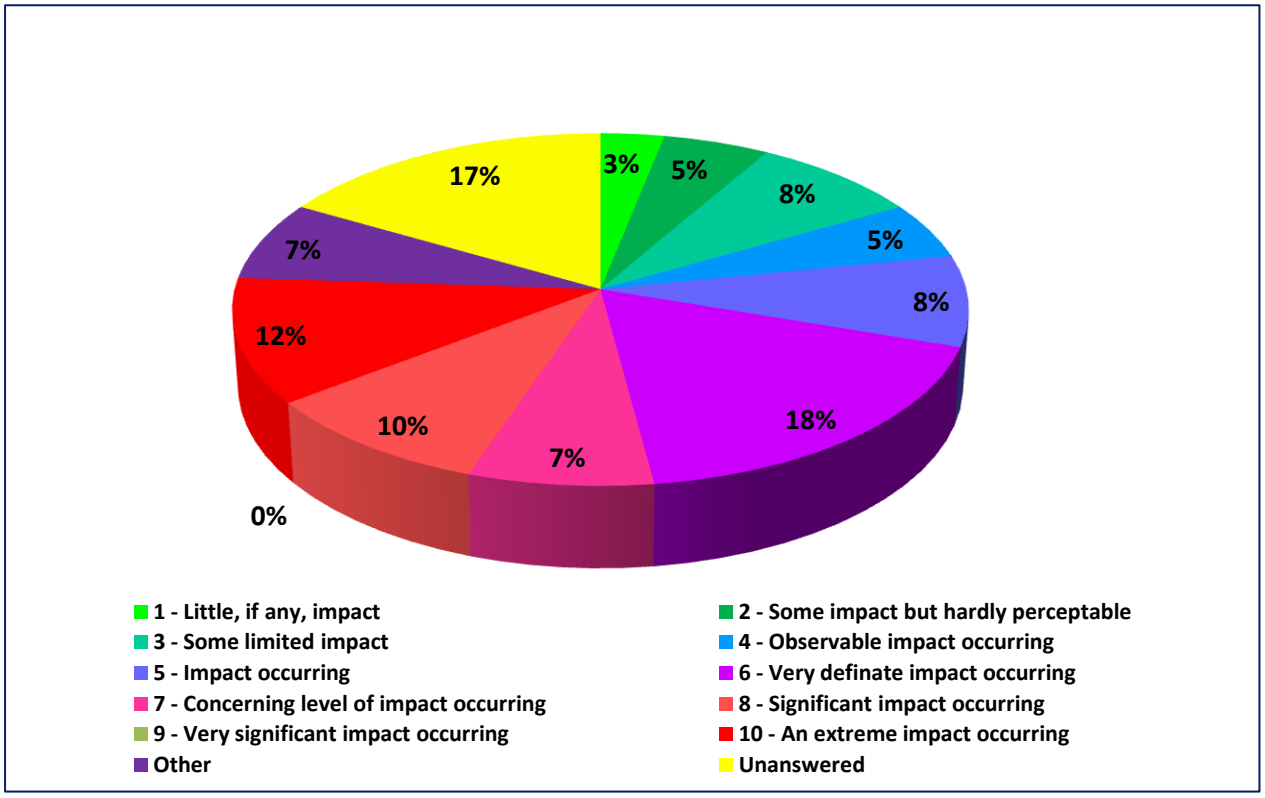

Figure 4.13 Views on the impact of planning legislation on the rate of development.

When questioned specifically, a quarter of the respondents (**Figure 4.13**) were of the view that an extreme impact was occurring on rate of development as a result of the ongoing shift to uncertainty in planning legislation. A further quarter were of the view that a significant impact was occurring, while only some 30% were of the view that no impact to an observable (but minor) impact was occurring.

Nearly 85% of the respondents believe that this negative contribution to development will continue indefinitely, while little more than 10% were of the view that it was a short-term phenomenon.

The issues identified are listed in **Table 4.3**.

Table 4.3 Issues identified by respondents on the impact of planning legislation on the rate of development[43].

Category	Issue
Poorly Drafted Legislation	• Delays aren't necessarily the fault of the Local Authority. Bad legislation like the PDA is difficult to administer. There might be value in a Commission of Inquiry into the way this was implemented. • There are too many legislative policies being flouted, which sometimes contradict each other. • The planning fraternity is being pounded with different plans from other external professions and this is causing a tidal wave of norms and standards. • The DFA streamlined the process and cut through the red tape - please bring back its twin. Simplify the process. • The new legislation allowing only Planners, Surveyors & Lawyers to do Town Planning work should be amended to allow Architectural Professionals to do Rezonings, Special Consents, Relaxations, etc.
Poor Implementation of Legislation	• The impact will not be negative if the implementation of the legislation was done in a technically correct manner. • The municipality should adhere to the legislated application flow to ensure compliance with time frames. • The onus on the applicant to obtain comments from departments like National Agriculture, KZN Department of Transport and also Environmental Affairs are extending the timeframe of applications well beyond acceptable limits and the applicant is not in any position to expedite the process. • One only has to look at data from the various Surveyor General's offices to see the huge negative impact the PDA has had on development in KZN in relation to the other provinces. • It was a good idea that has been bungled in application by allowing municipalities to sidestep the time frames, without incurring any penalties. • The developers have gone to Gauteng. • Time frames are too loose and not adhered to. • There is too much red tape. • Too many minor requirements can be used to delay development.
Capacity	• Municipalities are generally ill equipped and inexperienced. • The impact is directly related to the municipality's inability to process the requirements of the Acts/Bills; this is an HR issue due to understaffing. • The provincial government needs to assist the smaller municipalities in this regard with expertise, or, outsource such work. • Put people in place who know what they're doing and who have the relevant experience and expertise, this presently is clearly lacking. • The people coming out with so-called Planning qualifications are incompetent and the education system needs to be seriously questioned. • The problem will continue until it is adequately addressed. • The smaller municipalities do not have the capacity to implement the PDA or the

[43] Issues have been captured verbatim from the respondents.

Category	Issue
	SPLUMA.
Coordination	• Lack of legal coordination between environmental authorisation and planning approvals.
Other	• I believe there are other aspects, besides planning laws, procedures and systems, that impact negatively on the progress of development. To the best of my knowledge, these have not been included in the framework of this study.

In the one-on-one interviews and the focus group sessions, the eThekwini Land Use Management section identified the following matters in relation to planning:

- Strongly linked to the requirements of Part XA is the maintenance of adequate clear space about a building which becomes a bone of contention between planners and the development assessment practitioners.
- Section 7 of the National Building Regulations, has been used as a motivation for a policy change by Council on side space requirements. Section 7 is a relatively short section which should not have been allowed to override the city's schemes as these documents, which have evolved over many years, are significantly more complex and thoroughly thought through.
- Processes governed by the National Building Regulations often supersede the town planning schemes without following due procedure as required.
- There has been a dramatic drop in the number of building plans being submitted in Chatsworth and Phoenix due to these new requirements which frustrates the public and developers.
- LUMs are now involved in new procedures – pre-scrutiny - which they did not undertake in the past.
- Relaxations of building line, side space and rear space relaxations should be done by LUMS.
- Planners have been advised by the Town Planning Appeals Board NOT to concern themselves with matters outside planning legislation in their decisions. If they do, and a matter is brought to the Board on appeal, it will be overturned.

The valuer and property economist indicated the following on planning aspects deleteriously affecting development:

- There is a perception that stringent development planning and building inspectorate regulatory requirements delays development in the city.
- Most developers are reasonable and are more than willing to accommodate the municipality's reasonable requirements. However, a far greater degree of flexibility is required on the part of the municipality if development is to be encouraged, economic

development is to occur in the city and job opportunities created. There is perhaps a need for a facilitation department within the municipality to expedite and champion development.

- Unfortunately, the municipality's strict statutory compliance stance rather than a "How can we help" approach is tending to drive business away from eThekwini. While environmental matters are correctly considered, the social and economic aspects don't appear to be receiving adequate consideration when proposals are put forward by developers.
- In short, it is not the current planning law that is restricting the pace of development in Durban, as is perceived by some.

With reference to **Table 4.3**, respondents are of the opinion that it is not only the poor drafting of legislation that results in problems, but how the legislation is implemented and most importantly the attitudes of those implementing the legislation that hampers development.

4.1.6 Building Aspects

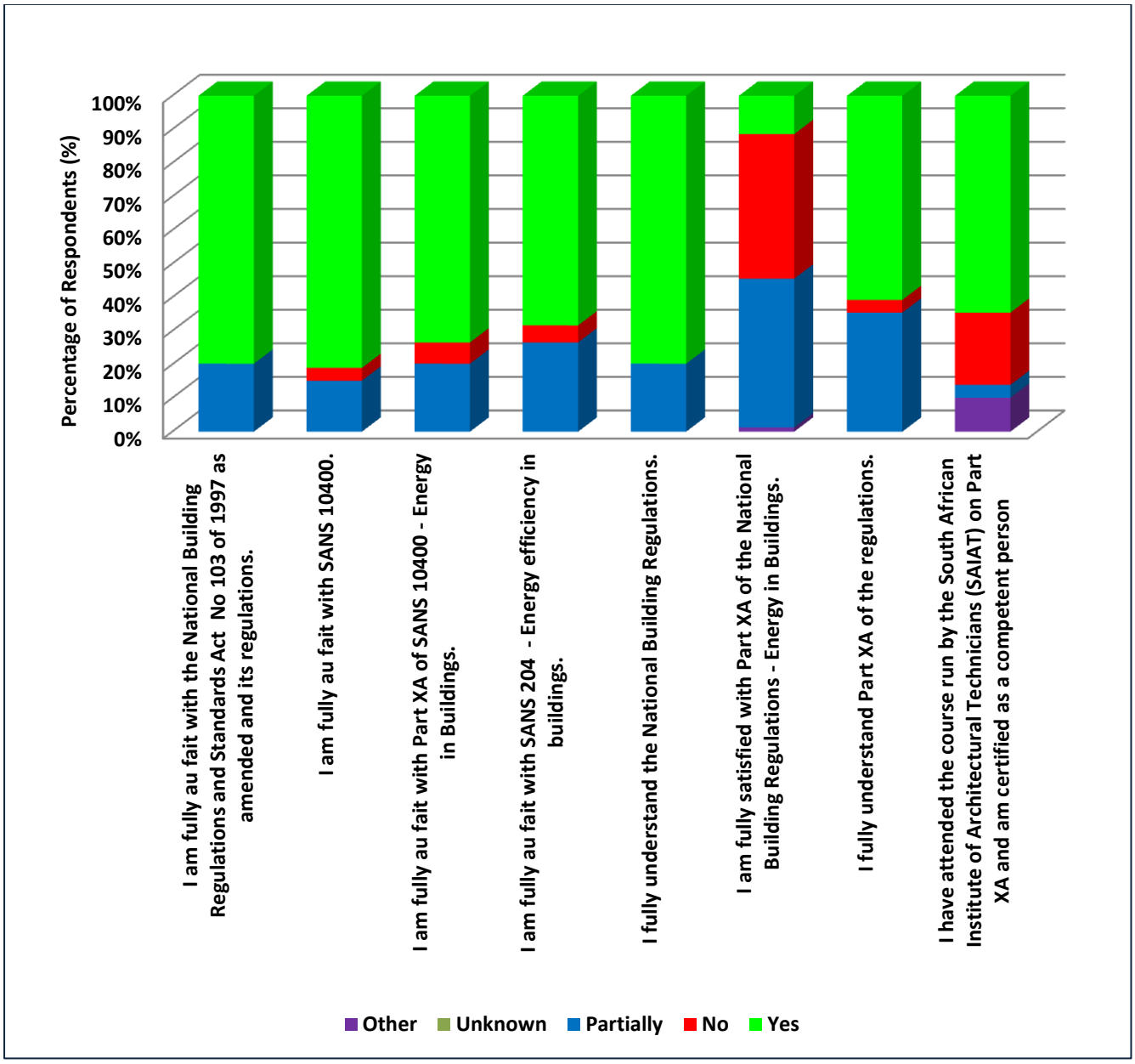

Figure 4.14 Respondents' knowledge of building legislation and policies.

Some 75% of respondents (**Figure 4.14**) stated that they were fully *au fait* with the National Building Regulations and Standards Act No 103 of 1977, as amended. Other than for one exception, all the others said they were partially familiar. In the case of SANS 10400, 75% again claimed knowledge, but 8% said they were not familiar with it. Moving on specifically to Part XA of SANS 10400, familiarity dropped to 67% with partially familiar increasing to 23%. Finally, with respect to SANS 204 familiarity was limited to 60%, while 33% claimed partial familiarity.

When asked if they were fully satisfied with the National Building Regulations Part XA - Energy in Buildings (**Figure 4.14**), 46% indicated they were not satisfied, 42% that they were partially satisfied, while 10% said they were satisfied. With reference to an understanding of Part XA of the regulations

(**Figure 4.14**), 38% said they understood them and 37% said they partially understood. Respondents who had attended a course run by the South African Institute of Architectural Technicians on Part XA constituted 62% (**Figure 4.14**). Only 25% indicated that they had not attended any course at all on Part XA.

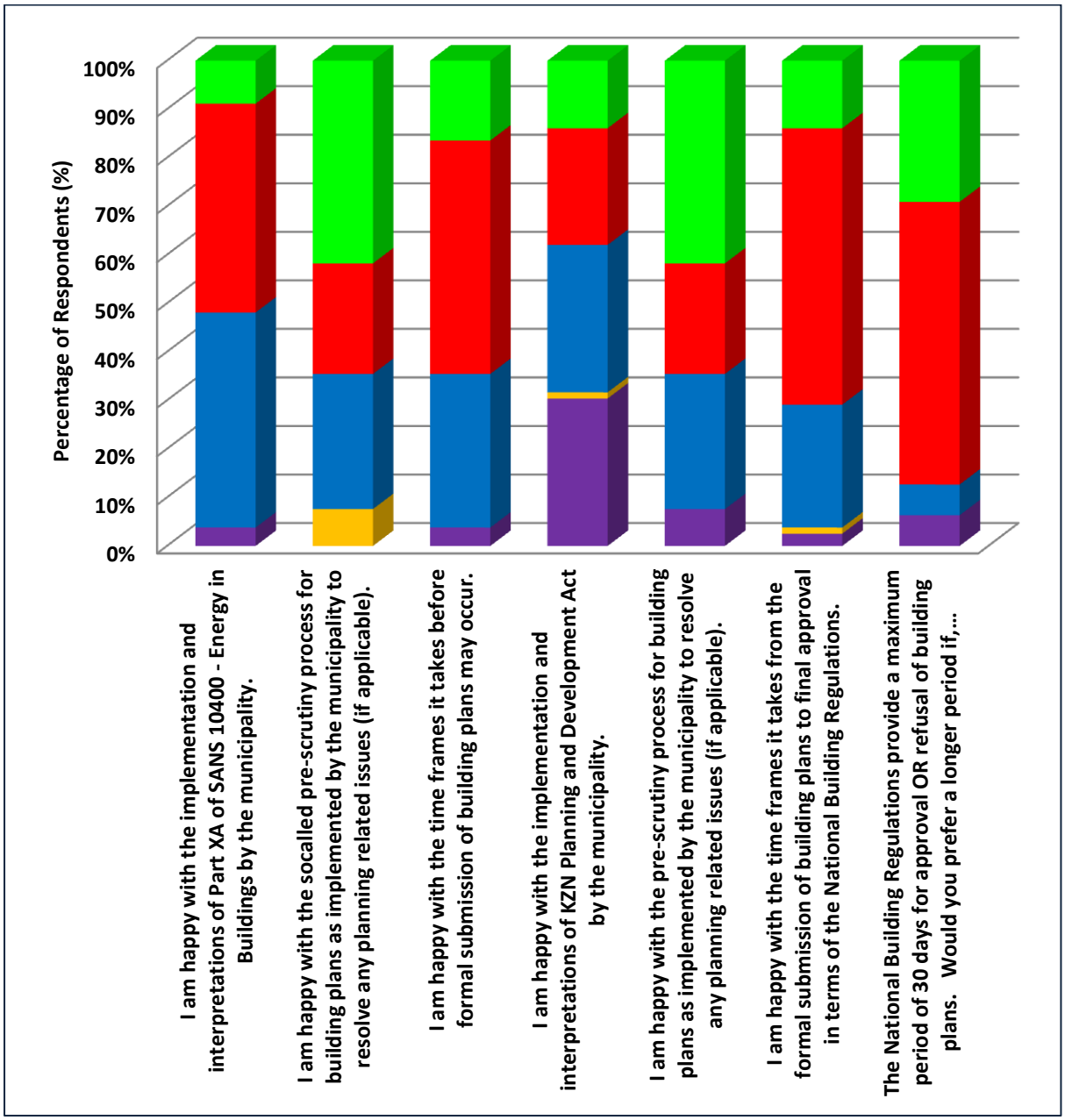

Figure 4.15 Implementation processes of the building legislation.

Only 8% of respondents indicated that they were satisfied with the implementation and interpretation of Part XA of SANS 10400 by the municipality (**Figure 4.15**). Forty per cent stated that they were partially satisfied, leaving the majority dissatisfied.

Only 38% of respondents indicated they were happy with the pre-scrutiny process for building plans as implemented by the municipality to resolve planning related issues (**Figure 4.15**). A further 27% said they were partially satisfied.

Only 17% of respondents indicated they were happy with the time frames before formal submission of a building plan could take place (**Figure 4.15**). The time allegedly taken for clearance of building plans in the pre-scrutiny process ranged from just under a month to 6 months and, in one case, to over three years.

A significant 35% of respondents indicated they were unhappy with the implementation and interpretation of the Planning and Development Act by the Municipality (**Figure 4.15**), while 33% said they were only partially satisfied.

When it came to the time frames involved from the formal submission of building plans to the final approval in terms the National Building Regulations, nearly 70% said they were unhappy (**Figure 4.15**). This time frame includes resubmissions following any initial refusal. Those that were unhappy indicated times ranging from two months to 6 to 8 months. In addition, there were some who indicated substantially longer times.

