A CRIMINOLOGICAL ANALYSIS OF COPPER CABLE THEFT IN GAUTENG

BY

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Submitted in accordance with the requirements for the degree of

MAGISTER OF ARTS

in the subject

CRIMINOLOGY

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF JH PRINSLOO

DECEMBER 2012

DECLARATION

I, William Lyon Pretorius, Student number 4572297, hereby declare that this dissertation on '*a Criminological analysis of copper cable theft in Gauteng*'**,** submitted in accordance with the requirements for the MA degree in Criminology, at UNISA, is my own original work and has not previously been submitted to another institution of higher education. All sources cited or quoted in this research paper are indicated and acknowledged in the comprehensive list of references.

SIGNED: _____   **DATE:**

ACKNOWLEDGEMENTS

This dissertation would not have come to fruition without the love, support and dedication of these special people in my life to whom I would like to extend my heartfelt gratitude:

The Greater Power; for giving me the grace, the opportunity and the strength to complete this study.

Prof Johan Prinsloo, my supervisor and academic conscience. It has been an honour to have been mentored by an internationally renowned subject master. Your guidance and continuous encouragement has truly been appreciated.

Prof Cherita Morrison, for the academic edits of the dissertation; your incredible knowledge provided colourful guidance and made complex issues appear simple.

Catherine Coetzee, for the language and technical editing of the dissertation; you made the content and context simple and clear so that it is interpreted and understood as designed.

Riëtte my motivator and wife and also my children; this mile stone is a shared achievement thanks to your continuous support and encouragement, thank you for the copious time you allowed me to do research, and for the unwavering belief you have in my success.

Each and every respondent and specialist who unselfishly shared his/her experiences and made recommendations that helped me to complete this research: This dissertation is your words and your message.

My employer; BMW, thank you for your support, and the sponsorship you have given to me throughout this research study.

And to my BMW associates for your continuous interest and encouragement: We really are a family.

ABSTRACT

This dissertation focuses on the phenomenon of copper cable theft within the Gauteng Province of South Africa. Data was collected from literature sources as well as from security professionals combating copper theft.

There are five primary objectives in this research:

1. To explore and to describe the extent and the impact of copper cable theft.
2. To gain insight into the profile and the modus operandi of the offender.
3. To evaluate current intervention measures used to combat the copper cable theft.
4. To describe the general factors limiting the success of combating copper cable theft.
5. To recommend probable intervention measures with which to combat copper cable theft.

Semi-structured interviews were conducted with responsible security officials of victim stakeholder groups in Gauteng. It was established that copper cable theft is currently a very serious crime that deserves both attention and quick intervention before it does irreparable damage to the utility infrastructure of Gauteng, in particular, and in fact to all these infrastructures in South Africa.

Key terms: Crime prevention; copper cable theft; copper theft; copper thieves; security measurements; Second-Hand Goods Act`s; Non-ferrous metal.

LIST OF FIGURES

GLOSSARY

ASIS: American Society for Industrial Security.

BACSA: Business Against Crime South Africa.

BAC: Business Against Crime.

CID: City Improvement District.

CJS: Criminal Justice System.

CPF: Community Police Forum.

Copper: A Non-ferrous Metal used as general electricity conductor.

CPTED: Crime Prevention Through Environmental Design.

CPO: Close Protection Officer

CPP: Certified Protection Professional (ASIS).

CSO: Chief Security Officer.

ESKOM: Electricity Supply Commission.

IDO: Intelligence Driven Operations.

ISO: International Organisation for Standardisation

ISS: Institute for Security Studies.

MBA: Metal Brokers Association.

Measurements: Methods or Techniques utilised to mitigate crime.

PRASA: Passenger Rail Agency of South Africa, also Metrorail.

Mitigation: Elimination, reduction and minimising exposure to risks and severity.

NFM: Non-ferrous Metal.

NFMT: Non-ferrous Metal Theft.

NFMCCC: Non-ferrous Metal Crime Combating Committee.

NFTCC: Non-ferrous Theft Combating Committee.

NPA: National Prosecuting Authority.

PSP: Physical Security Professional

PSIRA   Private Security Regulatory Authority

SACCI: South African Chamber of Commerce and Industry.

SARPA: South African Revenue Protection Association.

SAPS: South African Police Services.

Telkom: Parastatal, Largest integrated communications company in Africa.

Transnet: Parastatal responsible for the national freight transport

CONTENTS

CHAPTER 2

2   LITERATURE REVIEW ON COPPER THEFT IN SOUTH AFRICA

CHAPTER 3

3   ANALYSIS OF DATA

CHAPTER 1

INTRODUCTION AND METHODOLOGICAL FOUNDATION

1.1   INTRODUCTION

The Chairperson of the Parliamentary Portfolio Committee on Communications, Sikhumbuzo Kholwane, said; 'Copper cable theft is indeed, a national crisis.' (February 2012), while Natasha Michael, DA spokesperson on Public Enterprises, (March 2012), stated; 'The time has come to take serious action to put a stop to copper theft.'

It is the expectation of a nation that the governing bodies must secure the national assets, which ensure the necessities of daily life, for example; assets that provide telecommunications, electricity, transport and revenue. These essential supporting services are in fact non-negotiable.

If crime threatens life preserving assets and causes citizens and the National Security of the country to become vulnerable and at risk, it will undermine the core governance and security in the country.

During a one-on-one interview with Van den Berg (2010) he stated that since 2000 the high levels of copper cable theft had become a noticeable occurrence. But it was only over the past 10 years that it received specific attention. He is the Senior Corporate Security Manager, responsible for a major electricity stakeholder and for many years he was the chairman of the Non-ferrous Theft Combating Committee (NFTCC).

Interestingly, relatively very little, if any, scientific academic research was found during this research, especially published research concerning the impact this economic related crime has on organisations and on the country as a whole. However, on a non-academic level this research found many people and organisations with good, yet unpublished ideas on how to fight this crime.

The shortage of relevant academic literature has compelled the researcher to source the limited available data mostly from media publications, articles,

journals, reports and publications from various organisations known to have been reporting, investigating and combating copper theft. It must, therefore, be noted that secondary literary sources, such as found in the printed and electronic media, were mostly consulted for published information relevant to copper theft.

When referring to `copper theft` in this research it predominantly implies `copper cable theft`. Copper cables constitutes more than 90% of all copper thefts, the remainder consists of copper items in direct support of the copper cable network, for example; transformer parts and even small moving parts like train wheel bearings.

1.2 THE RATIONALE

The purpose of this study was to gather relevant data to underpin and to identify the nature of copper theft in Gauteng. This research was undertaken with the intent of understanding which specific factors inhibit the mitigation of copper theft, and to find out what were the perceptions of experts in the non-ferrous metal theft environment, especially their views concerning the risk factors involved. They highlighted their needs and gave their advice on how to combat these risk factors successfully. A comprehensive literature study was undertaken to gather the relevant data for this research.

1.3 AIMS AND OBJECTIVES OF THIS STUDY

The objective of a study, as stated by Fouche (2005:14), refers to the plan of action, the how, and the aim or the goal to be achieved. Any scientific undertaking in the field of social science has atleast one or more of the following seven objectives: Explorative, descriptive, explanatory, correlation, evaluative, intervention and participatory action research (Fouche, 2005:106-109).

This research, on the phenomena of copper theft, has an explorative, explanatory and descriptive objective.

According to Babbie (2010:268) explorative research is done in a new field of study, or a new interest, from which essential information is obtained. This study analyses the experience of responsible managers and security officers in the non-ferrous metal theft environment. This analysis highlights the copper theft measures they considered and the measures that were implemented to combat theft.

The aims of this research are based on the five areas that were investigated and individually described as a combination of; a main actuating, masquerading question, the specific problem statement and the end goal (Smit, 1985:14).

The first objective was to explore the extent of the impact/damage of copper theft in Gauteng. The second objective was to discern the modus operandi of copper theft offenders in Gauteng. The third objective was to determine whether the current crime reduction activities were being utilised in combating copper theft in Gauteng. The fourth objective was to determine the risk factors involved in inhibiting the combat of copper theft. The final objective was to determine the strategic solutions that security managers could apply to resolve the copper theft problem in Gauteng.

1.4 RESEARCH DESIGN

The term 'research design' refers to: 'the options available to researchers to utilise certain "formulas" suitable for their specific research goal' (Delport & Fouche, 2005:268). In the social science context, this research does not apply a 'pure' research method, but rather a pluralistic epistemological approach in which the phenomenological approach is dominant.

According to Hathaway (1995:535-562), a review of the literature revealed various distinctions between the paradigms underlying generic quantitative and qualitative approaches. All these traditions generally share common assumptions about ontology, epistemology and methodology. However, the researcher's role is different in the paradigms of qualitative and quantitative design. The researcher is either a detached outsider in empirical analytical

research, or is part of the phenomenological study of interpretive research. The investigator, working in the empirical-analytical paradigm (quantitative), pre-selects categories, known as variables, and states relationships between the variables as hypotheses to guide the research.

Qualitative research procedures are not as formalised or rigid as quantitative procedures. The scope is less defined and the researcher looks at subjective exploration from the participant's perspectives rather than at objective quantification (Fouche, 2005:74).

Thomas and Brubaker (2000:13-8) explain the paradigms underlying qualitative and quantitative research as distinguishing between positivism and postmodernism with post-positivism lying somewhere in between these two extremes.

According to the positivism approach, the reality of nature can only be understood by objectively studying empirical reality. 'Post-positivism is a non-fundamental approach to human knowledge that rejects the view that knowledge is erected on absolutely secure foundations, for there are no such things, post-positivist accept fallibilism as an unavoidable fact of life' (Phillips & Burbules, 2000:29). Post-positivism research teaches what reality is from the viewpoint of that particular researcher.

Exploratory and descriptive research involves the use of semi-structured interviews as a qualitative data collection tool (Fouche, 2002:19). This method allowed the researcher to explore, describe and explain the interactive contexts and dynamics underlying copper theft and the possible reduction methods. Interviews with selected respondents for specific and/or supplemental information, is not viable through quantitative measurement. The potential gap of losing the possible richness of information in using only quantitative measurements can so be countered (Creswell, 2009:13-14).

Qualitative attributes are given names or labels rather than numbers and are then categorised. As the interview schedule progresses, new knowledge shared can subtly change the interview schedule as the data collection

progress shows aspects that may not have been anticipated during the planning phase of the research (Bailey, 1996:62). Qualitative research is more useful for exploring phenomena within specific contexts, articulating participants' understandings and perceptions and generating tentative concepts and theories that directly pertain to particular environments (Schulze, 2003:8-20).

Kvale (1996:70) states that the strengths of the phenomenological approach are threefold, namely:

1. Allowing the researcher an insider perspective of a respondent.
2. Allowing subjective knowledge and experience to become known.
3. Showing the context in which the research interacts.

Based on the nature, the scope, the activities and the needs of all the role players, the phenomenological approach is custom made for eliciting information in protected and in confidential environments. This combination of explorative, descriptive, explanatory, evaluative and intervention research is essentially a way of eliciting information from a limited number of individuals who are presumed to have the information which is sought after. It further focuses on those who are able and willing to communicate and who are intended to be representative or in charge of a larger group (Hofstee, 2006:122).

However, a combination of both a positivist approach and a post-positivist research design were used during this research because the principles associated with the positivistic approach had to be utilised to cover the phenomenon of copper theft. Thus according to Johnson, Onwuegbuzie and Turner (2007:113) this can be rationalised as the mixed methods research; an approach used to find knowledge (theory and practice) that allows the consideration of multiple viewpoints, perspectives, positions and standpoints by including the standpoints of both qualitative and quantitative research.

The mixed method research is a synthesis that includes ideas from both qualitative and quantitative research. Denzin (1978:291) called this approach

triangulation; 'the combination of methodologies in the study of the same phenomenon'. According to Creswell and Plano Clark (2011:231) a mixed methods design is a research design (or methodology) in which the researcher collects, analyses, and mixes (integrates or connects), both quantitative and qualitative data in a single study or by utilising a multiphase programme of inquiry.

This research will aim to uncover all the information regarding the copper theft phenomenon, which will enlighten the goals to the point of saturation. It is therefore important to incorporate such knowledge, as described in documentations and other positivistic/quantitative observances and measures, into this phenomenological research design where it can enhance and support the experiences from the sample grouping, allowing for an even deeper understanding and knowledge of the research problems stated. The 'interaction' between researcher, respondents and published material was exceptional. The published sources became like another qualitative source rather than records from a quantitative environment.

1.4.1 The research paradigm

Paradigm issues are crucial, no inquirer ought to go about the business of inquiry without being clear about just what paradigm informs and guides his approach (Nagy & Leavy, 2004:36).

According to Babbie (2010:34) a paradigm refers to a model or a frame of reference that is used when observing, understanding, and influencing what is seen and interpreted, to give a researcher direction. According Nagy and Leavy (2004:21) once a research problem's area of interest has been selected, a model needs to be chosen that must be followed. This model must define a research paradigm (Model/Pattern=paradeigma in Greek / paradigma in Latin) as a basic set of beliefs/philosophies that guides actions, deals with main principles, which must be studied, and also shows the researcher's perception of the world.

For this research the respondent's mind is invaded so that the qualitative researcher can reproduce all the subjective experiences and emotions that the respondent is aware of (Ladikos & Kruger, 2006:157). However, no single method can apprehend all the incisive variations in actual human experience. This necessitates the venture into a wide range of interconnected interpretive methods and always seeking better ways of making the worlds of experience studied more understandable: 'In this sense all qualitative researchers are philosophers guided by abstract principles, which combine beliefs about ontology, epistemology and methodology' (Denzin & Lincoln, 2003: 31-36).

The research or inquiry paradigm in a social research context is explained in terms of three fundamental questions which are interconnected with constrains for control depending on the answers (Nagy & Leavy, 2004: 21 – 22). The three fundamental questions are:

1.4.1.1 *Ontological assumption*

The Ontological Question: What is the form and the nature of reality and, therefore, what is there that can be known about it? How things really are and really work? (Nagy & Leavy, 2004:21).

The respondents, the researcher intended to study, each has their own theory of real knowledge and, therefore, each one will have their own 'real' interpretation of the particular phenomena. According to Creswell (2009:6-7), the details shared by the participants may be different in experience due to the post-positivist assumption that there can be multiple realities. The researcher's epistemological position, regarding this assumption, is that data is contained within the perspectives of people that are involved with copper theft mitigation.

This, according to Aspers (2004), implies the empirical material level; the world of First-Order-Construct, from 'where the researcher explains the participants/actors meaning structures and the ideal types that they use, but avoids reading into theories.'

1.4.1.2 Epistemological assumption

The epistemological question: What is the nature of the relationship between the knower, or would be knower, and what can be known? This level must be entered with a clear understanding of what the answer to the Ontology question is (Nagy & Leavy, 2004:21).

The respondents and their experiences will predominantly be studied through the phenomenological paradigm. The paradigm can influence the way in which the research is conducted, or the strategy of this research. The main assumption in the phenomenological paradigm is that all people, in everyday life, experience different phenomena, which shape and influence them to make conscious sense of the world they see, and this is unavoidable (Creswell, 2007:58). The knowledge of experiencing the phenomena should be constructed and interpreted by the participants, so that the meaning in how they view their life can be developed. It refers to understanding the world in terms of subjective point of view, based on how something was experienced, taking into account the social and the historical context thereof (Creswell, 2007:20).

Such theoretical assumptions mean that the researcher produces second-order-constructs in relation to the participant's first-order-constructs. The second-order-constructs, the theoretical level, must communicate in two directions. On the one hand it must comply with the demand of subjectivism, which is understandable to the participants within the field. On the other hand, it must be connected with existing scientific theory and be understandable within the scientific community. The second-order-constructs, or the 'accounts of the accounts', are the theoretical notions of an existing theory and constructs as produced and coined by the researcher (Aspers, 2004:1).

1.4.1.3 Methodological assumption

The methodological question is: How can the inquirers, or would be knower, go about finding out whatever he believes can be known? Methods must, however, be connected to a predetermined methodology based on the

Ontological and Epistemological predispositions within the chosen paradigm (Nagy & Leavy, 2004:22).

The research has been conducted to find the essence of what and how subjects/respondents experience copper theft, and what the actions are that they have taken to mitigate/contain or to reduce it. The experience and actions/know-how will be studied by applying a phenomenological strategy. Creswell (2007:60) stated that by applying a phenomenological strategy, a deep understanding of the phenomena being investigated can be achieved, thus enabling the essence of the experience to be founded by the researcher.

1.5 THE PHENOMENOLOGY PARADIGM

According to Moustakas (1994:22, 27 and 61), phenomenological research returns to the experience of participants to obtain comprehensive descriptions. Moustakas further stated that these descriptions then provide the basis for a reflective structural analysis to portray the essence of the experiences: 'What appears in consciousness is an absolute reality while what appears to the world is a product of learning. That what appears to be appearing is actually appearing, one sees what or who one sees.'

According to Moustakas (1994:21), the universal qualities or common bonds of the human science research models are:

1. Recognising the value of qualitative designs, methodologies and studies of human experiences that are not approachable through quantitative approaches.
2. Focussing on the wholeness of experience rather than solely on its objectives or parts.
3. Searching for meanings and the essences of experience rather than measurements and explanations.
4. Obtaining descriptions of experience through first person accounts in informal and formal conversations and interviews.
5. Regarding the data of experiences as imperative in understanding human behaviour and as evidence for scientific investigations.

6. Formulating questions and problems that reflect the interest, involvement, and personal commitment of the researcher.

1.5.1. Justification for selecting the phenomenological paradigm.

A qualitative research design was considered appropriate for this study since it allowed the researcher insight into the perceptions of security managers and other senior non-ferrous metal theft role players. The researcher entered the subjects' 'life world' in order to understand the phenomenon in its naturally occurring state (Fouche, 2005:267-273). The study attempts to understand the meanings and the intentions that underpin the everyday actions of the subject.

Phenomenologists believe that the researcher cannot be detached from his/her own presuppositions and the researcher should not pretend otherwise. Individual researchers hold explicit beliefs (Mouton & Marais, 1990:12). The intention of this descriptive research was to gather data regarding the perspectives and the experiences of participants about the phenomenon of copper theft and its nature and modes operandi, what mitigates it and what is needed to continually do so.

1.5.2. The empirical phenomenological research method and collaboration with other epistemology paradigms

1.5.2.1 Empirical phenomenology

The philosophical foundation and practical application of empirical phenomenology, as utilised in this research, is based on the phenomenology of the philosopher Edmund Husserl and the sociologist Alfred Schütz (Aspers, 2004:1).

Moustakas (1994:xii) mentions five human research approaches that utilise qualitative methodologies, namely: Ethnography, Grounded Theory, Hermeneutics, Empirical Phenomenological Research and Heuristic Research. The chosen phenomenological approach for this study is the Empirical Phenomenological Research. This will require returning to the experiences to obtain comprehensive descriptions. These descriptions will then provide the

basis for a contemplative structural analysis to portray the essence of the experience (Moustakas, 1994:xii).

The contexts of the structural factors within which these experiences are met are just as important for this research. Fischer (1974:405 - 406), explains that the phenomenological method is the work of revealing and making explicit the unwritten constitution of everyday life. And according to Moustakas (1994:11-16), such structural factors will be embedded in the phenomenological research through a mixed approach. The original data comprises primary descriptions obtained through a semi-structured question schedule and an interview type dialogue. The researcher then describes the structure of the experience shared, based on the reflection and interpretation of the research participant's narrative. The aim is to determine what an experience means to the persons that have had the experience. From their general observations the essence of the research study is then derived; to enlighten the copper theft phenomena (Moustakas, 1994:11-16).

According to Miles and Huberman (in Ladikos & Kruger, 2006:158) empirical phenomenology was developed by Amedeo Giorgi. The aim of this approach is to research a particular phenomenon, or to research the participants' experiences and to share these with others. They are further of the opinion that for a researcher to successfully make use of empirical phenomenological research, he/she must describe a particular incident in detail, as experienced by participants and then step by step document how the essential psychological elements were extracted from the description.

According to Aspers (2004:1), empirical phenomenology is most noticeable in the way in which the researcher approaches his field. The starting point for empirical phenomenology is that the explanation must account for the subjects' first-order-constructs. The main idea of empirical phenomenology is the scientific explanation must be grounded in the first order contructs of the participants, which are their own meanings and words. These constructions are then related to the second-order constucts of the researcher. Notwithstanding the methods and its contrasting factors, they must always safeguard the subjective perspective (Aspers, 2004:1).

In line with Van Vuuren and Ladikos (1985:2-3), the techniques of empirical and phenomenological psychology for this research, were applied to all the security expert's experiences of copper theft. This was a study of the copper theft situation as experienced by these security experts responsible for its protection. In this way it was possible to study the 'way' in which the subjects/security officer's world is put together and how they experience it.

In this context 'empirical' must be interpreted as a meaning which must be attributed to the facts. The researcher thus interprets the copper theft related events in the way the security managers experienced them. The data and the stages of analysis, which led to the findings, were shared with expert colleagues to ensure that the phenomenon of copper theft had been faithfully considered.

The challenge of this research, from the viewpoint of a phenomenological approach, is that positivistic type sources, for example; various documents and data generalisations, were also used in an attempt to achieve saturation of the total truth.

1.5.3 Phenomenology and post positivism interaction

'The impetus for the development of a phenomenological method for the human sciences was a perceived failure by investigators using the methods developed by the natural sciences in adequately explaining the phenomenon that the human sciences were investigating the human being' (Omery, 1983:53.)

This research deals with security/legal categories which are rigid and usually informative of a structured systems and process approach. This might be epistemologically contrary to phenomenology in terms of generalisations and extrapolation towards theories and models. The goal of this research is, however, to uncover, interpret and to understand the phenomenon of copper theft in totality. From a criminology perspective it is about the outcome of the essential findings which can be applied in the field of criminology (Davis, 2012). These requirements manipulated the researcher to cover the evidence

and the facts of what have been before, the current status, and the future prediction. This implies a clearly combined post positivist and phenomenology approach. Knowledge may be gained through qualitative and quantitative research methods that may complement each other and move knowledge closer to the truth.

Clark concluded that discovery is welcomed in assisting to determine the meanings and purposes that people ascribe to their actions. Such experiences or meanings of individuals, such as phenomenology, may be encompassed by this paradigm (Racher & Robinson, 2003:464-469).

This research on copper theft spans the post positivism, empirical- and hermeneutic phenomenological ontology -paradigms. The challenge was; how to reconcile phenomenology with post positivism. Manen, (in Racher & Robinson, 2003:472) stated; 'the essence of a phenomenon is a universal which can be described through a study of the structure that governs the instances or particular manifestations of the essence of the phenomenon'. Therefore, if an essence is adequately described, by comprehensively encapsulating the lived experience and the significance, it will receive the phenomenological nod.

 As such phenomenology has been described as a method applicable within a post positivist paradigm; 'Phenomenology inquiry yields empirical knowledge in the form of descriptive and explanatory theory, and of understanding, which leads to practical relevant knowledge, and it also contributes to ethical, aesthetic, personal and socio-political ways of knowing' (Van der Zalm & Bergum, 1999:217). In both post positivist and interpretive paradigms, the use of quantitative and qualitative methods can be justified in meeting the purposes of the research without violating paradigm assumptions (Racher & Robinson, 2003:477). Davis (2012) stated; 'Criminologists do not apply research methods in the "pure" sense, but as how they can be used in the applied field of criminology.'

1.6. RESEARCH METHODOLOGY

1.6.1 Sampling

The respondents all reside in Gauteng. Copper theft security managers, who are also copper mitigation specialists, are limited in number. They were selected through purposive sampling. This kind of sampling is considered by Wellman and Kruger (1999:196) as the most important kind of non-probability sampling. The researcher selected the sample based on the purpose of the research, looking for those who 'have had the most valid experiences relating to the phenomenon to be researched' (Kruger, 1988:150).

Delport and Fouche' (2005:328), stated that non-probability sampling is most appropriate when the researcher seeks individuals where the particular processes or behaviour being studied are most likely to occur. The researcher used target sampling in order to collect information specifically relating to copper cable theft in Gauteng and the factors that could contribute or mitigate such occurrences.

In order to trace additional participants as sources, or as a second level validation for the information received, the researcher used snowball sampling. Snowballing is a method of expanding the sample by asking one informant or participant to recommend others instead. Groenewald (2004:5) calls those through whom entry is gained 'gatekeepers' (a person of authority who can authorise access) and those persons who volunteer 'assistance key actors or key insiders'. In this instance the researcher also used professional alliances such as; members of the American Society for Industrial Security (ASIS), ISS personnel and PSIRA affiliations in the security industry, to identify the 'right' Security Managers for this research.

Groenewald (2004:9) cautioned that gatekeepers tend to manipulate by influencing the course of the research, and therefore the researcher had to be alert to the possibility of such occurrences.

A unit of analysis is tapped for data until the topic is saturated. This occurs when the interviews (subjects or informants) introduce no new perspectives of the topic (Groenewald, 2004:11). Boyd (2001: 93-122) regards two to ten participants or research subjects as sufficient to reach saturation. Creswell (1998: 65 and 113) recommends long interviews with up to ten people for a phenomenological study. A sample of four Security Managers was selected. They were identified as specialists by their peers and their employers, and were not only responsible for, but were also the most knowledgeable of their institutions' security copper combating programmes. The fifth respondent selected was a service provider to the four senior security manager respondents, and he was especially knowledgeable in the field of copper theft. The researcher extensively contacted referrals within the same environments of the respondents until saturation of information was evident.

A focus group interview of 28 senior security managers was the sixth sample entity. The researcher was appointed to serve as moderator at a copper theft workshop in Gauteng on 13 and 14 October 2011. At this Workshop about 28 senior security management delegates, presented themselves at an open forum as experts and critical role-players in the copper cable theft environment. The transcribed interview schedule was tested on all of them to determine the level of saturation achieved.

1.6.2 Unit of analysis

The unit of analysis is defined as the person or object from which the social researcher collects data (Fouche, 2002:107). The unit of analysis in this research is the most senior security officials responsible for mitigating or reducing copper theft within Gauteng. Only research participants, knowledgeable and with many years of experience in the copper theft phenomenon in Gauteng were included in the sample. Gauteng is the economical hub of the RSA. The stakeholders most affected by non-ferrous metal theft in the RSA reside in Gauteng.

1.6.3 Data collection

Mittman (2001:7) mentioned the following empirical data collection tools: mail, telephone surveys, telephone interviews, in-person interviews, collection and analysis of documents, archival search, administrative data records, observation field notes, etc. However, the specific challenge was to decide on the data collection tool that would source the data which this research had as its goal. Semi-structured interviews were used as data collection tool for this research.

An interview schedule formed part of the semi-structured process to obtain the relevant information. The data gathered for this research should be relevant and clear, and the degrees of freedom utilised to gather such data is necessary and should be done scientifically (Giorgi, 1985:151).

1.6.4 Core reasons for utilising Interviews as data collection instrument

Kvale (1996:1-2) remarked that data capturing during the qualitative interview; 'is literally an inter-view, an interchange of views between persons conversing about a theme of mutual interest, where the researcher attempts to understand the world from the subjects point of view, to unfold meaning of peoples` experiences.'

The experience and the standing of the researcher in the Security Industry was known, which created an important rapport with the interviewees and made it possible to focus on the topic, especially as non-ferrous metal theft covers a broad spectrum. In supporting the rational for this dissertation, the importance of formulating correct and relevant guiding questions was needed. Smit (1985:14) explains that a guiding question could also masquerade as a statement question, which will demarcate the problem area. Therefore, specific attention should be given to the meaningfulness of the statement question. The interviewer immediately explained or elaborated on any miss constructed questions. It was also possible for the researcher to observe non-verbal communication more comprehensively.

The respondents were informed their anonymity was guaranteed and their responses would be treated as confidential and would only be used for purposes of this research. The researcher made use of an informed consent pledge to ensure an ethical research (see Annexure C).

All respondents providing in-depth information have been protected by referring to them as 'respondents' and later in this research collectively as 'R'. First and foremost it must be reiterated that the current situation in South Africa, concerning positions, resources, structures and operations, makes critical management opinions highly sensitive. This is also why confidential interviews, that guarantee anonymity, were used to obtain information without fear of compromising the respondents.

The value of the interview methodology used in this research lies in the fact that it guided respondents in sharing new information.

1.7 INTERVIEWING PROCEDURES

Interviews conducted by the researcher were semi structured during which open-ended questions were asked in either English or in Afrikaans.

This interview process gave participants an opportunity to share insights and to raise questions that the researcher had not anticipated. Interestingly, this approach influenced the scope, the sequence and the content of the interviews. These interviews were conducted during 2011 with the selected Senior Security Managers and/or Chief Security Officers (CSO's) at venues of their own choice. Permission was requested from all respondents to be interviews and for field notes to be taken and to be taped where possible. On completion of each interview these notes, recording and dictated interviews were transcribed as a verifying measurement.

1.7.1 Interview duration

The Senior Security Managers who had agreed to participate in this research were all involved in various security duties. They were duly informed that to obtain sufficient information each interview would be between 60 to 180mim. The amount of time spent on the interviews depended on the amount of information, experience and personal opinions the respondent provided. This often resulted in long in-depth discussions, which sometimes stretched into many hours. According to Taylor and Bogdon (in Maree, 1995:88) an interview should not take longer than two hours.

The researcher found that because of the interest in the topic, the discussion probes initiated philosophical debates, resulting in up to four follow-up meetings before the interview was finalised.

1.7.2 Focus group interview

Husserl (1913:86), stated that focus group interviews can also be phenomenological where the discussion of topics are sort of bracketed. A focus group can single out a phenomenon for careful inspection - it is removed from the world where it occurs and then it is examined. This unmasks, defines and determines the phenomenon's basic elements and essential structure.

According to Halcomb, Gholizadeh, DiGiacomo, Phillips and Davidson (2007:1) the focus group method is a technique of group interviews that generates data through the opinions expressed by participants. According to Groenewald (2004:5) a variety of methods can be used in phenomenological research including; interviews and focus group meetings. As the operative word in phenomenological research is 'described' is endorses the ability to describe the phenomenon as accurately as possible and to understand the psychological phenomena from the perspectives of the respondents involved. Bradbury-Jones, Sambrook and Irvine (2009:1) state that in phenomenological research it is actually beneficial that the focus groups are harmonious because it stimulates discussion and opens up new perspectives.

The use of focus groups actually provided a greater understanding of the phenomenon under study, as the successful group interaction and discussions on copper theft were extremely informative..

1.8 THE PILOT STUDY

According to Bless and Higson-Smith (2000:5), the purpose of the pilot study is to ascertain if the required data and information can be obtained from the respondents, and if the methodology, the sampling, the instruments and the analysis are adequately and appropriately determined in the process.

According to Holliday (2002:5) qualitative research is more flexible and open-ended and, therefore, it is difficult to establish a time frame, the costs, permission and the number of respondents that would be required to reach data saturation. These will become evident during the pilot study that will also highlight the early warning signs of problems that will need to be pro-actively resolved.

According to Janesick (1994:213) a qualitative study's advantage is that it allows a researcher to focus on issues such as, pre-testing certain questions and getting greater clarity on certain sections of the planned interview schedule. And as Bailey (1987:108) points out; to ensure the interview is fair and justified, and that the instruments to be used are tested before application..

Prior to the formal scheduled interviews the interview schedule was tested on two senior security managers and this sampling met the criteria. The researcher personally conducted the interviews during which the questions were tested for miss-construction and misunderstanding. The main focus was to ascertain whether the interest of participants had been sufficiently aroused for them to be willing participants so that the required data could successfully be obtained.

1.9 THE LITERATURE REVIEW

According to Mouton (2001:87) and Newman (1997:89), a literature study is conducted to determine the research which has already been done. This

information would then act as a guide for the researcher. The literature review is important to establish credibility as it demonstrates that the researcher has insight, is familiar with the current topic and has the most up to date information on that topic. According to Leedy (1997:71), a literature study can also provide new ideas. And it can also show gaps that still need to be researched (Marshall & Rossman, 1995:29).

The researcher must demonstrate his understanding of the topic under investigation by making use of the most up to date information on the topic. Mouton (2001:87) and Newman (1997:89) state that a literature review is essential to learn from, and to build on to previous research findings while at the same time provide a safeguard against duplicating previous research.

A comprehensive literature study was undertaken on the issues of copper theft. It was found that secondary literature on the topic was scarce and that which was available had mostly been indirectly duplicated. The existing formal research found on copper cable theft was of little significance.

This was one of the main reasons why the phenomenological method had been chosen. It became clear that data needed to be addressed with individuals and their experiences within the day to day reality of mitigating copper theft. The fact that not much literature exists about the research study referred the researcher back to the origin and reality of the phenomenon of copper theft.

The existing evidence on the current topic in the academic media is indicative of the fact that non-ferrous metal theft is a relatively new phenomenon to research in the criminological milieu.

1.10 DATA ANALYSIS

1.10.1 General analysis.

Newman (1997:101) is of the opinion that skepticism is an important norm of science, and the researcher is not obliged to accept anything at face value. This was kept in mind during the selection and the subsequent interpretation of

the data. Data from all the sources, as stated in the sample delineation, was analysed to distinguish what was relevant. According to Denzin and Lincoln (1994:33), the researcher was required to interpret the collected data so that the researched phenomenon could be understood. A final report would be constructed from data that was collected.

1.10.2 The empirical-phenomenological data analysis method.

According to Van Vuuren and Ladikos (1985:2-18) in the empirical-phenomenological method for qualitative research the process that is followed has five steps:

a. Reduced transcriptions of each interview
b. Summarising the main points of the interview
c. Illustrating condensation of the interviewee's experience which could highlight the problems of copper theft
d. Describing the psychological structure of the case (the inquiry of intimate experiences by the senior security manager regarding copper theft)
e. Relating the 'essential' psychological structure of all the interviews.

In using this method, the researcher could analyse the data that had been obtained from the participants, based on their experiences of copper theft at their premises, and reproduce the data in this research report.

1.10.3 The methodological implementation

The data analysis method is supported by eight steps which are used to enable the second constructor to make valid interpretations of information as received from the first constructor (Ladikos, 2006:161-163).

Step one: Appropriate questions were formulated for the subjects for them to share their specific experiences.

Step two: Appointments were made with the subjects and interviews were conducted. Dictation and recordings were utilised where applicable.

Step three: The data collected during the interviews was transcribed.

Step four: The transcriptions were analysed and notes were made of the general themes. The researcher was immersed in the reality portrayed in the data of the subjects' environment and the real life experiences of copper theft.

Step five: The transcriptions were re-read. Central themes and/or categories were identified and suitable headings were noted. This process is known as open coding.

In step six, the relevant themes, once identified, were grouped together, explained and discussed under the central themes with the aid of the empirical-phenomenological method.

During step seven, the best interviews were identified.

Step eight involved the academic writing of the chapter. During this step the transcriptions and recordings of the interviews, as well as the resent literature reviews, were continuously consulted to prevent the context and the original meaning from being omitted or misinterpreted.

These steps were followed so as to gather information and to make an in-depth analysis of this qualitative data, as uncovered in this research. The sequence of steps, however, was not strictly followed. Step seven identified the best interviews; yet at times these had already been used during the transcription and coding period. The researcher found this small change kept the topic focus current. In cases where the questions could not be answered clearly, or were not understood, these were immediately followed up, until the saturation point had been reached.