When asked whether they would prefer an extended period of time to approve or refuse plans as provided for in section 7, 62% indicated in the negative while nearly 30% stated they would prefer more time to enable matters to be finalised.

4.1.7 Energy Conservation in Buildings

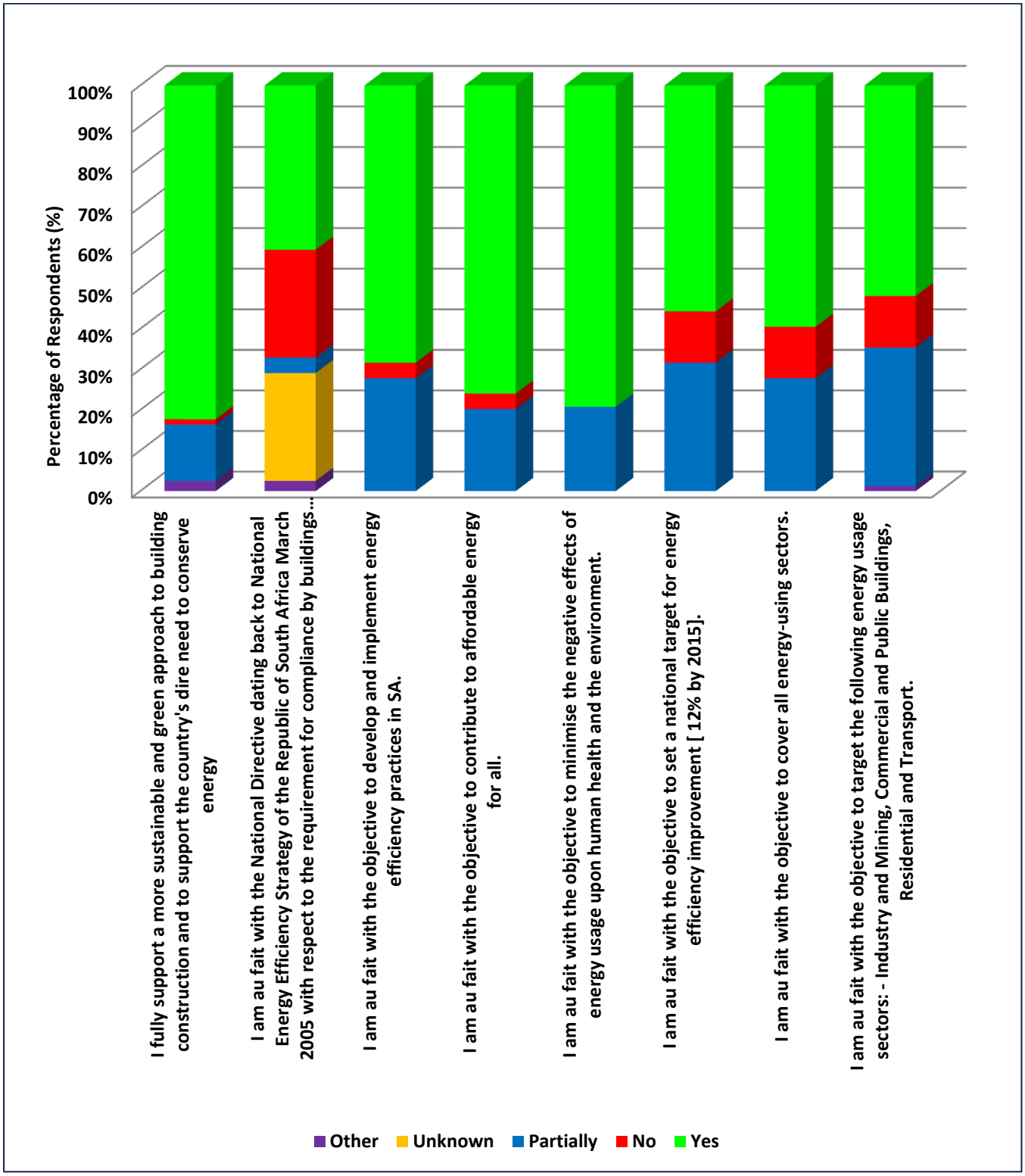

Figure 4.16 Knowledge of energy efficiency strategies.

By far the vast majority of respondents, some 80%, fully support a more sustainable and green approach to building construction and support the country's need to conserve energy (**Figure 4.16**).

Almost 44% of respondents stated they were a familiar with the national directive of 2005 towards achieving a national energy efficiency strategy for the Republic (**Figure 4.16**). With regard to the objective to develop and implement energy-efficient practices in South Africa, 70% said they were aware. With the objective to contribute to affordable energy for all 77% said they were aware. With respect to objective to minimise the negative effect of energy usage on human health and the environment 80% claimed they were familiar (**Figure 4.16**).

Only 58% said that they were aware of the objective to set a national target for energy efficiency improvement of 12% by 2015. Sixty two percent were familiar with the objective to cover all energies and sectors. Forty eight per cent were aware of the objective to target industry and mining, commercial and public buildings, residential and transport sectors.

Those who believed existing legislation and schemes take the national directive and its objectives into account constituted 35%, with a further 44% being unsure (**Figure 4.17**). There was greater uncertainty as to what extent or otherwise, Part XA had been taken into account, if at all. Only in the case of the KZN Growth and Development Strategy, was it partially believed that Part XA had been considered.

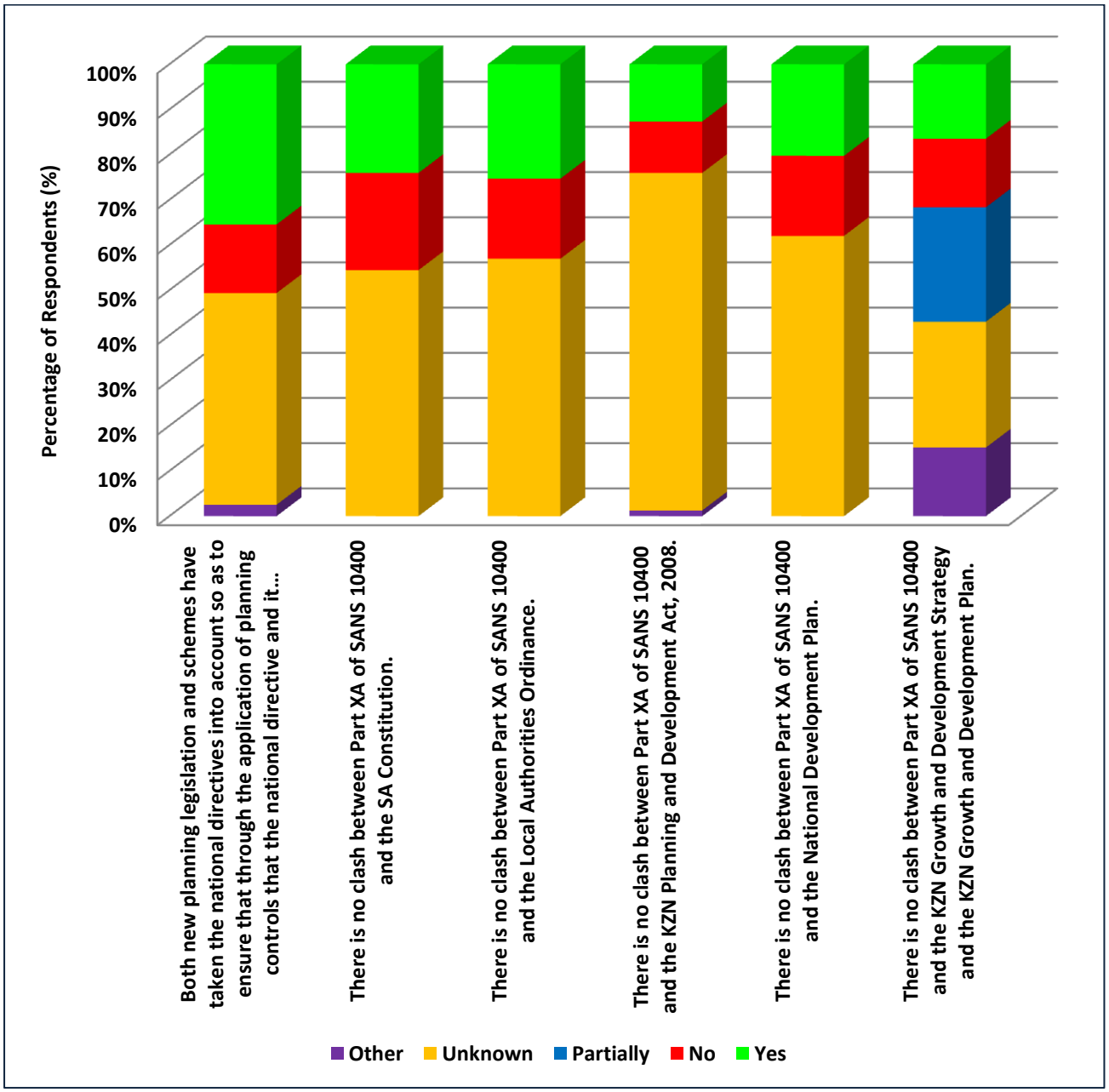

Figure 4.17 Clashes between energy efficiency strategies and planning legislation and policies.

4.1.8 Impact of Part XA on Development

While comments from the architectural sector on the impact of Part XA on the rate of development was obtained predominantly from KwaZulu-Natal and the Western Cape, the responses, perhaps surprisingly, were generally little different between the two regions. No differentiation has therefore been made below.

High costs resulting in poor design	• The costs associated with the design phase tend to cause designers to lean towards the 15% glazing area exemption. This leads to bad design, e.g. a 3 bedroom, 2 bathroom house of 100 m^2. This allows 15 m^2 of glazing if this has 1 sliding door & window of 3,6m x 2,1m onto a veranda, (7,6 m^2) this leaves 7,4 m^2 for the kitchen windows, say (1,2 m^2), 2 x bathroom, (0,72x2) and then we are supposed to achieve cross ventilation to the 3 bedrooms which means 2 windows 1200 high x 600 wide - clearly this is unworkable and unlivable. People will then install a/c to get the cooling they could have got by proper cross ventilation. The smaller the houses get, the worse this ratio gets, as door heights don't shrink & the area required for proper views & ventilation doesn't change.
High costs need good design	• The lower cost developments should also comply if it is within their budget. The designers have full control over issues such as orientation, shading elements such as wattle lathe or bigger overhangs. It is unlikely that the lower cost developments would be using mechanical cooling elements so Part XA should also take into consideration that roof gardens are a great for keeping houses cool if waterproofed correctly. Also encouraging the planting of non invasive indigenous shady trees. • Lower cost developments are called thus. There has been a marked increase in building cost to comply. The building must be compliant with the NBRs and be habitable and comfortable to live in. Correct ventilation. Habitable room sizes. Reflective shield in roof.
Assumptions on climatic zones	• It is simply not sustainable in a 3rd world country! Part XA in theory is a good idea, but it is too generalised at this stage to be effective. The control areas are huge and make assumptions on areas of varying climate and lump them into the same categories, i.e. Durban Central vs. Kloof/Hillcrest.
Not applicable to low cost	• In terms of Energy usage, the poor have always been trying to save for their own good anyway, by using less and by using sparingly also.

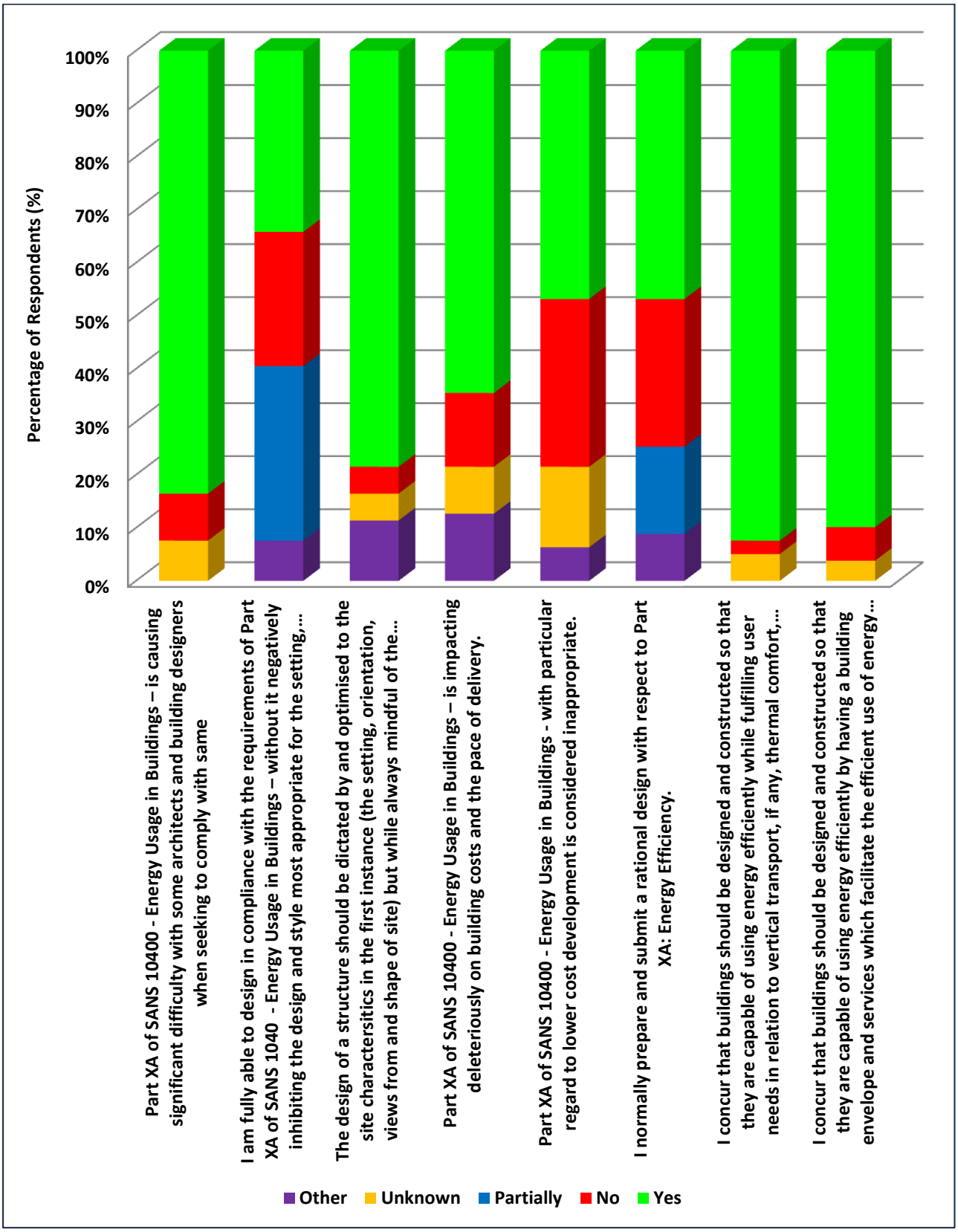

Figure 4.18 Application of Part XA.

The critical question of whether SANS 10400 - energy usage in buildings - was causing difficulty for architects and building designers resulted in a resounding 79% stating that this was indeed the case. Only 13% said it wasn't a problem. (See **Figure 4.18)**. The problems identified, while grouped, are listed verbatim in **Table 4.4**.

Table 4.4 Challenges identified in the impact of Part XA on Development. [44]

Category	Issue
Pre-implementation applications	• Plans have had to be withdrawn even though they were submitted before the period of the energy efficiency implementation program.
Costs	• The program has seen development costs rise exponentially. • Some clients will only pay architects once the plans are approved and if this takes a year it puts enormous strain on the cash flow for practices trying to make ends meet. • Most clients would gladly pay double the submission fees to the municipality for a fast track approval system. This would easily pay for the employment of additional staff. • All very frustrating and time consuming, resulting in extra costs for us and the clients - when it could be quite simple on residential projects. • The issue is not seeking compliance. The problem that I have experienced is that many clients cannot afford to build because of the extra costs involved in order to comply. • Unfortunately, this causes a domino effect into other trades and sectors. • It is a great expense to the homeowner to install energy saving devices. • There is still power theft in this country, is the wastage being considered, as the home owner who is paying must now pay more to be more efficient. • Part XA is causing construction to be more expensive because roof trusses need to be reinforced to carry solar geysers.
Small properties	• When dealing with smaller or council built homes, it is more difficult to comply with the fenestration aspects due to the size of the rooms. This is totally unfair as the poor are further disadvantaged as they have to bear additional costs. • Particularly when it comes to smaller erven, and erven with irregular slopes, it is extremely difficult for architects make designs that will be in line. • Firstly, Apartheid black townships were seen to be designed without any visible properties. Years thereafter tiny properties were added around boxed designs, these boxed designs did not cater for human social and security rights. • The Section 7 guideline is part of the XA, overshadowing etc. This stifles development in township small sites. This has a chain reaction; it affects architects, builders, construction labour, financial institutions, social needs, hardware and their suppliers and reduces the municipal rate base.
Orientation	• In terms of orientation, many buildings have been built incorrectly in the first instance and this impacts on future additions and alterations. • Some of the tables are apparently for the northern hemisphere and not the southern hemisphere. • Lookup tables apparently have wrong values for South facing openings. • Forced orientation may hamper the client's wish to take advantage of a view or orientate the view from the house towards an undesirable part of a pre-existing neighbouring dwelling. • Solar geysers are unsightly on roofs, especially when it is on the front elevation due to orientation.

[44] Challenges identified have been captured verbatim from the respondents.

Category	Issue
Implementation	• These bylaws are changing the face of architecture and depressing the industry. • The implementation of these bylaws in theory needs to be phased over a longer period to allow for the construction industry to catch up and be able to provide the necessary building products that are required to make projects comply, i.e. double glazed frames, hot water systems, specialised insulation, etc. • Plans getting lost at the municipality are unacceptable. • Plans are regularly referred for the same issues when these have already been dealt with. • Examiners are pedantic with the application of the rules and regulations instead of understanding a 'deemed-to-satisfy' situation and 'the bigger picture'. • Enforcing Act without receiving public comments.
Training	• Although I attended a course by SAIAT, and I feel that this did not make be competent - it was a waste of time and money. • Perhaps a lecture on green design is required..... not numbers. • We go on endless courses to learn about energy efficiency, which cost us time and money. We learn from a lecturer who gives their definition of what HE sees is the answer and then we submit the plans and they are referred by someone who thinks HE has the answer!!! Very frustrating.
Capacity	• Plans Examiners are not competent enough to read plans - they refuse on items shown correctly on plans. • There seems to be very little understanding from the plans examiners of the important role that they should be stimulating the economy by assisting in getting plans approved quickly. • There is a lack of knowledge on the part of the plans examiners, team leaders and unqualified examiners. There is a lack of attention to detail (needless referrals) and a lack of understanding of good building practice • Roof lights - why do we have to have a special engineer for this which cost the clients extra money (not really an Energy problem) - so we avoid putting them in - which is ludicrous. • If this has such an impact, then a Built Environment Specialist should assess this and not a technician who created this guideline.
Planning	• Why do a LUMs application first, when the plan has to be re-circulated back to them and refusal letters stating that the plan is not returned from LUMs. • Registered SG Town layouts pre-exist the requirements of XA and are fixed. • Often a dwelling layout that will satisfy XA will not be possible on a stand.
Refusal	• Plans are only circulated to some departments after the first nonsensical refusal. • The examiners should not be allowed a second take on an application, i.e. a refusal based on a totally new item (The assessment must be fully completed on the initial submission). • For a refusal to state "comments from the ..... department are outstanding" is unacceptable.
Poor drafting	• Difficulties in cross referencing with SANS 10400 XA contradictory statements by experts that SANS 10400-XA is obligatory. Multitude of values to cross-reference. • The data used is inaccurate and too onerous. • The science is not understood by the assessors. • Part XA has nothing to do with architecture or planning. It is a retrospective process that provides a very loose check to ascertain that your building is "compliant". It in no way assists in the design of the building. • There is a lot of contradiction with SANS 10400 Part O. Whilst we may comply with Part XA often our permissible natural lighting is compromised. • The regulations are nonsensical in many instances. SANS 204 contains many mistakes, contradicts Part XA with respect to energy using services. • The new Act is based on overseas regulations and I find that it does not realistically apply to

Category	Issue
	conditions here. Plus the areas of control are large and make assumptions that places like Durban central has the same climate as Hillcrest for instance, which results in unrealistic expectations for a building to comply. • Part XA contradicts SANS 10400 and is contrary to good health design principles in some instances Needs further investigation. • Regulations are not clearly defined in many areas. -Compliance with Part XA and SANS 204 regulations compromises the outcome in many situations when compared to the energy model calculation. • Insufficient regulations to allow flexibility when designing. • In my opinion Part XA & SANS 204 are a totally nonsensical way of achieving compliance - rather introduce meters that limit usage & or current, or charge on an incremental scale for power, so that it becomes so costly to exceed the predefined maximum, that the owners will implement cost saving measures by choice. This will also have the benefit that it would apply to all existing buildings and not just target that tiny percentage of buildings that new works comprises. That will save far more power. These are probably the most time wasting, uselessly inefficient and least practical methods of trying to achieve a given result that I could ever imagine. They are basing their premises on countries with extreme climates that are totally reliant on mechanical heating or cooling, rather than on our unique South African opportunity to be able to do without mechanical; for most of the year anyway. • I would replace the entire team at SABS who came up with this nonsense; I believe they have failed both Eskom & the architectural industry. I don't believe they are fit even to make amendments. Broad compliance has been explained, but the complexities and various scenarios have been excluded. Default values for fenestration performance are unreasonable. Default coefficients for solar heating geysers and conductance yield unreasonable results. There are too few regional variations - unable to integrate realistic local climatic data except *via* expensive software and engineer's modelling.
Climate	• Climate Zones are too broad. • In our area, which is subtropical, the orientation to wind and breezes for natural ventilation is a very successful way of cooling, but can often not be achieved due to the restrictions of XA, which does not take this natural resource into account.
Timing	• Time pressure is increased (without remuneration).
Calculations	• Anyone who claims an architectural knowledge of building design should be able to design in a "green" manner without the complex check of the retrospective XA calculations. I am told that these calculations are simply filed away within the depths of the council and actually do not assist the process. • Engineers – the modelling software (option C) is giving vastly different results to the option B methodology (for Architects, etc.) – why the inconsistency? If it passes with 50% glazing one way, why can't we get same compliance with all 3 methods - this is discriminatory toward the Architectural profession. The models rely largely on having air conditioning to achieve compliance – which is totally nonsense if the aim is to avoid electrical usage - prohibiting natural ventilation. This is taking design control out of the hands of architects and putting it in the hands of mechanical engineers -- clearly unworkable as they don't design the building and their interest is to sell equipment to generate fees. Why is option A not available for houses - there is more than enough statistical data available for this? Glazing areas are so restricted under option B for smaller buildings that one cannot achieve proper cross ventilation & this is causing bad design - particularly in zone 5. • In Durban, the U value calculation for heat loss is causing havoc with natural ventilation. Many of our clients do not want air-conditioning and are forced to have small openings even when completely shaded by verandas - this is ruining our coastal aesthetic and needs to be reconsidered. • Lighting calculations do not allow for homes that are large and where only portions used at a

Category	Issue
	time - e.g.: guest cottages.
Fenestration	• Most of the time, clients wish to have bigger windows and doors. South Africans enjoy the outdoors and wish to see it from within their homes. Try and explain to them why they cannot have this. • Shading is not always the best solution aesthetically. • The types of window/door frame solutions are very expensive. This also includes the glazing costs. • Compliance of the Fenestration Regulations when designing alterations/additions to existing dwellings is very difficult. We have no control over the existing orientation of the dwelling and additions are limited by site and other constrictions. It is ridiculous to enforce SANS 204 Fenestration requirements on minor new additions when the rest of the existing house is most often non-compliant. • The Western Cape has some of the most beautiful scenery in the world. Architects get clamped down by, for instance, the fenestration restrictions. Picture windows are very difficult to use in houses, etc. where applications to existing buildings are concerned in cases of alterations and additions. • Coastal homes requiring sea views and sun. Screening adding to costs and invariably clashes with guidelines implemented by the body corporate etc.
Alterations	• To apply Part XA to an existing building or extension becomes expensive for the new owner, and thus most clients elect not to get the plans formalised. • Targeting minor alterations/additions is not going to have a significant effect on achieving the National Energy efficiency targets. It should only apply to large additions i.e. adding on a whole new first storey to an existing single storey dwelling or to new builds only! • The regulations are not flexible when dealing with alterations to existing buildings. Part XA is also very handed (sic) on glazing requirements. • A small extension has to be energy efficient whereas the larger existing house is noncompliant, it is flawed. • Homeowners feel victimized because their new extensions must comply, whereas their neighbour's old buildings are noncompliant.
Public Awareness	• Some architects completed their qualifications way back, and most of them are self employed. As a result, they are not aware of the current changes that are being made with regards to energy usage in buildings and therefore find it hard to comply as they do not have information or knowledge with regards to the matter. • To make existing buildings to become compliance is becoming difficult because the public at large are unaware of these requirements and costs - simply the costs plus the compounded new laws prevent any form of development. • There should be more public awareness to the ratepayer, informing them of new legislation / regulations.
Air conditioners	• Why does the local authority require air conditioning to be put into houses, not everyone has or wants air conditioning The climatic zones are inaccurate - KZN Durban ambient temperatures much higher than (say) Kloof / Hillcrest. • In some cases, I have heard from colleagues, it is forcing them to use air-conditioning in areas where it's not actually needed.
Design	• The energy usage in the designs should be analysed from conceptual design and should take the total embodied energy of the overall design into account. • Rather than analysing a few selected parts of the design (as currently needed by Part XA) e.g. we should be able to sign off a rational energy design through the use of an approved software. The process currently is taking too long, for a process that is based on assumptions,

Category	Issue
	and there are many questions about the accuracy of the process.
Energy saving devices	• Energy efficiency is a global issue, the carbon footprint should be assessed in producing these so-called energy saving devices. Are manufacturers being assessed in their energy efficiency in producing these devices? • How long would these devices last, as it would cost the owner to replace these in a short space of time. Who will make sure that the owner will replace the energy saving device when the old one is damaged.
Glazing	• Available glazing U and SHGC available specifications are too few.
Other	• When my client has purchased a dwelling or building that has an occupation certificate, but does not have up to date plans. • Yet Municipalities still provide building certificates for submitted sub-standard building plans. • Multiple units need to have multiple solar geysers on the roof, making these units look unsightly. • Developers will shy away from Durban and look to simpler municipalities to work with. We are over regulated. • If homeowners are stifled in developing their own property, to fulfil their needs for additional living space, then soon they will become a liability to the government, as they will then wait for handouts.

4.1.9 Ability to Design in terms of Part XA

When asked if they could design in compliance with the requirements of Part XA without negatively inhibiting the design and style most appropriate for the setting, orientation, views from the shape of the site only 31% said they could. A full 33% said they could not while 27% said they could partially so design (**See Figure 4.18).**

Seven percent of respondents stated that in their view the design of the structure should be dictated by and optimised to the site characteristics in the first instance i.e. the setting, orientation, views from and shape of the site, while always mindful of the need to conserve energy, but not with the latter being the prime objective.

Sixty-two percent of the respondents stated that Part XA was deleteriously impacting on building cost and the pace of delivery.

4.1.10 Appropriateness of Part XA for Low Cost Housing

When posed with a query as to whether Part XA of SANS 10400 was appropriate for low-cost development, 50% said it was inappropriate, while only 31% found it suitable. (**See Figure 4.18).**

Reasons for not supporting Part XA for low-cost housing are shown verbatim in **Table 4.5**.

Table 4.5 Reasons for the inappropriateness of Part XA for low cost housing. [45]

Category	Issue
High costs therefore unaffordable	• Costly Implications for compliance are neither understood, nor quantified by officials. • Part XA requires costly insulation and glazing solutions which will push the cost of low cost developments to unfeasible levels. • When these developments were done in the apartheid era - stock type of designs was superimposed onto sites, no consideration was given to orientation, etc., the site areas varied from 130 sq. metres to 400 sq. metres narrow, steep and restricted by services i.e. sewer and stormwater, most of the developments were not plastered and painted, but bagged only. They did not have geysers, ceilings, power floated floors; so now to make these buildings comply would not be affordable by the home owner. • To comply fully with any green approach will entail a more sophisticated approach to the building science of the building. Hence general material "build-up".... insulations, etc. will have a heavy cost on the structure. • The query below is worded ambiguously and will cause many incorrect answers - this is a key issue! It prescribes the use of materials and suppliers which are outside of the budget of the client. First world conditions are enforced to a third world condition. The health aspect for people has not been considered. • With regards to Low cost buildings, I understand the need. A building should be comfortable, regardless of low or high cost. But the requirements of Part XA are so unrealistic at this stage that to use them on a low cost building would become expensive to implement as explained in the above 13 items. • Energy usage should not be restricted to the cost or size or a building. Low cost housing has a

[45] Reasons identified have been captured verbatim from the respondents.

Category	Issue
	cap subsidy that is usually topped up with other funds. The energy efficiency requirements have added costs that are not even subsidised by government. Even though the minister has increased the subsidy by R1000.00, this does not even make a dent in the costs. This has negatively affected the delivery of housing within the council - unaffordable. • Cannot integrate requirements due to serious cost implications. Sites very small. • Building products that are required to make developments comply with the SANS 10400 and Part XA are generally too expensive and not yet readily available in South Africa. It's sad, money wasted, low cost houses, solar panels on south facing.
Physical location for low cost housing	• Steep terrain is an inhibiting factor for compliance - this is the fundamental driver of low-cost settlement layouts.
Applicability to everyone	• If the rules are brought out by a government then they should ensure it is meant for all the people and they should build energy efficient low cost cheap houses. Let's see if they can - if they cannot - then they must reduce their rigid rules for the upper cost houses, etc. • Low cost developments often can still have a very detrimental effect on the environment and hence green principles should still be applied. • Constitutionally how does someone with a 1000 sq/m house get allowed 150sq/m of glass and someone with 100sq/m house only 15sq/m - who is using more electricity? - Clearly discriminatory. • Every resident of South Africa shares responsibility for reducing carbon emissions through reduced energy usage. These regulations cover approximately 2% of the population in the domestic field. The rest of the population do as they please.

4.1.11 Other Aspects

Some 48% of respondents said they prepared and submitted a rational design with respect to Part XA energy efficiency. Of those who do not prepare a rational design, 41% stated they used a mechanical engineer, 26% said they used another architect or building designer and 33% said they used other methods (**See Figure 4.18).**

The vast majority, approximately 88%, concurred that buildings should be designed and constructed so they are capable of using energy efficiently while fulfilling user needs in relation to vertical transport if any, thermal comfort, lighting and hot water as required in Part XA1(a) (**See Figure 4.18).**

Similarly, 90%, concurred that buildings should be designed and constructed so they are capable of using energy efficiently by having a building envelope and services which facilitates efficient use of energy appropriate to their function and use, internal environment and geographic location as required in Part XA1(b) (**See Figure 4.18).**

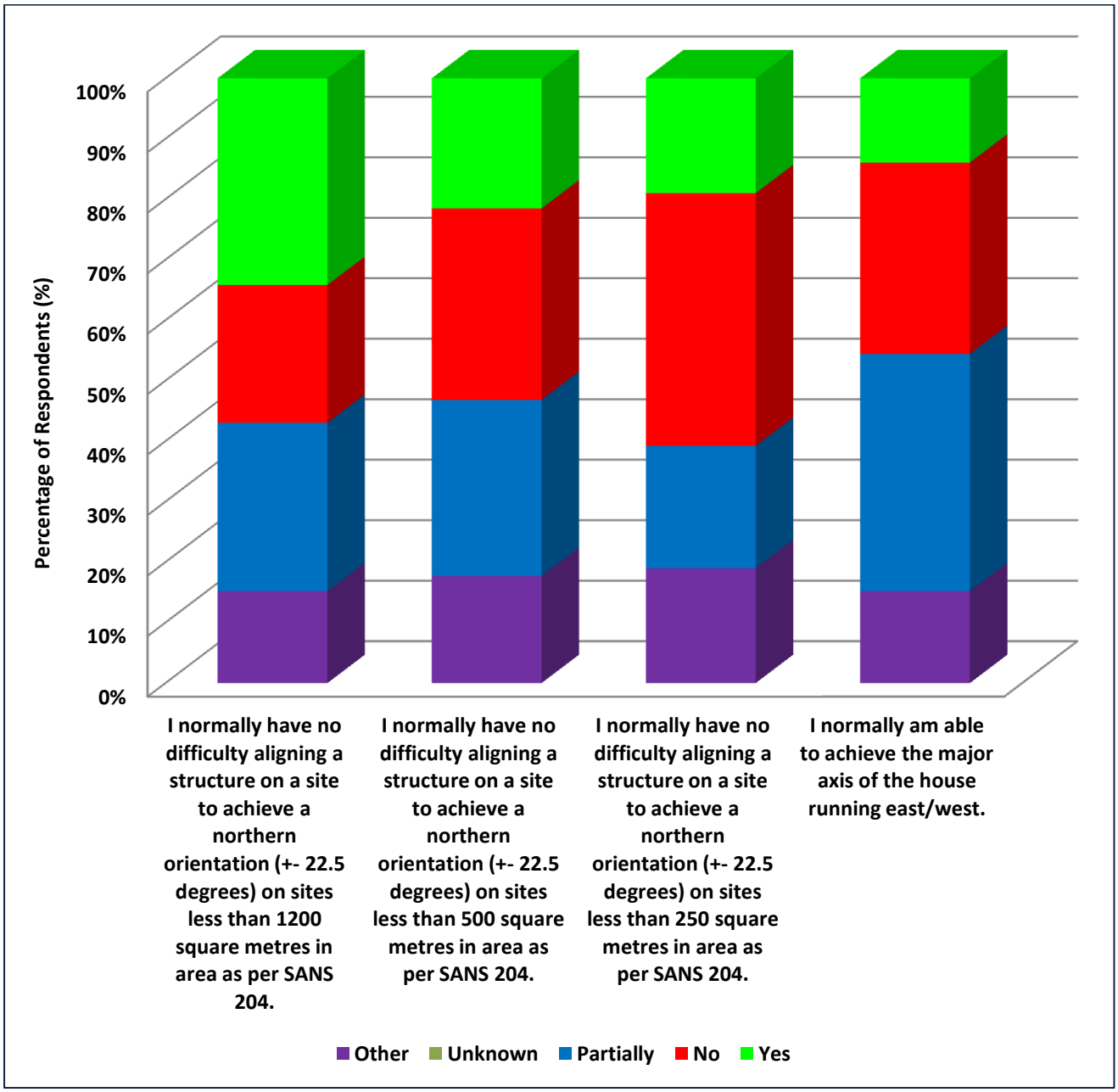

Figure 4.19 Orientation requirements.