1.11 VALIDITY AND RELIABILITY OF DATA

Maree (1995: 29) stated that the criteria for validity included confidentiality, honesty and responsibility. This criterion was necessary for validating the responses of the respondents – the completeness of the responses were

measured against this criteria According to Lani (2009:03), validity means accurate or error free conclusion(s) deducted from the data.

According to Lincoln and Guba (1985: 308), external validity is achieved through a detailed description of the research process allowing the reader to see if the results can be transferred to a different setting. In order to enable others wanting to apply the findings of this study to their own research so as to make an informed decision about whether to do so or not, descriptions of the experiences and identity development of the participants, as well as the definitive exposition of the researcher, is provided.

Reliability is used to evaluate the stability of observations by the multiple use of the same instrument as required (Miles & Huberman 1994:278). The respondents' answers were used verbatim to ensure the reliability of the study. Each respondent was asked the same questions, using an interview schedule.

In this study the researcher was able to demonstrate that his focus was on a clearly demarcated phenomenon. A similar observation would be possible if the same variables existed at the same time and at the same place. The quality of information about combating cable theft, that had been obtained from the selected specialists in the operational field, supported this observation in its entirety proving this research process is thus reliable and totally transparent.

1.12 PROGRAMME FOR THE REMAINDER OF THE RESEARCH

Chapter 1 introduces the study and discusses the problem, the rationale for the study and the research design and methodology.

Chapter 2 encompasses the literature review and provides information about the impact, the nature and the measurements of the phenomenon of copper theft.

Chapter 3 presents the data collected and its analysis.

Chapter 4 describes the findings of the phenomenon of copper theft.

Chapter 5 concludes the study by presenting the recommendations for combating copper cable theft and the recommendations for future research.

CHAPTER 2

LITERATURE REVIEW ON COPPER THEFT IN SOUTH AFRICA

2.1 INTRODUCTION

In South Africa copper theft is a national problem especially in the province of Gauteng because, being the commercial hub of South Africa it offers the most opportunities for copper theft.

The literature review revealed a paradoxical phenomenon in that most of the active initiatives for combating copper theft originated from outside the Gauteng borders.

No academic sources were found in the library that made a direct reference to the phenomenon of copper theft. Therefore, all the references acknowledged in the list of references are from the Internet and from data found in newspapers, magazines, chronicles, journals, departmental publications and in annual general reports.

Copper theft is a recent occurrence. It is only for the past 10 years that it has featured in literature reviews and with all the attention it is currently receiving it has become a growing concern.

2.2 EXTENT AND IMPACT OF THE COPPER THEFT THREAT

'Decisive action needs to be taken to deal with the theft of non-ferrous metal. Unless proper steps are taken, the continuing theft of copper cable will continue to undermine economic growth and development in South Africa' (Van Dalen, 2009:1). He further emphasises the fact that these non-ferrous metals are necessary for the provision of essential services such as; transport, communication, water and electricity.

According to U-dingane Senamela ,Transnet Freight Senior Security Manager, 'Copper theft syndicates were holding the country's economy at ransom,

causing the loss of jobs and destabilising operations that affected many economic activities across the country,' (Mogome, 2008:1).

Since 1993 the theft of non-ferrous metals in South Africa has escalated to unprecedented levels with annual losses running into billions of rand (Venter, 2008:1).

In 2007, Mr Bekker, a Member of Parliament, requested 'Non-Ferrous Metal Theft' to be classified a terrorist act with the consequent penalties because this phenomenon had become a matter of urgency (Coetzee 2008a:1). Geldenhuys (2008:1) supported this request with a warning that copper theft would cripple the cities in South, especially when power outages, communication cuts and the diminishing railway infrastructure were taken into consideration. This request was endorsed by Me Helen Zille, the Mayor of Cape Town, in stating that the multi-million rand theft of non-ferrous metal items threatened to bring Cape Town to its knees (Van Dalen 2009:1).Sikhumbuzo Eric Kholwane, Chairperson of the Parliamentary Portfolio Committee on Communications, recently stated: 'So it has become a national crisis, because people are being denied these basic services and this is a problem' (Money Web, 2012:1).

Natasha Michael, DA Spokesperson Public Enterprises (Allafrica.com 2012), stated that parliament has indicated that government is losing the war against copper theft. The minister of Public Enterprises, Malusi Gigaba, confirmed that Eskom and Transnet continued to suffer losses of millions of rand as a result of copper cable theft. The South African Chamber of Commerce and Industry's (SACCI) spokesperson, Peggy Drodskie, said the effects of copper theft on the South African economy were huge;- from delays in rail transport and shipping, to dysfunctional traffic lights (Business Live 2011:1).

2.2.1 The extent of the problem

Van den Berg (2004:1) the Senior Consultant and Advisor to Eskom, and for many years the Chairman of the Non Ferrous Theft Combating Committee (NFTCC), gave a specialist perspective on the broader impact of non-ferrous metal theft. He stated that the victims of non-ferrous metal theft did not only

suffer direct consequences as a result of financial losses incurred with having to replace the stolen material, other people also suffered indirect consequences, such as:

a. The impact on the image of the organisation
b. The impact on service delivery
c. The impact on employee morale
d. Loss of revenue or income
e. Labour costs to replace and to repair
f. Overtime costs for staff
g. Cost of equipment and vehicles
h. Security costs to protect and to safeguard assets and customers
i. The cost of electronic equipment, alarms and monitoring.

2.2.2 The impact of the problem

The cumulative damage to the economy of this country, its organisations and its individuals, is staggering. The previous Public Enterprise Minister, Barbara Hogan, said that copper cable theft was so rampant that it costs the South African economy approximately seven billion rand a year (Phakathi, 2010a:1). According to Geldenhuys (2008:1) the actual loss of copper cable could be multiplied tenfold to determine the actual overall economic loss. And then the cost imposed on all the victims that were without essential services had not even been included in the calculation.

The threat, however, is not only financial and services orientated, it also has a direct life threat capacity. Ben Coetzee, a senior researcher at the Institute for Security Studies' (ISS) highlights the danger of cable theft from major utility providers, saying that it poses, not just a major threat to the economies of the country, but also to the safety of the citizens. 'One obvious example is the mining industry, which relies heavily on a guaranteed electricity supply. If the wrong cable is stolen, a deep mine such as one of those found in South Africa would be hard-pressed to extract its workers from the mine shaft. Deaths could easily result' (Hi-Tech Security Solutions, 2009:1).

Organised gangs plunder kilometres of cable; the country's lifelines, and sell it as scrap metal. These copper thieves have an unlimited appetite as copper is stolen from basins, bearings, taps, window frames, drain covers, solar panels, water meters, overhead lines, substations, signal cables, underground cables, transformers, railway carriages.... In fact absolutely anything that has copper in it is stolen (Geldenhuys, 2008:1). Every day the safety of the communities is clearly at risk as the thieves more brazenly feed the general scrap metal industry's demand for profit (Van Dalen, 2009:1).

Initially the security of these non-ferrous type metals had not been taken into consideration during installation or construction. In fact 70 years ago, non-ferrous metals were not a sought after commodity, thus they were placed in plain sight for easy maintenance. But today this has made these cables soft targets for criminals who seem to be making a lucrative living out of cable theft. The complexity of the task at hand is enormous, for example; the challenge that Eskom alone faces involves approximately 370 000 plus kilometres of exposed electrical cabling that covers vast distances over kilometres of remote areas making these cables extremely vulnerable to theft (Hi-Tech Security Solutions, 2009:1).

Transnet faces a similar challenge in securing about 23 000km of rail track (News24.Com, 2007:1). Interestingly, what is not regularly reported is the theft of non-ferrous metals that severely affects the mining industry, municipalities and metropolitan electricity departments (Fin24.Com, 2006:1). The threat to municipalities is real, substantiated by the crippling effect it has on municipalities such as; the eThekwini Municipality where the perpetual service delivery interruptions are costing industries millions of rand in financial losses. Sandile Maphumulo, the eThekwini Electricity Head, said that the financial resources used to combat these thefts should have been used for social upliftment. Furthermore the situation plunders millions of rand from Durban municipalities, to the point where it can only be seen as acts of terrorism. Copper thieves should be given harsher sentences (Ndlovu & Magwaza 2008:1).

The message which should be conveyed to the public, is that; copper cable theft holds a specific danger for the entire South African industry infrastructure; in that it causes a domino effect that vibrates on all levels, for example; if the transports system such as buses, the trains, or ships, were to stop being operational, all the supporting and dependant services would follow. The indirect impact would be on the people making use of these transport services - thousands of people would be late for work, freight deliveries would be delayed and business would be without stock, etc. This could escalate into striking, angry, frustrated people - complaints and retaliation, vandalism, driver threats, hi-jacking of transport, burning of property, overcrowding, possible claims and even loss of life (Venter, 2011).

2.3 ROLE OF LAW ENFORCEMENT

There are very few publications concerning the current role of law enforcement in combating copper cable theft in Gauteng, let alone in South Africa. Business Hi Light (2009:1) states that the South African Polices Service (SAPS) has identified non-ferrous metal theft as a priority crime. However, there are still numerous loopholes within the system that needs to be addressed:

Law enforcement lacks an understanding of the severity of the crime and therefore the slipshod general prosecuting actions and the slack bail conditions imposed. For example; after many hours of intense investigation several members of a crime syndicate were successfully arrested, and the normal prosecution route had been followed accordingly for the suspects to appear in court, but without much ado, they were released on bail the very next day.

Bindeman (2011:2), the Technical Advisor of the South Africa Revenue Protection Association (SARPA) with many years consulting experienced in the copper cable theft environment and frequently reffered to in this section, provided documentation at the 2011 National Copper theft Workshop, highlighting the loopholes in the old 'Second Hand Goods Act' of 1955, which are continuously exposed in court by the defense legal representatives. The courts deal with syndicates and scrap metal dealers who are aware of these

loopholes, and who not only understand these laws but they also have enough money to get good legal representations

Bindeman furthermore states that in the industry it was well known that in the aspect of crime fighting, the SAPS Crime Intelligence did not regard copper cable as an area of focus. Therefore, the type of statistics needed to effectively take countrywide proactive action against these cable thieves could not be supplied. It seemed that to enable successful prosecution only outsourced investigative service providers and/or internal parastatal investigators were able to supply accurate statistics with regard to criminals who steal copper. 'In this type of crime (because it is not seen as a priority crime by the SAPS), we have the unique problem that SAPS only respond when we put pressure on them' (Bindeman, 2011:3). And this response could only be achieved either through a well-directed letter addressed to the highest level of the entity, or by the SAPS who inflate their crime statistics at station level to get the necessary attention.

SARPA assisted the AMEU (Association of Municipal Electricity Undertakings) initiative in writing a letter to the National Commissioner asking his assistance in this matter (Bindeman, 2011:3). Even thought the SAPS did provide support, it was brief and very superficial because the official they allocated to take action had little or no knowledge regarding the subject at hand. It takes time to train such an individual and then he/she is in all probability transferred; 'We are currently in one of such "periods" where the new Head of Visible Policing is trying to find his feet, after the Head of Organized Crime was withdrawn from the initiative after only one year' (Bindeman, 2011:3).

Business Against Crime put some pressure on the National Commissioner, at the request of all the role-players of the Non Ferrous Metal Theft Combating Committee (NFMTCC) (Bindeman, 2011:3). The Commissioner responded by sending out a letter to all the Visible Policing members in the country explaining their roles and responsibilities (see Annexure D). According to Bindeman (2011:3) it was necessary to once again put 'their foot down and force some changes' to ensure stricter control measures, especially since they had already gone through many of these phases over the past few years with

issues such as; the implementation of the new Second-Hand Goods Act (no 6 of 2009), the possible prosecution for economic sabotage, stricter export measures, and the process of getting the SAPS to re-categorise non–ferrous metals and to identify non-ferrous metal theft as a priority crime.

2.4 COPPER CABLE THEFT STATISTICS IN SOUTH AFRICA

In recent years non-ferrous metal theft has become a serious problem in South Africa. And even though the number of incidents and the related costs decreased between 2001 and 2004, the occurrence of this type of crime increased sharply during the period 2005 to September 2008 (BACSA, 2009a:1). Advocate Simi Pillay-van Graan, the National project manager of the Non Ferrous Metal Crime Combating Committee (NFMCCC) of Business Against Crime South Africa (BACSA), stated that this could be attributed to the dramatic increase in copper and aluminium prices as a result of the rapidly growing demand for these materials. In 2008 the estimated direct cost of copper cable theft in South Africa was already 500 million rand a year. But, the estimated indirect cost of copper cable theft to the economy was ten times higher than the expenditure required replacing these cables. (Pillay-van Graan, 2008:1). The graph in Figure 2.1 shows the reported costs related to copper theft in South Africa from April 2009 to March 2011.

Figure 2.1: Compilation of SA Copper theft related costs April 2009 – March 2011. **(Source: Money Web 2011)**
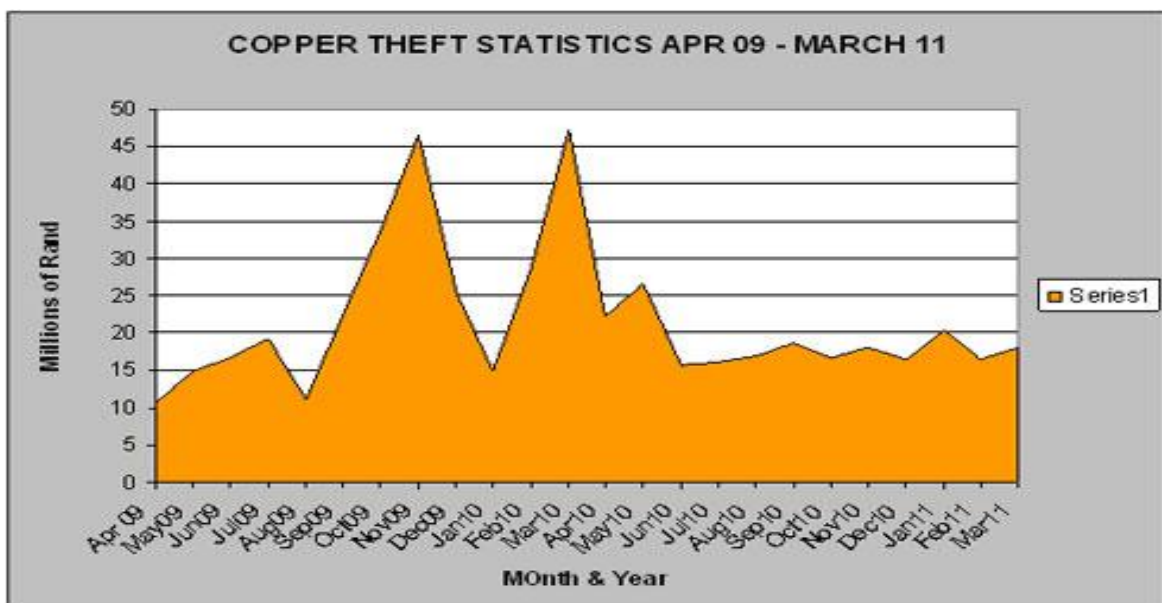
According to Phakathi (2010a:1), the DA stated that since 2010, South Africa has lost about seven billion rand per year as a result of copper cable theft. Planting (2011:1) reports that copper cable theft costs the South African economy an estimated ten billion rand per year. He emphasises the fact that with our National growth limping along at 3% and the National debt set to balloon, this problem clearly cannot remain unresolved as it can implode and destroy the fragile economy. According to allafrica.com (2012:1), Eskom and Transnet have, since 2006, collectively lost 1.2 billion rand through copper cable theft. This fact is echoed by Telkom who indicated that the entity had lost 1.9 billion rand just in repair and replacement costs, due to theft between 2006 and 2011.

This increasing concern, about the impact the cost of copper theft has on the economy, has prompted the South African Chamber of Commerce and Industry (SACCI) to develop a barometer that will measure and monitor the extent of copper cable theft in the country on a monthly basis. Their objective is to create a general awareness of the problem and to engage public participation in combating this crime (SARPA, 2011:1). However, the SACCI Barometer only addresses the estimated 'replacement' cost of copper cable stolen from the major users, such as Telkom, Eskom and Transnet (SARPA, 2011:1). Since the SACCI copper theft barometer is the only valid and reliable source publicly publishing these damages, the researcher found it a very important tool with which to show tendencies and to give possible explanations regarding the copper cable theft phenomenon (see figure 2.2).

The municipalities are possibly the worst affected entities according to Arendse (2011a:1). He agreed with the findings of the researcher who pointed out that the absence of a holistic status of copper cable theft showing a national copper cable theft barometer that incorporates the municipalities, presented a gap in understanding the copper threat fully.

The accumulative copper cable theft losses of Telkom, Eskom and Transnet, are shown in Figure.*2.2.* These statistics are for the purpose of this research but should also be utilised to grasp the patterns and tendencies of the copper cable theft phenomenon.

Figure 2.2: Accumulative Telkom, Eskom and Transnet copper **cable** theft losses between 2011/01 and 2012/08. **(Source: SACCI Media Release Wednesday 27 September 2012)**
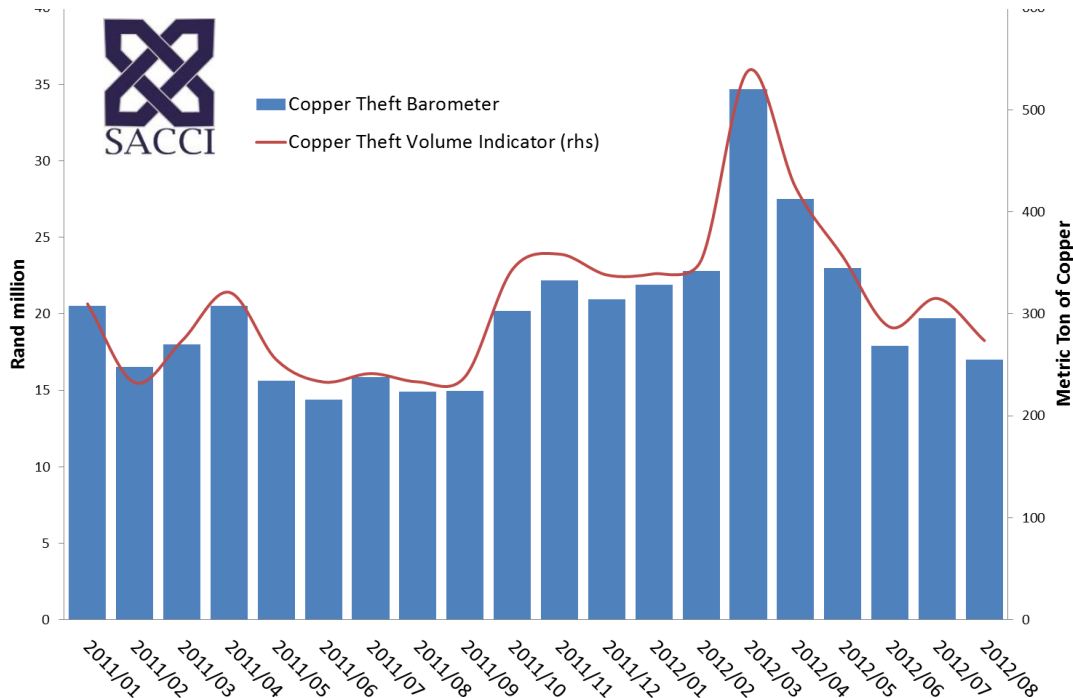
According to SACCI (2011a:1), in 2010 alone the annual cost for its members was 259 million rand. And although these levels were unsustainable they would continue to drive up the costs for consumers and business even though both were already challenged by the increasing levels of administered prices. A consistent downward trend had not yet been achieved. But the breaching of the lower bound of 16 million rand a month in May 2011 had SACCI hoping for the possibility of reaching contained levels of theft.

In August 2012 the Copper Theft Barometer (Figure 2.2) decreased from 19.7 million rand in July 2012 and 17.9 million rand in June 2012, to a level of 17 million rand. This was the lowest point the Barometer has been since September 2011 and a welcome indication of a downward trend in copper theft despite, the recent spikes in 2012; most notably the 34.7 million rand spike in March 2012. However, for the rest of 2012 the outlook for copper theft remained on a downward trend with the possibility of reaching the relative low of ten million rand per month (SACCI 2012:1). This `relative low` assumption is

a SACCI statement mainly for Telkom, Transnet and Eskom and should not be interpret as an acceptable appetite for risk in general.

2.5 RECORDED COPPER CABLE LOSSES IN GAUTENG

Eskom, Transnet and Telkom are the largest National Services infrastructures in South Africa utilizing and distributing electicity, making them the largest consumers of copper, especially in Gauteng, and, therefore, also constantly victims of copper cable theft. Their individual losses, as frequently published, illustrate the severity and the enormity of the financial impact of copper cable theft on these three essential service providers in South Africa.

2.5.1 Eskom

According to allafrica.com (2012:1), Eskom lost a total of 350.2 million rand as a result of copper related theft for the 2006/7 year, while Business Live (2011:1) reports a loss of 14.8 million rand in stolen materials, 38.7 million rand in replacement infrastructure and 18.2 million rand in security mitigation for 2008/09 (up from 10.5 million rand, 21.5 million rand, and 14.5 million rand respectively for 2007/08).

Ndlovu and Magwaza (2008:1) stated that according to Andrew Etzinger, an Eskom spokesperson in Durban, the copper cable theft was an ongoing problem for Eskom. In fact an increase had been noticed which was costing Eskom 25 million rand a year. He attributed the increase in this crime to the high price of copper and the depressed economic situation. Etzinger indicated they had seen a steady increase; from 446 incidents in 2005, 1 059 in 2007 and 1 914 in 2008 and it was going to increase. Business Hi Light (2009:1) pointed out that for the period 2008-2009, the Eskom Southern Region (EC), claimed a 15% increase in cable theft.

2.5.2 Transnet

The theft of overhead cables on railway lines has reached unprecedented levels, resulting in an average of 10 trains being cancelled per day (TFR, 2010:1). According to Morwe (TFR 2010:1), the acting CEO of Transnet (2010-

2011), cable theft remained a chronic problem, as it still contributed about 70% of the incidents of theft and vandalism across its network. It experienced a total of 1 506 incidents of theft and vandalism in 2009/10, and was consistently losing more than 20km of copper cable to criminal syndicates each month (Creamer, 2010:1). Cable theft was one of the main reasons why South Africa could not export coal to its full capacity. This has had a serious impact on South Africa's ability to be competitive in the International arena (Dlamini, 2010:1).

According to allafrica.com (2012:1), Transnet's losses namely; copper loss, replacement costs and the cost of increased security measures, incurred for 2006/7 and January 2012 amounted to 856.71 million rand. This included a sum of 80.9 million rand spent by Transnet on increased security costs in 2011/12 alone. During 2008/09 Transnet suffered losses of 12 million rand in stolen materials, 30.1 million rand in replacement infrastructure and 116 million rand for security services, up from 8.9 million rand, 22.2 million rand and 91.9 million rand for 2007/08.

Arendse (2011a:1), frequently referred to in this research, has been identified as an experienced, recognised exponent of combatting copper theft. He is also a frequent and official presenter on the copper theft topic, representing Cape Town City. He stated that Transnet lost 150 million rand in the 2007/2008 financial year. In 2010/11 Transnet Freight Rail spent 500 million rand on security - a sharp rise on the less than 250 million rand spent on security in 2004/5. In the meanwhile the number of security guards that have been employed will rise to over 3 100 from a mere 1000 five years ago. The direct cost to the company – the replacement cost for cables only, is more than 42 million rand per year and the consequential losses due to the knock-on effect, runs into many millions more. Cable theft also often leads to the destruction of Freight Rail assets such as locomotives and wagons and can cost the company millions of rand in repairs and replacement (TFR, 2010:1).

2.5.3 Telkom

Motlatsi Nzeku, Chief Operating Officer of Telkom, highlighted the fact that the increase in copper cable theft was fast creating an environment of a rapidly deteriorating service quality. It was also severely affecting the delivery of sustainable information communication technology services to customers (Le Roux, 2008:1).

Business Live (2011:1) reported Peggy Drodski of SACCI, stating that in 2007/2008 Telkom spent 141 million rand on new telecommunications infrastructure and 231 million rand on security. Its copper losses drastically increased between 2007 and 2009. The situation was as follows for 2007: 571 million rand; for 2008: 863 million rand; and for 2009: 907 million rand. Arendse (2011a:1) reiterated these Telkom findings for the same financial period, showing a similar loss, yet still a massive 856 million rand as a result of copper cable theft. Vecchiatto (2009:1), reported that Telkom had been hit the hardest of all the Parastatals, with a 2008/9 loss of 1,279 billion rand. According to Jones (2010b:1), Telkom did not even replace copper cable anymore but rather installed wireless and optic fibre connections where possible. And even then a 100 million rand worth of damage/theft was reported on the 'new' Fibre Optic infrastructure in the period 2007-2009. It is even rationalised that fibre optic can cause a much greater impact when damaged, and the same mitigation measurements as used for copper, will still have to be implemented (Jones, 2010b:1).

The Minister of Communications, Siphiwe Nyanda, stated in parliament that in the period 2007-2009 Telkom suffered almost 3 billion rand in losses because of cable theft. These losses were comprised of the value of the stolen material, the cost of security to guard against theft, and the loss of revenue as a result of the 'non-existence' of phone lines (Hamlyn, 2009:1). This report is supported by numbers released by Telkom (allafrica.com, 2012:1), which indicated that Telkom lost 1.9 billion rand in repair and replacement costs alone due to theft between 2006 and 2011, for 2010/11 alone this amount is 382.72 million rand. Telkom released the following figures regarding the annual cost of copper cable theft.:

- 2006-07: R340 million.
- 2007-08: R332 million.
- 2008-09: R422.35 million.
- 2009-10: R424.39 million.
- 2010-11: R382.72 million

The information released also shows that in the 2008/9 year alone, outbound revenue losses amounted to 906.8 million rand. (Politicsweb, 2012:1)

Communications Minister Dina Pule, stated that due to copper cable theft Telkom had lost nearly two billion rand in the four years (2007 – 2011). As an aftermath she also stated that based on the extent of the 'out of control' cable theft the losses could actually not be accurately determined (Business day 2012:1).

2.5.4 The Gautrain and City Power

It took the theft of a mere 100m of copper cable, at a substation, to put Gautrain's Pretoria line out of action, disrupting the Gautrain service between Hatfield and Centurion the 10th of Aug 2011. An emergency bus service had to be implement between Hatfield, Centurion and Pretoria (ITWEB, 2011:1)., The Gautrain spokesman Errol Braithwaite, pointed out the fact that this small amount of cable that had been stolen had massive repercussion such as; the unforeseen costs involved for the Gautrain, and also for every company which had lost production time because employees arrived late and product shipments had been delayed (Planting, 2011:1).

Even though the theft of cable is always a negative event, there is some 'good news' embedded in the Gautrain theft incident. 'The surge of attention that has been generated by the fact that the Gautrain's cables were stolen twice in two weeks is like "manna falling from heaven"' (Bindeman, 2011:4).

City Power, the Johannesburg power supplier, claims only 8% of power outages are caused by equipment failure, while 37% are caused by theft and vandalism and 14% are due to third party damage to equipment. If this aspect

is interpreted correctly, it means that copper cable theft causes eight times more power outages than general maintenance related outages (Tau, 2011:1).

2.6 PRICE OF COPPER AND ITS ROLE IN COPPER CABLE THEFT

2.6.1 Copper cable theft and copper price relationship

Peggy Drodskie, executive advisor to the South African Chamber of Commerce and Industry, indicated that there seems to be a definite link between the international price of copper and copper theft (Arendse, 2011a:1). John Cross, chairman of the Copper Producers' Association, stated; 'The consistently high price of copper makes it a valuable commodity for illicit business, and what drives the price up is massive demand from China and India, whose urbanizing economies are voracious consumers of copper' (Planting 2011:1*). According to Leedy (2011:1), South Africa had no choice but to confront the problem, a worldwide one, head on. Geldenhuys (2010:1), elaborated on this point, stating that massive increases in cable theft in the past year were mostly due to the fact that the price of copper had tripled in recent years.

It is, therefore, logic to conclude that copper theft can be attributed to the dramatic increase in the copper and aluminium prices as a result of the International growth in demand for these materials (BACSA, 2009b:6). This viewpoint is shared by SACCI who states that the variation in the International price is directly linked to the theft activity of copper (Bartlett, 2011:1). Theo Hess, Telkom's head of network field services, stated they have noticed that the number of cable theft incidents closely follows the price curve of copper on the London Metal Exchange (My Broadband, 2012b:1). Research conducted by ISS (Institute for Security Studies) confirms that until recently, the use of non-ferrous metals in exterior applications carried little threat with it, but as its value has increased, so has the rate of theft. (Hi-Tech Security Solutions, 2009:1)

In the following graph (figure 2.3), the growth in copper prices is depicted over the last 10 years.

Fig 2.3. The 10 year trend of copper prices **(Source: "iShares Copper Trust" FORM S-1/A for the period 2001 up to 2010)**

2.6.2 Future copper price predictions

Jones (2010b:1) stated that while the global recession continued the value and the shortage of copper would remain the same for the next few years. Before 2007, the copper price was reasonably low. In 2008 the price sky rocketed to $8685 per metric ton thus boosting the black market value. In 2009 the price of copper nearly doubled, thereafter the increase remained steady. Jones also indicated that global analysts predicted a shortage of copper in the immediate future, while Rio Tinto, the world's major copper producer, stated that there was little investment in opening new copper mines except the one in Mongolia, which would only be built in 2013. Arendse (2011a:1) also mentioned that up to five new cities, the size of London, would be built in China in the near future. Xstrata Copper predicted that the demand for copper would rise by 3.1% in 2012, boosted by China's continued investment in housing and infrastructure that would drive up the demand. This was regarded significant, since China's demand constituted 40% of the global demand (SAPA, 2012:1).

According to SACCI (2012:1), the international price of copper increased from the $7 509 average in August, to an estimated average of $8 076 per metric ton in September 2012. This change could be attributed to a slightly more

positive economic outlook following negotiations for financial stability in the Euro zone.

2.6.3. Future copper theft predictions based on copper prices

According to Engineering News (2012:1), because of the high uncertainty levels in the global economy, copper showed a sharp price contraction in the second half of 2011 Then from October 2011, the copper price fell on a monthly basis and only started regaining a positive monthly growth in January 2012. In general the industry body utilising copper added that a continuation of this copper price trend, coupled with the expected resurgence in global economic, could put the copper price past $9 000/t, which would have a far reaching impact on the replacement cost of stolen copper. This could hold the risk of elevating the cost levels of copper in South Africa, in general, and particularly that of copper cables (Engineering News, 2012:1).

According to Business Live (2011:1), SACCI predicted that based on the chamber's copper theft barometer, copper theft was expected to increase because, in April 2011 alone, industries had spent on average over 20 million rand replacing stolen cables. SACCI (2011c:1) also pointed out that according to recent market reports the copper price was recovering. But the magnitude and the pace of this recovery would determine higher levels of theft. SACCI reported that copper theft in 2012 was expected to rise due to the increase in International demand, which would automatically push local prices up (SAPA, 2012:1).

2.7 ANALYSIS OF COPPER THEFT V/S COPPER PRICE PATTERNS

Figure 2.4 20 Months Copper theft losses as recorded by SACCI (**Source: SACCI Media Release Wednesday 27 September 2012)**
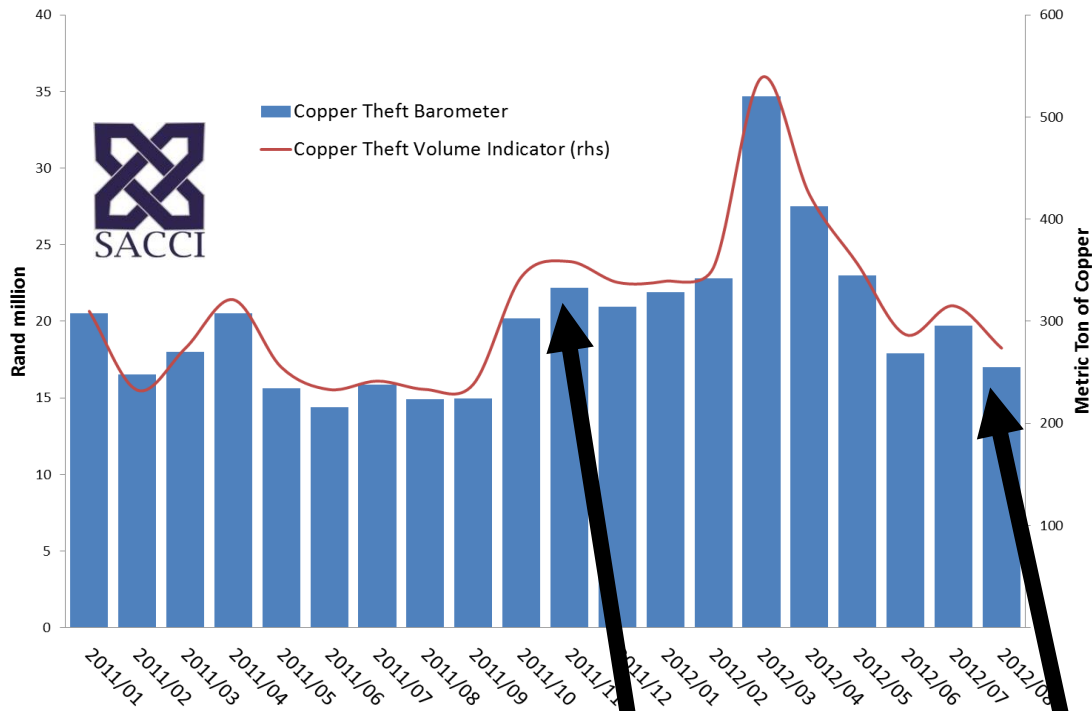
Figure 2.5 Copper prices on the London Metal Exchange.
(Source:http://www.metalprices.com /pubcharts/Public/Copper_Price_Charts.asp)

In the data analysis recorded in fig, 2.3 it is clear that copper cable theft is increasing annually. When fig. 2.4 and fig. 2.5 are compared a definite tendency is noted between copper theft and copper price fluctuations - the higher the price of copper, the more copper theft is experienced. However, according to SACCI (2012:1), in November 2011, an increase in copper theft was reported despite a 6 months slump of low prices in the international market. This observation proved that criminal activities and opportunism,

involving copper theft, did not necessarily follow the specific hikes in the price levels of copper. It should thus be noted that even though the value of specific copper losses may decrease because of a fall in the general copper price, the volume of copper theft cases may still increase, with the potential of an increase in consequential damages brought around by copper cable theft, as copper thieves try to make up the losses they may experience,.

2.8 THE INFLUENCE OF THE EXPORT MARKET ON COPPER THEFT

2.8.1 The export status

There are many opinions about the export of copper from South African shores and its influence on copper theft. Some of the questions being asked are:

a. Is copper export a major role player in creating an opportunity for copper thieves to make easy money?
b. Does the export market have a direct influence on copper stolen in South Africa and especially in Gauteng?
c. Will control of the export process have any real impact on copper theft inside the boundaries of South Africa?

According to SACCI (SAPA 2011a:1) exporting copper was not illegal, however, exporting stolen copper was. SACCI also noted that weak export control measures and the weak container inspection measures were factors that contributed to the difficulty in combating non-ferrous metal theft; a problem South Africa has in common with the US and Canada. (SAPA, 2011b:1).South Africa is not a large producer of copper, but it is a huge exporter of copper waste. It contributes 2.1% of the international market share (SACCI 2012:1).