In order to test the difficulty of aligning a structure on a site to achieve a northern orientation, alternative site sizes of 1200 m², 500 m² and 250 m² was posed. The respondents indicated that 38%, 25% and 17% would have no difficulty in so aligning. While 23%, 21% and 15% stated that they would be able to partially achieve this objective (**See Figure 4.19).**

Thirteen percent of the respondents indicated that they are normally able to achieve siting the major axis of the house running east-west, while 38% said they could normally partially achieve this desire. (**See Figure 4.19).**

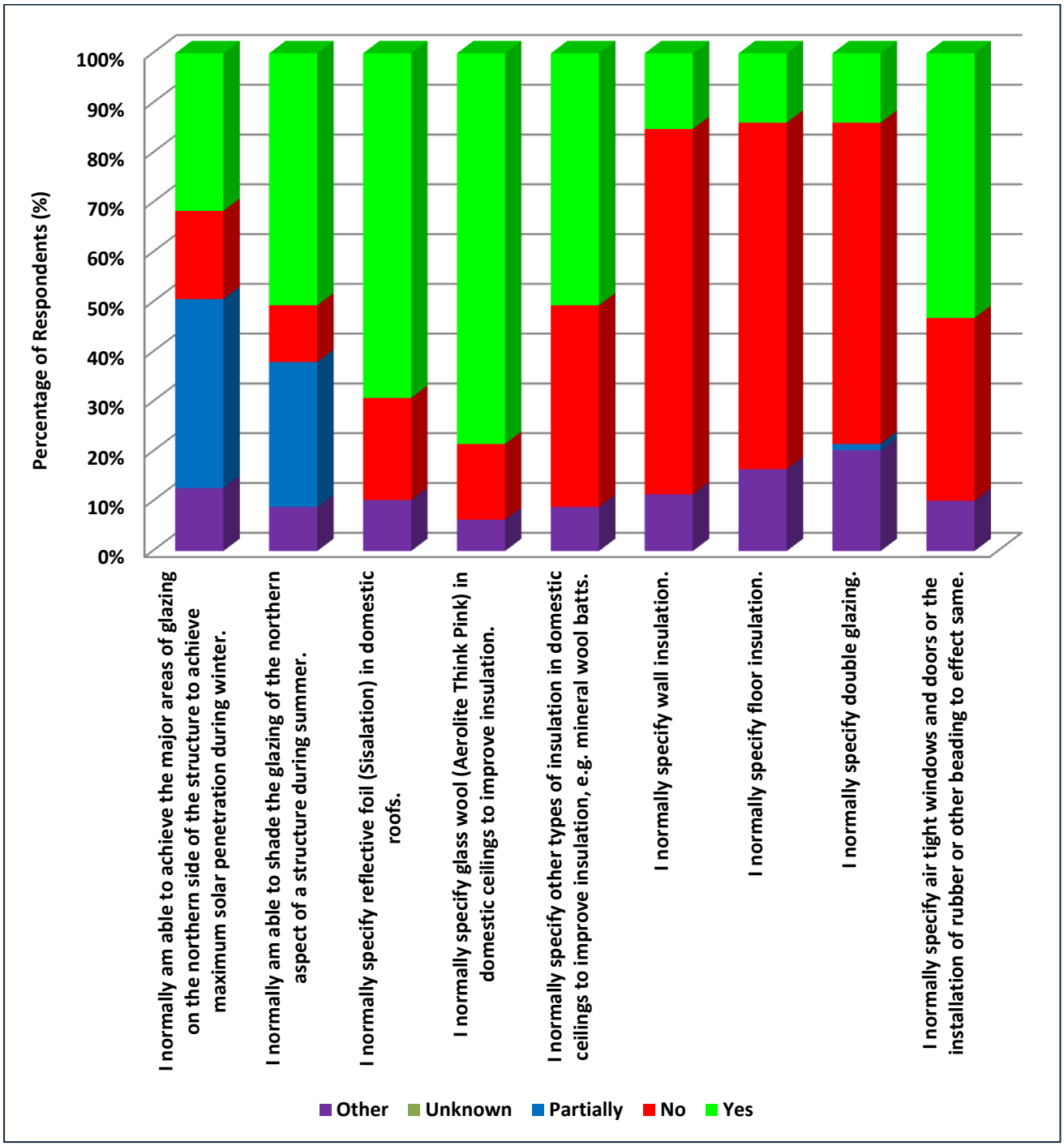

Figure 4.20 Insulation.

Twenty-one percent of the respondents felt that they could achieve the major areas of glazing on the northern side of the structure to achieve matched maximum solar demonstration during winter. Forty percent said that they could normally partially achieve this requirement (**See Figure 4.20).**

Fifty-four percent of the respondents stated that there were normally able to shade the glazing on the northern aspect of a structure during summer. Twenty-one percent stated they could normally partially achieve this (**See Figure 4.20).**

Thirty-three percent of the respondents said they had no difficulty in specifying smaller glass areas on the east and the west facade to minimise heating loads for their clients (**See Figure 4.20).**

Regarding the insulation, 62% of respondents stated they specified reflective foil or Sisalation, 75% specified glass wool, with 40% specifying other alternatives such as mineral wool batts. The vast majority of designers do not specify wall insulation (77%) or floor insulation (71%) (**See Figure 4.20).**

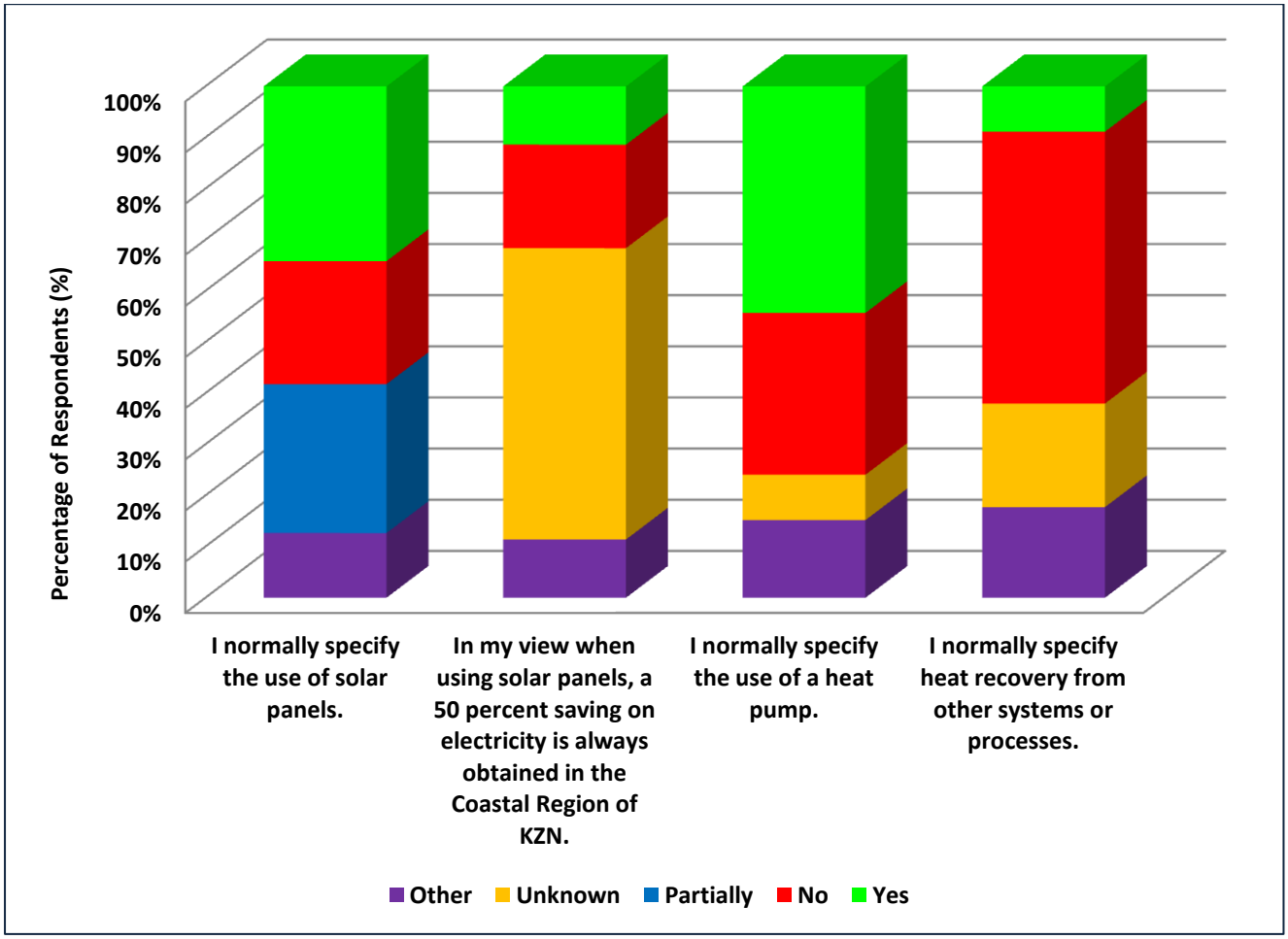

Figure 4.21 Augmenting energy sources.

Fifty-three percent of the respondents stated that they normally specify the use of solar panels, (**See Figure 4.21),** however, only 15% were able to positively state that a 50% savings in energy was achievable. The other 50% were unsure. Thirty-eight percent of the respondents stated they recommended a heat pump, while nearly five percent stated they sometimes specified alternative processes or systems.

Sixty-nine percent of the respondents stated they do not normally specify double glazing, only 44% specified entire windows and doors all of the installation of rubber or other beading to effect and the same.

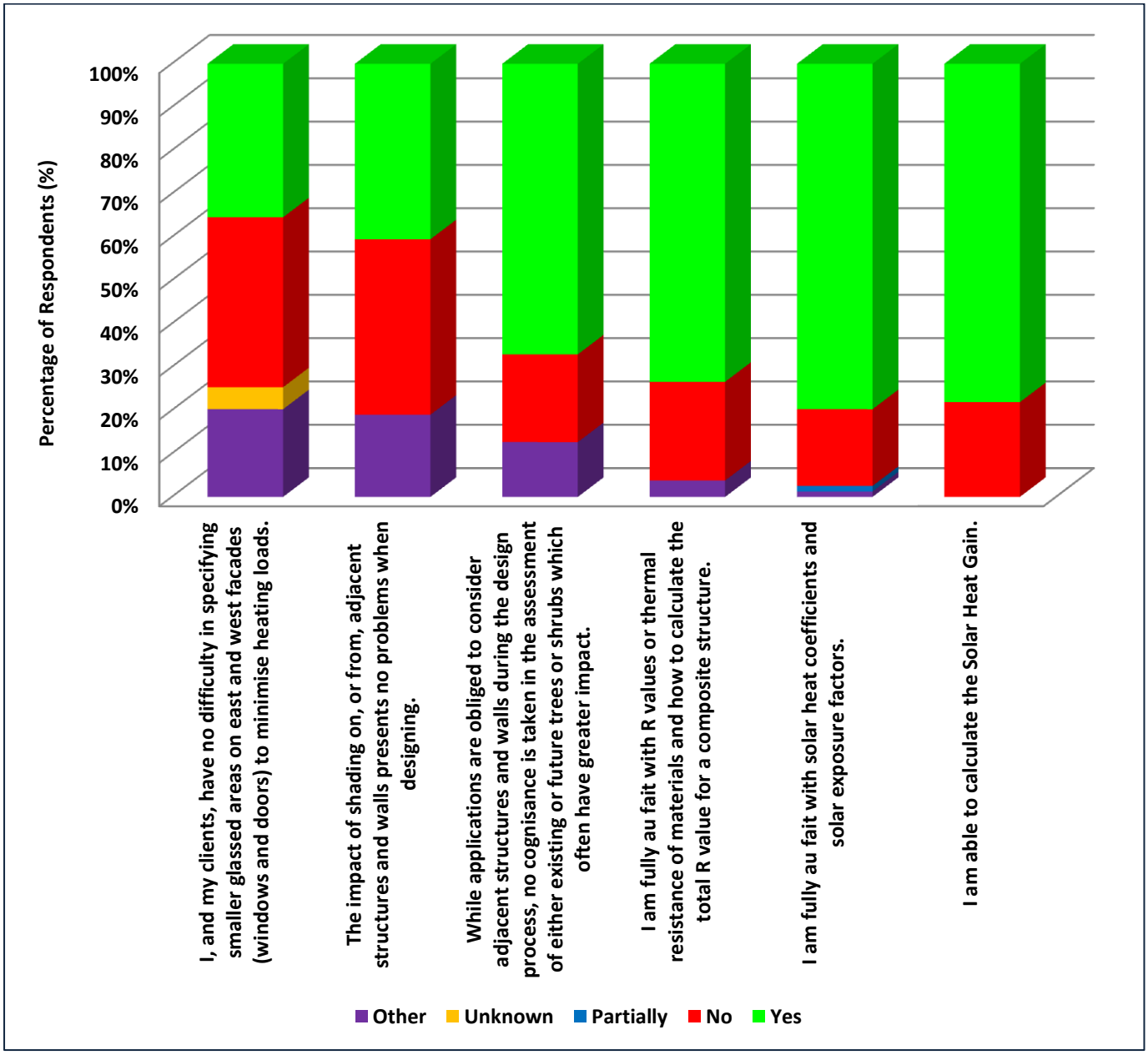

Figure 4.22 Ability to design in compliance with Part XA.

With respect to shading on, or from, adjacent structures and walls, some 38% stated they had no problem when designing. Some 58% stated that while they are obliged to consider adjacent

structures and walls during the design process, no cognisance is taken in its assessment of either existing or future trees or shrubs which often will have far greater impact (**See Figure 4.22).**

Approximately 70% of the respondents stated they were familiar with 'R' values or thermal resistance of materials and how to calculate the total 'R' value for a composite structure, and that they were familiar with solar heat coefficients and solar exposure factors, and that they were able to calculate solar heat gains.

Some 44% of the respondents believed that Part XA will have an indefinite negative contribution to development. While 37% believe it will only continue in the medium term.

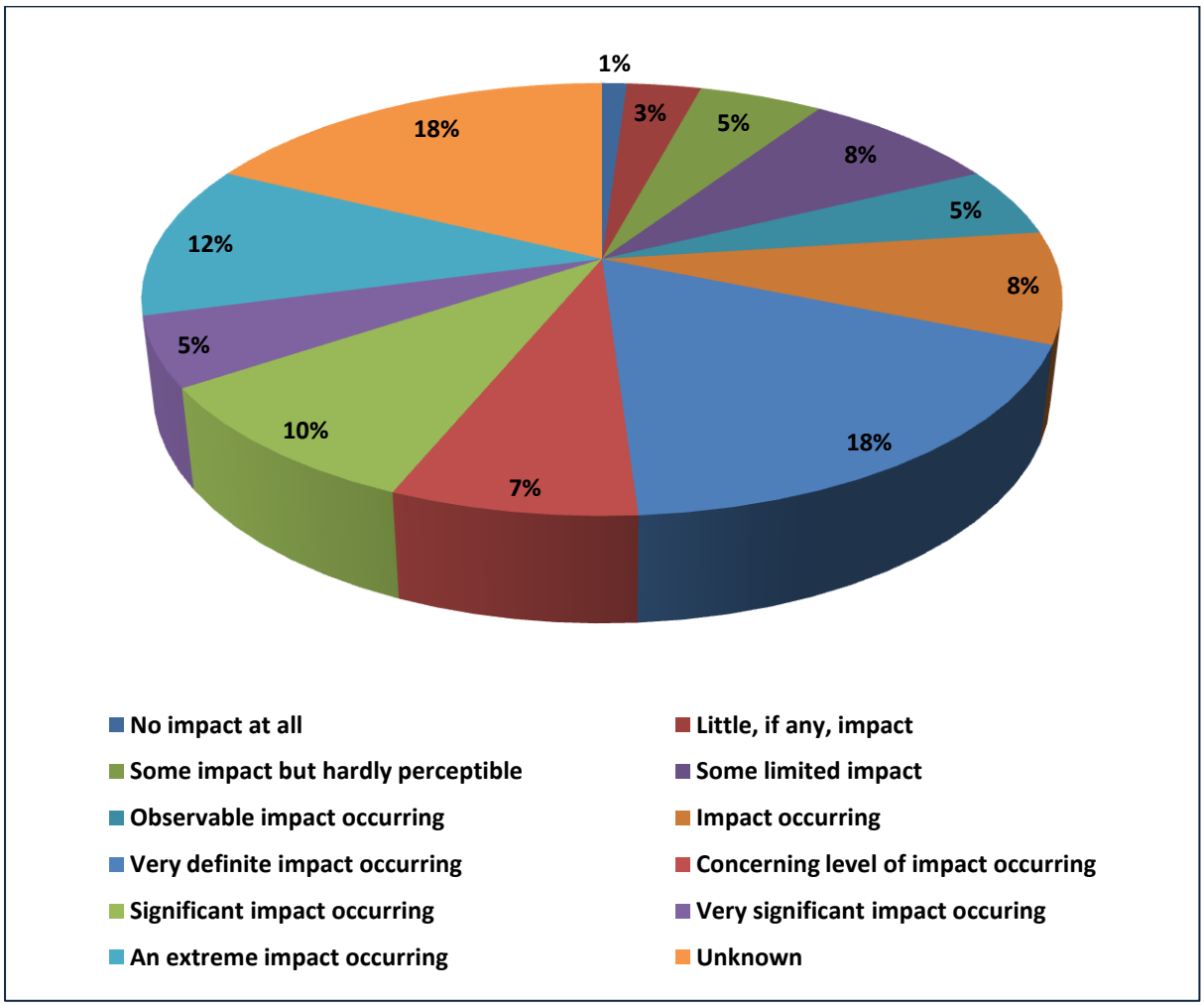

Figure 4.23 The impact of Part XA with SANS 10400 Part XA and SANS 204 on the rate of development.

Regarding the question of whether Part XA at the National Building Regulations read with SANS 10400 Part XA and SAN 204 were negatively contributing to the rate of development, some 76% stated that an impact to an extreme impact was occurring. The minority view was that no impact to observable (relatively minor) impact was occurring. (**See Figure 4.23).**

4.1.12 Concluding comments on the impact of Part XA

Respondents were asked at the end of the questionnaire if they had any concluding comments. Themes highlighted in the comments included:

- The unaffordable costs of implementing Part XA.
- Part XA is resulting in poor design.
- There was no public consultation prior to the implementation of Part XA.
- The implementation of Part XA has been poor.
- The legislation has been poorly drafted.
- The interpretation of the legislation differs and there is poor interpretation of requirements.
- The time to approve plans takes extremely long.
- The climatic zones identified are inappropriate.
- There are health design issues.