According to Theo Hesse, Telkom's head of network field services, copper usually leaves our shores from Cape Town and Durban and goes to the East. Hundreds of tons of scrap metal, including stolen copper cables and pipes, are shipped out of Durban harbour to Eastern countries, where there is a substantial demand (My Broadband, 2012b:1). According to a Durban scrap dealer, (Singh & Omar 2011:1), he earned about R60 to R70 per kilogram of copper sold on the International market, while he paid locals R40 to R50 per a

kilogram. Some dealers exported about 15 containers per month, each weighing 25 tons. The SAPS indicated that in two separate incidents police recovered, in Isipingo, one and a half tons of stolen cable at a scrap dealer, and at the harbour in Durban they recovered two containers with cables belonging to Telkom and to Eskom that were destined for the export market.. Police are still investigating the origins of the two containers they found in Durban. (Singh & Omar 2011:1).

2.9 COMPARISON BETWEEN COPPER THEFT AND EXPORT FIGURES

Figure 2.6. SA exports of copper waste and scrap from Jan 2009 to Sept 2011. **(Source: SACCI October 2011 copper theft barometer, SA DTI Trade Statistics)**
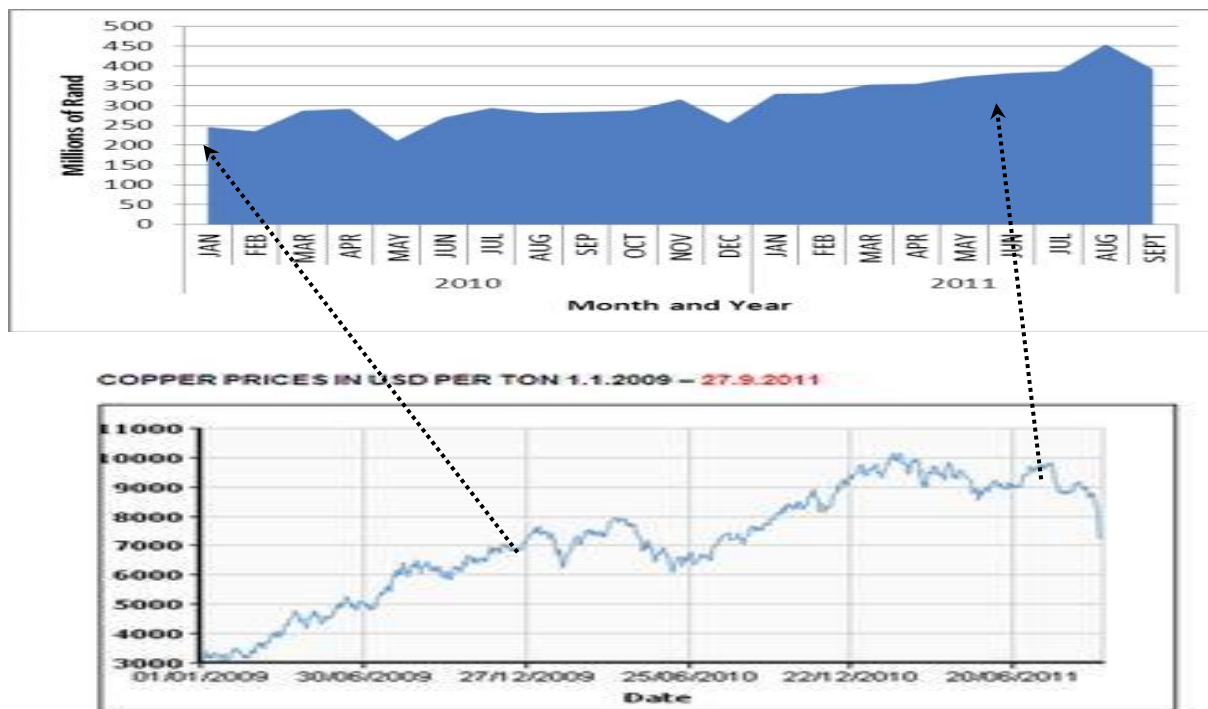
Figure 2.7. Copper Prices compared for same period as Figure 2.3. (Source: **Copper price at the London Metal Exchange).**

Figures 2.6 and 2.7 show that even though a general increase is noted in the export of copper scrap, it does not immediately follow the same sharp trends as seen in the movement of copper prices, it shows a much flatter curve with a subdued wave-like movement. What can be deducted from this pattern is that most of stolen copper is not exported, and if it is exported then it happens over a longer period of time, long after the crime had occurred. Figure 2.6 graphically illustrates the values and the volumes of copper waste and scrap

exports from South Africa. Figure 2.7 illustrates the International copper price in comparison to copper theft tendencies.

2.10 EXPORT REGULATING INITIATIVES

DA, MP, Pieter van Dalen emphasised just how critical it had become to take note of the export side of copper, especially when there was possibly far more illegal copper leaving the country than realised because there was only one operational container scanner at Durban harbour. He suggested that a possible solution would be to place a moratorium on the export of scrap copper or alternatively to propose a 40% duty on copper exports. (Leedy, 2011:1)

'Export is a key focus area,' according to advocate Simi Pillay-van Graan, BAC's Strategic Executive. She explained that the unregulated export of scrap metal was one of the biggest contributing factors to organised crime. South Africa exported about 350 000 tons of copper scrap each month and criminal activity are hidden with ease. (Leedy, 2011:1) She also mentioned the following three export strategy points that should be taken into consideration:

1. The implementation of export taxes on scrap metals across the board,
2. Amending the International Trade Administration Act to tighten up export/import controls, and
3. Criminalising the export of stolen copper.

The South Africa's International Trade and Administration Act does not allow for the policing of these processes. Thus syndicated criminal activity has an open door opportunity for stolen goods and non-ferrous metals leave the country without interference. And unfortunately, law enforcement agencies and International trade administration authorities do not have the resources to check every container that leaves South Africa (Webb, 2011:1).

Business Against Crime South Africa is the major driver attempting to control the export market. (BACSA 2009b:4-5) stated their specific goal was to improve the Criminal Justice System (2009b:1-m) and not to only act as a deterrent to crime but also to close down the market for non-ferrous metal

theft. They have proposed two objectives, which in a way have become the backbone of the formal sectors' approach to copper theft:

1. The first is to design a strategy to effectively deal, not only with subsistence thieves, but also to detect and to prevent organised crime, both locally and across South African borders.
2. The second strategy is to seek and to address the market for stolen ferrous metal through the export market and the associated export control processes.

Van Dalen (2009:1), also personally involved in physical activities in combating copper cable theft, suggested that to mitigate the exportation of stolen copper the following counter actions should be implemented:

1. The institution of an export duty on non-ferrous metals. The funds generated from this export duty could be channelled into a fund from which businesses could claim against for the losses incurred as a result of non-ferrous metal theft. For example, if a business suffered a loss of 1 million rand during the course of one financial year, it should be able to submit a claim to the export duty fund to recover either the full amount or a portion thereof.
2. Greater export controls for non-ferrous metals. Currently, customs inspection for non-ferrous metals was outsourced to private businesses, which were not required, in terms of their contracts, to inspect each and every container containing non-ferrous metals. As a result it could be expected that stolen non-ferrous metals were leaving ZA ports bypassing the required checks.
3. All contracts for private businesses performing customs duties must include the obligation for each and every container to be thoroughly inspected. Failure to inspect every container must carry some form of sanction, either in terms of the dereliction of duty or the failure to comply with legislation.

SARS, DTI, Customs and Excise all have pertinent roles to play in regulating this export supply chain.

2.11 THE INFLUENCE OF THE EXPORT MARKET ON COPPER THEFT

Pillay-van Graan (in Webb, 2011:1) was positive about the planned export and import processes and believed these would probably have the highest impact on curbing non-ferrous theft. She reiterated that the International demand for copper, particularly from developing economies like India and China, as well as Saudi Arabia, were driving organised syndicated crime in South Africa and increasing the level of incidents of theft.

The involvement of organised groups and syndicates as well as the absence of appropriate regulations that controlled the processing, sale, import and export of non-ferrous metals, were important issues to be looked at. However, SACCI (2011b:1) followed up this concern by stating that the local recycling industry primarily remained the market for stolen non-ferrous metals. Approximately 75% of all scrap metal generated in South Africa was handled by the formal sector and the remainder by a large number of informal businesses. The estimated turnover of the recycling industry was currently estimated to be in excess of 15 billion rand per annum. SACCI hoped that the new Second-Hand Goods Act (no 6 of 2009) would plug the gaps used by the recycling industry as the export market was a major creator for copper cable theft opportunities.

Advocate Pillay-van Graan from BACSA stated that in order to control the export market: 'The copper export market deserves much more attention should the NFTCC wish to combat nonferrous-metal theft more effectively. The export market and the associated processes have not been a focus of the NFTCC, resulting in an attempt to treat the symptoms of the crime, and a failure to address the core of the problem. This is clear in the escalating numbers of incidents in recent years. If the number of thefts is to be reduced, the market into which the stolen cable is disposed must be addressed, and more effective response mechanisms from both government and business need to be put in place' (Venter, 2008:1).

2.12 PROMINENT ROLE PLAYERS IN THE FIGHT AGAINST COPPER THEFT

After achieving qualified success in combating copper theft Neil Arendse (2011a:1), for many years the Head of Cape Town's Metal Thefts Unit, , mentioned that the following role players needed to form a collaborative front because even though they were all actively involved in combating copper theft crimes, they still worked in uncoordinated silos;

1. NFMCCC/NFTCC: With the increase in Public/Private partnerships this sector benefited through the establishment of the Non-Ferrous Theft Combating Committee (NFTCC), today it is known as the Non-Ferrous Metals Crime Combating Committee (NFMCCC). This committee involves all relevant stakeholders. Although previously chaired by the private sector, in 2008, the then deputy minister for Safety and Security decided that the SAPS should take over the chairmanship of the NFTCC. The SAPS or Government representative; a high ranking (brigadier or higher) police official now had to chair the NFMCCC. The idea behind the NFMCCC is to involve all stakeholders in a concerted effort to stamp out metal theft (specifically copper and aluminium) by focusing on the markets both internally and externally. Although this could/should be a vital strategy in the fight against copper theft, it is according to Arendse (2011b:1) 'disheartening that the SAPS only recently, after many years, issued a national directive on the structure of the NFMCCC.' The SAPS directive (See Annexure D) seeks to explain the structure and mandate of the Non-Ferrous Metals Crime Combating Committee. It is also against this backdrop that this research will seek to understand the level of collaboration amongst agencies fighting copper theft. According to Arendse (2011a:1), 'the success of the NFMCCC is thus still undecided'.

2. South African Police Service (SAPS): It is the mandated responsibility of the SAPS to lead the fight against copper theft and thus they also preside over the NFMCCC. (See Annexure D for the

formal directive explaining the SAPS role and structure to combat copper theft).

3. Parastatals: They are those most severely affected by copper cable theft in their electrical, telecommunication and electrified rail track infrastructure. Parastatals referred to in this research are Telkom, Transnet, PRASA and Eskom and they are better known as the 'stakeholders' in this research.

4. National Prosecuting Authority (NPA): The role/purpose of the NPA in this industry is to ensure successful prosecution of cases involving the theft of copper. In this capacity they would also have an advisory role and thus ensure that combating copper theft should be partly a prosecution-led approach.

5. South African Revenue Service (SARS): SARS has the mandate to conduct life style audits, since it is clear that syndicates are involved in this type of crime. Together with asset forfeiture, this is a crucial part of investigating this industry.

6. Municipalities (service providers): As a Service Provider, municipalities are facing crippling onslaughts on electrical infrastructure and have a clear vested interest in the fight against copper theft.

7. Business: Currently Business Against Crime (BAC) and the Chambers of Commerce, provide avenues for discussion and co-ordination. Their roles are crucial in creating momentum where needed. They should be the forums, under which industries and service providers should mobilise; alternatively the businesses affected could create their own platform.

8. The Second Hand Goods Industry: whether knowingly or unknowingly, they create the market for stolen goods to be filtered through..

9. Research Institutions: Since copper theft is a global phenomenon, it stands to reason that the global industry is coming up with better practices and new benchmarks on a daily basis. These should be researched and incorporated to create a knowledge base for all role players.

10. Asset Forfeiture Unit (AFU): In conjunction with the NPA, SAPS and SARS the AFU could initiate the forfeiting of the assets of culprits involved in this illegal trade. It stands to reason that the more criminal 'high flyers' start forfeiting their assets, the clearer the message will be sent out that criminal activity will cost perpetrators dearly.

11. SARPA (South African Revenue Protection Association): SARPA is a late participant in this research, which was discovered at a copper workshop where the researcher and SARPA jointly were requested to moderate a National copper theft workshop. The reasons for SARPA being an unknown and late entrant, is also indicative of how isolated Gauteng copper theft victims have become. SARPA is primarily focused on supporting ailing municipalities through a revenue recovery strategy, of which copper theft related losses form an integrative part. SARPA has focused on training the personnel in the Criminal Justice system and especially police officers within the copper theft environment. SARPA claims to have been instrumental in many successes in combating copper theft in the other provinces, especially in the Western and the Eastern Cape.

2.13 AN INTERNATIONAL PERSPECTIVE ON COPPER THEFT

It is important to compare the South African copper theft occurrences with international occurrences just to place the South African losses in perspective. Maj-Gen Shadrack Sibiya, the South African Police Service Deputy Provincial Commissioner in Gauteng, reported that in 2011 there were 72 533 reported incidents of copper cable theft, but only 10 736 arrests were made (Phakathi, 2012:1). If the abovementioned South African figures are to be compared with the copper theft incidents in the USA, the largest economy in world, it does not make for good reading from a South African perspective. The state of Ohio was declared by the 'National Insurance Crime Bureau' as the number one in the USA for copper theft. During the period 2009 to 2011 there were 2 398 reports of metal theft in Ohio, Texas came in second with 2 023 thefts, followed by Georgia with 1481 (NBC4, 2012:1).

These statistics highlight the seriousness of the South African copper theft situation when you realise that over a period of three years only 2 398 incidents, involving all types of copper theft, were reported in the worst affected state of the United States of America, while in Gauteng 72 533 cases of copper cable theft were reported during the year 2011 - a period of one year.

2.14 MODUS OPERANDI OF COPPER THIEVES

2.14.1 Types of thieves

According Natasha Michael, DA Public Enterprises spokesman, copper theft continued to be a highly co-ordinated professional crime against which our public enterprises were failing to mount an effective defense (allafrica.com, 2012:1).

Torkelson (2010:1), a researcher of the Institute for Security Studies (ISS) Organized Crime and Money-laundering Programme, who produced the only specific copper theft related publication this research found and frequently referred to in this section, stated that petty crime criminals comprised the first group benefiting from copper cable theft. She further stated that petty crime criminals were often already involved in collecting scrap metal for subsistence purposes. Geldenhuys (2010:1) confirmed that copper thieves' fell into two groups: organised crime syndicates, who tended to export their loot; and subsistence thieves who stole a couple of metres of cable at a time.

This second group, as mentioned by Torkelson (2010:1) and Geldenhuys (2010:1), were the scrap metal dealers. Not all scrap metal dealers were involved in crime. Their work was deemed necessary and it was legal. However, the illegal trade was far more lucrative than the legal trade and consequently the opportunities were for most too attractive to say no. According to Torkelson (2010:1), scrap collectors were often tempted to supplement their earnings by stealing a few meters of copper cable from sources close to home. Therefore, scrap metal merchants were more often than not, the central figures connecting and/or servicing petty and organised thieves alike, as they sold most of their copper to their local scrap dealers who

had connections with foreign export agents, primarily of Chinese and Pakistani origin. These tough, certified, scrap dealers were not meant to buy copper from such questionable sources, but for many the financial incentive was high enough to look the other way.

Fortunately, after analysts had called for better regulation of the second hand goods industry, a new law was passed to address these issues. However, disreputable scrap dealers always found innovative ways of dodging legislation. Some of these innovative ways were; sponsoring 'mobile scrap yards; buying illicit copper from traveling vehicles; establishing smelters at peri-urban farms; changing the appearance of illicit copper, and opening unregulated bucket shops to 'clean' the copper before supplying licensed agents (Torkelson, 2010:1)

A third group was also identified. This group consisted of organised crime networks. These syndicate type of criminal groupings were implicated in the theft of kilometers of cable from peri-urban or rural areas in Gauteng, the North West and KwaZulu-Natal. In this group foreign or International organised crime elements such as; the Chinese Triads and other Asian groups, were mentioned. These foreign groups were so arrogant that they bypassed local scrap agents altogether in response to the increased scrutiny. One Pakistani syndicate, with an address in Hillbrow, was using shipping containers in deserted areas as drop-off points for stolen copper. These containers were then driven to Durban and shipped abroad with falsified customs paperwork (Torkelson, 2010:1).

A fourth group, possibly also benefitting from copper cable theft was the private security industry. This was by implication and mostly in an indirect way. They were reluctant to help combat copper theft for reasons of job security. And even though some had been awarded large contracts to help combat this crime and to protect state assets there was very little evidence of this attempt having been successful. (Torkelson, 2010:1).

In supporting the Torkelson research, Peggy Drodskie (Business Live, 2011:1) Executive Advisor to the South African Chamber of Commerce and Industry,

states; 'Copper theft seems to be driven by syndicates'. Arendse (2011b:1) supported her viewpoint by using the example mentioned by the City Power CEO; that most of the entities stealing from City Power, had to be linked in some way or another to several syndicates in the Gauteng area.

Bindeman (2011:2) mentioned that syndicates could consist of any amount of members (mostly around 20 and more members). It also had to be remembered that one could never say a syndicate had been caught and then expect the crime to stop: 'First of all, in at least 90% of the cases we will only catch the runners, cutters or transporters. In the few cases where we do manage to catch the big fish, they would either force one of the minor members to take all the blame on themselves, or with their lawyers' help, be back on the street the following day and operate again the very next night'. He used as an example the Langa syndicate who were still very active even though they had been harassed by Western Cape investigators for 11 years. Some of them had received up to 3 years imprisonment, but were back on the streets all too soon again after having being released for good behaviour.

According to Le Roux (2007:1), Telkom spokesman 'Mvelase' said that based on Telkom's experience most of the repeat offenders were illegal immigrants who, when caught, were deported to their countries of origin, only to return (almost immediately) to South Africa to commit the same crime again. These illegal immigrants mostly fell in the subsistence group, but some of them were military personnel using their special traits.

2.14.2 Natural opportunities utilised by copper thieves.

According to Yorke-Smith (2010:1), 'natural' opportunities were created mostly by the remoteness of the targets where repair-work was in progress and the technicians and workers were unprotected. Many remote sites were also difficult to secure as they comprised of areas that were often without power or communication lines. These areas were ideal targets for stealing copper items found in the plumbing, wiring, generators, materials, air conditioners, cables, copper grounding bars, sprinkler systems and cooling systems. In fact for the resourceful copper theft criminal the opportunities were never ending.

These 'remote' sites included, for example; construction sites, vacant buildings, communications towers, electrical sub-stations and foreclosed properties (Yorke-Smith, 2010:1). Hi-Tech-Solutions (2009:1) supported the remoteness factor which thieves took full advantage of. Isolated sites were even more vulnerable when these did not have access to electricity or a means of communication, such as; a fixed line or a radio transmitter to transmit alarm signals. The uncertainty of the country's power supply exacerbated the problem by often rendering CCTV (closed circuit television) systems inoperable.

2.14.3 Modus operandi of copper cable thieves.

Venter (2008:1), one of the most regular reporters on the copper theft phenomenon, reported that the typical small-time copper thief was a subsistence criminal who was financially underprivileged. The despondent disposition of these subsistence entities were capitalised on by the organised crime elements that employed them to steal. They were, however, in the minority as gangs were responsible for most of the copper cable theft while in the scrap trade large cartels were at work. Copper was the metal of choice among metal thieves, followed by steel, brass water meters as well as palisade fencing.

In many high-theft or hotspot areas, the same copper cables were repeatedly stolen, sometimes within days of having been replaced or repaired. This implied that local repeat offenders were involved. They knew precisely what the weaknesses and the strengths of security were, and what their calculated chances were of being caught (Le Roux, 2008:1).

Copper thieves generally worked at night. Organised criminals were armed with trucks, pulleys, industrial cutting tools and tractors, to flatten the pylons and poles to get hold of the metal. These syndicates were highly sophisticated. They used state of the art equipment and also 'employed' both internal and external specialists for their own safety and security. They stole and sold in bulk. The personal risks for inexperienced thieves were very high. Thus it was under great stress that they stripped and sold the cables. Whereas subsistence

thieves were the small and on foot criminals who claimed they stole for survival and their tools of trade were rudimentary at best (Geldenhuys, 2008:1).

In the Western Cape it was found that perpetrators, who had been arrested, were in 75% of the incidents, under the influence of drugs when committing cable theft. Many of the thieves, who were indeed substance dependents, had been hired by the syndicates to steal copper cables. They stole from 'fix to fix'. During a research conducted to determine why these criminals were so effective in what they did, it was found that their strong points were; their great teamwork and their information-sharing network. Every day the thieves became more brazen and the safety of the communities was more at risk. Many people were killed because of the unsafe conditions created by people who did not care about their fellow human beings. Law enforcement officers had to risk their lives on a daily basis trying to prevent these dangerous situations and bring the criminals to book (Van Dalen 2009:1).

The South African Actuality Television Programme, Carte Blanch (2005) reported that cable thieves gathered information and determined hotspots. They usually focussed on specific cables in specific areas derived from the experience they had gained over years. Every scenario was different, but the way in which the thieves cut the cables stayed the same. Their tools were quite rudimentary, but incredibly effective. For overhead cables they used a hacksaw or bolt cutter attached to a specific length of pole with rubber tubing, and then with a rope and tube rubber they controlled the leverage.

In a transcribed investigative programme presented by Carte Blanche (2005) as part of a sting; they spoke to captured thieves who revealed interesting information about their Modes Operandi. They operated mostly at night, and therefore night-sight was important. Infra red was used, but thermal imaging was being utilised more and more by law enforcement. Cable thieves preferred remote areas as they knew here cable alarms might not have been attached; they worked with military style precision. There was always a night watch positioned to sound the alarm in case of a possible ambush or patrols. Thieves even regarded the theft of copper as their job. A single team member earned, if lucky, only about R500 for a good night's 'work'. They usually did not 'work'

when it rained as there was always the risk of being captured and/or electrocuted.

The stolen material was sold to scrap dealers, from there it was recycled back into the industry, and it landed back in the manufacturing industry at the end of the day. Scrap dealers were prepared to turn a blind eye, because cable thieves changed the configuration of the stolen copper so that it was not easily identifiable, yet it could still be transformed into marketable scrap (Carte Blanch, 2005). The easiest and most used manner was stripping and/or burning the cables in a furnace. The new Second-Hands Goods Act no 6 of 2009, however, prohibited trading in burnt copper.

Venter (2008:1) stated that it was quite possible to replace the stolen cable the one day, only for it to be stolen the next day. So instead of doing the much needed maintenance the personnel were running around replacing cables, while large parts of a city were without power until such cables had been replaced. Van Dalen (2009:1), a city councillor, spoke of many of the strange incidents he had come across during the first year the 'Copper Heads' (The Cape Town specialist Non-ferrous Metal Theft Unit) were operational. One was the arrest of a contractor, also a well-known pastor, for the alleged theft of copper cable. Another involved a persistent 16-year old, who the 'Copper Heads' had arrested three times. The first time he was nabbed he had been tracked down in intensive care where he spent two months after being shocked while trying to steal copper cables. Since then he had received so many shocks that his hands were completely disfigured (Van Dalen, 2009:1).

Venter (2008:1), reported that stolen copper could sell on the street or at a scrap dealer for between R40 and R60 per kilogram, depending on the copper price. It was quick and easy cash.

The copper cables targeted the most were those used for street lighting. Thieves came at the night and at first dug a pilot hole to determine the depth of the cable and the direction in which it ran. The next night they would return to dig up the cable. This proved that cable thieves did not only do reconnaissance they even did dry runs before the actual action. The stolen cable was typically

dragged into the bushes, where it was stripped for the copper inside (Venter 2008:1).

In their report on non-ferrous metal theft Ndlovu and Magwaza (2008:1), stated that thieves even removed mounting bolts on an electricity pylon, plunging businesses and thousands of homes into darkness. According to them the eThekwini Electricity Head, Sandile Maphumulo, said the copper cable theft hot spots were no longer confined to certain areas as theft occurred where ever the opportunity presented itself.

Vecchiatto (2009:1) found that the use of fibre optic cable in Communication, seemed to have a positive effect in that the thieves dug it up and then left it behind. However, it was stated that damage to the fibre optic cable could have much greater implications as it carried much more 'signal' capacity than copper. The rumour persisted that the Kevlar housing of Fibre Optics was taken by thieves for its body armour potential. Where copper cable mitigation had been successful, it also had a direct positive impact on fibre optic cables.

Jones (2010a:1) stated that copper thieves were blatantly processing copper cables in plain sight. Thieves would strip the copper of its insulation and roll it up, despite patrols in the near area.

Phakathi (2010b:1) stated that the Mpumalanga Department of Health saw two of their paramedics hide stolen copper cables to the value of R57 000, in their ambulance. They met the cable thieves near a mine and loaded the copper, after transporting it under siren. A tip-off had the police pull them over. This was indicative of all the different avenues copper thieves utilised. He also mentioned that in Mpumalanga, two Mozambican men had been confronted by members of a local village when carrying bags with copper cable. The villagers severely assaulted them until the police intervened.

2.14.4 Modus operandi and role of the scrap metal vendors.

A Member of Parliament, Mr Pieter van Dalen, the DA Shadow Minister of Public Enterprises, stated that in the Western Cape alone, there were 3500

'bucket shops' (informal subsistence scrap metal dealers, and nomadic pavement dealers), where people literally slept on the copper. From these bucket shops or the scrap dealers, the copper – by this time untraceable – went to one of the big five scrap dealers, from where it was exported to the East. Ironically he mentioned that even though there was not a single copper mine in the Cape, Cape Town had exported copper waste to the value of R77 million rand in 2007 and; 'You don't have to be a genius to figure out where this comes from' (Venter 2008:1).

Richardson (2011:1) suggested that even though copper did not fetch the same prices as gold it was still considered a valuable metal and therefore its sale and resale should be regulated. He explained that if scrap dealers were forced to register as legal dealers, opportunists would not find cable theft so lucrative and they would less likely be role players in the disruption of major services. It was evident that copper theft remained one of the most serious challenges facing economic growth and development in South Africa. And yet in most instances it was still regarded, even wrongly so, as a crime of petty theft. He firmly believed there was a definite need for the implementation of a control paradigm for scrap metal vendors and markets.

The South African actuality television programme Carte Blanche recorded an incident in which police had arrested a major scrap merchant as well as a number of municipal employees, in connection with stealing several thousand rand worth of council cables and drain covers. The irony was that this specific scrap merchant had attended the summit where Mayor Helen Zille was appealing to the industry to get rid of dealers trading in stolen metals.

Van Dalen (2009:1) stated that after thieves had removed all identifying marks on copper, the copper was sold to a scrap dealer, or a so-called bucket shop; an unregistered scrap dealer specialising in stolen metal creating a criminal economy for perpetrators, usually operating within a residential area. It was clear that the key to any non-ferrous metal theft solution would be to incorporate the entire scrap metal industry; from the registered scrap metal vendors down to the small bucket shops as, they all bought the metal and kept the thieves in business (Witbooi, 2007:1).

2.14.5 Modus operandi of the copper syndicates/organised Crime.

Drodskie of SACCI stated; 'Scrap metal dealers actively participate in syndicates that steal copper' (Business Live, 2011:1)

According to Pillay van Graan (Venter, 2008:1), before any renewed effort to combat non-ferrous metal theft was attempted, it was essential to understand that copper theft had also become a favourite among crime syndicates and that it had to be treated as a planned, well executed and organised crime.

Drodskie from SACCI stated that Telkom, Eskom and Transnet were the targets of an organised network of copper thieves who stole around 16 million rand worth of copper a month with dire consequences to the larger economy (Business Live, 2011:1).

Arendse (2011b:1) said that within organised crime in South Africa, copper had been earmarked as a commodity, which even served as a money laundering product. The legitimisation of stolen copper began with the mixing of stolen and 'honest' scrap, which was then smelted, liquefied and out of this process copper cathode was produced; the commodity that was traded on the London Metals Exchange.

Crime syndicates were embedded in industry and these provide copper thieves with an organised capacity exploiting the same sources of information that security personnel would use to apprehend criminals. Criminal undercover operatives were thus able to infiltrate both the security divisions and the general work force, even targeting management positions, to acquire information about the security measurements that were used and the weak points in the security procedures (Coetzee & Horn 2006:1). Syndicates then tested a potential victim's security measures until ways were found around them. The information was passed on to the syndicate management where it was used to make informed decisions regarding the product theft.

Copper theft syndicates were highly organised business units that would use all the resources at their disposal to infiltrate where the rewards were high

enough. The recruitment of employees would take the form of willing participation (for many reasons like reward or grudge), unwitting participation or coercion. Syndicates even used fronts like local shebeens, (unregulated areas for social eating and drinking, mostly unlicensed and illegal) for information gathering. Passive sources of information like building plans, aerial photo's etc., were also valuable in the hands of criminals. Security-related personnel therefore always had to take into consideration the possibility that their security might have been compromised (Coetzee & Horn 2006:1).

Syndicates were bona fide employers, they hired people to steal copper (Witbooi, 2007:1). According to News 24 (2007:1), in an interview with Likhethe, the Transnet Spokesman, it was reported that Transnet loses millions of rand each year to syndicate type operations that were run like a business.

According to Security Info Watch (2008:1) syndicates were highly sophisticated. Not only did they have state-of-the-art equipment, such as; trucks with pulleys, they were also experts at cutting off the electricity, thus they were able to steal the cable without being electrocuted. But being greedy they also made use of inexperienced individuals to steal copper cables and pipes at great personal risk. These individuals were not only desperate for an income they were desperate enough to take the risk of being electrocuted..

In most instances the modus operandi was; a reconnaissance team would scout the area during the day. The team did its `duty` during the night and before sunrise the loot was removed from the scene. The cables were then stripped and sold as scrap metal to the dealers. Given that in some rural areas as much as eight kilometres of cable was stolen in one go, it was clear that trucks were used to remove the cable from the scene. The cable was either taken to a second hand goods dealer, or to a scrap yard dealer, where it was either sold it to national or international tenders or melted it down for other uses (Security Info Watch, 2008:1).

2.15 MEASURES TO COMBAT COPPER THEFT

A previous Non-Ferrous Theft Combating Committee Chairperson, van den Berg maintained that South Africa was, at the time of his chairmanship under facilitation of BACSA, a world leader in mitigating non-ferrous theft (Fin24.com, 2007:1). Van den Berg (2004:1) suggested the following measures to combat non-ferrous metal theft in South Africa:

1. To be able to police the scrap metal market, companies had to negotiate a national scrap metal contract with one contractor who would purchase all legally generated copper and aluminium scrap.
2. This should be followed up by communication actions aimed at the metal scrap industry. Posters with illustrations and specifications of the most commonly used material in the different companies had to be handed to every known scrap metal merchant in South Africa. The receivers of the posters had to sign on receipt, an undertaking to inform the SAPS if material with the described specifications was offered to them.
3. The material of most of the companies should be marked and had to be identified as property of any of the said organisations.
4. Most networks should be fitted with specially developed alarms.
5. Regular pro-active operations, supported by members of the Non-Ferrous Theft Combating Committee, should be carried out on specific identified scrap metal merchants by the SAPS.
6. Several awareness campaigns should be launched to create awareness, and to obtain the assistance of the general public in addressing the theft problem.
7. Rewards could be offered for positive information.
8. Prominence had to be given to the problem during several SABC TV and radio programs.

The effectiveness of current options, such as the physical guarding of assets or the presentation of awareness programmes, was not enough to effectively negate copper cable theft successfully. The four main categories identified

during this literature research were; guarding; awareness; technology and crime Intelligence driven operations**.**

2.15.1 Guarding

According to U-dingane Senamela, Transnet's freight and rail senior security manager during 2007-2009, Transnet suffered huge losses. He stated that the copper theft syndicates were often more capable than the ordinary guard. Senamela implied that guarding was a static exercise and copper criminals continuously changed their tactics. He compared the current security measures as: 'fighting a war with kids gloves' (Magome, 2008:1).

The limitations and the frustrations regarding guarding are discussed in detail in chapter four.

2.15.2 Awareness

If communities were aware of copper crime thefts occurring, and if they could assist the law enforcement, then the crime of copper cable theft could perhaps be controlled. According to Le Roux (2008:1), Mvelase of Telkom, called for an intensified national campaign, including greater legislative powers, to clamp down on cable thieves. Coetzee (2008b:1) supported Mvelase, stating that a good effort in packaging a solution for non-ferrous metal theft, at that point, was to raise public awareness. The public had to be continuously informed of the imminent threat and the consequences of copper cable theft.

The SAPS joined this drive enticing the public not to hesitate in reporting copper cable theft as this type of crime was having a devastating impact on the economy of the country (SAPS Journal, 2007:1).

Telkom spent more than 100 million rand per year on security awareness measures, and running a series of TV inserts about copper cable theft (Geldenhuys 2008). These inserts re-enacted how the cables were stolen, the most common method used was cutting the cable at two manholes and then pulling it out with a truck. In 2007 the South African Rail Commuter Corporation (SARCC) spent almost five million rand on road shows, safety workshops and

media campaigns to educate the public and to initiate dialogue (Geldenhuys, 2008:1).

Van Dalen, Cape Town councillor and DA MP, mentioned that it was important to work with the media, highlighting successes, which provided positive feedback and won the support of the community. Media campaigns were an ideal way of getting messages across to the communities and to business partners. In the City of Cape Town they embarked on such a campaign to counter non-ferrous thefts and the results were outstanding. They had nearly 4, 8 million rand worth of exposure in the media for 12 months during 2008. This powerful awareness tool did up to 50% of their work for them, as the major scrap yard dealers were contacting the City of Cape Town, without spending time and money to find out what they had do, to sensitise such scrap metal dealers (Venter, 2008:1).

2.15.3 Technology

The Technology that was being used did not introduce anything substantial enough to make an impact on the threat of copper cable theft. In Gauteng a major victim of copper cable theft was the municipal power suppliers. The Technologies that had been investigated and applied were successfully demonstrated by the CEO of City Power, Silas Zimu (Zimu, 2010:1). This research found Zimu to be the only excecutive who has publicly made knowledgable contributions to the debate on copper cable theft and he is referred to in depth in this section. He gave the following pro active measurements that were being utilised by City Power:

a. Monitoring of power installations.
b. A pylon protection programme.
c. Cable Safe using old car wheels to embed rubber covering around the cable - it took the offenders too long to remove the rubber covering.
d. A commercial product which prevented cables from being dragged out of trenches.

e. Power monitors were being installed to indicate an act of theft on mini-subs, these also monitored a variety of parameters, such as the voltage drop on cables.

f. Sensors and seismic transducers were being fitted to pylons to detect any unusual activity which could be related to theft.

g. Sensors were placed on manholes to detect movement.

h. Seismic sensors above cables.

i. Monitors on public lighting.

j. Physically guarding and patrols.

k. A successful project was; the marking of cables with dyes that respond to UV light – making it possible to identify stolen cables that had been recovered by police.

Zimu (2010:1,) argued that the community took theft seriously and suspected thieves had on occasions been attacked by community members. It was thus an important factor to get the end users - the community involved.