At the conclusion of the survey period on 28 February 2014, 105 responses had been received in total. Unfortunately a number of these were duplicates and some appeared to have been done so as to influence the final outcome. These duplicates were deducted from the final results.

4.1.13 Comment on One-on-One Interviews

The various views on the perspectives of the different parties interviewed one-on-one. Some general observations and salient points emerge. These are discussed below.

Part XA

Table 4.6 Observations on Part XA from the interviews.

Category	Observations
Support for Part XA in principle	• Part XA of the National Building Regulations with the accompanying SANS codes are supported in principle by all the parties; the professionals, i.e. the architects and building designers, the developers and the municipalities. Only in the case of smaller building designers in the townships (the so-called recipe designers) has there been resistance. Cape Town, in the view of the municipality, seems to have overcome this challenge.
Training	• Good building design, as taught to architects at university, should cover all aspects as required by Part XA, albeit that it was not compulsory to ensure such observation in design. This should however make architects competent persons to design compliant buildings. • Attendance at the Part XA courses, run by SAIAT and others, does not necessarily make

Category	Observations
	an attendee a *de facto* competent person despite an initial accreditation given by SACAP to such courses.
Return on Investment	• Extra-over costs to comply with Part XA are acknowledged by most parties, but there should be a payback within a number of years with eventual savings of electricity costs.
Differences in views between stakeholders	• The views of municipalities on the state of acceptance of Part XA by the built environment industry and the views of the design professionals themselves differ. • There are opposing views, both within and between municipalities, on how the side and rear space should be handled; strictly in terms of the town planning scheme as administered by the planners or in terms of a policy based on potential shading of adjacent structure and utilising Section 7 of the National Building Regulations to enforce.
Interpretation of Part XA	• There are differences on how the Part XA requirements should be interpreted, strictly or narrowly or with a certain degree of flexibility and discretion. This variance in opinions is even found within municipalities. • As Part XA is currently written, there is no apparent flexibility permitted for interpretation in the regulations. • A number of parties have identified certain shortcomings in the regulations as it stands which need to be resolved. • The Regulator of the NRCS has indicated that while there will be no going back from Part XA; they are not totally inflexible to introducing some changes.
Batho Pele Principles	• Best practice suggests that municipalities should not only adopt, but should implement *batho pele* principles to assist those persons struggling to come to terms with Part XA. Many of the complaints allude to the exact reverse, citing lack of helpfulness, inadequate information on refusal letters, indifference, etc.
Enforcement	• Following the approval of building plans, there is concern in some municipalities that their building inspectorate is not adequately enforcing and the possibility for corruption exists in order to obtain occupation certificates. • Some municipalities report that the number of illegal alterations and additions has increased significantly as a way of bypassing Part XA requirements. This applies in particular to non-bonded housing that is not reliant on occupation (completion) certificates for payments from financial institutions. • Building plans to legalise illegal alterations and additions should be adjudged in terms of the law when the construction work was originally undertaken. To persistently require 'retrospective' compliance with Part XA at this juncture, for illegal works often done by an earlier owner, is viewed as unreasonable.
Approvals	• When plans are refused in terms of Part XA, clarity should be provided in what respect they do not comply.
Climate	• The climatic zones as obtained from the CSIR derived model as contained in SANS 10400 Part XA and SANS 204 are too broad and do not adequately take into account the micro-climate encountered at a finer scale. For instance, in the coastal strip of KwaZulu-Natal

Category	Observations
	it is more about the dissipation of heat than of retaining heat. • Concern has been expressed that the Part XA requirements derived from SANS 204 which in turn in many respects originated from German and Canadian norms. These countries experience radical extremes in climate compared to that experienced in South Africa, which enjoys a relatively mild climate; even on the Highveld and in the Western Cape.
Health Implications	• Requirements to minimise air leakage by using aluminium windows, with minimal ventilation, can result in unforeseen health implications.
Costs	• An alleged inability to design freely, without resorting to expensive solutions, is having a negative effect on persons who might otherwise elect to build new houses. As a result they are electing to purchase from existing housing stock.
Good building design	• Cooling by natural means, rather than by air conditioning is desirable. Some of the more onerous requirements of Part XA allegedly require an air condition to be installed. • Even on the Highveld it is believed that good building design will obviate most of the negative climatic factors without necessarily resorting to double glazing.
Alterations and additions	• The appropriateness of how best to handle alterations and additions presents a challenge, even within the same municipality. Some degree of flexibility and discretion is required.
Low cost housing	• Low cost housing, be it RDP housing or social housing, is a challenge in that the maximum accommodation for the limited available funds is desirable. Design solutions with increased floor area are favoured over and above expenditure on the Part XA requirements, which is often seen by occupants as nice-to-have rather than essential. Ceilings, for example, could be installed by the occupants at a later date. Actual savings in electricity achieved by conforming to the Part XA requirements would only be nominal. • Ultimately affordability levels of the poor and/or unemployed people have to be considered when fixing norms, such as Part XA. • Adjustments have been made recently to housing subsidies, amongst others, so as to cover the additional extra-over or start-up cost of complying with Part XA. Given the overall housing backlog in the country, one could question whether these funds should rather be expended in erecting additional housing units than in increased subsidies. • Most RDP housing will easily comply with the fenestration deemed-to-comply requirements, as the window areas do normally exceed the maximum of 15 percent of the floor area. • Orientation of sites (and so structures on smaller sites) is determined by a variety of factors other than optimising a northern aspect. All these factors have to be considered in township design.
Residential should be exempt	• There is a view that all housing, other than for the very largest, should be exempted from Part XA as the collective usage of energy of housing compared to energy consumed

Category	Observations
	by commerce and industry is negligible.
Other uses	• Punitive measures against owners of commercial buildings who (say) wastefully leave buildings fully lit all night long whilst unoccupied, should be put in place
Water Heating	• Close couple solar water heaters, often poorly installed and/or with the incorrect orientation, and with a low storage capacity are inadequate for the size of family they are expected to serve. • Magnetic induction geysers do not comply with the relevant SABS specifications and are not supported by the Regulator of the NRCS. Such use and recommendation should immediately be discontinued. • The veracity of the claimed saving derived from using heat pumps is challenged. • There is a need to monitor actual solar water heating and heat pump performance as the necessary 50 percent savings in electricity for water heating, as specifically required by Part XA, seems unlikely.
Rational Design	• Architects for more complex developments, including residential, commonly require the input of a mechanical engineer from the outset to undertake a rational design for the structure using software. • Rational design software is required to be ratified by the Agrément Board, but the large multi-national companies are not prepared to comply with this requirement.
Timing	• Compliance with Section 7 of the National Building Regulations regarding a decision being taken within 30 days (60 days for structures larger than 500 m^2) is leading to great unhappiness within eThekwini designers, particularly when the municipality is unable to get its own service departments to comply with time lines and then on that basis refuses a plan. In the view of another municipality and external professionals this is unacceptable as the application is made to the municipality as a whole and not to the building plan approval section in isolation. If necessary escalation to a higher level within the offending service department to ensure performance is necessary. Note: The Regulator of the NRCS is of the view that this time requirement was dropped in 2008 as the requirement is contrary to the requirements of the Promotion of Administrative Justice Act No 3 of 2000. Where compliance is impossible, the municipality cannot be held to account. Verification is being sought from the Regulator. • The requirement for a non-statutory pre-scrutiny of building plans by the planners of 30 or even 60 days in order to obtain a "clean" plan prior to formal submission of the building plans is seen as an evasion of both the intent and purpose of the 30 day requirement set out in Section 7 of the National Building Regulations. All evaluation processes should be handled simultaneously. If this is to be done, it could be done over the counter or within a period of (say) a week.
Constitutionality	• The constitutionality of the imposition of National Building Regulations requirements by the Department of Trade and Industries, *via* the Regulator of the NRCS, is questionable given that Building Regulations, like Municipal Planning, is a matter specifically allocated to municipalities in terms of Part B of Schedule 4 of the SA Constitution.

Category	Observations
Capacity	• It is the view that many smaller municipalities are not fully complying with the requirements of Part XA due to lack of capacity or other reasons.

Implementing Planning Legislation

- Perhaps surprisingly of those interviewed, the current ongoing uncertainty pertaining to existing, currently proposed or possible future planning legislation in both the country as a whole and specifically in KwaZulu-Natal is in most cases not seen to be acting as a brake on development *per se.* Developers require certainty from the outset with no unexpected surprises mid stream.
- The biggest constraint on development in developer's views, especially those who are not in a position to have regular liaison meetings with the Council, is in delayed processing of applications by the municipality, a lack of alignment between sections and departments and inconsistencies in policies and how it is applied between departments and sometimes even within the same department.
- A blanket policy approved by Council under the guise of Section 7 of the National Building Regulations and Building Standards Act, read in conjunction with Part XA with respect to overshadowing by buildings (while vegetation is ignored) has been elevated to sit supreme of scheme requirements adopted in terms of the Planning and Development Act. Such schemes on the other hand have taken account of the diversity of zones and site sizes found across the eThekwini Municipality and have been subject to public scrutiny prior to adoption. If this is to be the final position, then the schemes should be amended in terms of the Planning and Development Act and the public given a legal opportunity to comment prior to adoption and, if necessary, after exhausting an appeal process.

4.2 Discussion

4.2.1 Amendment of the National Building Regulations

There seems to be a general consensus that certain amendments to the National Building Regulations are desirable. The differences occur in exactly where such changes should be effected.

Some variously speak of poor alignment between Part XA – Energy in Buildings and Parts T – Fire Protection, Part S - Facilities for Persons with Disabilities and/or Part W – Water. Others complain about the need for clearer direction when considering alterations and additions to existing housing stock or to be able to treat low cost housing with more empathy given both the low affordability levels of the inhabitants and the *de facto* low consumption of energy in such houses. Others argue for the total exemption of all housing or housing below a certain minimum floor area given the relative low usage of energy by housing as a whole compared to that of commerce and industry.

Certainly there is need to address these concerns by those formulating the National Building Regulations; and the Regulator of the NRCS has indicated that they are open to reviewing same.

A real problem, it seems, is that there is no discretion available to the Building Control Officer, when making his recommendation in terms of Section 6 of the Act with respect to the requirements of Part XA. Whist Section 18 of the Act provides for deviations and exemptions from any applicable National Building Regulation (except for a regulation regarding the strength and stability of buildings), this provision is viewed as being too general and is not likely to be evoked by a municipality in other than the most exceptional circumstances. A more specific provision within Part XA of the Regulations is deemed desirable, so that reasonable requests for deviations for good reason may be considered on their respective merit. It would also be helpful if guidance be given, based on when such relaxation may be considered.

4.2.2 Microclimatic Considerations

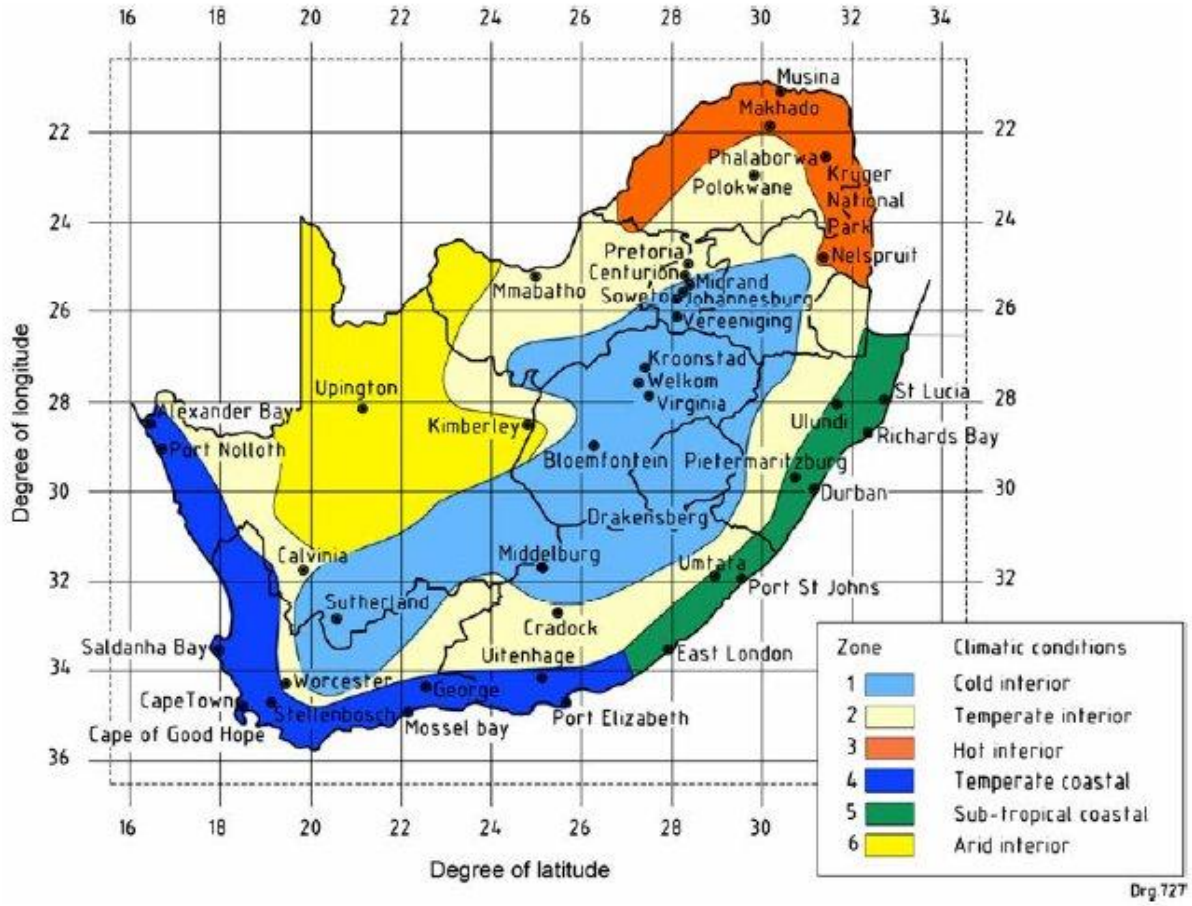

Figure 4.24 Extract from Annexure A, SANS 204 and SANS 10400 Part XA showing Climatic Zone Map.

Greater attention needs to be given to the local microclimate, when considering what energy saving requirements is necessary. The KwaZulu-Natal coastal strip, from Durban to Richards Bay is known as being extremely hot and humid, but with mild winters; yet in terms of Annexure A of SANS 10400-XA and SANS 204 (**Figure 4.24**) it is shown in the very same Zone 5 as Pietermaritzburg and Ulundi which have much drier climates with greater extremes in temperature between winter and summer. East London, which is known to be much milder than Durban is in the same Zone 5. On the other hand the NBRI Introductory Guide to Solar Energy depicts a more attuned representation of the location of Durban situated in a much narrower coastal strip, with Pietermaritzburg located in a separate zone. It is not considered that either of these small scale maps is absolutely definitive, being combinations of a variety of selected climatic features, yet the former broad and generalised map is used as the basis for setting requirements in terms of Part XA.

Hilton and the Kloof/Hillcrest/Bothas Hill areas being elevated have very different micro-climates to Pietermaritzburg and the Durban/Pinetown areas respectively, and are often being enveloped in cloud or even mist while their neighbours are in bright sunshine. These areas often don't see the sun for weeks in Spring, yet are treated exactly the same according to the table.

By comparison, the Australian Climatic Zone Maps whilst not having many more climate zones than South Africa, despite the size of the country, allows for greater interrogation of climatic factors by way of detailed calculations. Furthermore, the different states are not necessarily obliged to follow rigidly. In Canada the different states also have flexibility in what they adopt from the national code.

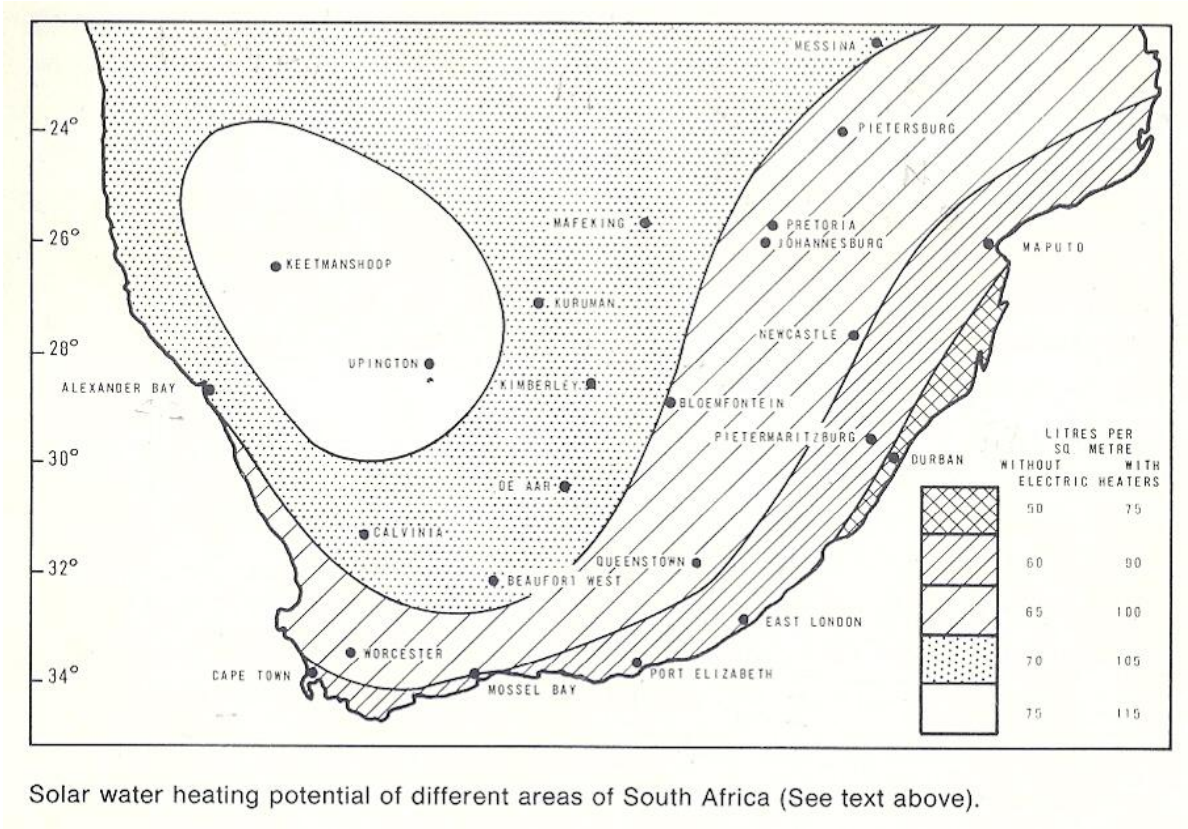

Figure 4.25 Extract from NBRI Introductory Guide to Solar Water Heating showing solar water heating potential across South Africa.

There is a need for a much greater level of detail to be accorded to the climatic zones than is presently the case and/or for the Building Control Officer to be given adequate discretion to take these local variables into account when considering building applications.

4.2.3 Building Orientation

The orientation of a structure in Durban, in terms of SANS 10400 read with SANS 204, is ideally required to be oriented approximately due north ranging from 5 degrees east or 12 degrees west of north, i.e. within a total range of 17 degrees (see **Figure 4.26**). This requirement clearly takes no account of other factors such as the topography, existing and future embankments – particularly on steep slopes often encountered in rugged terrain, prevailing wind directions, access to the site, adjacent buildings which either overlook or dominate, vegetation and, last but not least, views available from the site. All these factors need to be considered by a competent architect or building designer when undertaking his or her design for a particular site. This requirement came in for much criticism in some of the interviews and in the questionnaire.

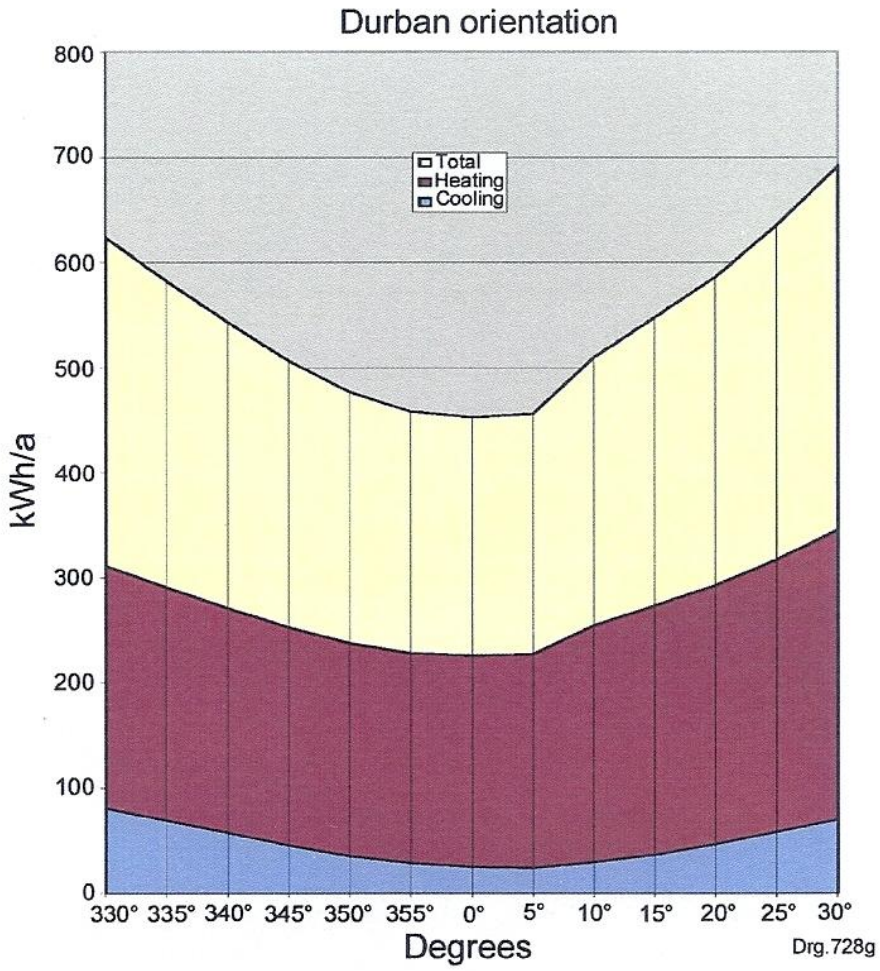

Figure B.2 — Durban — Optimal orientation true north +5° E and 12° W

Figure 4.26 Extract from SANS - 204 showing Optimal Orientation in Durban.

The appropriateness of this onerous requirement is further questioned when one examines the drop off in received radiation for solar water heating. **Figure 4.27** taken from X/Bou 2-40 shows that even with a 60 degree variance east or west of north, in excess of 80 % of the available radiation is still received.

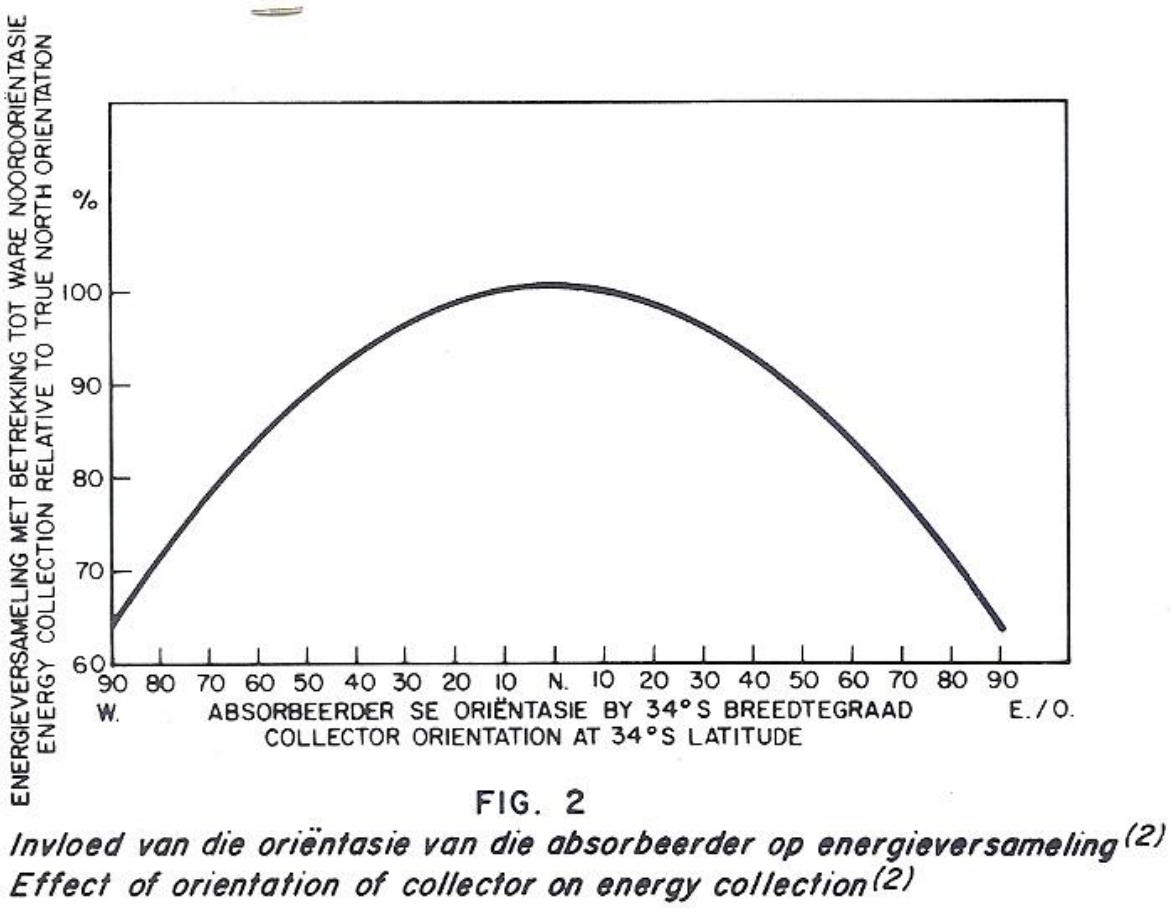

Figure 4.27 **Extract from X/Bou 2-40 showing effect of orientation of Collector on Energy Collection.**

In a climate such as Durban experiences, high levels of cloud cover are commonly encountered for large portions of the years other than during the winter months. A study termed "An Analysis of Cloud Cover at Johannesburg, Cape Town and Durban in South Africa" was undertaken by the CSIR. The measuring station for this study was the old Durban International Airport situated on the coast. Slightly inland locations, at the top of escarpments, are even more severely affected by cloud cover. This clearly indicates that the orientation in Durban is not as critical a matter as SANS 204 tends to suggest.

4.2.4 Building Regulations post the 1996 SA Constitution

The Republic of South Africa adopted a new constitution in May 1996. The Constitution heralded in a new dispensation in respect of both municipal planning and building regulations. These functions, listed in Schedule 4 Part B of the Constitution, were clearly assigned to local government to the

extent set out in section 155(6)(a) and (7). The matter of Municipal Planning has since been to the Constitutional Court and decided in the matter of the City of Johannesburg verses the Gauteng Development Tribunal. Municipal Planning, simply put, is the sole preserve of the municipality. On the other hand Building Regulations have continued to be directed by the national government *via* the NRCS, the SABS committee regulation drafting system, the Department of Trade and Industries and more recently the Department of Energy. The municipality plays a very small role other than as a passive commentor when new regulations are published, and these comments may or may not be considered as being appropriate for incorporation in the final regulations.

The Spatial Planning and Land Use Management Act, 2013 has subsequently endorsed the right of municipalities to have their own municipal planning bylaws, and the recently adopted Western Cape Land Use Planning Act, 2014 has taken this as their point of departure. Using this precedent, this clearly opens the door for each municipality to have its own building bylaw.

While the rationale for having a single set of building regulations across the country is more than appreciated, it begs the question as to whether this is constitutionally sound. Should municipalities not have more choice in what they are obliged to enforce in their constitution enshrined areas of their domain? Particularly so, if they were to consider, for example, that some of the climatic requirements were not rational for their particular environment, or that topographical orientation is very often impossible to achieve, these having been decided in a boardroom in Pretoria and where the local climatic conditions and topography are generally very different.

4.2.5 Role of the BCO – to report to the Minister of Trade and Industry or the Municipality

To whom is the building control officer accountable? Is it to the municipality who appoints and employs him or her in terms of Section 5 of the National Building Regulations to carry out his duties as assigned in terms of Section 6, or is it to the Minister of Trade and Industry on whose behalf he or she must ensure in terms of Section 6 (b) that any direction given in terms of the Act is carried out? The Regulator of the NRCS seems to be of the view that his primary responsibility is to the Minister. Section 6(b) seen in isolation seems to support this view.

This split in responsibility seems to raise a constitutional issue. Logically the Building Control Officer should report primarily to the Council that employs him or her. This is directly supported by Part B of Schedule 4 of the Constitution that lists building regulations, like municipal planning, as a function that is allocated to local government with both executive authority and the right to administer as provided for in Section 156(1).

4.2.6 Time for a rewrite of the NBR following the 1996 municipal demarcations

When the National Building Regulations and Building Standards Act was written in 1977 and the regulations operationalised in 1980s, South Africa was a very different country. There were no wall-to-wall municipalities, there were no metropolitan municipalities, municipalities tended to be small, and they generally had a Town Clerk, a Town Treasurer, a Town Engineer and a Chief Building Inspector. Then they all had their own building bylaws (or based on model bylaws) and the

Councillors very often saw each and every building plan before approval. With the coming of the National Building Regulations in the 1980s, all that changed, but the change was not that significant. Other than for the newly applicable National Building Regulations in place of the old building bylaws, the Chief Building Inspector became the Building Control Officer and he made his recommendation to the full Council or a delegated sub-committee of the Council. This operation continued to work reasonably well until the 1996 municipal demarcations, when suddenly prior municipalities disappeared and were consumed in new super municipalities and metropolitan municipalities. It became uncomfortable for the Building Control Officer to report directly to his political masters due to the sheer volume of building plans often submitted for approval.

In many cases an informal arrangement developed whereby the Building Control Officer himself approved the plans. Alternatively, a delegation was put in place for an individual to recommend plans for approval. It was however to take the *Jeeva versus Paola* case in eThekwini and the *Welele versus City of Cape Town* case for these issues to be fully thrashed out. In the former case it was found that the approval was invalid due to the lack of a suitable delegation being in place and in the latter case the approval was upheld in that a delegation by the Council was in place for a suitable official to approve building plans and to whom the building control officer had recommended approval (by his single assenting signature – there was no written supportive recommendation). The point is, is this an appropriate solution for a metropolitan or super municipality? Does not the law require to be amended to something more fitting the actual circumstances found on the ground?

4.2.7 Hiding behind a facade of legality. Where does the power lie?

The Building Control Officer or as previously known the Chief Building Inspector, was the most knowledgeable person on building matters in a municipality. Logically, if Councillors themselves were not to approve building plans on his advice, then he should be doing it himself. But that is not the way the law reads. Consequently, the Councillors are now required to not only appoint the Building Control Officer in terms of Section 5, but must also delegate an individual (or group of individuals) to act in their stead and approve building plans. The delegatee may in turn be authorised to sub-delegatee down the line to other individuals to approve building plans on the advice of further sub-delegated Building Control Officers in terms of Section 6(4).

While from a legal perspective, this may fully accord with the requirements of the Act, the person making the recommendation to approve or refuse the plans and the person approving or refusing the plans MAY be far from the most appropriate for that purpose. The amount of criticism raised by many of those who completed the questionnaire suggest that, at least in some cases, there may be some merit in suggesting that not the most appropriate persons are charged with making recommendations or decisions. The fact is that there is no local review possibility of a decision, as required by the Promotion of Administrative Justice Act and Section 33 of the Constitution, other than to the Review Board, which is a cumbersome process rarely embarked upon.

The Act therefore should be revised to ensure that the most knowledgeable person on building matters in an office or regional office should make decisions, rather than continuing with the facade of following the law. Furthermore, where there are reasonable grounds for doubting that the

decision taken is the most appropriate, it be made possible to appeal to the most knowledgeable person on building control in the municipality before embarking on a review to the Review Board.

4.2.8 Improved communication – both interdepartmental and the public

The respondents both in the questionnaires and the one-on-one interviews highlighted that there is often poor communication, between both the planning departments and the building control departments within certain municipalities, and between the municipal staff and the public. This is a matter that needs to be urgently addressed so unnecessary bottlenecks are avoided, which will in turn project a more positive image of such municipalities.

4.2.9 The role of the municipality? Responsibility now rests with the architect and the building designer

With the introduction of Part XA, a totally new scenario has come about, in that architects and building designers are required to sign off on compliance with Part XA before an occupation certificate may be granted by the municipality. This ensures that the building inspector need not necessarily monitor that the requirements of the Act read with Part XA were observed during construction.

Some architects have questioned why they should have to accept this responsibility whilst being challenged during the approval process, often by persons far less qualified than they, and in particular sometimes without the necessary training to ensure minimised energy usage in buildings? If the architects are good enough to sign off the completed structure, then their designs should equally be accepted during the approval process without interrogation and checking. After all the workings and calculations of the structural engineer are not subject to similar scrutiny. Furthermore, to quote the Regulator of the NRCS, the architect is the best qualified profession to ensure compliance with Part XA as the requirements have been part of their training. All they need to do is brush up on the most recent requirements as contained in Part XA.

4.2.10 Is SACAP accepting its rightful role?

The South African Council for the Architectural Profession's (SACAP) Vision, Mission and Values as adopted by the SACAP Council in 2010 and as taken from their website reads as follows:-

VISION:

Regulating the architectural profession in the spirit of "*batho pele*".

MISSION:

Make a positive impact on the built environment by ensuring excellence in performance and service delivery by fostering collaborative relationships with role players in order to:

- Effectively regulate the architectural profession
- Ensure pro-active public protection

- Develop a quality, sustainable and professional skills base
- Ensure good governance within SACAP
- Promote the role of the architectural profession in transformation
- Create a legacy of humane and sustainable architecture

VALUES:

Accountability: accepting responsibility for actions and decisions.

Cohesiveness: shared, coherent values and aspirations

Excellence: promoting high standards

Integrity: ethical behaviour, honesty and trustworthiness

Respect: ethos of dignity, tolerance and consideration

Transparency: appropriate disclosure of information and open debate

Emphasis added

On this basis, it would seem that their role is to regulate the architectural profession and assist in developing a professional skilled base adequately equipped to undertake any task that may be assigned to them. This would include ensuring that all courses provided in respect of Part XA and SANS 204, not only have their blessing, but are monitored and approved by them to ensure persons competent in this field of discipline are indeed just that. An interview with the Regulator indicated that this was not being done.

However, it seems that when Part XA was first introduced, the industry was not ready for it and that SAIAT, who sits on the SANS 204 committee, stepped into the gap and offered to take on the duty of training people. The offer was gratefully accepted by the industry and SAIAT are still giving these courses. Another four organisation or individuals, as advised by the Regulator of the NRCS, have also since been "recognised" and are providing Part XA courses.

Building Control South Africa (BCSA) did at one stage publish on their website names of people considered competent for the benefit of municipalities, i.e. persons who had successfully taken the SAIAT course. See http://www.buildingcontrol.co.za/competent.html. However recently this list has been removed. One can only assume that this was out of concern that such persons published on the web site may not in fact be competent, which could lead to BCSA being liable in the event of any comebacks. Furthermore, some of the people who have attended the SAIAT course have stated that they do not view themselves as being competent. Others who have taken the course have been hugely critical for one or other reason. Whether this criticism is warranted or not is beside the point, all such courses should be vetted by the responsible body.