He also recognised the importance of joint operations to combat cable theft. Close collaboration had been undertaken with the National Planning Commission (NPC) to this effect. City power encountered numerous cases where heavily armed thieves threatened staff. In this instance City Power formed partnerships with security companies in an effort to combat theft as they had a presence in most areas and could easily report any suspicious activities.

Zimu noted: 'that to combat criminals you need to think like criminals, even in the boardroom'. Crime intelligence was very important to City Power. Many suspects were arrested as a result of information derived from crime intelligence operations. Experience showed that one person caught, led to the names of ten others. Investigations showed that copper theft in general and copper cable theft in particular, was the work of syndicates – well organised gangs that planned the theft and the disposal of the stolen cables. A number of these syndicates had been identified by the police, and a number of their members were arrested as a result of the work done by City Power. (Zimu 2010:1).

2.15.4 Crime intelligence driven operations

According to Transnet Freight Rail (TFR, 2010:1) between May and August 2010 they implemented crime intelligence operations and reduced the length of cable stolen from its rail network by 77%. The company also decreased its monthly average of stolen cable by 52%, compared to the monthly averages in 2009. In May 2010, the company recorded 47 kilometers of stolen cable, which had since steadily declined to 11 kilometers in August 2010. All of these successes and improvements had been accredited because of the concept of crime intelligence operations (Crime-IDO) implemented by the company.

2.16 CONCLUSION

It was evident that copper theft was a very serious threat to the critical infrastructures which provided essential services to the country. If this was continuously overlooked and allowed to continue, the quality of life off all citizens would be influenced. What was disturbing was the alleged ignorance of this crime within the law enforcement environment and its policy makers. It seemed as if there was very little or no SAPS involvement. It was as if the SAPS were leaving this problem to the industries and to the security industry to resolve.

The strategic infrastructure role players/stakeholders; Eskom, Transnet and Telkom were clearly the major 'victims' in the copper theft onslaught. However, the municipalities and other smaller stakeholders were just as severely affected and the unreported municipal losses were of great concern. But they seemed to be depending on the government to take up the fight.

It was also clear that this crime of copper cable theft was a very broad subject matter. Thieves ranged from the subsistence criminals -the poorest of the poor, to drug addicts, and to the very advanced syndicate driven operators. The range of thieves included illegal immigrants, internal personnel and contractors. The market demand ranged from 'bucket-shops' on the street corners, to big business scrap-metal merchants syndicates. The target area from which thieves selected the copper ranged from the highly populated city

areas to the remote and uninhabited vastness of the urban areas. Damages could involve a small area that was vandalised for a few meters of copper cable, up to whole infrastructures that were decimated. The modus operandi was to work mostly at night utilising quick hit-and-run operations.

A very sophisticated, yet integrated approach was necessary to mitigate a multi-facetted crime threat within a wide range that mostly had high impact consequences when targeted. What appeared to be very frustrating, to all the victim parties/stakeholders, was that they knew precisely how they were being plundered, but they appeared to be unable to counter the threat within their current security configurations and resources. They also did not seem to have the capacity to pro-actively mitigate the threat and to identify the criminals.

According to Dianne Kohler Barnard, MP (Safety and Security) and Adv. Hendrick Schmidt, MP (Minerals & Energy), unless decisive action was taken, it was likely that copper metal theft would place even further strain on the economy. They strongly believed that from both a formal and an informal sector viewpoint there was a great deal that could be done to deal with this scourge (DA Discussion Document, 2008).

Currently a great deal was being said and done to mitigate the copper theft phenomenon, but the problem still remained and it was clearly continuously escalating.

In the next chapter the data derived from the interviews with the respondents will be interpreted and discussed. The scheduled interview probes were designed to encapsulate the experiences of the respondents based on the questions encountered during the literature review.

CHAPTER 3

ANALYSIS OF DATA

3.1 INTRODUCTION

In chapter one, the methodological principles, used in this research, were discussed in detail. In Chapter three the implementation of the chosen phenomenology method, graphically shown in Figure 3.1, is demonstrated.

Figure 3.1

The Methodological execution steps

Empirical phenomenological 5 Step data analysis method

Empirical phenomenological 5 Step data analysis method	The Methodological execution steps
Reduced Transcriptions.	Formulation of Interview schedule, central phenomenon
Summarising all main essential point subjects.	Interview process.
Illustrated condensation of all subjects.	Transcription of interviews.
Psychological structure of all subjects.	General Theme and clarification process, divide data.
Essential psychological structure	Central Theme and sub themes identified via open coding.
	Themes explained. 5 Step Empirical Phenomenological
	Best interviews flagged and data maximised.
	Academic writing commences utilising abbreviated version.

In the empirical phenomenological methodology implemented in this chapter, as shown in Fig 3.1, the following core guideline is given by Van Vuuren and Ladikos (1985:1), stating;

> 'Research within the human-sciences implies mainly the functioning and quantifying of the research topic in the search for order and laws as it is revealed, by the amount or grade a single factor changes, when other interacting factors are altered'..

This implies that mathematical preciseness is not focussed on. The focus is a more comprehensive grasp of the non- experimental, non-measurable world of human experience. Interviews, as a tool for this research, formed the basis of the methodology where the respondents shared, with the researcher, their life experiences regarding copper cable theft. According to Sephton (in Van Vuuren & Ladikos 1985:1), it was not about tabulating and classification, but rather about the interpretation of the human life experience. Giorgi (1985:86-88) put this into perspective, by stating that the analyses of the respondents protocol was to try and determine the natural meaning of specific units as expressed by the subject, and that maximum openness was required as attitude. The transcribed interviews presented in this chapter prescribe to the above-mentioned requirements.

3.2 THE INTERVIEW PROCESS AND THE SAMPLING UNITS

Appointments were made with the participants and the interviews were conducted. At the onset of the interview the aim and modes operandi were explained. In most cases the researcher was familiar with the participants as they were in the same safety and security industry. The participants held no antagonism towards the researcher and were willing to participate. However, their confidentiality and anonymity was important, mostly for the reason of not being perceived as criticising either their employers and/or the political powers.

Each participant was assured that his/her particular contribution was important in making this study possible. The assurance was also given, that the responses of the participant would be treated in the strictest confidence and that their anonymity would be maintained at all times. A tape recorder was used if no objections were made, otherwise dictation was done, which resulted in the interview sometimes extending over three hours, resulting in more follow-up discussions where needed. The recordings and dictations were used as the primary data collection aids during the interviews. This was an advantage in that the researcher was able to identify themes that immediately formed the blue print of the interview on paper. With the recording the researcher focussed more on the narration. Themes were identified only when the transcription took place. In both cases the opportunity for interpretation and translation immediately presented itself where needed. Interviews certainly gave the participant more 'telling how it is' time.

The interview schedule was mainly used to guide the respondents in focussing on the copper theft phenomena at hand. The topics of the interview schedule were constituted by the literature review, the pilot study, and the researcher's personal experience. These topics became natural bracketing instruments from where themes and sub-themes could be coded, making every relevant theme identifiable from the transcripts of the interviews.

The respondents could at any time add more topics for discussion. The interview schedule was open-ended and the total field of copper cable theft, and not just that of an individual, was placed within the methodological context. The achievement of making the higher level of abstract visible was reached in this way.

The study sample, in this research project, consisted of the contribution made by four senior security managers or CSO's of the leading copper vendor organisations in Gauteng. A specialist Crime-IDO service provider to all these security managers was the fifth subject. These respondents were all working for the most seriously affected 'victim' stakeholders; those in the railway industries (freight and passenger), the electricity providers and in the telecommunication industries. These were the benchmarking and the leading

role players in fighting copper theft in Gauteng and in South Africa. The sixth subject involved twenty eight senior delegates from scrap yard dealers and stakeholder representatives at a copper cable theft workshop. The same interview schedule was used as for the individual respondents.

All the interviews were transcribed within the scheduled time framework and notes were added where necessary. The interviews were then analysed as per the empirical-phenomenological method (see fig. 3.1).

3.3 REDUCED TRANSCRIPTIONS

The collective and corresponding experiences of respondents', as recorded during the interview schedule, were transcribed. All the respondents were subject to the same rigorous empirical phenomenological method.

3.3.1 Probe 1: The extent/impact of copper theft

Question: What are your personal experiences and/or perceptions regarding the extent and impact of copper theft in general and more specifically in your particular industry?

All the respondents described their experiences as being frightening. According to them, this crime had the potential of bringing the country to its knees. They felt that business and strategic infrastructures were being gambled with and if this crime was not controlled soon it could become catastrophic. *'Every indication is there that copper theft is quickly starting to become uncontrollable'.*

The respondents all stated that copper theft was an international problem. South Africa was perhaps the most aware of this problem. According to the respondents, this kind of theft, (outside South Africa) occurred mostly in the Far East with Thailand being the most affected. The USA did not have the same negative problems facing them, but they did seem to be escalating quickly. It was claimed that SADEC countries had started a network to monitor the crime. The researcher could not substantiate this, but the respondents seemed to have information of such individual networks. One such respondent

claimed that the networks within Zimbabwe and Mozambique had improved since South Africa had started supporting them with guidance and advice.

One of the respondents said: 'The worst thing that we fear is loss of life and we are very frustrated as these incidents just happen over and over again'. The respondents felt that there was no real cost effective, physical security solution for curbing subsistence thieves. The quick response operations, where urgent and were needed, but these were not properly planned. The organisations these represent were not either flexible in their resources and knowledge, thus making it impossible to manage and to control.

The respondents all felt that most of the South African copper cable crime operations were being run or planned from Gauteng. In Gauteng itself the belief existed that it was mostly the subsistence thieves who operated here, and that the rural areas from other provinces were mostly trespassed by organised crime elements controlled from Gauteng.

The respondents were not negative towards the SAPS in acknowledging their role and mandate: 'They (the SAPS) are really trying their best and some pockets of excellence can be found'. But the respondents felt that in general the SAPS did not have the knowledge, capacity or resources to fight copper cable theft. Specialised police structures, such as; the Railway Police could not be expected to provide a protection security function. They had too small a capacity, and since their recent inception they had just disappeared in the bigger justice system. All respondents were of the opinion that successful visible policing. in the copper environment. had not been achieved by the SAPS or any other specialised police. This was clearly evident in that some of the respondents had to appoint their own limited policing capacity to visit scrap dealers and to train local police and prosecutors.

What was also problematic was that some of the respondents were waiting for a return on the recent policing promises and capacities, even reducing their own security capacity expecting the SAPS/Railway police to deliver on their promises, which they to date had not. This situation resulted in the

respondents feeling that not only did they have less protection their security strategies were also dated.

The respondents pointed out that copper theft on its own was not the biggest problem or threat to the economy in general; it was the consequential damages that had become the biggest problem. And this loss was much higher than what the actual reported incidents showed. The respondents all had knowledge or experience of people going on a rampage vandalising and destroying critical infrastructure, because of frustrations regarding bad service delivery that had indirectly been caused by copper cable theft. Commercial and public transport ran within specific intervals, if one area stopped the rest had to follow. When this happened thousands of people could be late and inconvenienced, which again led to many complaints, vandalism, driver threats, hi-jacking of trains, torching of trains, overcrowding, possible claims and loss of life. The burning down of the Pretoria Railway Station on 19 February 2001 is a classic example of this.

Just one metre of stolen copper cable could cause the stand still of a total operational area, blocking whole sectors for long periods. However, the direct cost of theft was also high, especially the replacement cost. One of the respondents' stated; 'we can't just replace a small piece, we must replace whole conductor spans, and sometimes full infrastructures are indirectly damaged'. These repair costs also included unplanned labour, after hours labour and security for the maintenance teams.

3.3.2 Probe 2: The modus operandi of copper cable theft

Question: What is the modus operandi of copper cable thieves?

One of the respondents said that, 'They (copper thieves) have many targets to choose from at will. Copper theft in general is very difficult to anticipate as thieves operate mostly unstructured and at will.'

According to some of the respondents, small and subsistence copper thieves traditionally use any kind of rudimentary tool which they modified to their

requirements, for example, to steal overhead cables they used metal saws attached to a long wooden pole that had previously been cut and dried out (wet wood conducts electricity), or they attached a bolt cutter to the point of the pole with rubber strips, a rope was attached to the bolt cutters, one arm which, if pulled down provided the leverage to snap copper cables.

Some of the responses stated that, if possible, all metal would be stolen, not just copper, anything from masts to rails; absolutely any metal would be removed if possible. For bulk type metals, blow torches and other industrial types of tools were used whilst working behind custom made constructed shelters to hide their activities. For underground copper cables anything from shovels to motorised graders were used to excavate it. A power cable, if live, was then tripped or shorted by either shooting into the cable, or by driving any object into the cable to realise the desired effect. In most cases only the new naïve thieves were electrocuted, the experienced thieves' knew what to do. Some thieves poured petrol into signal distribution cases to short out the power, and then they commenced stealing everything they could. This 'theft operation' would then expand to other secondary infrastructure streams for example; goods trains were brought to a stop and their cargo was plundered..

According to a respondent from the telecommunications environment, underground cable had of late become the biggest problem. At first manholes were the problem but to counteract this they were locked; now they just dug out the cables, from what was called 'dug-outs'. All respondents agreed that copper cable thieves did excellent reconnaissance; they even did 'pilot' dug-outs and kept them under surveillance. If nobody acted they would then steal all they could lay their hands on.

Some of the thieves were previous employees who had become part of the organised crime or copper cable theft syndicates. According to the respondents these former employees were knowledgeable, they knew where to cut the power; how the systems worked and where the copper cables were most vulnerable. The respondents even found evidence of high volume theft where thieves used paid labour. In certain areas rail lines were totally decimated, only dirt roads remained. Unprotected and abandoned regions in

turn created areas that could be vandalised by thieves, as these were not regarded as hotspots and therefore were not protected. The respondents were concerned about this state of affair as the thieves were empowered by this 'free for all' situation. Thereafter they moved on to operational infrastructures that in turn had disastrous results on essential services.

The opposing experiences described by the respondents were that copper cable theft crime was not impossible to anticipate; instead crime intelligence was slow and/or inadequate, which resulted in the victims being unprepared and ill-equipped. But the general consensus was that copper thieves had the initiative for this kind of theft.

3.3.3 Probe 3: The nature of the offender

Question: What is the profile (type, qualification, employers, nationality) of offenders?

'We found offenders to be anything from subsistence thieves to highly organised syndicates with enormous capacity.' The respondents experienced copper thieves to be of above-average intellect, with the capacity to cultivate their market and to explore and/or to create various beneficial networks to protect and to support them in their criminal activities. Control and trust of gang members was achieved through good leadership. They had a detailed background of power networks as well as knowledge of the how electricity worked. They did an in depth reconnaissance of the area where the crime had been planned and in the meanwhile they built impressive intelligence networks.

The respondents mentioned that subsistence thieves were mostly illegal immigrants, working in small groups in a hit and run format. They stayed in informal settlements, close to power cable line activities where they targeted the overhead cables. The more specialised syndicates focussed on the bigger copper cables found in the underground infrastructure. These syndicates and other organised crime cells utilised the smaller informal groups, such as the subsistence thieves, by giving orders, reporting and receiving feedback

through command channels right from ground level theft operations up to the industries that recycle copper.

Subsistence thieves were mainly unemployed illegal immigrants primarily from Mozambique and Zimbabwe. They stole for survival, but it had become evident that many had, had military training as some of those who had been arrested were identified as serving members in the military forces of these foreign countries.

Syndicates operated more sophisticatedly as they had the resources, the command and the control. However, some syndicates were illiterate mob driven, while others were incidentally formed to carry out an 'informal' theft operation, after which they had naturally been disbanded. According to the respondents, well run syndicates were suspected of being managed by the typical blue-collar types or manual labourers.

Only a small percentage of internal employees were involved in theft syndicates, but respondents could provide very little evidence this. It was only on construction sites that their involvement might be suspect. On many of these sites, stores and warehouses and unused material was not logistically managed; cut-off (pieces of unused copper) had been left lying around, information was randomly sold, and many employees played along by turning a blind eye. These internal employees usually had close connections with illegal immigrants. According to the respondents, contactors in the corporate system were considered to be the biggest culprits as they seemed to have carte blanche. They knew where everything was, and what the procedures were, etc. And interestingly it was the safety boot marks of the contractor that were usually found at these illegal 'dug-outs'.

Organised crime was deemed to be the biggest threat in copper cable theft, because, according to the respondents, they were 'business professionals'. For example, they tendered for permits for the delivery of copper and then they recruited 'thieves' to provide such copper quotas. Organised crime was not experienced regularly, however when it happened, it did the most damage.

Respondent's suspected such professional brigands usually comprised of scrap metal dealers.

A highly specialised task force, such as the asset forfeiture group, was required to successfully combat this crime by investigating these criminal groups and putting them behind bars. But because the initial police investigations, arrests and prosecuting groundwork capacity seemed doubtful, such highly specialised task forces were not involved as they should be.

3.3.4 Probe 4: Visual measurements and awareness of the gravity of copper cable theft

Question: How and to who do you spread the message/news and does it work?

The respondents did security awareness campaigns on a recurring basis, which involved the following methodologies:

a. Distributing pamphlets (deemed a waste of money).
b. Community Forums.
c. Crime line (for whistle blowing).
d. Rewards.
e. Professional recognition.
f. Direct awareness programmes aimed at peddlers.
g. Selective broadcasts on TV and Radio as these were very expensive.
h. Articles in newspapers.
i. Collaboration bodies; such as the previous Non-ferrous Theft Combating Committee (NFTCC), which had unfortunately not been very successful.

Most respondents thought that they had been relatively successful in their campaigns in reducing copper cable theft. Some of their group leaders or CEO's regularly appeared on TV. They all handed out pamphlets, but this was generally regarded as a waste of money. Posters were also distributed both internally and at scrap metal vendors that depicted the copper items that were

being targeted. A respondent even launched an awareness programme on a breakfast TV programme, followed by a specific awareness programme for the rural communities. Close collaboration in this drive still existed between Eskom, Telkom and Transnet. As part of a continuous awareness drive, one respondent with the help of two dedicated legal specialists even trained members of court.

The extent of the copper crime was promoted through the external media. But internal budget restraints limited these promotional activities thus only limited success had been achieved from this coverage. The general feeling was that it should be a continuous exercise and not just *ad hoc* awareness campaigns. The respondents also tried to spread the message by forming security committees within the organisation. In the end the respondents could not measure if all the awareness initiatives were successful or not. It seemed more like a bottomless pit.

The opposing experiences of described by respondents indicated that they did not all have the same faith in the success of the media and in the awareness campaigns. Some felt that the targeted population, which needed to be contacted, fell outside of the mainstream 'propaganda' reach. Some would rather have distributed pamphlets with details such, as photos depicting copper cable theft and contact numbers for reporting cable theft - thus selective distribution, specifically aimed at intelligence gathering.

3.3.5 Probe 5: Technology measurements

Question: What specific technology is utilised to harden targets? Does it work? What do you recommend as the (possible) solution?

The respondents had not found the technology that really worked on the conductors, as the high voltage cables made things difficult, and the criminals' knew precisely where the weak areas were that technology did not work. No real breakthrough to the solution had thus far been found. The general requirement was that a technological solution had to be found which would

make copper worth nothing when stolen, only then would the 'demand' in the market diminish.

Physical security and supportive technology were still a high priority, according to the respondents, as these were readily available and in a way more practical, for example; special alarms on cables and networks linked with armed reaction. Physical actions included; declaring hotspot areas and then to hardening these areas with more physical guarding and/or placing cables in concrete, installing alarms, night vision, etc.

The respondents were also contemplating the possibility of using identification marks on cables - marking these as part of the manufacturing process. This, however, was still debatable and implied that all cables would have to be replaced and supported by investigative capacities, which were more specialised than what was currently happening.

An alternative to technology that was being widely used was the utilisation of specialised investigative resources, which appled high tech equipment for surveillance, and monitoring and then supporting such technology with qualified crime intelligence capacities. In layman's terms, this capacity was known as Crime Intelligence Operations and there were only two private concerns in Gauteng that could provide such services and only one had a national footprint with its Head Quarters in Centurion, Pretoria.

3.3.6 Probe 6: Integrated measurements

Question: What integration measurements, for example; GIS (Geographical Information System), continuous crime assessment, risk data analysis, early warning systems or networks, etc. capacity are utilised by you to provide an on time and proactive risk and vulnerability projection?

The vastness of the whole copper theft arena made it difficult to manage and thus delayed reactive responses were the rule. Integrated operational centres believed to provide a monitoring and control capacity at a 24/7 readiness,

which could lead to early warning where possible should be operational. A 'dashboard' or an 'artificial intelligence' system, which visually portrayed real time crime incidences: a real time monitor capacity that was focused on copper theft was very sought after by all respondents. There were such plans in the pipeline, but at the time of this research it was not yet in existence. This system would lead to a focused approach that was operational 24/7, it was called an integrated CRIME-IDO (Crime Intelligence Driven Operation) capacity.

The respondents agreed that the biggest challenge in combating copper theft was acting with an intelligence network, based on integrated measurements, before the crime occurred. This implied that there had to be an intelligence-based gathering and assimilation capacity with a direct link to operations and/or control that knew where, when and by whom a copper theft incident would occur. This concept of an intelligence and central control centre then had to be supported by specialist task/hit teams. This concept had been tested by most respondents in small operations who all realised that this method was in essence the only solution that had shown any real long lasting dividends in combating copper cable theft.

A complaint from the respondents was that the integration measurements for CRIME-IDO', would take a long time to establish, develop, implement and maintain, before providing any useful intelligence. It was also expensive, especially when small dividends were shown in the short term whilst the demand was for immediate gratification. The respondents all felt that the pro's over shadowed the con's, because if such a system was in place, the defenders/victims would receive a pre-warning in that they would know where the crime could and would occur before it did. They could then follow up with closer investigation, sting–ops, monitors, alarms on the spot, arrests, or even witness the crime and follow the thieves to the real controllers.

The integration of such security systems and operations were deemed to be too advanced for the current security operators, and it might become an IT driven application and not a security tool. The IT managers would then drive the process without a counter crime core or mind set, and it would thus become more of a system management exercise than a crime prevention tool.

Professional security exponents were needed to head such an application with IT supporting them.

Most respondents did have a crime analyses capacity, but it was mostly for statistical purposes and not for real time tactical support in conjunction with a GIS capacity within a Crime-IDO set-up. The respondents in general felt that from a security perspective they currently did not have an effective GIS system. Most of the respondents with such systems described them as white elephants, which were not designed and managed by subject matter security experts.

All respondents, however, had implemented or were busy planning, or building a NOC/JOC (National or Joint Operations Centre) to centralise and to control all operational incidents which would allow for immediate reaction. The respondents nevertheless doubted if the application and the capacity of these GIS systems would be effectively implemented in combating copper crime theft.

An opposing experience of a respondent was that too much emphasis had been placed on systems doing what only hard physical work could achieve in the field.

3.3.7 Probe 7: External measurements

Question: What external measurements are or can be put in place to lessen the threat to your copper status?

Most respondents hoped and waited for the new Second-Hand Goods Act (no 6 of 2009) to be fully implemented and properly managed by the SAPS, and that the SAPS would be able to co-ordinate all role players in fighting copper cable theft in unison. But most of the respondents also thought that the SAPS would not be able to deliver.

Some of the respondents had entered into a national scrap metal agreement with a specific service pro vider, regarding the sale and the recycling of scrap conductor metal. This implied that non accredited scrap metal dealers were not

allowed to buy the scrap copper from such stakeholders. If there was any concern the scrap dealer had act as if it had been stolen. The agreement was frequently inspected for 100% compliance. This sounded good on paper but it unfortunately was difficult to police.

Respondents felt that it was necessary for them to understand and to uncover the Risk/Threat/Vulnerability profiles that copper cable theft might have on their industries. Necessary activities on how to combat copper cable theft as mentioned by the respondents are depicted below:

a. Tactical deployments by a dedicated special response capacity which would allow early warning, patrols, observation posts (OP's) and reactive task teams.

b. Dedicated and effective crime intelligence gathering, information analyses, profiling and patterns.

c. Scrap metal investigations and research.

d. Socio ecology awareness.

e. Doctrine for best practice in reacting, combating and prevention of copper cable theft, to be run on a national level.

f. Understanding how to professionally protect, prevent and prepare. A need for professional and accredited security specialists.

g. Target hardening on all levels, from the burying of cables to tying it up with layers of cable ties, to make it as difficult as possible for the offender.

h. Cost effectiveness through buying power and sharing, this required collaboration between all role players.

i. Control the market of scrap metal dealers. Know who the buyers and the sellers are. Must be able to catch them at will.

j. The modus operandi of each criminal and each syndicate had to be researched and understood: The how, why, when, where and with what did criminals operate. This could only be achieved when syndicates and scrap metal dealers were infiltrated and/or monitored very closely. Routes used, associations and modus operandi of the offender had to be known, allowing for proper planned action.

    k. Respondents continuously referred to the following external requirements that they believed had to be put in place to support internal measurements:

        i. Visible policing.
        ii. Dedicated and continuous compliance audits at scrap yards.
        iii. Harsh sentences.
        iv. Focus on scrap dealers and the recycling industry.
        v. A national NFMTCC clearly and strongly managed.

3.3.8 Probe 8: Law enforcement and legal aspects

Question: Does law enforcement support you in the mitigation of copper cable theft and are there sufficient legal constraints to mitigate copper cable theft effectively?

The current Law was sufficient but it had not yet been implemented. Law enforcement could not even enforce the 'old' Second-Hand Goods Act, but the new Second-Hand Goods Act was already imminent. If the 'old' Second-Hand Goods Act (no 23 of 1955) had not properly been policed then how would the new Second-Hand Goods Act (no 6 of 2009) be? The question occurred: 'What is going to be different?' The feeling was that the SAPS were clueless; dockets got lost, and cases took months and even years to be finalised. The culture of crime in South Africa was too big for the SAPS to control.

Non-ferrous metal theft in general, and copper cable theft in particular was never seen and treated as a priority crime. Emotional crime received more attention, as it was perceived by the public as tangible and thus more serious. The SAPS did not understand non-ferrous metal theft; therefore, their resources allocated to combating copper cable theft were insufficient. Pre 2009 a specific non-ferrous metal theft unit was operational. But this function was handed over to the organised crime unit, at the end of 2009. According to the respondents, the SAPS 'just let it go'. And in this process a lot of expertise and capacity went to ground. Copper cable theft, on ground level, was clearly not a priority of the SAPS, they at most patrolled scrap some metal dealers three

times per month. However, no real effect was noticed as the members of the SAPS had not been trained and were not vigilant in this kind of crime. The SAPS with their limited manpower, knowledge and vehicles seemed to be missing the bigger picture all together. 'The bottom-line is that you must realise you are on your own, don't expect any help', was the general feeling of the respondents.

Noteworthy opposing experiences between respondents were as follows: Even though the respondents were in agreement when stating their misgivings about the weak state of the law enforcement capacity, some were not as critical they were sympathetic and supportive. The opposing statement was that the responsibility still had to be handed to the police and that they (the SAPS) had to take leadership and sort the problems out. Most of the respondents remained sceptic of this ever happening. One respondent however gave a totally opposing experience of the SAPS, stating that when their services were required, they were delivered. It was, however, noted that this positive respondent basically had an internal capacity that delivered all the functions of the SAPS and even provided close guidance on copper related crimes to the legal system. This respondent, who claimed success for the imprisonment of copper criminals, rendered the following internal services to the police:

a. They provide the courts with a video/CD of the stolen copper that explained the crime. Two lawyers on call were frequently used to educate and to sensitise the courts.

b. Relationships were being built with the SAPS by helping with basic docket processes, case guidance, the necessary data and support in the identification of the stolen copper.

c. Using their own legal team they went so far as to request that no bail would be granted at first appearance in court.

d. They populated the docket with relevant information to make the seriousness of the crime clear and comprehensive for the state prosecutor to utilise effectively.

e. Providing supporting briefs, which would aggravate the sentence, with photos and other evidence.

f. They policed the scrap yards continuously.

3.3.9 Probe 9: Political aspects.

Question: How do political decisions influence the mitigation of copper theft?

Externally, the political will (Government and State President) was verbally demonstrated and by the decisions taken. However, the supportive capacity was not there to realise the Political will and/or Acts at ground level. Internally the security needs and messages did not always get to the top as true security specialists did not sit at executive level to influence decision making.

The respondents experienced that copper theft was still not a priority of the SAPS, as emotional crime was politically more important. The capacity and the competence in the SAPS for combating copper cable theft was very limited notwithstanding political assurances.

Political support was based on statistics, which the respondents regarded as speckled with discrepancies. It was claimed that the specific true copper theft numbers were difficult to obtain. The figures that were released had been inflated, possibly because of the sensational value, or not keeping proper records, or for fear of making the true situation transparent.

In general, the political will had not yet done anything noteworthy for copper crime reduction.

3.3.10 Probe 10: Financial situation

Question: The resources at hand versus the threat, are these sufficient? What is the impact of the financial parameters in combating copper theft?

Finances seemed to be an enormous frustration for all of the respondents. Funding usually was available when the risk of crime became unacceptable. However, when security was successful it was more difficult to justify the need for funding and success even became a preamble for uninformed cuts.

Security was never regarded as core to business and, therefore, when budget cuts were implemented security was the first to be cut. Notwithstanding, the respondents were required to continuously provide adequate security within a change management environment with added financial restrictions. As quoted by the respondents;

> "Every year our risks are higher and the money less. We can't grow our capacity more than seven percent per annum. Higher inflation therefore kills any advantages and effectively we must do more with less to the point where we are ineffective with no more room for efficiencies."

The implication was; to combat copper cable theft it had to become a specialised function. The controlling capacity had to be even better qualified to manage the required services where the 'usual' resources were depleted.

The respondents felt that money was wasted on contracting a vast array of private contractors to do physical security. A clear national plan and a concentrated effort between all role players would save money; and if it did not save money, at least it would definitely bring damages down significantly.

One of the respondents stated that, the resources and the management were sufficient to contain the current situation with the dated approach. The problem was not only the money. The problem had everything to do with the lack of knowledge, experience and the capability to run a crime prevention capacity based on a model of crime intelligence operation. If implemented correctly it would eventually save lots of money.

3.3.11 Probe 11: Quality assurance

Question: What measurements do you use to ensure quality processes and standards in mitigating copper theft?

Some respondents claimed ISO 9001, SANS, OSH and RSR standards were used to establish, develop, implement and maintain security processes. But only one respondent could explain how these security standards worked.

The respondents implemented corrective actions by means of an audit process in which they were assessed during crime surveys about losses, customer feedback and behaviour, reasons for business interruptions, time lost recorded and customer opinions. The respondents tried to ensure quality, by adhering to the strict monitoring of SLA's for performance delivery as agreed upon. This was done through clear security requirements, standards, and KPI's with stern penalty clauses where non compliance was found.

The problem of ensuring quality was a challenge to the respondents, in that they knowingly fought copper cable theft with the wrong people and with the wrong tools.

To uphold standards, some respondents invested externally by training law enforcers, especially from the NPA, SAPS and the courts.

For security to be effective, knowledgeable Security Managers were needed, with a high level of technical capacity, to understand the integration of security measurements, its quality factors and its applications for best practice. The respondents felt the training of the operational security managers was lacking in the art of intelligence gathering, and in out-flowing analysis methodologies. This implied a poor understanding of the profiles of copper thieves and copper criminal activity patterns which should have been used and assessed for quality counter operations.

All the respondents stated that for security to become a quality measureable function a specialised capacity was needed for proper intelligence gathering and for forensic type investigations, which could be measured against arrests, the conviction rate and the monitored crime tendencies. Currently, to keep abreast of the general situation, and to be able to measure current quality outcomes against current threats, the respondents had to monitor the copper cable theft scenario closely through reports, communication and publications from both internal and external markets.

The respondents felt that visible policing would still be the best agent for gathering information as it would provide a platform from where counter

planning could be done. However, this would imply police officers were qualified and knowledgeable.

In general, the respondents were serving under general company policies prescribing to 'traditional' standards and their compliance. It was difficult to embed security specific functions into these traditional policies and standards because of the constant configuration changes in security and the constant changes in the environments. All respondents stated that security should have its own standards, for example; as prescribed by ISO for processes, this standard had to cover the outcomes or the deliverables of the mandated scope as agreed upon.

Noteworthy opposing experiences amongst respondents were that only one respondent could emphatically state that all the above mentioned standards were in place. Most respondents stated the abovementioned was in place in one way or another, but they were unsure how to quantify it in a security environment, and some even stated that there was no quality audit.

3.3.12 Probe 12: Strategy

Question: What strategy(s), up to now in your experience, has/have shown to have a positive impact on mitigating copper theft?

The respondents unanimously agreed that no security strategy so far could be described as having had a show stopper impact on combating copper cable theft. A solution for this was still being searched for. The respondents felt that the strategy required was a Crime Intelligence Driven Operational concept. A permanent security capacity that would involve hit squads, immediate response, intelligence gathering, proactive investigations and mobile task teams, supported by expert witnesses, legal and law enforcement training and functions.

Some respondents felt that security policy makers generally misunderstood the concept of 'strategy'. Some of the top management, overseeing the security function, regarded the security strategy a secret only for 'behind the doors

confidential' planning, and so much so that nobody dared ask for such a strategy as they would be frowned upon.

Guarding was the most used crime prevention strategy, yet in its current application most respondents considered it ineffective and a waste of money, because the guarding companies had no knowledge of, or real interest in, how to combat copper cable theft permanently. It was mentioned by the respondents that these service providers were employed by gullible and/or disinterested security heads, perhaps even with a financial interest in mind.

Dedicated and knowledgeable security specialists needed to be sourced and appointed for any security strategy to be implemented, established and maintained. According to the respondents security had unfortunately become a dumping ground for 'connected' appointees who did not understand the problem or the field of security as a science.

The respondents at best saw themselves as reactive, working in silos and with little or no national leadership and without a clear strategy.

Noteworthy contrasting experiences amongst respondents were as follows: The most successful stakeholder in combating copper cable theft only utilised a very limited guarding capacity, their copper losses were lower than most and had appeared to stabilised. According to this respondent, copper cable theft crimes were investigated by a private intelligence gathering service provider, followed by proper in-depth investigations, which led to bona fide arrests and prosecuting processes. This Crime IDO unit had a great deal of experience in copper cable theft and the industry environment, which also encapsulated the policing of the scrap metal industry. In order to enhance such a Crime IDO capacity, physical security had also become more effective with the intelligence received and the hot spot assessments drawn up for proactive manoeuvring where possible. The message was out and the copper cable thieves knew that they would be caught and prosecuted.

The benefit of such a strategy was that the longer it was implemented, the better its networks would work and the proactive controlling of copper cable

theft would escalate. The down side was also that the stakeholder would become more and more dependent on the service provider. However, since there was no real collaboration between all stakeholders, this exercise could reach a limited saturation point. If this methodology or strategy was not adopted by all stakeholders it would basically just remain a drop in the ocean and copper cable theft would not be eradicated but merely displaced.

3.3.13 Probe 13: Security Service provider

Question: What impact do the security service providers have on the mitigation of copper theft and how can it be improved?

Security service providers were necessary, but the deployment of internal personnel to check if they complied with the expected service deliverables was time consuming and expensive. Some of the respondents complained that they had to manage the service providers 24/7 just to make sure they did their jobs. Some respondents were so frustrated with the underperforming security service providers that they even contemplated the option of only relying on insurance; a cheaper option (at first) and less stressful, than managing mostly ineffective private security providers. It was already an acceptable strategy to accept losses, which they just managed in certain cases and in certain areas. The challenge was keeping operations going whilst managing the risk accordingly.