The NRCS has stated that they are not the body responsible for approving SANS 10400 Part XA and SANS 204 courses. What they have done in the past as a facilitator to ensure that Part XA is being

correctly applied by the building industry, was to request course material, vet the material for the correct content and then to sit in on lectures, after which the courses were "approved". This approval is obviously informal and those professionally responsible need to take ownership. SACAP at the national body for the architectural profession needs to shoulder this responsibility. This should then obviate the criticism regarding standard course contents.

4.2.11 Opposing views at the CSIR relating to health concerns?

The Building Science and Technology Unit of the CSIR are investigating SA National legislation pertaining to the built environment and airborne infection. Sections of SANS 204 and SANS 10400 XA appear possibly to be contrary to the principles of good health building design and, it is said, could adversely contribute to the epidemic of tuberculosis within public hospitals and the home environment - especially with respect to natural ventilation, daylight, etc. These laws allegedly "make people sicker". It would appear in the preparation of SANS 204 and SANS 10400 Part XA that the issue of health was not effectively addressed. Given the current tuberculosis crisis, including multi-drug resistant tuberculosis (MDR TB) and extreme drug resistant tuberculosis (XDR TB), coupled with AIDS this aspect needs to be urgently resolved.

The primary areas of concern relate to ensuring adequate ventilation is achieved in structures to minimise the risk of infection and the transmission of diseases. A maximum window size of 10% (World Health requires a minimum area of 10%), ventilation, sealed rooms, hybrid ventilation systems and the actual situation pertaining in South Africa all need to be jointly considered. SANS 204 and SANS 10400 Part XA are in this light viewed as perhaps being theoretical and need to be adapted if proved necessary. Investigation is currently ongoing by the CSIR.

5 Recommendations and Conclusion

5.1 Recommendations

It will be noted that the recommendations have not been confined to Part XA of the National Building Regulations or Planning Legislation *per se*, but where a particular problem has emerged during the interviews and focus group discussions and supported in the questionnaire, and where a potential solution is evident, this has been proposed. This study, therefore, recommends that: -

1. That the Council open up dialogue with the SABS Technical Committee (SC 59G), the SANS 204 Energy Efficiency in Buildings Committee, and the Regulator of the NRCS with a view to introducing changes to the Building Regulations. This would include, but not be limited to eliminating conflicts with Part XA and other Parts of the regulations; enabling building control officers to exercise a level of discretion when considering applications, particularly those involving alterations and additions; and exempting certain requirement in respect of low cost and social housing while ensuring that the main aims and objectives are still being substantially achieved.
2. That the Legal Department be requested to investigate the issue of constitutionality of the National Building Regulations and options the city could pursue with a view to modify and/or replace same with its own bylaw. Effectively override certain sections of the existing building regulations and/or granting exemptions in specific cases and circumstances.
3. That in order to achieve better coordination and speed up the delivery process, the Development Planning and Management Unit revisit the current organogram, and consider following the Cape Town model, or a version thereof, with a view to having a single individual in charge in each of the regional offices and to whom both the senior regional planner and the regional building approval delegatee must report. All decisions could then to be taken at the regional office level, provided that all complicated or contentious applications be referred to head office for consideration and/or input. If necessary, and if the project is significant enough, such applications could in turn be referred on to a committee of Council for a policy decision.
4. To establish specific time frames in which applications are processed by both internal and external departments, and in which external departments are obligated to comply in terms of a sustainable and enforceable service level agreement. The time frames must be specific, warranted for the purpose and should not be arbitrary in nature. These timeframes should be constantly reassessed and refined with a view to decreasing the time taken to process the applications. In the event of non-performance of an external department it must be possible to automatically escalate the matter to an individual's superior for further action. It must be incumbent on such departments to employ an adequate staff level to ensure timeous performance.
5. That, along with the current schemes accessible from the GIS, that the prior schemes be made accessible on the GIS and a window period assigned (say two years) in which any landowner may apply to the Council to correct any error in translation from the one scheme to the other . This 'amendment' would be at no cost to the landowner.
6. That an appropriate section should be introduced into all schemes whereby energy efficiency aspects are specifically catered for. This will address matters such as orientation of sites in townships to achieve maximum possible northern orientation given topographical and other

restraints, any provision in the maximum height permitted must allow for tilted solar collectors (and tanks), on racks if necessary, as an additional appendix.

7. To ensure that following the refusal of a building plan, on resubmission that the plan should not be referred back to departments or sections that have already commented and that no further comment should be sought or items identified, in anything other than in exceptional circumstances and which circumstances must then be justified in writing.
8. To ensure that plans circulated to a department or section during a pre-scrutiny process, having obtained the approval, should not be re-circulated to the same department or section without very good reason; such reason should then be justified in writing.
9. That the current practice of allowing magnetic induction geysers to be installed as an alternative to solar heating or a heat pump to achieve a 50 per cent reduction in energy use, be discontinued with immediate effect, as these geysers do not conform to the appropriate standards and tests conducted by the SABS which indicate that they are likely to fail.
10. That the issue of professional indemnity for staff be investigated due to allegations by numbers of the respondents complaining that the staff of the municipality tasked to assist them refuse to take any accountability.

5.2 Conclusions

As this project has unfolded, the complexities have increased. What seemed simple at face value actually emerged as complex with many levels of details. While the aim of the project was purely to investigate largely the impact on development of Part XA of the National Building Regulations, read with SANS 10400 Part XA and SANS 204, and Planning Legislation on development, this evolved into investigating other constraints on development which came to the fore during the investigation and which could not be ignored. At the eleventh hour a flag was raised that serious health issues might need aspects of Part XA to be revisited, irrespective of the study.

While major developers seem unfazed about the current fibrillating in planning legal system, it is clear that to some this is a matter of huge concern and is putting off development. Certainly, as seen by the land surveyors there are urgent amendments needed to the current Planning and Development Act, which can't wait until the politicians and/or the legal experts decide which option to implement. A revised KZN Planning and Development Act compliant with SPLUMA, or a series of municipal planning bylaws, one for each municipality, but more likely one for eThekwini Municipality and possibly a provincial model bylaw adopted by all other municipalities in the province.

Items of significant concerns compared to the challenges in the current legal system to some developers are the competence of the municipalities themselves in meeting statutory deadlines and in timeously obtaining comments from their sister departments, such as the Waste Water and the eThekwini Transport Authority, along with obtaining necessary clearances from the KZN Department of Transport, the KZN Department of Agriculture and Environmental Affairs and the national Department of Agriculture Forestry and Fisheries. These are collectively having a significant impact on the rate of obtaining successful planning authorisations.

The requirements of Part XA of the National Building Regulations, according to those most intimately involved, are having a huge impact on the rate of development in KZN and in eThekwini in particular. This view is not confined to KZN. Comparisons with other metropolitan areas suggest that this is not the only factor that is retarding development. Architects and planners from other areas also do not seem to share the same all-is-well view, in which municipalities generally seem to see the situation. In the Western Cape very similar concerns are raised to those heard in KZN.

It is accordingly necessary that municipalities, including the eThekwini Municipality, question whether the application of the law is being done reasonably and in the best interests of its citizens.

A hard nose approach with low cost housing is not sustainable in the long run, and a certain degree of flexibility needs to be built into the system as it currently stands. South Africa is not a first world country and we need to look east as well as west. It is noted that India and China have apparently still not fully addressed energy in buildings for the masses. The Regulator of the NRCS has indicated that they are not averse to certain amendments where warranted and this should be further explored.

Finally, it must be acknowledged that the world is no longer what it used to be, and we are not able to consume resources indefinitely. South Africa, once an exporter of electricity will increasing become an importer and alternative generation systems such as hydro, solar farms, wind farms and perhaps even wave generating farms in the sea will out of necessity become more and more the norm. The building industry itself has a role to play, and this means more sustainable energy solutions have to be employed, albeit in the short term. Whether it is correct to expect sunny South Africa, in reality a third world country, to be emulating highly industrialised first world countries which often have limited hours of sunlight and bitter winters, is perhaps another debate. Greater energy efficiency will have to be the order of the day, with the reuse of building materials, and less dumping of same by errant builders. Such requirements in the Building Regulations will only come about when the planned additional sections of Part X are formulated and adopted.

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7 Some Useful Web Links

Building Control South Africa http://www.buildingcontrol.co.za/

City of Cape Town – Planning and Building
http://www.capetown.gov.za/en/planningandbuilding/Documents/PBDM_Contacts_ALL_2011_05_23.pdf

CSIR Building Science and Technology
http://www.csir.co.za/Built_environment/Building_science_and_technology/

Green Building Council http://www.gbcsa.org.za/

National Regulator for Compulsory Specification http://www.nrcs.org.za/

Plumbing Industry Registration Board http://www.pirb.co.za/

South African Council for Planners http://www.sacplan.org.za/

South African Council for the Architectural Profession http://www.sacapsa.com/

South African Institute of Architects http://saia.org.za/

South African Institute of Architectural Technologists http://www.saiat.org.za/

South African Institute of Building Design http://www.saibd.co.za/

South African Planning Institute http://www.sapi.org.za/

Swiss Agency for Development and Cooperation SDC http://www.sdc.org.za

Major Property Developers & Architects

Central Developments Property Group http://www.centraldevelopments.co.za/

Century http://www.century.co.za

DBM Architects http://www.dbmarchitects.co.za/index.php

Elphick Proome Architects http://www.eparch.co.za/

Price Adler Architects http://www.adlerprice.co.za/Adler_Price_Architects.html

ANNEXURE A: Pertinent Sections of the National Building Regulations and Building Standards Act No. 103 of 1977 and Milestone Building and Planning Case Law - Legal Contribution by Sifiso Msomi: Shepstone and Wylie Attorneys

The National Building Regulations and Standards Act, 1977

Section 4 - Approval by Local Authorities of Applications in Respect of Erection of Buildings

No person shall, without the prior approval in writing by the local authority in question, erect any building in respect of which plans and specifications are to be drawn and submitted in terms of this Act.

Any application for approval referred to in subsection (1) shall be in writing on a form made available for that purpose by the local authority in question.

Any application referred to in subsection (2) shall-

- Contain the name and address of the applicant and, if the applicant is not the owner of the land on which the building in question is to be erected, by the owner of such land;
- Be accompanied by such plans, specifications, documents and information as may be required by or under this Act, and by such particulars as may be required by the local authority in question for the carrying out of the objects and purposes of this Act.

Any person erecting any building in contravention of the provisions of subsection (1) shall be guilty of an offence and liable on conviction to a fine not exceeding R100 for each day on which he was engaged in so erecting such building.

Section 5 - Appointment of Building Control Officer by Local Authority

Subject to the provisions of subsection (3) a local authority shall appoint a person as a building control officer in order to exercise and perform the powers, duties or activities granted or assigned to a building control officer by or under this Act.

Any person not having the qualifications prescribed by national building regulation in respect of a building control officer shall not, without the approval in writing of the Minister be appointed as a building control officer in terms of subsection (1).

Subsection (1) shall also be construed so as to enable:-

- Two or more than two local authorities to appoint, on such conditions as they may agree to, one person as a building control officer for all such local authorities;
- A local authority from time to time to appoint a person temporarily as a building control officer;
- A local authority, with the approval in writing of any other local authority and on such conditions as they may agree to, to make use of the services of any person appointed as a building control officer by such other local authority.

Any person who:-

- Immediately before the date of commencement of this Act was employed by a local authority in order to perform as a controlling officer any activities substantially the same as the activities referred to in section 6 (1); and
- On such date is still so employed, shall be deemed to have been appointed in terms of this section as a building control officer by such local authority.

Section 6(1)(a) (The Recommendation) provides that:

- A building control officer shall (a) make recommendations to the local authority in question, regarding any plans, specifications, documents and information submitted to such local authority in accordance with section 4(3);

Section 7 - Approval by Local Authorities in Respect of Erection of Buildings

(1) If a local authority, having considered a recommendation referred to in section 6(1)(a):-

- Is satisfied that the application in question complies with the requirements of this Act and any other applicable law, it shall grant its approval in respect thereof;
- Is not so satisfied; or
- Is satisfied that the building to which the application in question relates is to be erected in such manner or will be of such nature or appearance that:-
    - The area in which it is to be erected will probably or in fact be disfigured thereby;
    - It will probably or in fact be unsightly or objectionable;
    - It will probably or in fact derogate from the value of adjoining or neighbouring properties;
    - Will probably or in fact be dangerous to life or property,

  such local authority shall refuse to grant its approval in respect thereof and give written reasons for such refusal:

BUILDING CASE LAW

Paola vs Jeeva & Others 2004 (1) SA 396 (SCA)

FACTS

Mr. Paola was the owner of a property in McMahon Avenue, Umgeni Heights, Durban which had an almost 180 degree unsurpassed view over Durban and its surroundings, including the city centre, the river, the harbour entrance and the sea. He then learnt that his neighbour, Mr. Jeeva, on behalf of his trust, had lodged a plan which provided for a new double storey house with a roof which, when built, would obliterate much of his view. Affidavits were filed which expressed the view that the market value of Mr Paola's property will be significantly diminished by the proposed developments on the trust's property.

The municipality had approved the plans and had given Mr. Jeeva permission to commence building in terms of the National Building Regulations and Building Standards Act.

Mr. Paola took the matter to the High Court on review relying on section 7(1) (b) (ii) seeking to set aside the Municipality's decision to approve the plans.

The Court dismissed the application and the matter was taken to the SCA.

Mr. Paola's attack was based on the following:-

- Firstly, that the Municipality did not have a building control officer at the time as required by section 5(1) of the Act and had thus made a decision without considering the recommendation by the building control officer as required by section 7(1) of the Act.
- Secondly, that due to the size of the proposed development, it would derogate from the value of his property in terms of section 7(1)(b)(ii).
- Thirdly, that the relevant official had failed to apply his/her mind properly to the consideration of the plans.
- Fourthly, that the plans were approved in breach of the provisions of the Town Planning Regulations because the rear space between the rear of the building and the rear boundary of the trust property was less than 5 metres.

RULING

The Court held that the appointment of a building control officer and the recommendation by such officer of the local authority were necessary preconditions for the exercise by the local authority of its powers to approve or reject building plans, and that each of these preconditions constituted a jurisdictional fact, the existence of which was a necessary prerequisite to the exercise of the

statutory power. Further, that a non-existing power to approve the plans had purportedly been exercised.

The decision of the High Court was set aside.

Clarke vs Farraday 2004 (4) SA 564

FACTS

Mr. Clarke was the owner of property in Hout Bay which enjoyed superb views over the valley, the beach, the bay and the harbour. Mrs. Farraday purchased an adjacent vacant property slightly downhill from Mr. Clarke's property and proceeded to commence earthworks on her property.

Building plans were approved by the Municipality in terms of the Act. Soon after construction had begun, Mr. Clarke realized that the proposed building would restrict his views severely and he launched an application for an urgent interdict pending the finalization of proceedings to review the Municipality's decision to approve the building plans.

He contended that the obstruction of his view and consequent derogation from the value of his property should on a proper application of Section 7 of the Act, preclude approval.

Mrs. Farraday's legal team argued that the new dwelling was in compliance with local building regulations and there were no further title deed restrictions or servitudes which further regulated the matter.

RULING

The Court held that on plain reading of Section 7, the local authority was obliged to grant approval if it was satisfied that the building plans met the requirements of the Act and further that Section 7 had to be approached on the basis that it must be restrictively interpreted having regard to its object and rationale.

JDJ Properties CC & Another vs Umgeni Municipality and Another (2013) 1 All SA 306 (SCA)

FACTS

The municipality owned certain immovable property and it decided to sell the property by public tender with a view to it being redeveloped. The second respondent's tender was accepted and a sale agreement was concluded which included certain development requirements.

One of those requirements was that the property had to be developed by the purchaser as a commercial development.

The second respondent planned to build a shopping complex on the property and, entered into an agreement of lease with the third party. Because of the nature of the proposed supermarket's business, it required more building space and less parking on the property. The second respondent applied for the relaxation of the Municipality's usual parking requirements in terms of the Town Planning Scheme "the Howick Scheme". It also obtained consent from the owners of the adjacent property, and the Municipality's consent. Prior to concluding the lease agreement with the third party, it submitted its building plans to the Municipality for approval in terms of the Act.

When the two appellants heard of the development, they opposed the Municipality's approval of the building plans. The validity of the Municipality's approval of the plans was challenged on the basis that the decision to relax the Howick scheme's parking requirement was unreasonable and its side space requirement was relaxed unlawfully, the approval of the building plans itself was invalid.

RULING

Section 6(1) of the KwaZulu-Natal Planning and Development Act 6 of 2008 states that a town planning scheme "is binding on the municipality, all other persons and organs of state, except in the event of a conflict with the provisions of an integrated development plan that was adopted prior to the scheme or amendment of the scheme. The court held that s7(1)(a) of the Act requires compliance with this Act and any other applicable law.

The court referred to the judgment of Heher JA in True Motives 84 (Pty) Ltd v Mahdi and another 2009 (4) SA 153 (SCA):-

"The refusal of approval under s7(1)(a) is mandatory not only when the local authority is satisfied that the plans do not comply with the Act and other applicable law, but also when the local authority remains in doubt. The plans may not be clear enough. For instance, no original ground levels may be shown on the drawings submitted for approval, with the result that the local authority is uncertain as to whether a height restriction imposed with respect to original ground levels is exceeded. In those circumstances the local authority (a) would not be satisfied that the plans breach the applicable law, but equally (b) would not be satisfied that the plans are in accordance with the applicable law. The local authority would, therefore have to refuse to grant its approval of the plans. Thus, the test imposed by Section 7(1)(a) requires the local authority to be positively satisfied that the parameters of the test laid down are met".

In this case, because there was absence of an application of a special consent for the relaxation of the side space requirement and no attempt to comply with the procedural requirements of an application for special consent; the Municipality could not have been satisfied that the second respondent's application for the approval of the plans complied with the Howick scheme. Nothing in the record indicated that any enquiries were made in this regard.

Therefore, a jurisdictional fact for the proper exercise of the power was absent and the approval of the plans was set aside.

Lester v Ndlambe Municipality (2013) SCA 95 handed down on 22 August 2013

FACTS

Basically, Mr Lester's dwelling was erected unlawfully, without any approved building plans as required by Section 4(1) of the Building Regulations. The lower Court found against Lester and he appealed against that decision.

RULING

The Court referred to the judgement of United Technical Equipment vs Johannesburg City Council :-

"the respondent has not only a statutory duty but also a moral duty to uphold the law and to see to due compliance with its town planning scheme. It would in general be wrong to whittle away the obligation of the respondent as a public authority to uphold the law. A lenient approach could be an open invitation to members of the public to follow the course adopted by the appellant, namely to

use land illegally with a hope that the use will be legalised in due course and that pending finalisation the illegal use will be protected indirectly by the suspension of an interdict."

the Court remarked "One is acutely aware of the financial calamity, inconvenience and disruption which the demolition of what is plainly and expansive, luxurious dwelling, and a primary residence to boot, would cause Lester. But the upholding of the doctrine of legality, a fundamental component of the rule of law, must inevitably trump such personal considerations. The appeal must therefore be dismissed with costs, including the costs of two counsel where so employed."

The Court ruled that as Lester had erected an unlawful structure on his property, the jurisdictional basis for a demolition order had been established.

In conclusion the Court said "One is acutely aware of the financial calamity, inconvenience and disruption which the demolition of what is plainly and expansive, luxurious dwelling, and a primary residence to boot, would cause Lester. But the upholding of the doctrine of legality, a fundamental component of the rule of law, must inevitably trump such personal considerations. The appeal must therefore be dismissed with costs, including the costs of two counsel where so employed."

CONCLUSION ON BUILDING MATTERS

In summary, the following legal principles emerge out of the above cases :-

- The execution of the plans which will significantly diminish the value of the adjoining property prevents the approval of the plans;
- There cannot be a valid approval of the plans if a power to approve plans was exercised in the absence of the necessary jurisdictional facts, e.g. plans approved without considering a recommendation from a duly appointed building control officer;
- An owner of land who uses his property in an ordinary and natural manner is not guilty of committing nuisance, even if by so doing he causes damage to the property of others;
- The local authority is obliged to grant approval if it is satisfied that the building plans meet the requirements of the Act and "other applicable law";
- There is no such thing as a right to a view;
- Our Courts will not hesitate to order a demolition order once the jurisdictional facts for such an order were found to exist;
- The decision to approve the building plans is an administrative action and therefore the provisions of the Promotion of Administrative Justice Act 3 of 2000 (PAJA) must be followed.

PLANNING CASE LAW

CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY v GAUTENG DEVELOPMENT TRIBUNAL & OTHERS (2010) JOL 25654 (CC)

The main issue in this case was the constitutionality of Chapters V and VI of the Development Facilitation Act 67 of 1995. These chapters authorise provincial development tribunals established in terms of the Act to determine applications for the rezoning of land and the establishment of townships.

A dispute arose in the province of Gauteng between the City of Johannesburg Metropolitan Municipality and the Gauteng Development Tribunal, a provincial organ created by the Act. This dispute was about which sphere of government is entitled, in terms of the Constitution of the RSA (1996), to exercise the powers relating to the establishment of townships and the rezoning of land within the municipal area of the City. The parties could not resolve the issue and the City instituted an application in the High Court, challenging the constitutional validity of the Act. This challenge proved unsuccessful.

The SCA granted an order that decided Chapters V and VI of the Act were invalid, but suspended the declaration of invalidity for 18 months to enable Parliament to remedy the defects identified by the Court.

The Constitutional Court held that Section 40 of the Constitution defined the model of government contemplated in the Constitution. In terms of this section, the government consisted of three spheres: the national, provincial and local spheres of government. These spheres are distinct from one another, yet interdependent and interrelated. Each sphere was granted the autonomy to exercise its powers and perform its functions within the parameters of its defined space. Furthermore, each sphere had to respect the status, powers and functions of government in the other spheres and "not assume any power or function except those conferred on it in terms of the Constitution".

The Court went on to state that, "planning" on all spheres of government allocated "regional planning and development" concurrently to the national and provincial spheres, "provincial planning" exclusively to the provincial sphere, and executive authority over, and the right to administer "municipal planning" to the local sphere; and that in considering all pending applications, the tribunals had to uphold the municipalities' integrated development plans. The role played by

these plans in the administration of land was important as they provided for, among other things, the alignment of resources utilized to supply basic services to local communities.

There could be no doubt that any development undertaken within a municipal area affected the budget of the municipality concerned, particularly in the supply of services.

The Court decided that for a proper exercise of the contested powers the tribunals did not need the authority conferred on them by sections 33(2) and 51(2) of the DFA to exclude the operation of certain laws and bylaws in respect of land which was the subject-matter of an application submitted to a tribunal. These powers entitled tribunals to intrude unnecessarily into the domain of the legislature. It was therefore essential to include, as a further condition of suspension, a prohibition against the exercise of this authority.

The order of the SCA declaring chapters V and VI unconstitutional was confirmed. And the respondent's appeal was dismissed.

The order made by the Court meant that development tribunals established under the DFA could not accept and determine applications for the grant or alteration of land use rights after the date of the order made by the court.

R A LE SUEUR v ETHEKWINI MUNICIPALITY & OTHERS (2013) ZAKZPHC 6

The applicants, aggrieved by resolutions made by the eThekwini Municipality, made application to the KwaZulu-Natal High Court for the following relief:-

That the resolution to adopt the amendment of the eThekwini Town Planning Schemes to introduce split zonings taken by the council of the eThekwini Municipality on 28 October 2010, be and is hereby declared unconstitutional and set aside;

That the resolution to adopt the amendment of the eThekwini Town Planning Scheme to introduce D-MOSS (Durban Municipality Open Space Systems), taken by the Council of the eThekwini Municipality on 9 December 2010 be and is hereby declared to be unconstitutional and is set aside;

That the said resolutions were passed in terms of a repealed ordinance and were without legality at the time of their passing and are hereby declared to be set aside as invalid……

The Court held that it was satisfied that before the step was taken by the Municipality to publish the advertisement of its intention to amend the Ordinance to bring into operation the D-MOSS

Amendments, that it had in fact resolved and taken a Resolution to do so before such publication was effected.

It was clear from what followed that at no stage did the Council take any step or give any indication after publication that the process had been abandoned.

The Court held that section 24 (b) of the Bill of Rights provided that everyone had the right to have an environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:-

Prevent pollution and ecological degradation;

Promote conservation; and

Secure ecologically sustainable development and use of natural resources while promoting justifiable, economic and social development.

The court held that there was nothing in the Bill of Rights itself to suggest that the protections offered by Section 24 of the Constitution were only binding on the National and Provincial spheres of Government.

Section 156(5) of the Constitution states that, "a Municipality has the right to exercise any power concerning a matter reasonably necessary for or incidental to, the effective performance of its functions."

Accordingly, the Court held that Municipalities were in fact authorized to legislate in respect of environmental matters to protect the environment at the local level and that the D-MOSS Amendments in no way transgress or intrude upon the exclusive purview of the National and Provincial governance in respect of environmental legislation. Therefore, the Court was satisfied that the D-MOSS Amendments introduced by the first respondent were not unconstitutional and invalid on the basis contended for by the applicants, namely, that the first respondent did not have the authority to legislate in this regard.

Application was, accordingly, dismissed.

MACCSAND (PTY) LTD & ANOTHER v CITY OF CAPE TOWN & OTHERS (2011) All SA 601 (SCA)

This matter was an appeal in the SCA. The appeal was from the Western Cape High Court concerning two issues. The first was whether the grant of a mining right or a mining permit issued by the Minister of Mineral Resources in terms of section 23 and section 27 of the Minerals and Petroleum Resources Development Act 28 of 2002 "MPRDA" entitled the holder of the right or permit to undertake mining operations without obtaining authorization in terms of the Land Use Planning Ordinance "LUPO", which empowered municipalities to determine and enforce the use to which land in their areas of jurisdiction may be put.

The second issue was whether such a holder was precluded from commencing or continuing with its mining operations without first obtaining environmental authorizations in terms of the National Environmental Management Act 107 of 1998 (NEMA) in respect of activities listed under section 24(2)(a) of NEMA.

The Western Cape High Court found that both LUPO and NEMA applied to mining operations.

The SCA held that the regulation of mining was an exclusive national legislative competence and the administration of the MPRDA was vested in the national executive. Municipalities, however, played a central role in land use planning in their areas of jurisdiction. Having regard to the separate pieces of legislation and their respective objectives, the Court concluded that it could not be said that the MPRDA provided a surrogate municipal planning function that displaced LUPO and it did not purport to do so. Its concern was mining, not municipal planning. That being so, LUPO continued to operate alongside the MPRDA. Once a mining right or mining permit had been issued, the successful applicant would not be able to mine unless LUPO allowed for that use of the land in question. The MPRDA and LUPO were directed at different objectives and therefore there was no duplication. The first issue was decided against the appellants.

As alluded to above, the second part of the appeal was directed against the ruling that Maccsand was not entitled to commence or continue its mining operations until and unless an environmental authorization had been granted in terms of NEMA for the carrying out of the relevant activities. It was however unnecessary for the Court to examine the legislative scheme of NEMA because it was repealed in its entirety rendering the interdicts redundant.

LAGOON BAY LIFESTYLE ESTATE (PTY) LTD v MINISTER OF LOCAL GOVERNMENT, ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING, WESTERN CAPE & OTHERS 2011 (4) All SA (WCC)

In these proceedings, the applicant wanted an order setting aside the Minister's decision and declaring that the approval by the George Municipal Council in law constituted the required approval of the application. The applicant's attack on the Minister's functional competence was based on the argument that the so-called "condition" imposed by the Minister is (a) ultra vires the empowering provision in LUPO and, in any event, (b) constitutionally unlawful because it offended against the provisions of section 156(1), read with Part B of Schedule 4 to the Constitution of the Republic of South Africa, 1996.

The applicant argued that the rezoning and subdivision applications decided by the Minister, formed part of the control and regulation of the use of land, which fell within the exclusive autonomous sphere of local government under the rubric of "municipal planning". On this basis it follows, so it was submitted, that the Minister had no power or authority to decide the relevant application for rezoning and subdivision, with the result that the George Municipal Council had the exclusive power and authority to do so.

In response, the Minister accepted that the majority of applications for rezoning had to be considered by municipalities, pursuant to their functional competence in respect of municipal planning, as the impact of the majority of such planning decisions was limited to the geographical area of the relevant municipality.

He further submitted that there was a category of planning decisions which would have an impact beyond the area of a single municipality and would have effects across a larger region. He submitted that for a variety of reasons, including its size and scale, the present development fell into this latter category.

The court held that the Constitution conferred "planning" on all spheres of government and that the functional areas allocated to the various spheres of government are not contained in sealed compartments. The court rejected the applicant's argument regarding the exclusive power of the municipality and held that it was permissible and appropriate for the Minister to have reserved the right of final approval of the application for rezoning and subdivision to the provincial department.

WARY HOLDING (PTY) LTD v STALWO (PTY) LTD & ANOTHER 2009 (1) SA 337 (CC)

The first respondent had in 2005 approached the High Court for an order declaring that a contract for the sale of certain agricultural land the first respondent had purchased from the applicant was binding and directing the applicant to transfer the land accordingly. The applicant countered that the contract was void because it did not comply with Section 3 of the Agricultural Land Act 70 of 1970, which required ministerial consent in writing to the subdivision and sale of agricultural land. According to the applicant the land fell within the provision to the definition of agricultural land as contained in the Subdivision of Agricultural Land Act 70 of 1970 and the required ministerial consent was not obtained.

The provision to the definition of agricultural land stated that, "land situated in the area of jurisdiction of a transitional council, which immediately prior to the first election of members of the transitional council was classified as agricultural, shall remain as such"

It was common cause that the land in question was situated in the area of jurisdiction of a transitional council immediately prior to the first election of members of the transitional council. It was further common cause that with the disestablishment of transitional councils the land fell within the jurisdiction of a municipal council. The first respondent contended that the provision preserved the status of agricultural land only until such time as transitional councils were superseded by municipal councils.

The High Court dismissed this application; the SCA found that the provision applied only during the existence of transitional councils, that the land was accordingly not agricultural land as defined and that ministerial consent was consequently not required.

The Con Court held that as to the merits, that the interpretation to be given to the ordinary meaning of the words used in the proviso, in the context of the statute read in its entirety, including its purpose, was that the duration of the classification of land as agricultural land was not tied to the life of transitional councils. The provision was therefore still operative.

The court further held that the enhanced status of municipalities and the fact that municipal ordinances accorded them various powers, including those of planning, zoning and rezoning of land and approval of applications for subdivision, was not a ground for ascribing to the Legislature the intention that national control over "agricultural land" through the Agricultural Land Act, was

effectively a thing of the past. There was no reason why the two spheres of control could not co-exist, even if they overlapped and even if, in respect of the approval of a subdivision of "agricultural land", then one could, in effect, veto the decision of the other.

The High Court order was reinstated.

FUEL RETAILERS ASSOCIATION OF SOUTHERN AFRICA v DG: ENVIRONMENTAL MANAGEMENT, DEPARTMENT OF AGRICULTURE, CONSERVATION AND ENVIRONMENT, MPUMALANGA PROVINCE, AND OTHERS 2007 (6) SA 4 (CC)

The applicant applied to the High Court for the review and setting aside of a decision by the third respondent (Department of Agriculture) to grant authorization, in terms of the provisions of s 22(1) of the Environment Conservation Act 73 of 1989, for the construction of a filling station.

The application was brought in terms of section 6 of the PAJA on the ground that, in arriving at its decision, the Department had failed to consider the socio-economic impact of the proposed filling station. The Department argued that the local authority had assessed the need and desirability - which it equated with the socio-economic impact of the proposed development and it was unnecessary to assess these.

The court held that Section 24 explicitly recognised the obligation to promote justifiable socio-economic and social development which was essential to the well-being of human beings. In *Government of the RSA v Grootboom* the Constitutional Court recognised that socio-economic rights set out in the Constitution were vital to the enjoyment of other human rights guaranteed in the Constitution; but held that, "development cannot subsist upon a deteriorating environmental base. Unlimited development is detrimental to the environment and the destruction of the environment is detrimental to development. Promotion of development requires the protection of the environment. Yet the environment cannot be protected if development does not pay attention to the costs of environmental destruction. The environment and development are thus inexorably linked. The Constitution recognises the interrelationship between the environment and development; indeed it recognises the need of the protection of the environment while at the same time it recognises the need for social and economic development. It contemplates the integration of environmental protection and socio-economic development. It envisages that environmental considerations will be balanced with socio-economic considerations through the ideal of sustainable development. This is apparent from section 24(b)(iii) which provides that the environment will be protected by securing “ecologically sustainable development and use of natural resources while promoting justifiable

economic and social development". Sustainable development and sustainable use and exploitation of natural resources are at the core of the protection of the environment".

The Court further held that it may be said that section 24, together with the legislation that had been enacted to give effect to section 24, imposed an obligation on the authorities to adopt an integrated approach to the environment; an approach that protects the environment while promoting socio-economic growth. To this end, the authorities were enjoined to adopt a risk averse and cautious approach and to prevent and remedy negative impacts on the environment.

The Court found that the filling station would have been situated 3 kilometres from the existing filling station.

Accordingly, the decision of the first, second and third respondent was set aside.

Sachs J stated in his minority judgment, that there was no evidence that the arrival of the new kid on the block doing the same business in the same way in competition with existing filling stations would give rise to the risk of unacceptable degradation either to the physical environment or to the socio-cultural environment. He was not persuaded that the principles of sustainable development were engaged in this matter at all. He said that the objective of NEMA was to preserve the environment for present and future generations, and not to maintain the profitability of incumbent entrepreneurs.

CONCLUSIONS ON PLANNING LAW CASES

In conclusion, the following principles emerge from the above planning law cases:-

- The Constitution confers "planning" on all spheres of government and that "the functional areas allocated to the various spheres of government are not contained in hermetically sealed compartments and that different spheres of government may legitimately exercise powers in relation to the same subject-matter.
- That the majority of applications for rezoning must be considered by municipalities, pursuant to their functional competence in respect of municipal planning, as the impact of the majority of such planning decisions is limited to the geographical area of the relevant municipality. However, there is a category of planning decisions which will have an impact beyond the area of a single municipality and will have effects across a larger region; this would be due to a number of reasons, including size and scale.
- The obligation on Departments to consider the socio-economic impact of a proposed development is wider than the requirement of a local authority to assess the need and

desirability for purposes of rezoning. Departments are also obliged to consider the cumulative impact.

- The duty to consider the need and desirability in the context of rezoning is not identical to the duty to consider the social, economic and environmental impacts of a proposed development as required by the provisions of the National Environmental Management Act 107 of 1998.
- Although environmental matters stand as the apparently exclusive area for National and Provincial governance, it is clear that the authority of the Municipalities at Local Government level to manage the environment at that level has always been and is still recognized. Accordingly, Municipalities are authorized to legislate in respect of environmental matters to protect the environment at the local level.
- Land in terms of the Subdivision of Agricultural Land Act 70 of 1970 did not cease to be agricultural once transitional councils were disestablished and fell within the jurisdiction of the Municipality.
- Once a mining right or mining permit has been issued in terms of the Minerals and Petroleum Resources Development Act 28 of 2002, the successful applicant will not be able to mine unless the Land Use Planning Ordinance 15 of 1985 (and/or other relevant planning law or scheme) allows for that use of the land in question. Both Acts are directed at different objectives and must be complied with in the case of mining operations.