Security (guarding) was mostly outsourced by the respondents. However, the respondents felt that they were in the hands of 'guarding mercenaries' with a very limited capacity. The limited security experience, management and leadership within the respondents' organisations created the opportunity for security service providers to deliver less than what was expected and get away with it. The internal operational Security Managers generally did not understand the scope of service delivery that was required as they did not understand the threat or the science of security, let alone have a 'vague' security strategy. They were thus ill-equipped to implement a control audit for a proper performance measurement, to guarantee the way it should be. The service providers were expected to provide the plan, the capacity and to

measure its own performance. The service provider was therefore the player and the referee.

The respondents testified that the guarding service providers did not always have a specialised understanding of what the industry required. In general, untrained guards were just 'dumped' on patrol, without knowledgeable leadership. Limited management, knowledge and support were the rule rather than the exception. Security providers only delivered if penalty clauses were clear and enforced with intolerance. According to the respondents, the involvement of the guard with criminals was an unfortunate fact, and under the 'right' conditions it became the rule rather than the exception. Respondents felt that the service provider had to be held responsible for damages and for losses where they were entrusted with a specific security responsibility, which they had contractually accepted. Consequential liability when negligent was a must. But service providers always shied away from this as they did not trust their own capacities of delivering as expected.

According to the respondents, the situation became even more aggravated because of professional jealousy between the lower level managers of the organisation and the security managers of the service providers. This created animosity as they started seeing each other as a threat. The respondents, however, acknowledged that at managerial level, the service providers were generally more knowledgeable than the operational security managers. One of the respondents said: 'The tail wags the dog, and the tail is there to make as much money for as little as possible, and we don't have the capacity or the knowledge to counter that.'

The stakeholder respondents felt that security service providers were business organisations and entrepreneurial entities first, second and last. Security as a business could only be good whilst a crime risk was a real threat. One respondent stated: 'The security service providers call the shots. They are not loyal to the 'cause'. They are loyal only to their own purses. It is a business for them; the appearance to combat crime brings in money. Why then kill the creator (copper theft) of wealth if you can maintain it?'

Opposing experiences noteworthy among respondents were indicated as follows: The respondents were in two minds regarding whether outsourcing security was the best option. Some felt threatened in that they themselves were not in control of their general security and the implication was the security providers had become untouchable. Others felt that outsourcing security was the 'cheapest' solution, but the 'client' had to upgrade their own operational security management capacity to be able to properly manage the service providers.

3.3.14 Probe 14: Management and man power

Question: Can your current manpower and management capacity effectively mitigate copper theft?

Throughout the interviews the respondents stated that security was unfortunately grudge expenditure and therefore it would always experience the first organisational cut when there was any financial difficulty in the industry. The reason being security was an EXCO decision based on risk, threat and vulnerability parameters. The respondents all stated that the in-house security capacity had already been cut to the bone, with only limited managerial capacity, which was even less when the lack of experience was measured.

The geographical area, which the respondents were responsible for, was impossibly large; in fact too large for only physical security coverage to be cost effective and efficient. The current general manpower would never be enough in the current guarding configuration to cover the vastness of the area. And to make it even more difficult, the sociological environment was ever changing. It was very difficult, for the current security capacities, to adopt corrective measurements timely, especially within the dynamic sociological environment involving informal settlements, industrial-, commercial- and residential regions. The manpower was not sufficient to cover all these security areas and on top of this, it was impossible to also patrol the scrap metal dealers and do visible policing.

According to the respondents, the general shortage of technical force multipliers and know-how demanded an even higher level of professional requirement from guards on the ground. This in itself was an issue which had proven to be unachievable for many reasons, which implied the security status was even lower.

What was needed, according to the respondents, were knowledgeable managers to negotiate the risk regarding the principles of threat, transfer, tolerate and terminate, and then to make timely and relevant decisions. This should be a priority. It came down to security managers who understood the science of security and its management. The current operational security managers were generally inexperienced, according to the respondents. They did not come from a security environment and thus had very limited knowledge and qualifications in security, in particular, and in managerial expertise, in general. It was thus difficult to say if the manpower was insufficient or not. The numbers might be right but their output clearly was insufficient.

The respondents in general felt that stakeholders were held 'hostage' by an untrained and an unsuitable workforce. 'They don't know what they don't know.' Security had unfortunately become an employment avenue; the social responsibility buffer. The outcome was that with all the 'dead wood' in the industry the ensuing incompetence frustrated the security managers, to the utmost, who were expected to deliver.

3.3.15 Probe 15: Command and control

Question: What is the composition of your security/risk control strength which is responsible for copper theft mitigation?

Copper cable theft was just another general security responsibility, which was part of all other criminal type of threats to the organisation. The security structures, which the respondents managed, were more management inclined than operationally involved as operational aspects were generally outsourced. In a perfect world, respondents basically designed a strategic plan within set parameters (finance, personnel, business requirements, etc.) as a priority. A

mandate and a structure could be formulated from this, which would mirror the required command and control structure. A risk analysis and survey would then be done to motivate or to assist this designed structure that was necessary to combat copper cable theft. However, any security strategy was subservient to the company strategy and mandate. This implied that the security managers got what was dished out and they had to make it work, regardless of the facts and the requirements provided.

The respondents stated the need for an in-house crime Intelligence and Investigative capacity. This capacity encapsulated all non-guarding operational requirements specifically to do with copper related crimes and was aimed towards a future pro-active capacity. Currently, such capacity (although limited) was also largely outsourced and utilised on an *ad hoc* basis.

The command and control lines varied in the respondents' environments. Some Senior Managers reported directly to the board and or board members. Some reported to non-board members, such as; the human relations or finance departments who had inherited security just as an *ad hoc* function. The affected respondents stated that such a situation caused many security problems. At the time of this research, none of the respondents reported to a top board member who was solely responsible for safety and security. Two respondents reported their organisations were considering the possibilities of appointing such security board members. However, the fear the respondents had was, that these newly appointed top managers would just be politically connected, non-security specialists with either a military or a police background.

Opposing experiences noteworthy among respondents were indicated as:

The respondents who were not supportive of having an internal crime intelligence capacity did not know how this would work and be managed within the current ill-equipped structure. With the current lack of knowledge and professionalism in their security middle management, this high maintenance capacity would most likely turn out to be disastrous.

One respondent was mildly satisfied with his security's composition in combatting copper cable theft/crimes. He had contained this crime at a stable level for the past few years. It was the responsibility of a dedicated body residing at the Corporate Head Office. He had two senior security managers who strategized and advised all other regions and/or areas which were run as separate cost centres. An important asset for this respondent would be a research department that would provide guidance and the latest crime related information, that would allow this respondent to adapt as the threat changed. He rated his success a result of the controlled integration of all capacities (specialists in departments of commercial, technical and security loss control) and, even though limited, his managing personnel were capable and competent. He had appointed a service provider to provide him with a full crime IDO capacity in focused areas. Most of his guarding, also limited, was an in-house capacity, whilst the other respondents out-sourced this capacity.

3.3.16 Probe 16: Risk analysis and standards to support business

Question: What does your organisation use/do to measure risks, vulnerabilities and threats?

Most respondents acknowledged a risk analysis approach. However, some respondents felt that the situation regarding copper cable theft had deteriorated to the point where such assessments had in fact become nonsensical. They were frustrated because their message about the identified risks had not received the attention it deserved.

Two respondents stated that they had used a custom designed risk assessment from where they promulgated Standards of Procedures (SOP's) for each capacity that was then measured through internal audits. Most respondents, however, felt that a risk analysis was just an academic exercise from which nothing evolved because of untrained managers who had little to no analysis capacity. This exercise was seen as a waste of time and the figures that had been provided were not to be trusted. In most instances top management saw a security risk analysis as a 'scare tactic' to invoke fear to

ask for more money. All the previous warnings had not materialised and they were content carrying the risk and going on as per usual.

Some interesting remarks made by the respondents regarding the way in which top management dealt with the priority outcomes of the risk analyses:

a. Did top management really care?
b. Corruption was so rife that notwithstanding the risk analyses outcome, tenders were influenced based on non-business principles.
c. If they were really interested, they should have been able to mitigate this copper cable crime by know. Security would have been empowered and well sourced.
d. Why did they not care about the very bad reputation and image created by copper cable theft and also as predicted in a proper risk analyses?
e. Why did they do nothing more than talk and provide public rhetoric?
f. Currently, security decision making did not protect or benefit the company.
g. Clearly, individuals got the benefit; the business was a last priority.

3.3.17 Probe 17: Unique model and standards

Question: Does a theory containing a clear model or plan, and supported by required standards, exist in or outside your organisation for the mitigation of copper cable theft? Have you ever considered such a model? What was/is it? Has it successfully been implemented? If not, why not?

All the respondents stated that a specific chosen or designed model to combat copper theft in their organisations did not exist. However, all but one mentioned that the 'Crime IDO concept' should be considered to stem copper cable crimes. This concept would approach the copper cable theft situation from a broad perspective and incorporate all possible measurements in an integrated fashion. The respondents mostly ascribed the current 'models' they utilised as being more intuitive driven, from many years of experience, rather than embedded in scientific theory.

3.3.18 Probe 18: Concentrated effort, collaboration

Question: Do all role players and the copper cable theft victims, work together effectively to mitigate the common crime? If not, why not? If so explain how?

Collaboration between the respondents, in this study, was a continuously fluctuating process. Sometimes close co-operation was achieved, but as of late, it was not very clear and for some it was basically non-existing.

According to two respondents, Business Against Crime South Africa (BACSA) was previously the conveyer and the facilitator, between all the large organisations, for victims under the auspicious of the NFTCC. The Non-ferrous Theft Combat Committee (NFTCC) had not existed until two years ago. It was professionally run by Business Against Crime (BAC), the watch dog for businesses and a body which furthered the interest of businesses. It consisted of 130 persons. Decision making processes were done at National Conferences. Thirty five area committees not only kept everything relevant, a clear operational strategy was also in place. Everything was kept central, all members as well as the Police were part of this strategy making body. Everyone concerned sometimes utilised an external facilitator for bigger decisions.

However, after the SAPS had been handed the reins by BACSA in 2009/2010, everything came to a standstill. Since then there had not been similar NFTCC meetings for the respondents. The SAPS Minister was responsible but she, however, declined and referred it to a SAPS Commissioner. Currently the respondents were not sure who in the police were operationally responsible for the occurring non-ferrous metal thefts. It was believed a structuring responsibility had been incurred in the SAPS in 2011, but the respondents had to date not seen any changes. Formal and orchestrated collaboration between copper cable theft victims in Gauteng had effectively come to a standstill. It was, however, clear, that since the Non-ferrous Metal Combating Committee was not driven via BACSA the wheels had come off. Everybody was back in their silos. The respondents stated that many conferences and work groups

had been attended, but no leader had emerged. Everybody was waiting for the police to take up their mandate with a knowledgeable strong leadership.

Some respondents even stated that they had distanced themselves on purpose from the current SAPS and BACSA; institutions from which nothing positive could be expected. Other respondents felt that goodwill and even support was received from these institutions, but it was mostly at top management level, as the products on the ground were still few and far in between. All the respondents but one, stated that the SAPS' role players were unknown to them; 'We experience their capacity as extremely low and then coupled with a very high rate of turnover in SAPS' positions, it makes it impossible to build a long standing relationship, let alone for the SAPS members to get acquainted with the copper theft phenomenon.' The respondents were clear in it that without a strong SAPS leadership, with focused and prioritised capacities, collaboration between role players would never be a long term success.

Some respondents mentioned that stakeholders had previously collaborated - but for selfish reasons: to look for what they could get rather than what they could put on the table. Professional jealousy was always very clear and the people with the most information started feeling abused and withdrew their contributions.

3.3.19 Probe 19: Socio economic

Question: What is the external or neighbouring role, outside of the business environments' direct space, regarding copper cable theft, and how do you involve such external environments in combating copper cable theft?

The respondents all stated that community awareness was an important mitigation tool. The general crime culture in SA was the biggest threat as criminals were sometimes protected and were even seen to have a right to plunder. Road shows were frequently launched to educate the general population on copper cable theft issues. The respondents experienced a lot of

goodwill and support from the general population. They also did their utmost to get communities involved in reporting such crimes. The mobilisation through CPF's did work where possible. However, the general feeling of the respondents was that the involvement of the public did not really work. Criminals were so specialised that they could hide from specialist counter-crime operators; and the chance that civilians would uncover them or even see them, was very rare. The few, who then did see and recognise such crimes, were in danger of intimidation and even worse.

The respondents also stated that the target population in all probability would not be reached by the usual media and propaganda mediums. They, the general population, also did not really care about the effects of copper cable crimes as they were just trying to survive from day to day. The effectiveness of community involvement was perceived to be un-measurable. Awareness operations were also decentralised, and if the local resident security manager took full responsibility, it again implied that a silo approach was operational.

The respondents were in two minds when it came to delivering the message to the right audience. Most of the respondents, however, felt that a definite expansion on this activity was necessary, but some respondents stated that proper Crime IDO's would encapsulate this requirement.

3.3.20 Probe 20: Media

Question: Does the media portray the copper cable theft problem accurately and sufficiently?

All respondents acknowledged that the latest news programmes on TV, regarding copper cable theft, were very important in getting the seriousness of the situation across. They however had some reservations because they showed only the symptoms of the problem in a sensational manner. The core of the problem never got mentioned; that security was run by non-professionals from Middle Management downwards, that law enforcement was incapable, everybody acted in silos, and a central strategy and leadership was not available.

The respondents mentioned that they had in general found the articles on copper cable theft and its impact watered down in the media. However, the respondents still stated that most reports were factual and the sources were respected. The general feeling also was that the media should report more regularly; the SACCI's (South African Chamber of Commerce and Industry) copper cable theft barometer should be more visible and inclusive, with more investigative journalism to support the claims.

The cost of continuously being in the media, propagating the real story of copper cable theft in Gauteng, was just too expensive for the respondents, and since it was not sensational enough copper cable crimes were at the best of times an *ad hoc* production.

3.3.21 Probe 21: Scrap metal dealers

Question: What is the role of scrap dealers in the copper theft phenomenon?

The respondents believed that about 5000 scrap metal dealers resided in South Africa with about 3000 in Gauteng alone. According to the respondents, all the stolen copper had to go through the hands of scrap metal dealers and the recycling vendors. This made the scrap metal dealers the key to the mitigation of copper cable theft. Yet on the other hand they were the core institutions that kept copper cable theft alive and well. In the light of this, all scrap metal dealers had to be regarded as suspect, as they were all directly and/or indirectly involved in this crime. Demand and supply was the order of the day, and one of the respondents believed that 95% of scrap metal dealers would buy stolen copper if it was presented to them.

The respondents supported the notion that the scrap metal market was in no manner policed sufficiently. There were so many loopholes that in a way they had become untouchable. They created the market, thus they were in control. Copper as a commodity was in such great demand that the weak security and law enforcement situation in this country allowed copper to be provided/stolen on demand, for business entities and the entrepreneurs such as scrap metal

dealers, who could destroy any evidence quickly through the general recycling process.

Bucket shops and scrap metal dealers were one and the same, even working with and for each other. Together they found loopholes in the systems, for example, they moved the stolen copper cables through internal loops and networks, making the identification and quantification of stolen copper very difficult.

The respondents believed that there should be a strict clear policy relevant to all scrap metal dealers, which could work if controlled. Metal merchants knew what was right, but they ignored compliance because of bad control, weak law enforcement, and untrained police. Some respondents believed that it was beneficial to have an agreement with a single scrap dealer to control losses. Transnet, Eskom and Telkom individually used selected service providers for their specific, unique and identifiable scrap metal. At such a selected service provider everything was done on site for aluminium and copper. General and/or other scrap metal dealers were trained to identify the unique markings of these stakeholders because if any of this marked copper was found at these scrap dealers they would be charged with dealing in stolen goods. The three big stakeholders put a receipt system plus a poster system in place at all scrap metal dealers and no excuses were tolerated. However, the respondents assumed that 20% to 50% of copper still went the illegal route. It was very difficult to prove any illegal activities unless the criminals were caught red handed.

The respondents felt that scrap metal dealers should be the focus of law enforcement. A specific disciplinary code had to be put in place under the auspicious of the MBA, who had to strictly follow said controls and regulations as work ethics. According to the new Second-Hand Goods Act (no 6 of 2009), scrap metal dealers received incentives if they were members of the MBA. They were exempted from the required seven day cooling off period, or waiting time before they could sell copper. The SAPS had to, in co-operation with the DTI (Department of Trade and Industry), operate as a task team and control and issue licenses to scrap metal dealers. Scrap should not be paid for in

cash, but with a cheque receipt system. The respondents felt that there was a definite need for a software programme that could integrate all transactions at scrap metal dealers. These should immediately be verified through a data base and a biometric identity system.

Opposing experiences noteworthy between respondents were depicted as follows:

One respondent felt that the scrap metal dealers were playing a very important role in self-regulating. They were also valuable informants who were reporting the suspect behaviour of suspect entities selling copper. Scrap metal dealers, according to this respondent, were mostly honourable business people. They were people of substance, in some instances running very large businesses. The untrained SAPS as well as the other law enforcement personnel was mostly a nuisance, resulting in making these very important partners, in the fight against copper cable theft, disgruntled and non-co-operative. The law and this respondent stated that nobody could/should take the right to trade away from anybody, as it would impact on the right of free trade and entrepreneurship.

3.3.22 Probe 22: Solutions

Question: What do you propose as solution(s) for copper cable theft?

The collaborated experiences of the respondents concerning solutions to copper cable threats were as indicated below:

   a. A clear national strategy for copper theft.
   b. A supportive law enforcement and proper legal capacity.
   c. A qualified police division with a high capacity to lead and to manage.
   d. A centralised intelligence hub from where all stakeholders could plan and work together.
   e. Technology, which would make the copper invaluable if illegally obtained.

f. An alternative to human guards. They were generally ineffective and too expensive.

g. Laws which could be enforced.

h. Management of human behaviour through dedicated security designs.

i. National collaboration and zero tolerance processes.

j. Share and utilise resources between stakeholders.

k. Military to patrol infrastructure and borders.

l. Export market was the wrong focus; the focus should be on internal causes, not symptoms.

m. A total culture change in the country was needed. Respect for other and respect for the Law had to be non-negotiable.

n. Employment had to increase in general.

o. Stricter border control. Deport illegal immigrants, and prevent them from returning.

p. Control the scrap-metal market.

q. Buying all copper to biometrically trace it back to role players.

r. Self-regulation (ethical) in the scrap metal market.

s. Inputs of security specialists of major stakeholders in the economic and legal milieu where copper crimes were discussed.

t. Quality training, for all the security managers, in security as a science. Everyone should be graded, especially those in top positions.

u. A dedicated parliamentary committee for copper theft mitigation.

v. A national drive to have a singular Crime IDO capacity to curb copper cable theft.

3.3.23 Probe 23: CPTED (Crime Prevention through Environmental Design)

Question: Do you have any knowledge of CPTED? If so, what does it mean to you and how do you think it can be utilised in mitigating copper cable theft?

CPTED, as a theory and a methodology was unknown to the respondents; their answers were generally as follows:

    a. They had heard of it but did not know much about it.

    b. They thought it was a new way of thinking.

    c. They had not heard of it and were not familiar with the concept.

The respondents, all security specialists, were all senior managers regarded as leaders in their respective environments. The unfamiliarity of the term CPTED; the general lack of understanding security as science; the criminological methods, and the crime prevention theories in the security industry were all very disconcerting. This situation warranted an in-depth research.

This transcribed interview schedule, consisting of 23 probes, was successful. It not only initiated, it also invited open dialogue on the topic of copper cable theft. Their willingness to share their experiences was positive and even overwhelming. The information collected in each probe topic reached saturation, which indicated the successful coverage of all the data. This made central and sub-themes easy to identify and to code.

The phenomenological data that had been gathered was sufficient for the empirical phenomenological data analyses methodology to commence in the following sections of this chapter.

3.4 SUMMARY OF THE MAIN POINTS OF THE COPPER THEFT CASE

The main points of the copper theft phenomenon were derived from the central themes as experienced by the Collective-Respondent. This collective respondent would be referred to as 'R' in this chapter. The rationale for referring to all respondents as 'R' was for practical reasons as including all the individual references, of all the respondents, all the time, could make this report unwieldy (Ladikos & Kruger 2006:168). This method would also support the search for invariance in the analyses process as mentioned by Ladikos and Kruger (2006:173).

The sequence of events, as uniquely experienced by the respondents', or collectively as 'R', and how these real themed experiences revealed the

existential and social meaning of the copper theft phenomena in Gauteng are discussed under the following themes:

3.4.1 Theme A: Extent and impact of the crime

'R's' experience stemmed from being part of the victim body and also from witnessing the consequential damage inflicted on the clients using his employer. 'R' explained that the greatest problem experienced with copper cable crimes was the theft of copper cables that fed essential infrastructures delivering essential services. This again caused disruptions in the quality of life of the people dependant on these essential services. The first implication experienced, was the tangible damage of the theft; secondly the consequential out-flowing damage, and then thirdly the aftershock damage caused by disgruntled customers' projecting their frustration on the respondents' environment.

This was a vicious cycle in which there were only losers. 'R' mentioned, as an example, the incident where frustrated peddlers burnt of a railway station because they were late time and again. The lateness of the train was a consequence of the continuous copper cable theft.

'R' was intensely frustrated by the consequential damages that were caused. He mentioned for example that one metre of stolen copper cable stopped the operations of many supply chains. The replacement costs based on labour, time lost, and stolen copper, were unrealistic in comparison to what had been stolen and what had to be done to replace this one metre piece of cable.

'R' was of the opinion that the extent and the impact of copper theft on the national economy and on the general population was so great that it was in fact not comprehended by either the man on the street or the politicians .

3.4.2 Theme B: The nature and modus operandi of the offender

'R' experienced that copper cable thieves stole copper using any make shift tool they were able to design. The operational requirement remained the same as the cable had to either be dug out or cut off from a structure. What made the

theft of copper unique was the cables were a very dangerous item to steal because of the voltage they carried. But the way in which the thieves got around the electricity current showed that their knowledge levels were high. They had the capacity to diversify; they even stole goods from goods transporters affected by the power cuts. It was also mentioned by 'R', that taxi's and other modes of transport that were unnaturally quick on the scene raised suspicion, which could perhaps imply a further collaboration between criminals and other elements that could indirectly benefit from copper theft.

'R' experienced the modus operandi of copper cable thieves covered the whole spectrum of criminals, from subsistence thieves with rudimentary equipment and movement, to syndicate driven crime hubs who employed all spectrums to steal on their behalf, and lastly to organised criminal elements who appeared in any format necessary to steal. The subsistence thieves were mostly illegal immigrants, working in small groups, staying in informal settlements close to their target area, which made it very difficult to arrest them as they disappeared very easily. The syndicates employed subsistence thieves and/or used them as cheap suppliers; they were the doers. Syndicates were involved on all levels, from scrap dealers to recyclers. They were not only the planners they also ran big theft organisations where necessary.

3.4.3 Theme C: Measurements utilised to combat crime

According to 'R' the measurements necessary to mitigate copper cable theft were multi-dimensional, involving direct target hardening measurements which covered better bolting actions of cables and deeper entrenched ground tunnels. Everything possible was being done to protect copper cost effectively through tangible measurements and to increase the effort and risk to the offender with regard to the environment he targeted. However, the large remote areas made timely reaction impossible to intercept this crime. According to 'R'; 'To catch them you had to either catch them on the job or you had to have information so that you could wait for them - otherwise everybody was always two steps behind, which was currently the case.'

Measurements also meant the involvement of social support systems and the collaboration between all role players. Based on the experience of 'R' many social awareness initiatives such as; posters, pamphlets, radio messages, crime lines, community forums and newspaper advertisements, did not really work because the target population did not have access to these mediums and pamphlets tended to arrive a bit late. But possibly the most important aspect was the 'culture of crime' that had to be changed at an early age. According to 'R's', the media was more interested in propagating sensational news in a sensational format. And because copper theft lacked the sensation issues, the causes of the copper cable theft phenomena and the core needs were not addressed; in fact nothing noteworthy or any tangible benefits had ever come from it.

'R' mentioned that it was just as difficult that to get the communities and other socio-ecology players involved, because the large geographical areas were each speckled with different sub-cultures. However, communities could become involved through training and awareness programmes. But unfortunately the vastness of the target area more often than not resulted in these programmes being decentralised, which made it difficult to measure the effectiveness of such community programmes. Success then largely depended on the passion and the dedication of the decentralised area management.

'R' had not encountered any single technical system or tool that successfully mitigated copper cable theft as a copper replacement or an early crime detection tool. The current alternative replacement metals for copper were expensive. The question posed was just how long before these would also be stolen? 'R' mentioned that technology was available that would prevent stolen copper from being melted, as it would become worthless thereafter. But even though it was rated a viable solution it was very expensive. Many hours of planning and money were being invested in central control centres to centralise monitoring and planning, but these still had to be proven effective to the point where they could take charge of copper theft environments. And to date these centres proved to be expensive *ad hoc* monitoring and recording 'call-centres' and nothing more.

'R's' advised that the only measurement that would have an immediate and permanent positive impact on the copper cable theft phenomenon in Gauteng was the implementation of integrated crime intelligence and security surveillance technological capacities, that were directly supported by capable and effective law enforcement structures. This could work because then the focus would be on analysing this phenomenon and all of its variables (e.g. the scrap metal market) for proactive operations, resulting in a high level of arrests and successful prosecutions. 'R' mentioned that some of these requirements already existed in a limited fashion yet the role players operated mostly in silos.

3.4.4 Theme D: Factors inhibiting the mitigation of copper cable theft

According to 'R's' experience, a copper cable theft mitigation organisation had to be centrally facilitated and run by either the SAPS and/or Stake Holder Industries within clear accountable performance measurement parameters. The BACSA handed over the facilitating responsibility to the SAPS and the then functioning NFTCC was disintegrated at a time when it was just starting to come together. While still under the BACSA information was shared and even disruption operations were jointly done, which involved scrap yard inspections and even apprehending well known criminals.

'R' said they knew the SAPS role players, but they experienced their capacity as very below standard. It felt as if the wheels had fallen off and they had been left on their own without a leader. They did, however, experience a strong political will in South Africa that was very positive towards changing the current situation. New laws were even being made and the public opinion and involvement was apparent and positive. However, goodwill alone could not realise good intentions in practise. And even with the backup of the weak SAPS, all the talk just remained talk, no substance followed the good intentions.

'R' felt that the law and the old Second-Hand Goods Act (no 23 of 1955) were sufficient. The new Second-Hand Goods Act (no 9 of 2009) was just a modern update of the old Second Hand Goods Act (no 23 of 1955) with the inclusion of one or two more regulations to allow for more transparency. However,

according to 'R', the problem did not reside with the law as such, but more with the implementation and policing thereof. He felt that should be the area of focus of the SAPS. But it frustrated 'R' that the SAPS had thought it good to disband the special unit for non-ferrous metal at the end of 2009, and make copper theft a general function under the SAPS organised crime unit. 'R' felt that the fact that copper theft was not a priority in the SAPS was demonstrated in the expertise and capacity that had been lost in this process.

'R' monitored the SAPS closely; at most they patrolled scrap metal dealers up to three times per month. But no real effect had been noticed with the SAPS involvement in mitigating copper cable theft crimes, because the SAPS members were not trained and/or vigilant enough for the specific requirements of this crime. With limited manpower, knowledge and vehicles, the bigger picture was continuously missed all together. 'R' experienced the SAPS as clueless and it showed, in that dockets got lost and simple cases took months and even years to be finalised; 'The bottom-line is that you must realise you are on your own. Don't expect any help.'

'R's' experienced scrap metal dealers as being suspect in trading stolen copper. They created the market and were the core institution that kept copper theft alive and well. The reason for this suspicion was that all stolen copper eventually had to go through scrap metal dealers. The bare fact was that all the stolen copper, responsible for about 10 billion rand of consequential damages to the South African economy, had at one stage been handled by scrap metal dealers. 'R' blamed the fact that scrap metal dealers were not effectively policed, which created the time and the opportunity for them to become involved in purchasing illegal copper. 'R' felt with the allocation of specific areas and processes that could be controlled by the SAPS 24/7, only one copper vendor that did all the buyback of this metal should be allowed. Because if you took the opportunity for illegal trading away, you controlled the market, and by implementing such action, second hand copper would, from a criminal point of view, lose all value.

The biggest challenge experienced in mitigating copper theft was the scarce and limited resources, especially money. Each year this threat increased more

than inflation, while the damages became more expensive to repair. However, in relation, the increase in the security budget was less each year and the expectation was to do more with less. 'R' mentioned that security was mostly seen as grudge expenditure and it would always be the first to experience cut-backs. In-house security especially, would always at best function on a skeleton crew capacity. 'R' felt that this forced him to rather invest in specialised security and to displace the calculated risk acceptance to insurance. This would never eradicate copper cable theft, but it might manage losses to become 'acceptable'. From 'R's' experience, EXCO's decisions were solely based on Risk, Threat and Vulnerability parameters. If the losses could be recovered from the increasing prices;- why not…as it was only the bottom-line that counted.

 'R' was also of the opinion, that if a risk assessment was not done regularly, showing clear threats, vulnerabilities and risks from the copper threat phenomenon, organisations and regions would be blind to this threat. 'R' also mentioned that crime combating SOP's could only be effective if they were based on such recent risk assessments. 'R' stated that there was a real need for custom designed risk assessments to measure best practise and performance measurements. 'R' felt that corrective action on on-going copper thefts could only be implemented after a proper audit process had been followed. He mentioned that it was not just about fixing security related problems, but also about measuring if business requirements and satisfaction had been met. 'R' found that such quality audits provided good statistics regarding losses, true and consequential, for later planning purposes and to measure the progress and the performance of current processes. A good risk assessment strategy and standard measurement process would counter that.

'R' believed that the only strategy with which to mitigate copper cable theft was via a combination of physical security and Crime IDO's. 'R' motivated this by pointing out that strategic plans were not always supported by clearly defined intelligence and quality physical security elements with the capacity to act and to think without hesitation, which was absolutely necessary as copper cable theft required instant decisions and immediate implementation.

'R's' experienced that security service providers that provided guards, eventually cost you more than the service they had been contracted to render. He explained that it had become necessary to appoint people or to use scare resources to watch over security service providers and more specifically their guards, to make sure they did their jobs well and correctly. 'R' felt the only way to manage these service providers was to hold them liable for damages, and also to penalise them to the point of paying them nothing for bad service. This, however, did not make crime go away, it did add to the already high administrative implication. 'R', mentioned that it only took a short time before guards were infiltrated and /or compromised by copper thieves or syndicates. 'R' believed that the ultimate solution to copper cable theft would be that which did not include guarding provided by a service provider. 'R' contemplated that security service provider's benefitted from the current crime situation, so why would they want to erode it? Guarding, however, was still the most widely used protection capacity; because they did not know what else to do within the limited budget. On a daily base 'R' had to work with the SAPS and their knowledge based limitations.

'R' mentioned that the area was impossibly large for which security had to be provided. In fact it was too large for physical security coverage to be practical and cost effective. 'R' also mentioned that his internal personnel capacity was not either sufficient to patrol both internal security positions and external scrap yards to ensure compliance. 'R' felt that this created ample opportunity for criminals to steal, and for guards and scrap yards this created ample opportunity to be non-compliant and/or to become involved in illegal copper trade.

3.5 ILLUSTRATED CASE CONDENSATION: THE GIST

According to 'R's' personal experiences and perceptions the impact and the extent of copper theft crimes evoked feelings of frustration and despair especially when the crime could in actual fact not be mitigated if it was given the priority and the attention it deserved. What also stood out as a refrain throughout 'R's' responses was that he believed that the political will was there, the leadership was there, the tools were there, the laws were there but the

capacity to support, implement and maintain the requirements, was just not possible within the current set-up. This situation, as perceived by 'R', gave rise to feelings of frustration, anger and even despair. 'R' portrayed this as; but a matter of accepting it as fate, as he was of the opinion that nothing would change.

'R's' experience of poor service delivery and especially of feelings of despondency was verbalised because copper cable theft occurred regularly and was greatly unabated, whilst no decisive action on the same grand scale was forth coming. Unfortunately, the powers that be and the general man on the street perceived this crime as being victimless. In the process this perception diminished any urgency required to combat this crime.

The prominent aspects identifiable from 'R's' experience of copper cable theft were embedded in; the inability of the law enforcement and the legal services to solve cases successfully; the uncoordinated and isolated manner in which copper theft was fought; and the continuous waiting and hoping to find a method or a technical tool to beat copper cable theft effectively and cost efficiently.

In 'R's' experience there was no proven technical tool that could prevent copper from being stolen. Everything that had been proposed was very much first generation or still in the research and development phases. As far as a methodology, to mitigate copper cable theft, was concerned, nothing specific had yet been defined, however, Crime IDO's were seen as a concept which had provided some success, even though these were reactive and based on small surgical strikes. Crime IDO's could work, according to 'R', but only if all members participated. Thus it had to be a total collaboration exercise based on longevity.

'R' did not only criticise, he displayed an understanding for the dilemma of the copper cable theft exponents. 'R' stated that the police were not trained to be copper theft fighters, and neither did they have the capacity to a pro-actively act and protect. Traditionally they were inclined and trained to be supportive role players in the investigation, the arrest and the prosecuting legal process,

and not security guards for major infrastructures. However, to make the newly passed law on the trade of second hand goods effective it was necessary to focus on the vast number of scrap metal vendors because all stolen copper eventually passed through the hands of scrap-metal vendors, and this required vigilant and dedicated police monitoring. However, in 'R's' experience, the SAPS had neither the resources nor the capability, or the capacity or the personnel to carry out this basic task successfully. From this, 'R' deduced that the criminals in fact knew where the strengths and the weakness of the SAPS were and where to focus when planning copper cable theft. These weaknesses resulted in business stakeholders depending on very limited internal resources and rather outsourcing major tasks to security providers. 'R' explained that this situation was at best a small reactive solution for a much bigger security requirement. He emphasised the fact that when it came to combating this crime they had to date failed dismally, because it could never be won with what they had. Instead all they could do was to try to keep it at acceptable loss levels.

'R' was of the opinion that since the BACSA's role of facilitation and conveying to get the entire group of businesses that were victims of copper theft around the same table had been handed over to the SAPS; the whole collaboration capacity had unravelled. These businesses were once again, each working in a separate silo.

'R' did not either agree that it was acceptable for businesses, which provided essential services to industry, to absorb damages through insurance designed by and for the calculated appetite risk equation. This approach would never eradicate copper cable theft criminals, and neither would it place trust in the minds of clients. This could in fact cause a negative domino effect within the bigger economical set up of South Africa, causing industries to either find other means of transport/power/communication or to close their businesses.

'R' wanted to see all the industry role players putting their heads together, to present a plan on eradicating copper cable theft through the proper collaboration of knowledge, mitigation measurements and technology, shared

methodologies and law enforcement with focussed capacity supported by clear legal acts.

The abovementioned examples illustrated the personal feelings and perceptions of the respondents. The following section will describe these in the context of the position or psychological structure in which the respondents were in relation to their experiences.

3.6 THE PSYCHOLOGICAL STRUCTURE DESCRIPTION

The respondents ('R') had on average directly been involved in a combating role to mitigate copper theft for more than 20 years. In 'R's' experience since 2000, non-ferrous metal theft was very little and only isolated had been reported. But in the last seven years it had suddenly escalated and become an unstoppable crime, inflicting consequential damages that had a disastrous impact not only on all operations but also on the South African economy as a whole.

The experience of 'R' resided in feelings of frustration, powerlessness and vulnerability. 'R' continuously explained that the bigger picture or structure had to be understood, in that the physical deed of copper theft, was in most cases a minor activity, which most people did not care much about because to them it was a relatively small piece of stolen copper cable with a limited street value. However, the consequential costs and damages were symptomatic factors that were much graver than the essential piece of copper stolen.

'R' stated that copper thieves would never become rich out of copper cable theft as they got paid a minimum fee, and therefore, they kept on stealing to survive. They would never retire. Whether the price was good or whether it was bad, they would steal. It was actually a never ending process; a futile war against a mostly small and mobile enemy 'insurgent' that caused at will, grave damages to essential services. And it did not take up a lot of time and it could be done anywhere and at a high speed.

'R' despondently stated that the holes could never all be plugged as they were always trying to catch up because the thieves chose the playing field and they made the rules. If you removed a security capacity the theft would just re-occur and carry on as per usual because they knew it was not always affordable to keep selected security measures in place all the time; 'So, you are damned if you do, and you are damned if you don't.'

According to 'R'; all the security requirements or rather the lack thereof, put massive pressure on internal controls. It was impossible to manage and to control if you knew that you were not compliant with what was required. This instilled frustration and feelings of abandonment and resulted in the 'R's' opting for the option of letting insurance cover costs even though this resulted in insurance premiums increasing. In fact it did not matter what they did they could not win.

Another frustration of 'R' was everybody knew the scrap metal market bought the stolen copper, but somehow this could not be controlled by any means. Something did indeed smell wrong.

These experiences of 'R' were also emphasised by the lack of understanding and the unfair treatment exposed in the internal management processes and expectations. The attitude was that cable theft was a responsibility of the security manager. It was in fact one of the key performance areas. If he/she was not able to control cable theft and the out flowing symptomatic activities impacted negatively on business then he/she would not get a salary increase.. Respondent 'R' further stated that other process partners rated a manager's SLA (Service Level Agreement) according to how he/she allowed the business to work at leisure or not. This again had a snowball impact on the service providers, who had accepted such SLAs, even though they knew they would be under resourced, and would be heavily penalised for anything that went wrong under their guard. This meant that the service provider was continuously remunerated at a higher reduced premium.

'R' only saw things getting worse in stating they were in fact on their own 24/7. They could not depend on anyone for assistance, not even the police. There

was not either a central facilitating or an organised body that could bring role players together. The previous NFTCC (Non-ferrous Theft Combating Committee) no longer existed. Technology that worked was very scarce, and if it was not benchmarked through collaboration it would in any case not become familiar to all role players. And even though the money was less, they were still expected to do more with this less, when in fact they did not even have enough at any other time to begin with.

The employer or company expected 'R' to combat copper cable theft without an internal or an in-house platform of knowledge and experience to work from. Instead he had to depend on outsiders and their equipment. 'R' also touched on the fear aspect of being under-powered regarding technical and human resources. He stated that to run a successful counter copper theft operation required specialised equipment and personnel, people who understood that there was no quick cure and easy application. It was a dangerous environment, people were armed, both sides. Knowledge of security and risk assessments were indeed a prerequisite, but these people were expensive and not readily available. Where organisations had outsourced, they had lost in-house knowledge and the experience to control the copper cable theft phenomena. This implied that resources (physical and intellectual) which were necessary to build future business resilience on were lost forever.

"R's" despondency was underwritten in his statement that It had become a nightmare as they actually knew what to do, the laws were there and the expertise could be outsourced. But they were alone in this fight because with their limited resources they were restricted. And the formal sector did not have the knowhow to lead and/or the resources or to actively combat this crime.

The final step in the empirical phenomenological methodology entails that all the reduced themes, the condensation of the illustrated experiences and the psychological structure as depicted, are subjected to the following question: What is the essence of the psychological structure of any experience of crime in similar circumstances? To achieve this requirement the researcher continuously looked for invariance in the analyses to achieve a higher level of abstraction (Ladikos & Kruger 2006:173).

3.7 THE ESSENTIAL PSYCHOLOGICAL STRUCTURE

The essential psychological structure, affecting the experience of copper cable theft within which the respondents' experiences of copper theft will be discussed, is embedded in five central themes identified to serve as the essence of the psychological structure. These central themes are further delineated by the contextual supporting 'sub themes', and each 'sub theme' will be discussed and clarified within the context of the central theme..

These five central themes are:

1. The extent and the impact of the crime.
2. The nature and the modus operandi of the offender.
3. The measurements utilised to mitigate the crime.
4. Factors limiting successful mitigation of the crime.
5. Proposed solutions.

The researcher established a general structure of the experience of copper cable theft crimes, as reflected in 'R's' experiences.

'R' understood the gravity of the copper cable theft phenomena and that it spanned over national and international borders. It had, however, become clear that 'R' experienced extremely high levels of frustration and even despondency, because it seemed as if this crime would not be successfully stopped and/or combated. What made it even worse was that the crime was understood by him/her and enough knowledge existed, and was readily available, to put a workable plan together to mitigate copper cable theft successfully.

The essential knowledge about copper cable theft as experienced by 'R' is depicted below.

3.7.1. Extent and Impact of the crime

a. **Not understood:** 'R' was frustrated because the unique phenomenon of copper cable theft was not fully understood by the general public or the

law enforcement agencies. The impact was mostly experienced indirectly by the man on the street. It was even called the 'victimless crime'.

b. **Consequential damages:** The essence of copper cable theft resided in the impact thereof, more specifically the 'consequential' impact thereof. It only took a few metres of stolen copper cable to bring to a standstill a whole business infrastructure or supply chain that was reliant on the power conducted through that copper cable.

c. **Out of sight, out of reach:** All the published material showed that copper cable theft was responsible for major damages to the South African economical infrastructure. However, the initial crime deed was nonsensical in the bigger scope of things, and was it not reported on enough to allocate the necessary resources and leadership to stop it.

3.7.2 The nature and modus operandi of the offender

a. **Multi-dimensional:** The perpetrators were not a specific group, but a sample of the national and illegal immigrant socio-economic compilation, which involved subsistence thieves, hardened criminals, amateurs, gangs and small to large organised crime syndicates. The criminals would use any measure and means to their disposal to commit coppers theft crimes. Even though the rudimentary tools used were basically the same, the DIY methodology was implemented when required. These methods also differed from using very basic to specialist tools designed by knowledgeable people. The organised criminals were well trained and planned their crime operations in the finest details. 'R' felt that the criminal intelligence networks were far better than those of the victims. What was most disturbing to 'R' was the internal involvement of own personnel, contractors and or suppliers in the copper cable theft environment.

b. **Gauteng the originator:** Gauteng seemed to be the copper theft 'hub' and originator of copper cable theft; some even stated that Gauteng was the training ground for copper cable thieves.

c. **Copper cable theft would happen:** The cost to fight such a versatile and mobile adversary was high. The criminals had the luxury of choosing the time and place. They had the intelligence to precisely design and plan the cable copper theft. 'R' had to contemplate areas where the appetite for risk might or might not be tolerated and then plan accordingly. 'R' knew that unprotected copper would be stolen; it was just a matter of time. And if the criminals were not interrupted they would steal 'everything' of value.

3.7.3 Measurements utilised to combat copper cable theft

The following measurements were being used to combat copper cable theft:

a. **Anything that worked:** 'R' was responsible for copper cable theft mitigation, and utilised all possible measurements, tangible and non-tangible, to lessen the threat, vulnerability and risk to his corporate or parastatal.

b. **The media:** The media was directly and indirectly a tool that was utilised by 'R' to reduce copper cable theft. The media in all its formats, TV, radio, newspapers, pamphlets and posters was, however, an expensive option and only successful if deployed on a continuous basis. Unfortunately the media was sensational in nature and covered the damages and not the source or the cause of the criminal conduct. What was seen as a bonus was the investigative TV programme; Carte Blanche, which aired a few in-depth case studies and operational programmes dedicated to copper cable theft. However, the media did not always reach the people who really needed to see these programmes.

c. **Physical security:** This entailed guards and a reactive alarm capacity. Physical security was still the easiest measurement to utilise. This, however, had become very expensive and less and less effective, because of the lack of resources and the vastness of the areas that had to be protected.

d. **Proactive v/s reactive:** What was needed was a proactive/early warning capacity. Everything was reactively inclined, which implied the

action took place after the incident had already happened and in which case the thieves nearly always got away.

e. **Technology:** Technology was the solution, according to 'R'; it, however, sounded more like a cry in the dark. However, at this stage, as far as the equipment and the personnel were concerned, it was haphazard and expensive. Nobody wanted to pay for research and development without guarantees. Technology was required that would specifically replace copper with a product that would have no market value if stolen. Technology to support an integrated security capacity was important. It was mentioned that a capacity was available where surveillance and other monitoring capacities were interfaced to provide an immediate GIS picture in a central Risk Control Centre from where decisions could be made. This would provide an immediate picture of what was transpiring. However, to manage and to maintain such a capacity to its full potential with the current resources would not be possible.

f. **IDO solution:** 'The biggest challenge remains: to act before the crime occurs.' This is the refrain that 'R' continuously emphasised. In order to realise this challenge, Crime Intelligence Driven Operations (Crime-IDO) was the current buzz word among the respondents. It was seen as the only solution that had so far shown real sustainable dividends to control copper theft. In a nutshell; this concept required a well settled investigative and intelligence gathering capacity, which would become so well imbedded in a specific area, that crime and criminals would be unmasked even before they could act. It was hoped that in the end it would become unnecessary to have expensive security systems and guards behind every bush. The time it would take to build this concept and for the current unequipped capacity to run such an operational system would, however, be a major challenge. Currently such a capacity could only be outsourced.

g. **The need for a qualified facilitator:** 'R' stated that the only way in which the copper theft crime would be solved, was if the criminal did not see the target as easy and risk free. This would only happen if a massive operational capacity was in place that covered the whole country, and from where all role players could be manoeuvred as

collaborative partners. Such a capacity was in the process of being implemented by the disbanded NFTCC, under the auspicious of BACSA (Business against Crime South Africa), and it would have worked as all role players had been brought together, but the collaboration process was not facilitated properly. In fact many joint operations were done, and the support was there because many successes had been achieved, but since BACSA had withdrawn from their original role as facilitator, everything had come to a standstill while everyone waited for the promised replacement

h. **The SAPS as new facilitator:** To the distress of 'R' the BACSA, as facilitating body, referred their responsibility to the SAPS - in his opinion, the wolf in sheep's clothing. And since the SAPS had accepted this role nothing was done to bring the role players together, who in the bigger picture had subsequently become leaderless, and operated in their own silos. It was stated that if the SAPS was actively involved, the message had not yet reached them. They had been hearing the right noises for years, but to date had not seen anything at ground level.

i. **Shared costs and resources:** 'R' stated that costs could be shared between victims of copper cable theft; the resources could be shared and the operations could be planned. Millions of rand were wasted because of duplication and the silo mentality. The command and control of a 'strong' facilitator was required and but such a capacity did not exist.

j. **Major reason for a dysfunctional situation:** 'R' saw the issues of no leadership and a break down in collaboration as possibly being the major reasons why copper cable theft was still unabated and serious.

k. **Political support:** Even though the general feeling towards formal structures and leadership was negative, 'R' felt that there genuinely was politically commitment, goodwill and support to stop the threat of copper cable theft. However, much more than vocal support and new Acts were needed. It was a question of empowering the capacity to enable the Acts that had been promulgated and to realise the promises that had been made to the business environment. Yet very little of this had been done and what was especially troublesome was the incapability of the

SAPS' to fulfil their role. Somebody was required to make not only a visible but also a tangible standing that could be measured for accountability.

l. **Law enforcement and the police:** The police were incapable of providing the services that the security manager wanted, so a security manager was compelled to take the necessary steps to keep his working environment safe. 'We are alone; we must accept that and fend for ourselves'. 'R' further stated that when the police eventually pitched up they were 'clueless'. They had become a politically driven organisation, where sensational aspects were more important and as copper theft was a dirty hard working environment, you would not find any sensation there. In fact the police only complicated matters as they were not trained and lacked the capacity to make a real difference. The question was often asked, whether the police in any way understood their own constitutional mandate and responsibility in protecting life and possessions. There was in general a lot of negativity towards the SAPS especially because of their lack of capacity and competency on all levels. What was often mentioned was that the SAPS were expected to be the leaders, and everyone would welcome it if the SAPS did take up this role and were able to replace the security service providers.

m. **Scrap metal market:** 'R' saw the scrap metal market as being the biggest role player that needed to be controlled, if the copper cable theft phenomena in any way were to turn for the better; 'The only solution is to close all scrap metal dealers from trading in copper'. 'R' felt that specific law enforcement and the criminal justice system was severely lacking in tackling the problem of copper cable theft. However, even if it might be seen as being a little late, a new law regulating second hand trade would be welcomed as it could be a powerful tool especially to control scrap metal dealers. 'R' especially stated that the new Second-Hand Goods Act (no 6 0f 2009) for example, would forbid scrap metal dealers from buying any copper that was not clearly identifiable and/or burned. It would also require the second hand metal market to have a self-regulating body that would ensure compliance. However, 'R' doubted the effectiveness of the CJS (Criminal Justice System) and the

Law Enforcement agents ability to implement the policing and to maintain the new Second-Hand Goods Act (no 6 0f 2009). The problem was if they could not make the old Act work how would they make the new Act work because nothing had changed in their capacities. This would in all probability turn out to be yet another good idea, which will be badly executed.

n. **The crime culture:** An aspect that made 'R' cynical about resolving this problem of copper cable theft was the culture of crime in South Africa. It was too big for the SAPS to contain. Crime that was sensational and played on the emotional received all the attention. Crime that was perceived victimless would always be last in the row of priorities, and it did not matter how serious it was. South Africans had very little respect for the laws and for each other. They were not aware of their role in building a country, everyone just thought of him/herself and forgot about the rest; 'An upgrade was needed for loyalty; we had to all see the country as being ours.'

3.7.4 Organisational challenges that impact on copper cable theft mitigation

The focus, at this point, was the influence of internal organisational challenges on the mitigation of copper cable theft operations. The following are the factors 'R' struggled with on a daily basis.

a. **Financial reality:** 'R' named financial restrictions in obtaining and in maintaining the necessary resources, as a major contributor to the lack of capacity to properly combat copper cable theft. However, the business perspective on appetite for risk had to be understood. But in many cases 'R' wondered about the common sense of continuous financial restrictions when the crime and the threat kept on escalating. He said security was not a nice to have anymore. It had become a 'had to have'. Unfortunately security was still grudge expenditure for many of the top management role players. It was the first place to cut in financial difficulties and in South Africa this had become a recipe for disaster.

b. **Quality of security personnel:** The quality of security personnel contributed to the financial restrictions because it had become the dumping ground for people who could not make it elsewhere, or who got a job through political connections. Most security managers had no formal education in the security environment and neither were they interested in security. Yet they were expected to analyse the problem, look for solutions and justify recommendations and funding for all decisions taken up to board level.

c. **Training:** Training was a necessity for security personnel and law enforcement players; 'It is clear that we fight copper theft with the wrong people and the wrong tools.' The notion to become involved in IDO type operations required a specialist with experienced intelligence and investigation capacity. This type of resource come at a price and was not available everywhere. In fact 'R' was afraid of mentioning the need for specific personnel because they were given people that made the problem worse and not better. These people all needed training, and in the end training took time and money.

d. **Security strategy:** The lack of a clear corporate strategy for security and for combating cable theft contributed towards making 'R' feel disempowered. It was always a grey area: They did not know what to expect, or what the mandate was, or which policy had to be put in place. Security was either not part of the bigger business plan or not represented by capable people at the highest level. Yet command and control was directly part of strategy. Structures followed strategy and at this stage, from senior management and upwards, it was all in order but down the line it was a mess. 'R' clearly stated that control and performance compliance on ground level was bad, and that this was indicative of the fact that top management was at best unsure of what to do about the problem of copper cable theft.

e. **Outsourcing mentality:** A major contributor to weak security was the outsourcing of security functions, especially at management level. They were in the hands of guarding mercenaries. Security Service Providers were business people; crime was their bread and butter. They would try to sell you as little as possible for as much as possible. And to empower

the Security Provider with decision making capacity was like putting them in charge of a blank cheque. Their interest was to keep the status quo, not to get rid of the crime altogether. 'R' felt that this situation was evident in that the real security competency resided with service providers; the client/stakeholder did not have a competent structure with which to enforce compliance. This was why 'R' hoped for a purely technical solution, with which to get rid of the hold of Security Providers.

f. **Specific copper cable theft model:** A scientific analysis of the copper cable theft phenomenon, and a specific design of a mitigation model, did not exist. Every organisation did as it pleased within its own frame of reference. Even though copper cable theft was a phenomenon in its own right, it was still seen as just an ordinary crime that had to be mitigated with general counter crime measurements. This entailed utilising the same 'general dated' security thinking and methodologies. Copper was still regarded as just another theft. The only difference was that it impacted heavily on the South African infrastructure. But in the same breathe, why did some people, even MP's, want to declare it as sabotage and terrorism?' This meant that copper cable theft was not just an ordinary theft, and therefore, its solution would not be found in ordinary thinking. A project plan and model was required based on proper facts and methodologies, with leadership that encapsulated the total security environment, as well as the social factors. 'R' endorsed the fact that specialists had to review the whole action plan against copper cable theft from all angles, to identify a specific plan that could be implemented nationally, because; 'At this stage, opportunists claiming successes from operational up to technical breakthroughs are confusing the issue even further.' A specific crime prevention model, accepted by all, and demonstrated by a qualified capacity, supported with a formal facilitating status, was urgently required.

3.7.5 Solutions proposed

Many of the solutions mentioned here, were previously discussed in the above-mentioned experiences of 'R'. One solution that was reiterated throughout this

research was the fact that a clear national strategy for copper cable theft was urgently required. This strategy had to provide directives for establishing, implementing and maintaining an adequate, qualified law enforcement and legal capacity This capacity would be respected and in itself fulfil the role of a leader.

The respondents, who were part of the group of security managers, continuously listed the following 'core' solutions they believed would contribute towards effectively combating copper theft:

a. The implementation of a qualified police division with a high capacity to lead and to manage.

b. A centralised intelligence hub from where all stakeholders could plan and work together.

c. Qualified security professionals, who understood how security worked, and who had as a template a unique model to mitigate copper theft.

d. Strict border control and the effective deportation of illegal immigrants.

e. Strict controls over the scrap-metal market.

f. Self-regulation (ethical) in the scrap metal market.

g. Quality training in security, recognising the security field as a professional science to be managed by security specialists.

h. Technology that would make recycled copper invaluable.

i. Replace human guards, as they were ineffective and too expensive.

j. Laws which could be enforced.

k. Management of human behaviour through respected social programmes.

l. National collaboration and zero tolerance processes.

m. Sharing and utilising resources.

n. Military capacity to be utilised for patrolling remote assets.

o. Focus on internal causes, not external symptoms, for example; export copper.

p. The creation of a dedicated copper theft forum with a dedicated director facilitating the process as a project. This person had to be knowledgeable, experienced and had to have accredited qualifications.

3.8 CONCLUSION

During the qualitative sessions of this research, was clear that the respondents valued the fact that their opinions, about copper cable crime, were highly rated yet anonymous. The respondents were open to sharing and willingly provided a window within which their experiences of crime could be placed with other perspectives.

The gathering of data, by means sharing experiences within the context of dialogue had been successfully accomplished. The recognised methodology required and subscribed to, for this research, was closely followed and adhered to. The total field and not just the individual were placed in the context of the methodology, the result of which appeared clearly as the various protocols were considered.

The expertise of the focus workgroup participants was used to confirm the data gathered in this chapter. This focussed work group of participants, for all practical purposes, became the sixth respondent of this research sample and a helpful add-on to the unit of analyses.

The search for the essential structure of the unit of analysis, namely the senior security managers' experiences of copper cable theft crimes, led to the identification of the five areas which addressed the experiences of crime as central themes. Within these central themes, a global picture of the experience of copper cable crimes in Gauteng was recorded. This gave meaning to how senior security management in Gauteng had experienced the phenomena of copper cable theft in its entirety. It was important to note that all the respondents shared the same experiences. A saturation level of the selected topics was clearly reached after having uncovered the total picture. This was confirmation that the research design had been the right choice.

CHAPTER 4

RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter is both a synopsis and an integration of the previous chapters. It illustrates where, and how the literature review and the empirical research findings come together to enlighten the set goals for this research as delineated in the Central Themes.

4.2 THEME A: EXTENT AND IMPACT OF COPPER THEFT

Richardson (2011:1) illustrates the seriousness of this crime and the general impression there is towards copper cable theft, as follows: 'The major impact is on the country's total economy. Surely that constitutes sabotage, which was a major crime the last time I checked'. The impact of copper cable theft affects many different types of victims such as citizens, businesses and even the government. However, the greater impact of the damage done by one stolen cable is not always seen and or experienced by everyone, thus copper cable theft is referred to as the 'victimless crime'.

The vast majority of the literature reviewed stated that the on-going damages incurred to the economy were immense. In chapter two various sources point out that South Africa loses anything between seven billion rand and sixteen billion rand per annum as a result of copper theft. (Phakathi, 2010a:1). This unacceptable situation was because this crime was fought without proper law enforcement leadership and with the lack of adequate government resources. The vast remote expanse over which this crime occurred was continuously met with ineffective security measurements, regardless of the continual escalation of copper cable theft. It was reported that the consequential damages were out of control and unprecedented levels were continuously surpassed by new negative benchmarking; the economy was being sabotaged and copper thieves were called 'terrorists', by members of Parliament, as they posed an intolerable threat to essential services (Ndlovu & Magwaza 2008). It was clear

that the cumulative damage to the economy of this country, its organisations and individuals, was staggering (Geldenhuys, 2008:1).

The statistical picture is very negative, and for many ordinary people the numbers are mind boggling and not easy to grasp. This poses another problem because the bigger picture is not fully grasped, by either the man on the street or in some instances even by the policy makers. The only frequently published figures depicting copper theft are produced by SACCI, and these are based only on the estimated replacement cost of stolen copper as recorded by Telkom, Eskom and Transnet. These limited statistics do not include the figures of the municipalities and the industries.

This research encountered many discrepancies in the figures reported on copper theft. But if the minimum averages only, were taken into account the numbers remained staggering. The average figures available for the replacement of stolen copper, as collected from published sources, for Eskom were 15 – 20 million rand, per annum; for Transnet 20–90 million rand per annum and for Telkom 900- 1279 million per annum (allafrica.com., 2012:1). And to give an indication of the cost of security to counter copper cable theft, it was published that Transnet Freight alone would spend 500 million rand per annum on security for the 2010/2011 year (TFR, 2010:1). But to put the figures mentioned in the reality of consequential losses, Telkom alone suffered losses, to the value of three billion rand over the 2007/2009 year, related to copper cable theft, security costs and direct losses in revenue (Hamlyn, 2009:1).

The research findings, with regard to the impact of copper cable theft as derived from the close and personal experiences of the Senior Security Managers in Gauteng (most of them have a national responsibility), put together a clear image of eminent ruin. According to the respondents the general population and even the law enforcement agencies did not fully understand the unique phenomenon of the crime of copper cable theft, because the impact thereof was mostly experienced and portrayed through the range of indirect damages. The true range of damages incurred by copper cable theft resided in the 'consequential' impact thereof. It only took a few metres of stolen copper cable to bring a whole business infrastructure to a

standstill. The respondents experienced this as frightening. According to their viewpoint this crime had the potential of eventually bringing the country to its knees. They agreed that business and strategic infrastructure were being gambled with if this crime, that was becoming uncontrollable, was not controlled soon.

Frustratingly because there is no real sensational value in copper theft crimes, the policy makers lose focus and interest in the phenomenon of copper cable theft, and then the needs required to fight these causal factors are neglected. It was in light of this 'gap' between policy makers and the security specialists on the ground, that the recent uproar in 2011 was caused when the Gautrain had to cancel some operations due to copper cable theft. The guardians of copper cables saw this incident as a temporarily window of opportunity to get the necessary high level dignitaries in politics and in law enforcement involved and interested. Once again the media was inevitably mobilised to its full extent, to create an awareness of the copper theft phenomenon in SA. Some security managers even stated that this event was like 'manna from heaven' for the copper theft cause. However, nothing substantial was in essence brought to life, not even a formal enquiry of this phenomenon or just something to provide security managers with some sort of empowerment. It was purely back to 'normal' for the responsible security managers who once again were left to react to copper theft incidents, monitor the decay, write reports and attend workshops on copper theft just to vent some frustration. Nothing in fact changed, everything has remained the same. One respondent aptly quoted Einstein saying; 'If you keep on doing the same thing and hope for change then you are truly a mad man'.

4.3 THEME B: THE NATURE AND MODUS OPERANDI OF THE OFFENDER

The literature review and the respondents agreed that copper cable thieves came from all walks of life. In general the research sources mentioned that there was a distinct group of the role players who were stealing and/or dealing in illegal copper whenever an opportunity to steal copper cable presented itself. Four distinct groups were identified in this research:

1. The subsistence or 'bread and butter' thieves, this represented the petty theft criminal element and was also the most common group. They worked in small groups, stayed in informal settlements close to power cable lines from where they worked in a hit and run fashion. Some worked together in smaller gangs, each with their own leader who was an active serving military member from a foreign country making, some easy money on the sideline. These subsistence thieves were mainly unemployed; they stole for survival, regardless of market prices and conditions. Illegal immigrants from Mozambique and Zimbabwe appeared to be the core of the subsistence thieves in Gauteng.

2. Organised crime networks belonged to the next group which consisted of different numbers and a different quality of gang; *ad hoc* teams and dedicated syndicates. In many cases subsistence thieves were employed by this group. It was this group that regularly recruited internal employees from stakeholders, security providers, logistical contractors and law enforcement. They became involved, or were invited to be involved, because of their expert knowledge and experience. Syndicates utilised not only the smaller informal groups, but also the more formal organised crime cells, by giving orders and demanding feedback through command channels initiated from the ground diggers and cable cutters up to the business owners recycling copper. Syndicates operated more sophisticatedly as they had the resources, a proper command, and a functioning control system. However, some informal syndicates were just an illiterate mob, whilst others were used just for a specific 'informal' or impromptu theft operation, after which they naturally dispersed. Well run syndicates that faced the possibility of being apprehended, were supported by typical blue-collar types, who provided effective logistical and intelligence platforms with arranged protection and convincing cover stories. Some respondents strongly suspected that some parts of the Criminal Justice System (Courts, SAPS and Organised Crime Police) were involved in these syndicates. Organised crime was not experienced on a large scale; however, they did the biggest damage and were thus the biggest threat. They had both influence and business expertise, they for example tendered for permits

to deliver copper and then recruited 'thieves' to provide stolen copper for these quotas.

3. The role players in the Scrap Metal Industry such as the scrap metal dealers and the recyclers, if given the opportunity, were also part of these organised crime networks. Brigands made up of scrap metal dealers, or who represented a large scrap metal dealer, were suspected of currently operating these networks. They generally only bought and recycled stolen copper; their physical involvement in stealing copper was actually very minimal.

   The players are many, and they come from diverse environments and therefore, a very highly specialised investigative function is required to counter these metal merchant crime groups, such as, the asset forfeiture group that has been used successfully, even if only in isolated cases.

4. Foreign cartels, mafia's and such 'business' groups have also been identified as actively running copper crime ventures in Gauteng. The ease of the South African market makes them even run their own independent crime operations within South Africa, without any South African involvement.

Each of the above-mentioned four groups is made up of different numbers and unique sub-cultures. The diversity and compilations of copper crime exponents are legion, only to be matched by their innovativeness to steal. No real solution exists for subsistence thieves, because their *ad hoc* operations, without formal structure, planning and disorganised content make them impossible to predict, control and manage from a traditional security perspective. The experience of the respondents showed that subsistence thieves, with limited resources, operated more in city areas, whilst capable syndicates operated more in rural areas. Some thieves had been previous employees who were connected to organised crime or syndicates. This made them very valuable as they knew where to put the power off, how the systems worked, and where an infrastructure was at its most vulnerable. Evidence had been found of high volumes of theft where thieves used paid labour to help them carry the copper

cables. The number of thieves was determined by the amount of cable that could be stolen and carried, and vice versa.

Copper thieves, whether on a small or a large scale, did excellent reconnaissance. They even did dry runs by uncovering or tripping copper cables and then keeping these targets under surveillance. If nobody acted defensively they commenced stealing at will. The thieves stealing in gang formation operated in military fashion. They had members in observation posts, point's men, and a 'patrol' group making contact with possible ambush elements. There were constant cellular communications between the groups and their logistical support, for example, vehicles and safe houses, were at hand.

Building networks were very important tools used by copper cable thieves. These were achieved by recruiting targeted individuals in key positions who had gripes or were experiencing financial difficulties. They were provided with the essentials and with luxuries for the services they could provide, which included giving out information and/or looking away when necessary.

The respondents were not all in accord regarding internal theft; one stated that only one percent of theft was allocated to internal employees. However, very little evidence was available of the involvement of their own personnel in copper crimes. This was mostly because of the limited forensic audits and records available. Most respondents, however, found there was a tendency of their own personnel, especially contractors, being involved at construction sites, especially where copper cut-offs were lying around and unused material was stored in abundance in temporary and also in general warehouses. The CEO of City Power stated clearly that contactors were often responsible for theft, primarily of scrap material but also of new cable (EE Publishers, 2010). Their involvement was more secondary, for example; selling information, especially those with close connections with illegal immigrants. Contractors doing maintenance on copper lines were regarded with suspicion by all respondents, as these contractors were mostly players (holding and maintaining copper capacities) and referees (reporting theft and deciding what needed to be done to repair damages).

Copper cable thieves served in all capacities; from police officers, contactors, employees, security officers, service providers and corporate management. Some copper cable theft syndicates and copper cable theft specialists were highly qualified and well trained individuals with the influence and the capacity of running large criminal operations. The higher the capacity level of a criminal was; the better the level and size of equipment used, from excavators up to specialised vehicles and copper recycling equipment. In lower level groupings thieves used rudimentary tools, anything that would work of which bolt cutters, saws, poles and rubber bands for isolation and binding, were the most common. Copper cable thieves in general had time to plan and to survey; they knew their areas and environment in detail. They knew the security capacity and the processes; they knew precisely where soft target areas were. Copper cable thieves were seldom caught on the job, as the remote environment and well placed observation posts gave these criminal the benefit, and because they stole at night the darkness became their ally, helping them to get away quicker. Copper thieves constantly looked for weak spots and vulnerable places. Their patterns changed, but their methodology invariably stayed the same.

Overhead cables were at first the biggest target until recently; now 95% of the targets were underground cables. They had to implement a different strategy; first they had to dig up or expose the cables and then 'trip' the power by making a fire on the underground cables until the power tripped. Sometimes the power tripped when they hit a nail into the cable, this was, however, very dangerous and only used for smaller cables. In some instances a small arms side gun was used to fire a shot into the cable. This was also very dangerous because when there was such a violent short, an electric arch was created, which could burn and kill bystanders. In most instances only new naïve thieves were electrocuted; the experienced thieves knew what they were doing.

When stealing overhead cables the thieves threw cables or ropes over the chosen copper cable and caused a 'short' in the power current of the cable. Then they cut the cable using a saw or a bolt cutter that had been attached to a long wooden pole, for isolation purposes. Then, the cables were cut into

small pieces and carried away or hidden close-by and fetched later. Very rudimentary, yet very innovative DIY equipment was used to make 'special' tools. Long dry wooden poles were used to reach the cable from a safe distance and because they understood the isolation requirements, they used rubber tubes to tie it all together.

The tools and methods commonly used:

a. Anything from shovels to motorised graders were used to uncover underground copper cables.

b. Thieves used extensive camouflage and cross dressing, masquerading as police, municipality workers or even emergency personnel.

c. They hid behind shelters to dim both light and sound from where they and worked using blow torches and other industrial type heavy tools.

d. Thieves tended to work outwards from the Distribution Boards (DB's) to steal as much as they could.

e. Goods were stolen while a transport infrastructure stood still because of a power outage.

f. If possible, all metal was stolen, not just copper, anything from masts to rails; any metal was removed where possible. In certain areas entire rail lines had totally been decimated, leaving behind a dirt road.

g. Thieves targeted everything, from overhead cables to underground networks and any equipment that contained copper (transformers) or metal.

h. Unprotected and abandoned lines created ready markets, as these were not considered as hotspots and were therefore not protected. The thieves 'empowered' by this situation moved on to operational lines with disastrous impacts.

i. When trains were stranded, taxi's and busses were immediately on the ready, which gave rise to the possible 'collaboration' between copper thieves and taxi or bus drivers.

One very despondent respondent asked: 'Who is not involved in stealing copper?' The respondents' experiences, supported by the literature review, indicated that Gauteng seemed to be the brain and the platform behind most of

the national copper theft operations. According to Singh and Omar (2011), Durban taxpayers had, had to fork out more than nine million rand over a five-month period to replace stolen copper cables, while slick Gauteng syndicates ripped and robbed Kwazulu, Natal, of electricity cables in outlying areas. Cornelius Vermaak (in Singh & Omar 2011), Eskom's security and distribution manager for the eastern region, said cable theft syndicates from Gauteng preyed on overhead cables in Kwazulu, Natal. This research found that subsistence thieves were mostly found in Gauteng. They operated between high density infrastructures, and lived close by as they did not have the cars or the money or the logistics that wer necessary to operate over great distances. The rural and more resolute areas were thus mostly trespassed by organised crime elements, largely employed or controlled and/or funded from Gauteng. Taking it even further, according to SARPA (South African Revenue Protection Association), as discussed at the 2011 copper theft workshop, most of the national copper crime operations were being run from Gauteng.

The picture emerging from this area of research is interesting. It focussed specifically on the copper theft offender's nature and modus operandi and it clearly shows that it has become imperative for law officers, security officers and security managers to contain and act against this crime. From a military perspective it seems as if the 'enemy' insurgents are in control of the battlefield, as 99% of the time they are successful and are able to get away without being caught. The enemy soldiers are unidentifiable, superior in numbers and can move without restriction between their own forces. They have a very superior intelligence network and use very cheap and rudimentary weapons, easily obtained with which they cause unlimited damage to their very expensive and sensitive targets. From an own forces perspective, the picture is dismal; the enemy clearly can't be fought and overcome or even just restricted within the current set up. This is evolving into becoming a lost war/case.

4.4 THEME C: TYPICAL MEASUREMENTS UTILISED TO COMBAT COPPER CABLE THEFT

Physical security guarding and awareness programmes form the basis of the current security measurement against copper cable theft in Gauteng. However,

if the current extent and impact of copper cable theft is taken into consideration, then the effectiveness of these two options is not something that can be deemed successful. The respondents clearly showed that they had no faith in the current resources available to them.

Under Theme C, the current counter copper cable theft measures, and the technical applications utilised in the fight against copper cable theft, will be discussed under the same sub themes as structured in the Essential Psychological Structure design of par 3.7. In these sub themes the respondents' technical experiences, failures and needs will be uncovered and integrated as follows:

4.4.1 Awareness programmes

The respondents felt very strongly that the media should report more regularly on the seriousness of the situation. They often neglected the copper cable theft issue, as it was not regarded as sensational enough. Copper cable theft *per se* was not a priority issue of the media. When reported, the media would mainly focus on showing the symptoms of the problem and then in a sensational format. The core of the problem such as; security decisions were being made by non-professionals and law enforcement was incapable, were never mentioned, thus everybody acted in silos. The crime was neither understood nor confronted scientifically, in fact a central strategy and strong leadership was urgently needed. The general feeling was that any awareness programme should be a continuous exercise and not just an *ad hoc* awareness campaign.

Awareness activities which could be implemented include the following:

a. Posters depicting the copper items targeted could be distributed internally and at scrap metal vendors.
b. Security committees within the organisation could also help to spread the message effectively.
c. Hand-out t-shirts displaying a 'whistle blower crime line' number.
d. Posters could be put up at hotspots, depicting snake eyes that cause superstitious fear and direct messages.

e. Security campaigns could be done on a recurring basis.

f. Pamphlets could be distributed. However, respondents felt that pamphlets were just a waste of money.

g. Available internal radio channels could be utilised.

h. Community Forums could be utilised more to spread the message, as these would be more successful than the recorded show.

i. Crime lines for whistle blower purposes could be utilised and propagated more, currently the success was not as expected.

j. A reward or incentive system could be widely used. Transnet appealed to the public to assist in the fight against crime. Rewards of up to R25 000 would be paid to individuals who provided positive information which led to the recovery of Transnet property or to the arrest and conviction of the perpetrators (Fin24.com 2006:1).

4.4.2 Physical guarding, integrated security systems and technology

4.4.2.1 Physical Guarding

Conventional physical guarding was still the main method used to protect copper cable theft. Billions of rand lost later, it was clearly not effective and at best unreliable. Alternatives were constantly and frantically being researched but nothing had surfaced at the time of this research. There was a place for physical security and it could work, but only at static places like depots with clear logistical lines, perimeter integrity, and quick operational support when needed. Copper cable theft, however, mostly occurred in areas which were too far away for conventional physical security to be practical, manageable or cost effective. Communication and transport were always as big a problem as the terrain where copper cable theft occurred was not only remote it was also hazardous to drive, and to make matters worse only limited cell phone reception was available in these remote areas.

The securities mentioned were ineffective at best. The only conclusion is that physical guarding should never be the best solution, as the crime arena is just impossibly big for effective physical security coverage alone. The respondents confessed that they even ignored certain areas and hoped for the best, which

was a question of taking calculated risks. However, the copper cable theft phenomenon continues to escalate and security budgets keep increasing to accommodate the appointment of more guards.

4.4.2.2 Integrated security systems

The Technology that everybody wanted was a technology which would stop copper cable theft; a technology that would make expensively manned guarding obsolete; a technology which could be successful as a stand-alone capacity. However, technology can never be regarded as a stand-alone protective function, it will always have to be managed, controlled, monitored and reacted on by humans. Technology is very dependent on support and maintenance. It is expensive, even more so than physical manpower, especially if not understood. Currently, no singular technology is available to effectively curb copper cable theft in Gauteng. CCTV, GIS and integrated security systems have become the buzz words in the copper cable theft security industry. However, 'integrate' means integration between all types of security systems, methods and strategies. Such a process implies a very high level of security management capacity, not just a technical capacity. It also implies intelligence, analyses, investigative and specialist reactive applications, to name just the basics. This strategy is the compilation requirement, which would be best suited for a Crime-IDO protocol.

Besides physical security methodologies this research found no other substantial security protocol used as a main stream strategy, apart from *ad hoc* crime intelligence driven experiments or smaller capacities. No system or capacity was utilised as a specific alternative, or continuous standard, other than physical manned guarding. However, the researcher found many 'stand-alone' tested technologies, with just as many abandoned systems, for example, on the railway lines old RFID systems were evident; and a very expensive integrated security platform, at a National Operations Centre (NOC,) was seen, but the application thereof was undeveloped at best. CCTV cameras and monitoring equipment were in limited use and if not managed effectively could become nothing more than expensive image recording facilities, which, according to the respondents seemed to be the case. It was clear that

technology concepts were regularly piloted, but a lack of qualified human resources to run, to manage, or to control such complex systems eventually shuttled these projects. The respondents acknowledged that the integration of security systems was usually too advanced for the current operators, and usually became an IT driven application, maintained by IT managers rather than a security tool utilised by security experts to achieve the desired outcomes.

According to the research findings the basic requirement for an integrated security capacity was to have a control panel displaying a visual Geographical Information System (GIS) that could immediately be interpreted by qualified operational risk control personnel in for example, a central Risk Control Centre. Such a Risk Control Centre (RCC) should be the hub to which all security related incidents were reported for remote control and/or assistance. All such incidents should be analysed in real time to identify possible patterns and profiles. The respondents all had some level of such a capacity, but none could demonstrate a total integration from where valid data could be derived for immediate warning through clear patterns and profiles. Some of the respondents stated that they were in the process of building a NOC/JOC to centralise and to control all operations and operational incidents.

All the respondents indicated that their greatest limitation, in making such an integrated security capacity work, was the lack of specialised personnel, or security experts who understood what technical integrated systems were all about and who could assimilate and interpret what was being projected for real time operational action. Another important requirement in such a capacity was a crime analyst for the dedicated gathering of crime intelligence, which could be profiled and patterned. Such an integrated system, if it was implemented and maintained correctly, would produce the much needed data, which would have to be analysed continuously. The respondents believed that from such a capacity they could identify the risk/threat/vulnerability profiles that could impact, with probability variations, on their work environment. This would provide the guidelines for best practice in reacting, combating and preventing

of copper theft via the Crime-IDO methodology. In doing this, they believed they could fully protect, prevent and prepare their enterprises sufficiently.

However, whilst a clear strategy for integrated security systems was absent, such a capacity would not get off the ground, in which case, manned guarding would still be the only real option. Possible future stand alone technologies will be discussed next.

4.4.2.3 Technologies designed and/or applied to combat copper cable theft

All respondents indicated that technology was urgently needed to protect, replace, and to change copper so that all gain from stolen copper was diminished and in the process the 'market' was taken away from the thieves. This Technology had to make melted stolen copper invaluable or it had to be a replacement technology that made the less valuable conductors such as, aluminium more favourable and copper obsolete.

'Kwena-Flex' and 'Tigre Wire' are technologies that provide these attributes. Unfortunately these hybrid systems and material are very expensive and not always practical. It must also be realised that to replace all copper immediately is not be possible, only that which has been should be replaced with this new technology. These replacements will, however, not dissipate copper crimes immediately as there are 25 000km's of rail lines and 360 000km's of power lines in South Africa that would have to be replaced.

The respondents within their limited capacity would use any means possible to make accessibility more difficult for the perpetrators of copper crimes. Within the restrictions and the enormity of the copper theft onslaught, the respondents mainly utilised standard security capacities, for example, special alarms on specific cables and networks with armed reaction in support where it was practical. Le Roux (2007:1) stated that the Telkom technology measures primarily included the installation of alarm systems that were activated when cable transmissions were interrupted. Areas declared as hotspots were hardened with more security measurements that incorporated physical guarding together with high level surveillance equipment, for example, night

sights. Other activities included a more direct hardening of structures by embedding cables in concrete, installing more alarms and putting extra cable ties in more controlled environments.

Where the theft occurrence was grave or a pattern of reoccurrence emerged, respondents employed specialised investigative resources that applied high tech equipment and professional personnel for surveillance and monitoring. The respondents seemed to be more trusting of this solution of apprehending the thief before he did something and if he was caught, to arrest him as soon as possible, and thus be directly involved in the process of investigating, arresting and prosecuting for maximum effect. This in essence was an integration of security systems, according to the Crime-IDO way.

Another technological option was to identify copper cables by marking these as part of the manufacturing process. However, the respondents had not yet decided on marketing the implementation of such technology as a main crime prevention measurement. High voltage and heat made these technologies vulnerable and unstable. It was also not crime preventative in the real sense of the word, merely reactive at best.

Singh and Omar (2011:1) argued that the South African government had at its disposal the technologies to embed markers in copper. The microdot system was first proposed to the government in 2009, but nothing has yet been done. They even priced such an exercise as to be approximately 0.03 cents a metre. According to Naidoo (2011:1), a microdot manufacturer and Data-Dot Senior Strategic Analyst, the first step should be to start looking for solutions that could be deployed at the copper manufacturing level, and to embed such technologies in the raw state of copper. He believed that technology, including microdots, could be used as a cost-effective method of identification because cables were; 'devoid of an identity once the casing had been removed. And by the time it reaches the foundry or for export, it is in its raw state and the individual who has it in their presence can claim ownership'.

However, marking all newly manufactured copper cables would only be of value to its owners and to law enforcement, and only if it was stolen. However,

the inability to properly identify stolen copper cables remained one of the main reasons why copper cables were so easily reintroduced in the recycling industry. According to Van Dalen (2009:1) everyone had to, as a matter of urgency, lobby their councils to start marking all items that were prone to theft with Micro-dots. This would also help law enforcement agencies to identify stolen goods. At the Copper Theft Conference, Leeburn (2011:18-25), mentioned that the following technologies, to prevent and/or detect stolen copper cables did exist:

i. Cable break-identifier.
ii. Copper wire with metallurgic contamination.
iii. Earth clamping.
iv. Wireless CCTV feed.
v. Aluminium replacing copper.
vi. Various marking and identifying technologies. (Embossing – Embedded Tape – Etched wire – Microdot – DNA Trace).
vii. Wire hardening procedures.

The researcher and respondents experienced of all of the above-mentioned applications and found that not one of them stood out as the solution that could stop copper theft. They all had limitations and many were still in the research and developmental phase.

Alternative technologies other than copper markers had also been used. According to Singh and Omar (2011:1), the eThekwini municipality resorted to alternative measures between September 2010 and February 2011, when it had incurred more than nine million rand expenditure related to network theft. They employed additional task teams and specific technologies with which to combat unauthorised entry into the substations in an attempt to curb the copper cable theft problem. Pepper gas systems were installed in sixty four substations that had been identified as hotspots; alarms were also installed on overhead lines.

The respondents all stated that the capacity to manage such technicalities would either make or break the successful implementation thereof. Telkom, as

an example, had been lambasted after many years of copper losses which seriously impacted on essential communications. In Moneyweb, (2012:1). Telkom responded, emphatically stating that to counter the scourge of cable theft, it had adopted various interventions, including alarming critical and sensitive cable routes; employing the services of armed security firms; deploying various wireless technologies as an alternative to copper; assessing vulnerable aerial cable routes and where feasible burying these cables underground.

Notwithstanding this Telkom's losses are still close to one billion rand per annum. This shows that all the technology and resources in the world will not alleviate the problem if the right strategy is not scientifically designed, implemented and maintained by an accredited security specialist.

4.5 THEME D FACTORS LIMITING THE SUCCESSFUL MITIGATION OF COPPER CABLE THEFT

4.5.1 Weak collaboration and leadership

4.5.1.1 Collaboration needed and the current status

One of the most frequently mentioned findings of this research was that the respondents of Gauteng experienced the lack of proper leadership when it came to a unified and facilitated capacity between all role players. They had reached their limit a long time ago, they wanted to be rescued.

Copper theft could only be beaten through a collaborative approach. Collaboration is commonly defined as: 'A cooperative arrangement in which two or more parties work jointly towards a common goal' (Arendse. 2011a:1). In his presentation at the conference; Policing in South Africa: 2010 and beyond, General Pruis from the SAPS, suggested that

> The answer to South Africa's problems may be to put people from different disciplines in a room, throw problems at them and ask them to come up with solutions, that there was a lot of information available and that if people started working together they would find solutions.

A measure for success in combating copper cable theft can be found in close networking with the SAPS and other role players (Vecchiatto, 2009:1). Van den Berg, who is also a senior consultant in Eskom's corporate security risk management department, said that he believed that continued concerted efforts to deal with the crime of copper cable theft was the only sure way of having positive results (Fin24.com, 2007:1). The Cape Chamber of Commerce ran a Copper theft summit in April 2012 under the banner of using a collaborative approach to beat copper theft. The role players included; the MEC for Safety in the province, the South African Police (SAP), Parastatals such as Eskom, Transnet and Telkom, Business Against Crime (BAC), Agri-Forum, NPA, second-hand dealers, SARS, the City of Cape Town and other relevant participants. This conference came at a time when copper theft had reached epidemic proportions in our country, with losses running into billions of rand.

The challenge was the fact that the copper cable crimes were not separately reported, despite the significant impact it had on the economy and more specifically on industries and on the communities that were targeted by this type of crime.

BACSA (2009:1a), stated that the information flow and analysis to enhance the work of the NFCCC (Non-Ferrous Crime Combating Committee), depended on receiving reliable information from all the role players with regard to incidents, arrests, prosecutions and the issuing of certificates in terms of the old Second-Hand Goods Act (no 23 of 1955). The analysis of the collected statistics would not only allow accurate indicators to be developed, it would also provide the necessary information to indicate the prevalence of the crime and any associated results in reducing the crime. A centralised analysis of the national statistics would give a monthly assessment of the effectiveness of the implemented strategy initiatives used to combat and to prevent this type of crime. This was precisely what the respondents were asking for and what should have been an automatic outflow from the BACSA facilitation process.

According to the respondents, a few years ago, such a Non-Ferrous Theft Combat Committee (NFTCC) did exist. It was run professionally by

stakeholders under the auspicious of Business Against Crime, South Africa (BACSA), - the watch dog for businesses and a body to help further the interest of businesses. It consisted of approximately 130 persons. All decision making processes were done at national conferences, 35 area committees kept everything relevant. In fact a clear operational strategy was in place. Everything was kept central, all members plus the Police were part of this strategy making body. When needed, the NFTCC utilised an external facilitator for big decisions and the role players conducted counter copper theft operations together. But in 2009/2010 the reins were handed over to the SAPS and all such co-ordination went astray. According to the respondents, the SAPS role players and structures were unknown because they frequently changed, with the result nobody seemed to be in control. What worried the respondents was that the SAPS' capacity regarding infrastructure, experience and knowledge to counter this specific crime was very low. The general consensus was that after the SAPS had been handed the reins by BACSA in 2009/2010 everything came to a standstill and a similar meeting, with all role players present had not yet been scheduled.

Another aspect of concern was that even though the different approaches used to combat copper cable theft were clear, they did cause some confusion because it seemed as if each Gauteng area and province in South Africa still operated in silo's - each with different approaches, and each with their own custom made operational methodologies with which they combated similar crimes. Gauteng participants were basically ignorant of what went on across national and international borders; they were too busy fighting their own war against copper cable theft. Some respondents did not even know about other organisations, networking opportunities and forums regarding copper cable theft mitigation that took place in the rest of South Africa. This was even happening between role players within Gauteng. The bottom line was role players might know about each other and have limited or per chance contact, but basically it was a case of everyone for himself.

The main role players in Gauteng were the Telkom, Eskom, Transnet and PRASA stakeholders. These also were the sample unit that was the area of

focus in this research. The respondents were all in accord that they had expected leadership and facilitating roles from BACSA and the SAPS, for the mitigation of non-ferrous metal theft. However, the current situation was in a continuously fluctuating process and the respondents felt that collaboration had effectively come to a standstill.

4.5.1.2 The NFMCCC rated in the copper theft environment

A relevant sample questionnaire was distributed amongst role players within the NFMCCC Western Cape to determine the perceived level of collaboration within the NFMCCC initiative. The feedback received was analysed in order to draw a conclusion (Arendse, 2011a:10). The questionnaire sought to ascertain the perceived level of collaboration, amongst this group of eleven role players. The questionnaire required participants to, rate their perceived level of collaboration on a scale of 1 – 5 based the following key:

- 1 - very poor = needs serious attention;
- 2 - poor = not on effective standard;
- 3 - average = meets only the minimum level of collaboration;
- 4 - good = achieves an effective standard witnessed in successes;
- 5 - excellent = collaboration is optimally functioning and securing major successes.

The following data outcome was achieved: 63% of respondents returned with relevant feedback. 37% preferred not to participate in the questionnaire. The analysis of this data from the 63% of the respondents revealed that an overwhelming 71% perceived collaboration to be on a level rating of three, meaning it met only the minimum level of collaboration. It was clear that the members engaged in the copper cable theft initiative believed that, regarding effective collaboration, the NFMCCC left much room for improvement (Arendse, 2011a:1).

The respondents in this research were even more negative in their perception of the current NFMCCC.

4.5.1.3 Leaders and initiatives within the copper cable theft combating environment.

Van Dalen (2009:1), a Member of Parliament (MP), stated that shared knowledge was power. In his opinion the only alternative way forward was the empowering of the NFTCC and/or NFMCCC type Combating-Committees by means of legislation to give advice, enforce compliance and to make recommendations at Parliament, in an attempt to combat non-ferrous metal crimes. The NFMCCC should report to the Portfolio Committee of Safety and Security on a quarterly and an annual basis regarding the theft of non-ferrous metals on a provincial and on a national scale. The NFMCCC had to be granted its own budget in terms of legislation, and operate as an independent body within the Safety and Security Cluster. It was Van Dalen's proposal that this should be chaired by the highest-ranking police officer responsible for the enforcement of the Second-Hand Goods Act (no 6 of 2009). What was needed was an influential, official leadership body that could make decisions and enforce them.

Collaboration between all role players was essential for fighting copper cable theft. However, it seemed as if the direct opposite had transpired with regard to what Van Dalen and Van den Berg had suggested. Pillay-van Graan was of the opinion that the successful Non-Ferrous Theft Combating Committee (NFTCC), the forerunner of the NFMCCC, was no longer the industry led body that had been created in 1993 to represent business and to watch and to lead the police. It was instead a government led body chaired and controlled by the police. According to Pillay-Van Graan this had to be seen as a major achievement as it would instil the governance structure at the level where it was required, and specifically obtain the required buy-in and co-operation from the South Africa Police Service and other law enforcement organisations that had not been available in the past. (Venter, 2008:1)

The respondents, however, saw this as a noble idea; the research had shown that the reality was that the SAPS did not have the capacity or capability to take up this responsibility. Industry needed a BACSA type of organisation to be the facilitator between the industry led body NFTCC/NFMCCC and the SAPS.

The respondents felt that since the NFTCC was not driven via BACSA, facilitation had stopped and members were isolated.

The respondents all stated the need for a qualified facilitator - the only way to combat copper cable theft effectively. This could only happen where all role players were manoeuvred to become collaborative partners. Since the SAPS had taken over this role, the whole collaboration workgroup had become leaderless and the respondents were on their own. When the respondents were contemplating the CRIME-IDO concept, they stated that if costs were shared between victims of copper cable theft, the resources could be shared and operations could be planned. The respondents saw the breakdown of collaboration and no formal leadership as possibly the major reason as to why the Crime-IDO concept would not take off.

The senior managers in Gauteng manager's knew about the international phenomenon of copper crimes, they even supported other countries as consultants. However, in SA each stakeholder focused on his own problems and, therefore, was not very interested in what the other stakeholders and provinces were doing.

The singular most significant point in the research of this phenomenon was the fact that a combined effort in the fight against copper cable theft was non-existent in Gauteng. The main reason being no effective leadership structures were in place. It also became clear that the respondents had been caught totally off-guard by the change of leadership - from the BACSA to the SAPS. The fact that the SAPS per se, was now the supposed leader was not the problem, the biggest issue was that such a move had been done singularly, without involving the role players', without handing-over procedures, without proof of concept and without a pilot period. It had just been done, with no clear plan or project management. The outcome was that every organisation was now separately fighting the same enemy with limited resources resulting in a lot of duplication taking place, which in turn could result in millions of rand being wasted.

Bindemann (2011), called on all municipalities to become involved in a singular forum, with, for example; the SAPS, SACCI and BACSA, and to join hands with all role players to form a united front against copper cable thieves. He also stated the need for a political champion. As the SARPA representative in combating copper cable theft, Bindemann had an in-depth understanding of copper cable theft and its requirements from an operational viewpoint, which also encapsulated the training of police officers, judicial staff members and municipality officials. This training material would be incorporated in the national law enforcement training material. SARPA was closely involved in a National Rationalized Specifications (NRS) initiative to develop a new guideline to combat utility metal thefts (NRS, 101). This intended drive was a very positive movement in the right direction. However, the mandate was still with the SAPS.

At a copper theft conference (Copper Theft Conference 2011), Yusuf Abramjee, the Head of Crime-Line, a Prime Media Radio 702 initiative, stated that Crime-Line is the first tip-off line in the world to utilise SMS technology in the fight against crime. Crime-Line is an anonymous crime tip-off service that gave members of the public a safe platform to pass information about criminal activities to the police. This initiative was launched in June 2007 and had since yielded phenomenal success with close to 40 million rand in seizures and over 1 000 arrests. He proposed that all copper cable theft victims should support this initiative not only as a matter of urgency but also to empower collaboration efforts, it should be a prime instrument in fighting copper cable theft.

4.5.2 SAPS and legal framework roles in combating copper theft

4.5.2.1 SAPS

The SAPS as institution was respected by all respondents. However, the capacity of the SAPS and what was expected of them in combating non-ferrous metal theft was regarded by most respondents as disappointing and it caused high levels of frustration.

However, according to Singh and Omar (2011:1), the Natal police were threatening to take a hard line after they had identified copper cable theft as a priority crime in the province. A special task team had been set up to deal with this matter. The Natal SAPS, Brigadier Aaron Robert Harry, provincial head of visible policing, said they were taking a tough stand and would not hesitate to prosecute offenders. He said cable theft was brazen, with suspects not hesitating to steal whenever they had an opportunity. 'We mean business and are treating this as a priority crime. We want every resident who sees this to report it to us. We want dodgy scrap yard dealers to know that we are coming after them.'

According to Advocate Simi Pillay-van Graan, the Business Against Crime South Africa executive of strategy, copper cable theft had been declared a high-priority crime that would receive the focus and the attention it required as government was at last realising the impact of copper cable theft on the economy. The organisation was engaging with the Department of Trade and Industry (DTI) to incorporate more stringent legislation that would see stricter regulation of import and export processes, which would ensure that the exporting of stolen goods, including copper, was punishable by a prison sentence of 10 - 15 years (Naidoo, 2011:1).

Singh and Omar (2011:1) cited Adv Pillay-van Graan stating that the SAPS had been very proactive not only in the provinces but also nationally. She also mentioned that high level plans would be developed for each province and more vigorous policing would be in place. What was most critical, however, was that 'business needed to get its house in order'. Pillay-van Graan explained as follows: 'It is very easy to say there is a reliance on law enforcement organisations to do the policing, but we believe most of the risks exist within businesses. There is a need for businesses to unpack their value chain and to clean up their houses'. Pillay van Graan further stated that business also needed to identify internal risks throughout their own value chain, from financial investment to security, skills and capabilities of staff, including the outsourcing of services.

This was, however, not the same message the respondents from Gauteng had received. The respondents stated that they were more on their own than ever before. They did not expect any help. They perceived the SAPS as being clueless; dockets got lost, and cases took months and even years to be finalised. Copper theft was clearly not a priority of the SAPS. Crawley (2011:1) stated that the SAPS considered cable and copper theft as a non-priority crime, and they used their resources to combat higher crime priorities. Emotional and sensational crimes were supposedly more important. The capacity and competence in the SAPS were rated as being very limited because they did not have the knowledge, the capacity or the resources with which to fight copper cable theft. Specialist security functions could not be expected of smaller sections such as the railway police as they did not have the capacity to fulfil these functions.

They seemed to have disappeared in the justice system, according to Crawley (2011:1). The basic requirement for visible policing was not achieved as had been expected. For example, the uncertain situation regarding the railway police had led to a decrease in the security capacity of all related respondents because they had budgeted for a better response and more support from the railway police. The service which had been promised, did not realise, thus the respondents who had budgeted for this support found them in an even worse situation.

According to the pre-2009 respondents a specific SAPS Non-Ferrous Metal Unit had been operational; but this function was handed over to the Organised Crime Unit at the end of 2009 under the auspicious of the new SAPS restructuring. In this process, a lot of expertise and capacity had been lost. The respondents were in agreement that copper theft on the ground level was not a priority of the SAPS. At most the SAPS patrolled scrap metal dealers three times per month, but no real effect had been noticed as the SAPS members were not adequately trained and nor were they vigilant enough. The SAPS with its limited manpower, knowledge, vehicles, etc., missed the bigger picture altogether. The respondents even mentioned that the SAPS were only there to process the crime statistics for CJS records, not for protecting essential

infrastructures from criminal activities. Some of the respondents were not even sure if the police had a protection function, or if they were only to be perceived as being reactive. One respondent went so far as to obtain a special authorisation to have his security managers empowered as Peace Officers to police the scrap metal industry. But it was accepted by most that the constituted duty of the police was to protect the life and the property of all citizens. According to Dianne Kohler Barnard, MP (Safety & Security) and Adv Hendrick Schmidt, MP (Minerals & Energy), unless decisive action was taken, it was likely that metal theft would cause more needless pain and suffering and place even further strain on the economy. They strongly believed that there was a great deal that could be done to deal with this scourge if the police and business were better equipped to combat metal theft (DA Discussion Document 2008:1).

The research clearly showed that on all levels the SAPS was regarded as uninvolved, untrained, ignorant, and under resourced. In general, the research showed that senior security managers felt alone in their fight against copper cable thieves. The crime of copper cable theft was not a priority of the SAPS. Since BACSA had handed over the NFMTCC leadership responsibility to the SAPS in 2010, the SAPS had been unable to take this very high priority crime and fight it.

This SAPS' situation was underlined by Van Dalen (2009:1), a Member of Parliament, who had outlined the following three requirements for the SAPS to become what they were expected to be:

i. The South African Police Services (SAPS) had to reinstate the SAPS Crime Code for copper related thefts. In the past, there used to be a separate code for the theft of copper, but as a result of internal management restructuring this was done away with. The code was used to capture crime information in general and, therefore, all incidents of copper theft had used the same code. Thus the copper cable theft was recorded in various different ways, from malicious damage to property, to unspecified theft, making it impossible to generate specific national or provincial statistics on copper cable theft.

ii.   Without a central means to collate and to compile all crime information on copper theft, it was impossible to properly engage in the investigation of theft trends and syndicate operations across South Africa.

iii.   Van Dalen (2009:1) further stated that the SAPS needed to reinstate the specialised unit that used to deal with non-ferrous metal theft. The old truck-theft unit had been responsible for this specialised work. But this unit was closed down a few years ago as part of the general move to shut the specialised units and to transfer critical skills to station level. Given the nature of copper cable theft, which required the involvement of organised criminal activity, it was imperative that a specialised unit was set up to focus on these criminal activities as part of the drive to arrest and to convict perpetrators. Such a unit could report to the organised crime branch of the SAPS. The failure to maintain specialised units within the police was an indictment of their ability to fight crime in a focused manner.

City Power, according to its CEO, Silas Zimu, was taking action to have certain installations classified as national key points in terms of the National Key Point Act (EE Publishers, 2010). This could possibly be the best idea if all the issues with the SAPS were taken into consideration. However, essential service networks should all be regarded as key points.

It was clear that combating copper theft did not depend on one solution only. Therefore, a multi-disciplined, multi-specialist, high level management body was necessary that knew more than the criminal master minds, and had the dynamics to hunt copper cable thieves down with a vengeance. If law enforcement did not show this capacity and commitment to erode copper cable theft, it would become part of the problem. A new Second-Hand Goods Act (No 6 of 2009) had been designed to empower law enforcement to combat copper cable theft.

4.5.2.2 The legal frame work (Acts, Laws and Processes)

Every South African had the constitutional right to have access to food and water and essential services such as electricity and telephone lines. Unfortunately there were too many criminals crippling these networks, leaving communities and businesses without electricity and telephone lines.

Van Wyk (2011:9) mentioned that no separate crime code for copper cable theft existed even though in 2008, it was the third most stolen commodity in South Africa after clothes and cash. He mentioned that copper theft should in actual fact take first place if the unreported cases were taken into account. The unavailability of statistical data on the rate of copper cable theft detection and conviction, made it impossible to draw an inference relevant to the success in this fight. The reluctance to communicate these statistics could subsequently bring thieves and the broader public under the impression that this crime was low risk, which in turn could lead to an increase in incidences (Arendse, 2011).

In general the respondents felt that currently the law was sufficient, even though a new Second-Hand Goods Act (no 6 of 2009) was about to be implemented. Much hope had been placed in this new Act being able to change the copper theft situation through better regulation and stiffer sentences. The new Act was very clear and was at first sight lauded by the respondents, the public, the CJS (Criminal Justice System) and the SAPS alike. This research, however, found a great deal of scepticism did exist regarding the successful implementation of this new Act and the expected SAPS capacity to enforce and to maintain it, especially as this new Act required even more SAPS involvement than the old Second-Hand Good Act (no 23 of 1955).

The respondents believed that the current problem did not reside with the old 1955 Act; they firmly believed that the law enforcement role players just could not enforce the 'old' Second-Hand Act. According to the respondents the old Act was not properly policed and neither would the new one be. The capacity to process, enforce and responsibly manage this new Act operationally was still very unclear. The copper cable theft market could not be controlled without

proper law enforcement patrolling the new Act in full. Currently the law enforcement agency (SAPS) had demonstrated that it did not possess the capacity and competence to enforce it. Non-ferrous metal theft in general and copper cable theft in particular was and had never been seen and treated as a priority crime.

Geldenhuys (2008:1), states that because the legislation that regulated the old Second-Hand Goods Act (no 23 of 1955), was outdated and inadequate it was difficult to police the scrap metal market effectively. This Act had not been designed to deal with scrap trading in the modern day environment.

The respondents felt that in the justice system the prosecutors and the magistrates should be sensitised and supported by expert witnesses. Some were informed, but most were clueless. Their statements were supported by Van Dalen (2009:1), who emphatically stated that a comprehensive training module on non-ferrous metal theft, in particular copper cable theft, was urgently called for on a national scale, to sensitise all the judicial officers –the public prosecutors and the judges, in the court system. Without this training, the public prosecutors and judges frequently did not know how to proceed with the effective prosecution and judging of such cases. There also had to be a comprehensive training module for the SAPS members, in particular for detectives. Detectives had to be trained on how to analyse and to detect evidence that could be used at the scene of copper cable theft. The same module also had to be incorporated in the basic training for all new SAPS recruits.

BACSA (2009a:2), mentioned that a training manual and a series of workshops would assist law enforcement officials to effectively carry out their mandate in the successful arrest and prosecution of criminals engaged in the theft of non-ferrous metals. Specialised training would include the focus on the management of dockets, intelligence and prosecution-driven investigations, court processes and the application and enforcement of relevant legislation, including the Second-Hand Goods Act (no 6 of 2009).

Van Dalen (2009:1), stated that the new Second-Hand Goods Act (no 6 of 2009) had to be enforced. The Second-Hand Goods Act (no 6 of 2009) contained several measures that contributed to the fight against copper cable theft, such as; traders in copper (non-ferrous metal) had to obtain a license to operate, they had to keep accurate records and were subjected to site inspections by the SAPS. He also argued that the backlog of dealer licenses was a great problem. Many dealers in non-ferrous metals had applied to the SAPS for licenses, in terms of the Second-Hand Goods Act (no 6 of 2009), but to date they had not been issued with their licenses because of delays within the SAPS. This meant that many dealers were operating illegally, as they only had a receipt from the SAPS, indicating that they had applied and were waiting for the license. Such interim measures made it impossible to hold dealers accountable instead these created an opportunity to be involved in crime. The necessary administrative capabilities within the SAPS needed to be improved to ensure that all applications for licenses were dealt with, within a maximum period of three months.

Adv. Lorinda Nel, from Business Against Crime SA, stated that it was inconceivable to think that legislation drafted more than 50 years ago, would still be relevant in today's modern and technologically advanced society. For many years the Second-Hand Goods Act (no 23 of 1955) had been the only legislation available with which to regulate the business of second-hand goods dealers. The major problem with this Act was the difficulty to identify the origin of copper cable once it had been stripped of its plastic casing. As a result, scrap metal merchants, caught with stolen copper cable, were often charged with being in possession of suspected stolen material, (a lesser offence than theft) for which the current penalty was only a maximum of one year imprisonment. The original Act (Act 23 of 1955) had definitely become outdated (Kempen, 2009:1).

Hess, Telkom's head of network field services, summed the new Act up as follows, 'Under the Act, copper is declared a "controlled metal" and a number of limitations are placed on its trade and possession' (My Broadband, 2012:1).

Arendse (2011a:1), mentioned that although the new Act sought to promote self-regulation it still lacked the necessary regulations to achieve this. Although the new Act brought some hope, if it was not going to be well regulated there would be little benefit in it for the parastatals that lost hundreds of millions of rand per year because of copper cable theft and vandalism. Hess, Telkom's head of network field services, put it simply 'The principles of the new Act are solid but much depends on the efficiency of compliance and implementation' (My Broadband, 2012:1).

Adv Lorinda Nel, of BACSA, dissected the new Act to show, in a nutshell, what it wanted to achieve (Kempen 2009:1);

<u>The aims of the new legislation</u>

     i.   Regulate the business of pawnbrokers and dealers in second-hand goods;

     ii.   Limit the trade in stolen goods and

     iii.   Promote ethical standards in the second-hand goods trade.

<u>Important to the Non-ferrous Metal Industry</u>

     i.   Legitimate dealers would benefit.

     ii.   Dealers in or recyclers of metals such as copper and aluminium had to be registered. No recycling equipment could be kept on any premises other than on those of registered recyclers.

     iii.   Provision for routine inspections during working hours.

     iv.   Warrants for search and seizure.

     v.   Empowering law enforcement officials to search, to seize and to seal off premises.

vi. Provision to extend powers in the Act to public entities, to assist with enforcement e.g., Spoornet, Telkom and ESCOM.

vii. Acquisition, possession and disposal of burnt cable was an offence.

<u>No dealer could:</u>

i. Acquire or accept pawned goods from any person under the age of 18 years.

ii. Take into his possession goods if he was not convinced that the person was the owner or titleholder and was authorised to dispose thereof.

Recommendation of respondents: any copper without a purchase record must be confiscated. Even better, make it unlawful for any person to possess or to transport specified quantities of non-ferrous metals unless in possession of a specific permit.

iii. Goods could not be changed or altered within a period of seven days.

Recommendation of respondents:

No cash payments, must be via cheque payments

Sellers with more than one sale record had to register as a non-ferrous metal vendor.

A dealer could only buy a certain amount of copper per month, from small deliveries.

iv. If the information provided seemed suspicious, in that the goods might be stolen, it was their duty to report it to the police.

v. Reports to be noted in the prescribed manner and the complainant issued with an acknowledgement.

vi.   Criminal offence if not reported.

vii.   Identity and particulars of all acquisitions or disposal of goods.

viii.   Description of goods.

ix.   Signature/ name/ identity number of client.

x.   Copies of identity document or passport.

xi.   Retain documents for 5 years.

<u>Disqualifications for dealing with sellers:</u>

i.   Previous conviction- sentenced to imprisonment without option of a fine for certain offences.

ii.   If in preceding 10 years, convicted for an offence in terms of the 1955 and/or the 2009 Act's on Second-hand Goods.

iii.   Un-rehabilitated insolvent.

iv.   Under 18 years.

v.   Does not permanently reside in RSA.

vi.   Any other law that disqualifies a person from carrying on with a business.

vii.   Business in which a person with an interest, a partner or a beneficiary of trust had been disqualified.

According to Van Dalen (2009:1), Member of Parliament, the Act on managing Second-Hand Goods had to make it difficult for people to steal property. Some communities covered up criminal activities for fear of reprisals, or to protect friends or family members. The Act needed to make the consequences so clear, that no one would want to keep quiet. He further stated that Government needed to appoint a judicial enquiry to address flaws in the law enforcement

system. Non-ferrous theft had to be classified as a serious organised crime, so that the Asset Forfeiture Unit and the Scorpions/Hawks could be called in at any given time.

The promulgated Second-Hand Goods Act (no 6 of 2009) had clearly brought into play relevant capacities with which to regulate the dealing of second hand or stolen non-ferrous metal. There was, however, still a lot to be done and this Act had to be seen as the first step in the right direction. This Act had to be incorporated by all the user role players, only then would it grow to its full potential. The NPA recently secured the conviction of two people accused of stealing copper cable from a municipal store. The sentences passed were 11 and 12 years' imprisonment respectively; emphasising for the first time the severity of the crime (Planting, 2011:1).

The new Second-Hand Goods Act (no 6 of 2009) would be a very strong tool, if successfully implemented and maintained by law enforcement, and if the self-regulating expected by the copper vendors, for example the Metal Regulations Association (MBA), happened. The core problem area, namely, the internal or local copper market would then be under control. However, if the success of any Act promulgated was based on the expectation that industry would follow the rules and regulations through self-regulation, it would be tested to the hilt. The copper cable theft phenomenon needed an ethical approach, but because the problem did not seem to reside with the bigger vendors, where self-regulating was easier to implement, the same problem with smaller vendors might be much tougher to mitigate. The crux of the success of the Second-Hand Goods Act (no 6 of 2009) would not be in the contents but rather in the implementation and enforcement thereof. Scrap metal dealers were the group most implicated in the new Second-Hand Goods Act (no 6 of 2009).

Business Live (2012:1) reported 72 533 incidents of copper cable theft in 2011, but only 10 736 arrests were made. In the same report SACCI mentioned that the sentences recently passed had become harsher. Sections of the new Second-Hand Goods Act (no 6 of 2009), dealing with the accreditation of the government Second-Hand Goods Dealers Associations, had been

implemented. It was gazetted 9 December 2011, that President Zuma had authorised the implementation of the following sections of the Act.

- Define a controlled metal
- Criminalise dealers not reporting suspicious transactions, and
- Criminalise the dealing in, or possession of, non-ferrous metal (e.g. copper) of which the cover has been burnt.

These provisions regulated suspicious transactions as well as the possession, acquisition and disposal of metal cable of which the covering had been burnt. The full implementation of the Act would be based on the promulgation of outstanding regulations that were due at the end of April 2012 and on the training of designated second-hand goods police officers. On 13 January 2012, the President proclaimed that the parts of the Act of 2009, specifying maximum prison terms for offences, would come into force on 16 January 2012. This in effect would mean that anyone guilty of the crimes listed above might be sentenced to a maximum of 10 years imprisonment. In some cases, where offences were on-going, a court might declare the goods in question to be forfeited to the state, or further penalties could be imposed. SACCI said that police stations also had to be mobilised and capacitated, so that the full implementation of the Second-Hand Goods Act (no 6 of 2009) could take place in the second phase. (The new Second-Hand Good ACT, no 6 of 2009, would have been be promulgated in full by the time this research was completed.

4.5.3 The scrap metal dealers' role in copper theft

It costs South African utility providers more than 20 million rand per month to replace stolen copper and copper cables, while local metal dealers amassed a fortune from copper exports fetching more than 350 million rand per month (Singh & Omar 2011:1).

All aspects of this research found the scrap metal vendors were the real culprits responsible for the dire situation in which the respondents found themselves in. The respondents stated clearly that scrap metal dealers controlled the market for stolen copper, as all stolen copper had to go through

the hands of scrap metal dealers and the recycling process. The scrap metal dealers were regarded, on the one hand as the key to the successful mitigation of copper cable theft, and on the other hand the core institution that kept copper theft alive and well. Some respondents even stated that 'all' scrap metal dealers should be regarded as suspect.

The reasons were that scrap metal dealers were unrestricted in their dealings as they were not being sufficiently policed. There were so many loopholes in the system that they in a way had become untouchable and were able to get away with buying and selling stolen copper. When the presenter of a copper theft workshop in 2001 asked a scrap metal vendor why he bought material his answer was simple; 'If I don't the next man will, it's a business'. A respondent stated that whilst demand and supply currently depicted the market she believed that 95% of all metal merchants would buy stolen copper if they were presented with it.

The number of legal scrap metal dealers in SA was about 5000, with just about as many bucket shops (bucket shops were mini and informal scrap metal dealers mostly unregistered with a mobile/nomadic capacity). They created the market. Bucket shops and scrap metal dealers were often one and the same, even working with and for each other. Together they found loopholes in the system, for example, they moved the copper around and made it difficult to determine the origin of the copper, especially as the declared amount was the same as the amount that had been found on inspection. A scrap metal dealer could make copper unidentifiable within minutes.

Transnet, Eskom and Telkom by agreement, used only one service provider for their scrap metal. Everything involving aluminium and copper was done on site. But the respondents stated that at best, only about 25-50% of their copper was channelled through such a service provider, the rest still went the illegal route. It was, however, difficult to prove differently. This agreement was frequently inspected for 100% compliance, and accordingly the respondents had to ensure that the copper was marked, it had to be as unique as possible. The scrap metal dealers were trained to identify this. A receipt plus a poster system was in place at all scrap metal dealers, no excuses were tolerated. Other scrap

dealers were not allowed to have on their premises any copper with the prominent markings of Transnet, Eskom and Telkom. If these inspectors found suspect copper on the premises of these scrap metal dealers they would act according to the law especially if the copper in question was suspected of being stolen.

The respondents were basically despondent with the current situation; some even demanded that all copper scrap dealers should be closed immediately. The CEO of City Power felt the same, but he stated that closing the scrap dealers would not work as they would simply open somewhere else (EE Publishers, 2010). A request was frequently made for a product that would formulate a device that would make copper reduce or even diminish its value if recycled or melted by scrap metal dealers.

The majority of the respondents stated that it was an accepted fact that scrap metal dealers would buy any copper regardless of its origin. It was, therefore, very difficult to monitor and to ascertain if compliance was met without the strict control of the SAPS. However, the SAPS manpower was not sufficient to cover all the scrap metal dealers, even though, according to the SAPS Journal (2007:1) the SAPS was going to crack down on second-hand dealers who bought stolen goods from the criminals and who were not compliant with the Second-Hand Goods Act. The effect of this 2007 promise had in effect come to nothing.

The question remained who and what could control the scrap metal dealer? According to Nefdt (2007:1) there should be a minimum requirement to closely monitor the municipal depots and the scrap metal dealers with mandatory CCTV at all times. This was an idea that had come up in many of the discussions with the respondents. However, the management of such an application would have to be managed by a high level well qualified capacity.

The general feeling of the respondents was that if there was a strict and clear acceptable policy that controlled all scrap merchants they would have to work together. They knew what was expected of them, but they ignored compliance because of bad controls, weak law enforcement, and untrained police.

Nancy Strachan, CEO of the Recycling Association of South Africa, was of the opinion that the recycling industry could play a vital role in effectively reducing copper and aluminium theft in South Africa. This they could effortlessly do by not purchasing stolen goods. If they were alerted timely of which materials had been stolen and from where they had been stolen they could then refuse to purchase these goods and in the process prevent it from being sold in the market. If an item could not be sold in the market, it would eventually lose its value - even to the criminals. Strachan further stated that scrap yard dealers, however, were often unfairly blamed for creating a market for stolen copper. According to Strachan the scrap metal recycling sector had worked actively on preventing and reducing the problem of cable theft in South Africa, but this deduction did not seem to be supported by those that were affected most. She said the industry was regulated and legitimate dealers had to comply with criteria set down by the association when accepting scrap metal (Singh & Omar 2011:1). But then again, not all scrap dealers were legitimate.

However, even with all the Acts, law enforcement resources and scrap metal dealers under control, it would still not come to anything if the will and capacity of leadership did not inspire and change people to adopt a culture of zero tolerance to crime.

4.5.4 Political will, effective counselling and SA crime culture

The research revealed that generally there was a political will to combat copper theft effectively. The most recent political support encountered was by Sikhumbuzo Eric Kholwane, chairperson of the Parliamentary Portfolio Committee on Communications, who stated that his portfolio committee needed to engage in the Telkom copper theft matter, to find alternatives and solutions (MoneyWeb, 2012:1). But the incapacity of politicians to support their promises with corresponding deeds seemed to be at the order of the day. The general crime culture in South Africa had to be phased out before copper theft would be seen by the general population as being wrong. This, according to Bruce and Gould (2009:19), had to be the primary task and ownership of the state in addressing the socio-economic, political and historical factors that contributed to the high levels of crime.

a. Political will. The progress in fighting copper theft was slow, but as reported by Leedy (2011:1), there did seem to be a new political will to eradicate the copper theft phenomenon. This will had been verbally demonstrated and supported by decisions to be taken at the highest level of political will at Government and at the State President's level. The SA Police Service was moving from a reactive to a proactive methodology to combat this type of theft. However, the capacity was still not there to realise the political will and/or decisions. A minister even proposed that copper should be declared a precious metal. But after much debate it was concluded that this proposal was not practical. The respondents felt that political commitment was there, which was good, but no operational capacity to support this commitment had ever materialised. Political powers should understand that where it was lacking in delivering on promises it was in fact necessary to act..

b. Effective counselling. Respondents felt that effective counselling to top echelons in industry, regarding the copper theft phenomenon was imperative. Unfortunately security had become a dumping ground for 'connected' appointees who did not understand the problem, or the field of security as a science. These individuals then struggled to get the right message across.

c. The crime culture. Throughout this research there was not one person who did not denounce the current situation caused by copper crimes in this country. Every law enforcement agency and political party will collaborate with any enterprise or entity that wished to help and to attribute. The enormity of copper cable crimes was staggering, and it impacted directly on essential services, infrastructure and economic stability on micro and macro environments. Calls for new laws and calls to grade cable copper theft as acts of terrorism and to deal with offenders as saboteurs were rife. Why then did it go on unabated? According to Coetzee and Horn (2006:1) the only deterrent against becoming involved in crime was the mindset of the worker. The company should therefore strive to create, in the workers corps, a culture of responsibility and loyalty towards their employer. Social development was an important method to holistically counter crime. The

respondents experienced that the citizens did not realise their role in building the country. Everybody was just there for themselves, and the need for immediate gratification was evident without considering the future legacy. It was clear that there was a deeper meaning to be read into this problem; many respondents mentioned that South Africans had become used to crime. Historically it was used to try and overthrow an apartheid regime; lawlessness was encouraged, and crime became an acknowledged way of life. Now, after getting their freedom everyone was expected to change. What had remained was that South Africans had become more lenient towards crime, especially victimless crimes and crimes against the establishment. Crime had become a way of life and it was judged on a case by case principle rather than on ethical principles. Within this mindset it should not be a surprise that a crime-culture was tolerated and even sometimes supported.

d. Combating copper cable theft originated from the stakeholder environments, organisations, corporates or parastatals. There were internal challenges within these environments that had an impact on combating copper theft.

4.5.5 Internal organisational challenges in combating copper cable theft

4.5.5.1 Challenge: The threat, risk and vulnerability as experienced by top structures

All respondents stated that the perceived threat was Management Board/EXCO driven and was based on holistic risks, threats and vulnerability parameters as perceived by the top structures. The security manager would understand how to minimise the impact by choosing between treating, transferring, tolerating, and terminating decisions that needed to be made and understood. The only aspect that was taken into account was the impact and the probability of the threat as perceived by the victim; the perspective of the crime or threat as perceived by the business thus always had to be clear. The question was: What was the risk or the threat of copper cable theft to businesses, and what was the clearly defined appetite for risk parameters? If this status was known, security could commence to protect, prevent and

prepare the environment it was responsible for, and then eventually successfully control the risk within the stated parameters. More important was that if the appetite for risk was clear then success could be measured. Respondents largely stated that they were expected to contain the current situation, with the current limited resources and management, but that they had to guess what the stakeholder's sentiment or appetite for risk was. This in essence stated that industry only portrayed the direct losses they considered important, and that consequential losses, endured by the broader community, were not a real threat or a bother to them.

4.5.5.2 Challenge: Costs and internal impression regarding security costs

The respondents confirmed that the cost to mitigate and to counter copper cable theft ran into millions and even then it was still clearly not enough, to be completely successful. Outside of paying for security services, the largest cost component was for full-time personnel to check on the service providers for compliance. Every year the threat seemed to grow, the losses were more and the risks were higher. A clear increase in the required capacity was a given and the inflation decimated budget increased. Security budgets as non-core expenditure were cut first. Effectively, security departments continuously had to do more with less. This situation required a much more specialised security function which could provide new efficiencies in a changing environment with constant financial restrictions.

Some respondents even contemplated that it was financially better to carry their own insurance, as it was a cheaper option, and then to just accept the losses as they occurred. However, in most cases this option was regarded as unpractical. The best way to render security, whilst being most cost effective, coupled with the best possible efficiency, was to deliver best practice based on minimum quality standards.

4.5.6 Quality standards required to improve copper theft security

The respondents emphasised that specific minimum standards were needed to ensure that copper cable theft mitigation was combated effectively and

efficiently. The following areas were in need of these quality minimum standards:

4.5.6.1 Challenge: Quality through training and specialisation

Externally the standardised training of law enforcers was urgently required, especially for the NPA, SAPS and the courts. The Metal Regulations Association (MBA), under whom the scrap metal industry was regulated, was seen by the respondents as a good standard originator. But it was not the scrap metal dealers that abided by these regulations and subscribed to the MBA requirements, that were the problem; it was those outside of this regulating body.

Internally, knowledgeable security managers were needed with a high level of technical capacity to understand security integration measurements and its applications. The operational training of security managers was needed especially in the art of intelligence gathering and out flowing analysis, which would provide profiles and patterns of direct and indirect copper cable theft factors. It was clear that the problem the respondents had; was fighting copper cable theft with the wrong people and with the wrong tools. A specialised capacity was especially needed for intelligence gathering and for forensic investigations. This capacity had in most instances been outsourced, especially for organised crime. Regarding CRIME-IDO's, most respondents stated that they did not have sufficient internal resources to manage or to deliver such a capacity.

4.5.6.2 Challenge: Quality through measure and audit.

Respondents made use of different measures and quality standards to ensure that the outcome of their services would satisfy their customer; the employer. Standards that were mostly utilised were based on the general ISO processes. But security in particular was found to be non-standardised. The researcher found that these standards had been based on internal audit requirements and were mostly just a paper action. Corrective security actions were seldom required through a formal security audit process. The respondents did quality

measurements through one or more of the following: analysing and interpreting crime statistics to do with losses, client feedback and behaviour, negative reactions or occurrences, surveys, SLA performance management, technical and electrical provisions and the KPA's/KPI's of agreed upon security processes.

However, best practice and clear customer requirements were not found to be formally stated, measured and reported on. What had been done was mostly just of theoretical value, no specific projects, emanating from any analysis or measurement, was mentioned. A recognised standard for security, for example, ISO 28000 was not found or mentioned or implemented.

4.5.6.3 Challenge: Quality awareness through an integrated security and monitor capacity.

The respondents' decisions to combat copper cable theft were entirely dependent on information which had been derived from their monitoring capacity. Monitoring, for example; was diverse and encapsulated the copper cable theft scenario closely through incident reports, survey communication, patrols, CCTV, informant networks, investigations and crime analysis. The dedicated integration of all these capacities was not noted. Visible policing was still regarded to be the best source of information through its continuous physical presence. The reliance on technical monitoring systems from a cost efficiency perspective was preferable; however, supportive systems for technical monitoring required highly skilled supervision and interpretation. The lack of these prerequisites, however, rendered most of the technologies that had been implemented; limited stand-alone systems.

An important finding was that because of the limited knowledge levels within the security environments, most of the security technology force multipliers were designed and run by other (for example IT) functionaries. Security officials were usually not involved and any such technology was therefore not understood, fully utilised or integrated in the total security strategy of the stakeholder.

4.5.6.4 Challenge: Quality security through a proper strategy design

One of the most popular requirements this research encountered was that of 'integrated security systems' showing a real-time image of all copper theft patterns and threats. However, a mature early warning, or pro-active crime analysis capacity was not found in the stakeholder environments. The respondents were yearning for real-time information and the reliable interpretation thereof, which could only be provided by an integrated security system. Most respondents stated that such a capacity would only become viable in conjunction with a Crime-IDO function. Such a capacity was in two security service providers, one more localised and the other with a national foot print. Both were found to be selectively utilised by some of the respondents, but the *ad hoc* utilisation of these service providers implicated that long term goals and the continuous follow up operations could not be achieved.

What become evident was that a comprehensive security strategy was needed that would have a lasting impact on mitigating copper cable theft. According to the respondents a clear security strategy in generally did not exist, let alone one for copper cable theft. Planning was mainly reactive, with little leadership and management guidance. What was needed was leadership and guidance emanating from a promulgated strategy plan with which to counter copper cable theft in a dedicated manner. In some instances the concept of a strategy was misunderstood by senior management who saw it as being a secretive document or only for strictly confidential planning. The respondents were of the opinion that a strategy was needed that focussed more on the Crime Intelligence Driven Operations (CRIME-IDO) concept and especially on the training of the CJS role players. The implication in realising such a strategy depicted that dedicated and knowledgeable security specialists had to be sourced and appointed, or if they were already there, to empower them to design and to implement an appropriate strategy.

4.5.6.5 Challenge: Quality through proper SLA management and selection of security providers

The role and impact of security service providers in the mitigation of copper cable theft was vast. Many respondents felt that security was outsourced to guarding mercenaries. Security was thus handed over to privateers who steered this process, and it was mentioned, influencing it to keep them in business. There real interest of service providers was to make money through the provision of as little as possible for as much as possible. In general, the respondents felt that service delivery was weak on all levels and unprofessionally managed. The respondents were all of the opinion that outsourced physical security only delivered results under close and continuous supervision by the client. Internal compliance checks had become the order of the day as respondents felt that they could not trust the service provider to perform on his own. Some even stated that utilising security providers would only work if penalty clauses were clear and continuously enforced. The respondents also felt that security service providers had to be held responsible for damages and losses, where they had been entrusted with specific security responsibilities. They felt that blame had to be accepted by the clients or the stakeholders and when negligent, consequential liability was not only a must it was the only way to keep security service providers on their toes. However, this area was very difficult to manage.

Security managers mostly worked without a clear scope or mandate, coupled with limited security experience, management and leadership. This created, within the organisation, the opportunity for security service providers to deliver sub services and get away with it. The organisation's operational security managers in general did not even understand the problem or business requirements. This lack of knowledge also impacted negatively on correct tender procedures regarding security service providers, bill of quantities, requirements and ensuring SLA deliverables as required. It was mostly expected of the service providers to provide the plan and to self- audit them for best performance. What aggravated the situation was the professional jealousy between organisation security managers and service providers, who saw each

other as a threat. The respondents were of the opinion that on operational management level, service providers mostly had more knowledgeable and leadership capacity than the stakeholder's internal operational security managers.

4.5.6.6 Challenge: Quality through qualified manpower

The respondents felt that the current *bona fide* security manpower and operational managers appointed were not sufficient to effectively mitigate copper cable theft as they lacked experience and security knowledge. These security managers were mostly from a non-security environment and security for many of these managers was just an *ad hoc* task. Very limited qualifications regarding security in particular and managerial expertise in general was found among people directly responsible for security. It was, therefore, difficult to say if the manpower was insufficient or not, maybe the numbers were right but the output capacity clearly was found to be insufficient. A disturbing finding was that the few knowledgeable security professionals had become disgruntled and over worked at a time when even more creativity and leadership was needed.

4.5.6.7 Challenge: Quality through proper command and control

The CSO (Chief Security Officer) as the highest level security manager reported directly to the CEO. The CSO position could be regional or national, depending on the size of the organisation. The CSO, in some instances, had a seat on the EXCO and all other senior security managers were subservient to the CSO. Some respondents were unsure regarding the role of their CSO, for most it was a politically influenced appointment and for others it was functionally sound regarding leadership and guidance. The most common experience of the respondents was that it was difficult to communicate problems to top management as guidance from the top was unsure at best and not worth the effort of waiting for feedback.

According to most respondents top management should be responsible for security. The lack of a clear command and control chain was a contentious issue with most respondents, especially from middle management down to

operational level. The reason was that so many people, appointed as security managers, did not have the credentials or the experience which resulted in priority issues being handled inefficiently. The frustration level of people reporting to the respondents was extremely high, because they could not be trusted to deliver on job requirements, let alone supervise or manage subordinates.

Where the respondents were content, the researcher found copper cable theft was the responsibility of a dedicated body residing at the Corporate Head Office. This body directly strategizes and advises all other regions and/or areas, and also operates as a research department that provides guidance, and shares the latest technology information on how to adapt as the threat changed.

The most successful senior managers succeeded in the basic integration of all operational capacities to make it not just a physical security problem. The successful senior managers had personnel that were capable and competent and who collaborated with specialists in commercial, technical and security environments.

All senior security managers stated that in general the CRIME-IDO concept was the best solution, but they had their doubts if it could be managed within their own organisation, as this capacity required a fluid and executive command and control capacity. Until then such a capacity would have to be outsourced.

4.5.6.8 Challenge: Quality through risk analysis and standards to support business requirements

During this research a risk analysis template was not ever mentioned that consisted of a process to uncover the total security function, capacity, applications and requirements against the risks, threats and vulnerabilities. The researcher found that the risk related terminologies were differently used and interpreted among the respondents. However, the respondents were

knowledgeable regarding the expectations and the fields of risk, vulnerability and threat measurement.

The research mostly found that where a proper risk analysis capacity was weak the following aspects were indicative:

i. A risk analysis on operational level was not done or understood.

ii. Very limited training existed, regarding this aspect, if at all.

iii. A monthly report was required but a quarterly product at most would be received.

iv. This report was then also handled very 'secretively' and as such the lack of transparency, regarding the risks identified, saw to it that the risk remained.

v. Copper theft was a high priority but no clear answer or reasons had been given.

Where a proper risk analysis capacity was found the following was noted:

i. Structured research, analysis and reports.

ii. Showed risk constantly to relevant process partners.

iii. Custom designed risk assessment.

iv. SOP's for each capacity that was measured through internal audits.

v. Standards important for clear application.

vi. All members that worked within the copper theft environment were fully briefed and trained.

vii. Copper theft was fully understood and could be answered and rationalized, usually copper theft was less disastrous

4.6 COPPER THEFT SECURITY, SCIENTIFIC FOUNDATION AND THEORY

This research constantly inquired about models or theories that could be considered, used or contemplated in combating copper cable theft in particular, or crime in general. No such models or theories were mentioned by respondents, and when asked about such models they did not altogether understand what was meant by a specific security model or theory.

After testing the knowledge of the respondents about CPTED it was evident that they had a very basic knowledge to no knowledge at all of other crime prevention theories and criminology. Nothing unique with which to mitigate the copper theft phenomenon was offered to design a specific model for this phenomenon. For the respondents, copper cable theft was but a crime and should be prevented by any means possible, means that were based on practise and experience. Knowledge from academic publications or any other research was perceived by the respondents as not necessary. They regarded it as historical knowledge and of no value. If the respondents had utilised the formal knowledge sources to define and to develop their counter copper theft methodologies, a more functional result would have been found by the researcher. Most of the respondents implemented a version of Crime-IDO's which indicated that a total crime prevention solution was urgently required. This did not come via their own research but rather by following the successes and the solutions implemented by other service providers..

4.6.1 Understanding the role of social involvement within security

Communities with active Community Police Forums (CPF's) were increasingly successful in preventing copper cable theft pilferage. CPF's were generally well organised, funded and knowledgeable. All the respondents endeavoured to get the community involved; from doing patrols to being whistle blowers. The respondents agreed that one of the biggest threats in SA was the general crime culture and that the only way to deal with it was to engage and to educate the communities. They reported that they had encountered a lot of goodwill and support from these communities in general, which fully realised

that community awareness was an important mitigation tool in the fight against copper cable theft.

Road shows in these areas were frequently launched at schools and community centres to educate the general population on copper theft issues. At certain dangerous areas, especially where a large gangster presence was encountered, awareness activities were presented under protective measurements. In order to encourage participation Van Dalen (2009:1) recommended that a national reward system should be instituted that provided monetary rewards for information that led to arrests and in so doing get communities more involved in combating copper cable theft.

Business Against Crime South Africa (BACSA, 2009a:1) reported that a National Communications Task Team had been established for Non-ferrous Metal Theft. The aim of this Communications team was to build a general community support network that would help them to close down the illegal markets supporting the theft of non-ferrous metals. Interestingly the respondents did not have any knowledge of such a task team. Greater community involvement, together with a social marketing approach, would encourage the people to report these crimes and any information related to the work of syndicates and illegal operations, which had an impact on the general functioning of the country in terms of electricity, transport, communications and other services.

The general feeling was that local authorities and communities should not be left alone in the prevention of copper cable crimes.

4.7 CONCLUSION

In the first theme the respondents' experiences were unique with regard to the extent and impact of the copper theft phenomenon. Their feelings of frustration, not only concerning the presiding status of copper cable theft, but also about the real operational problems, limitations and restrictions to function effectively in this environment came through very strongly.

The second theme showed that the nature and modus operandi of the copper offender was extensively generalised in publications, whereas the respondents were more selective in reporting their specific experiences. The result of this was a deep and wide knowledge based understanding of the nature and modus operandi of the copper offenders, as was uncovered in their complete variety and operational configurations.

The third theme concerns the measurements utilised and available to counter copper cable theft. The specifics of each method were provided by both the respondents' experiences and the published sources on this topic. Based on the feedback of the respondents, and from published sources, it was clear that the problem needed multi-disciplinary approaches. They agreed that it had become necessary to implement crime intelligence operational methodologies. Unfortunately the Crime-IDO methodology had not been well defined or structured and had only been partially tested and implemented by the respondents.

The fourth theme covered the critical factors within the respondents' work environment and all the related external influencers, which limited copper cable theft from being properly combated. The published sources gave a lot of information regarding the external factors that limited the Criminal Justice System (law enforcement, proper Acts, collaborations and courts). These were also supported by the respondents' personal experiences. They mostly gave an insight into the internal critical factors regarding organisational issues that they struggled with on a day to day basis, issues such as; the quality of personnel and service providers; problems with the organisational perspectives of security and risk; and the lack of strategy and leadership support without defined specific outcomes. The general risk factors that were uncovered were found to have reached a level of saturation through the amalgamation of the respondents and the published source mix.

The most essential findings in this chapter will be carried over to Chapter 5 where final recommendations for the identified themes of this research will be put forward. The achievement of the objectives, general recommendations and the identification of future researchable topics will also be discussed.

CHAPTER 5

RECOMMENDATIONS

5.1 INTRODUCTION

The recommendations made in this chapter are based on the essential findings of this research. The achievement of the objectives, general recommendations and the identification of future researchable topics will also be forthcoming.

5.2. SUMMARY OF THE RESEARCH

This research investigated the copper theft phenomenon in Gauteng. No studies have previously been recorded on this topic. The relevance of this topic to society in general, and to executives of industry and business in particular, is to create an awareness of the seriousness of copper theft and also to emphasise what the needs of the security practitioners are. This realisation must nurture a common understanding and a vision of the problems facing business and industry and suggest how these problems should be tackled.

In order to create an awareness of the needs of security practitioners, combating copper theft meant that the copper cable theft phenomenon had to be investigated and dissected to the bone. This research was conducted with the intention of documenting the effect and impact of copper theft on society, industry and business and to identify the perceptions and requirements of the individuals responsible for securing society, industry and business against copper cable crimes.

This was an empirical qualitative study. The stipulated research procedures were followed for an investigative and descriptive study. The investigative objectives of the research were to uncover the copper theft phenomenon regarding its impact, extent, the nature and modus operandi of the offenders, identify all the role players and all the possible related factors involved.

The descriptive objective of the research was to describe the experiences and requirements of the senior security practitioners responsible for combating

copper cable theft and then to recommend probable interventions as deducted from this research. All of the research objectives have been met. In Annexure A the essential findings, with specific recommendations per finding, have been tabulated.

5.3 RECOMMENDATIONS

5.3.1 Portray the correct extent and the impact of copper theft in Gauteng

An intelligence gathering institution for copper cable theft needs to be created: An institution, which provides comprehensive statistics with a crime analyses capacity showing relevant patterns and profiles. The city's chambers of commerce: local governments, municipalities, the MBA, SAPS, and the NPA, to name a few, should present their copper related losses to a centralised, suitable, knowledgeable and transparent forum. This endeavour will make it possible to understand the copper cable theft phenomenon in all of its facets. SACCI, BACSA and/or the ISS could facilitate this process with accreditation.

5.3.2 Understand the nature and modus operandi of copper theft in Gauteng

If the enemy is not known in all of its facets, a war cannot be won. The research recommends that copper theft must be identified for what it is, namely a multi-faceted threat from all spheres of life in need of a multi-facetted approach. This approach should encapsulate a joint effort between; legal and security (physical and technical integration); a dedicated law enforcement capacity under clear command and control utilising counter terrorism tactics and strategy. It is recommended that a much more formal approach to an integrated CRIME-IDO strategy within the CPTED methodology should be considered.

5.3.3 Alleviate specific factors that impact negatively on the copper theft mitigation environment.

5.3.3.1.   Collaboration and leadership

All role players and stakeholders, within the environment where copper cable theft is encountered, must get together to work together as a team, sharing resources and intellectual capital. Respondents stated that a knowledgeable, experienced, qualified and an accredited leader body were urgently needed. That should be officially appointed and empowered by the government, to lead all role-players and to escalate the seriousness when needed. The first choice to combat copper theft would be the SAPS - if they were capable of leading and actually managing the collaboration between all the role players. However, according to this research this suggestion would be unattainable for the foreseeable future. The only realistic recommendation is; the victims must measure precisely what they require and expect from the SAPS, and then do the rest themselves through either appointing contractors, or using their own personnel, or they can train SAPS members (if they can get any) to work under strict professional guidance. The best immediate solution for such a necessary capacity would, however, be for government to put a tender out through an open recruitment process.

The current leaders in the fight against copper cable theft are the parastatals, who should set the example for collaboration and standards for the whole country. But they are currently failing dismally. These parastatals should be measured against performance management targets as set by the highest authority. This implies that a parliamentary committee as well as regional committees, for non-ferrous metal crimes, should be brought to life; their accountability should be clear and transparent. The country allegedly suffers between 7 and 16 billion rand of damages per annum; this surely warrants special circumstances and urgency from the highest level.

A knowledgeable, experienced, qualified and an accredited person is required who is officially appointed and empowered by the government, to lead all role-players and to escalate the seriousness of this crime. Government should tender for such a capacity through an open recruitment process.

5.3.3.2. *Criminal Justice System*

A lasting impression of the respondents is their frustration with the current criminal justice situation. The reason is mostly that the respondents want the law enforcement environment and the criminal justice system at large, to be involved and to act according to the seriousness of this crime. Respondents felt as if they were witnesses to a serious crime but nobody was there to help or support them, regardless of making continuous alarm. Laws are made; people are tasked, but nothing substantial filters through to where it matters. Effective and efficient policing and prosecuting actions, regarding the new Second Hand Act (no 6 of 2009) will only work if these are supported with a proper policing capacity. A specific training course should be presented to all NPA and Policing members before they are allowed to get involved in the copper cable theft environment. No cable copper theft case should be processed without expert witness counselling to the prosecutor and magistrate figure. A centre of excellence should be created for this specialised field and it must be ensured that the level of experience and continuity is not broken by personnel turnover - natural or otherwise. A separate crime code for non-ferrous metal must be formulated.

5.3.3.3. *Scrap metal dealers*

The general recommendation is for the SAPS to focus purely on the scrap metal industry. If they control the metal merchant in the copper cable theft supply chain and scenario, then they will control all the second hand copper trade, inclusive of illegal trading. In this instance the SAPS members can then saturate the scrap metal traders, which will be easier to manage and to police than the current challenges to combat copper cable theft over a vast area with

limited resources and capacity. This capacity would also successfully support the SAPS in their leadership or collaboration facilitator role.

Bucket shops need to be outlawed immediately as they are the network through which subsistence thieves' work. They are regarded as the criminal extension of the scrap metal dealers where copper is 'washed' before it is brought to the main dealership.

The most common solution would be to declare the trade of any second hand copper unlawful, except centralised state owned copper recyclers. This act will effectively render any second hand copper useless and of no value. If that can be achieved, the whole copper cable theft problem will be solved. Until such a decision is formulised and implemented as a law, copper vendors hold the key to controlling illegal copper trade as they are the eventual buyers.

5.3.3.4.   Social involvement

All social groups fighting copper crimes should be in collaboration. This response is also supported by Shaftoe, Turksen, Lever and Williams (2007:301-306), who all agree what is needed is a top down approach where chief executives reinforce partnerships within their administrations (emergency planning and community safety) as well as outside city halls (police, NGO's, business community, citizens and social society). This must be followed up with the reinforcement of civil leadership and the empowerment of communities that have skills, competencies and responsibilities, to observe or to report abnormal behaviour. Community interaction should make it easier for citizens to understand the role of local agencies and agents through signposting, leading and more open explanations. The building of communication strategies and the modernisation of its infrastructures are also important. Special communication networks; prior and during crisis and structured communication in general should aim to reassure the public and restore their confidence while maintaining their vigilance. The most appropriate options recommended are mainstreaming prevention actions throughout local safety strategies, for example; through education, youth services, community development and planning.

According to Shaftoe *et al.*, (2007:301-306) a mandatory risk assessment must be introduced by all local authorities and communities, and non-ferrous metal theft should be added to all existing criteria. The participation of citizens should be promoted at all times by making them feel co-responsible for joint activities through the risk assessment process.

5.3.4 Internal management and controls

5.3.4.1. *Capacity of security personnel:*

Security in modern times should be run by security specialists who have the necessary qualifications and accreditation and they should be incorporated in business structures. If this happens then security will not only become a value added business but also a role player that can make a positive impact at ground level. CPTED and Crime-IDO's, as recommended in this research, can only work if completely understood and managed by *bona fide* security practitioners.

5.3.4.2. *Knowing the risk, a strategy and quality measurement:*

With regard to the specific respondent environments, the appetite for risk and its implications must be officially shown. And the organisation must publicly state that it either accepts or rejects the threat and risk analysis regarding copper theft. This is an absolute must to enable the proper planning of a relevant strategy to mitigate copper cable theft, which with clear timelines and deliverables must state what needs to be done. It is strongly recommended that the deliverables and the quality thereof must be measured against set targets on a continuous basis.

5.3.4.3. *Training of security personnel:*

All security officers and other functionaries to do with combating copper cable theft, whether in preventative security, investigations, arrest or prosecution environments, must be trained in the copper theft threat and the unique requirements to combat it successfully. This can be formally done through the SASETA process, or through tertiary institutions such as the UNISA

Department of Security Science. The ASIS accreditation courses, CPP and PSP are recommended for security managers, on all levels, as a prerequisite for being appointed in any security managerial capacity.

5.3.4.4.   *Integration of security measures:*

Monitoring and surveillance capabilities should be firmly embedded in the technology platform of an institution's central Risk Control Centre. A valuable part of an operational control centre function is that many other related applications can be interfaced and integrated here for a quick overall status, for example; a whistle-blowers capacity; law enforcement movement and liaison in emergency situations; crime analyses; GIS and other type dashboard functions; biometric access and egress control; transport management; even fire and building management systems can be integrated here; etc. This recommendation is firmly imbedded in the belief that only specialist security exponents should design, implement and manage such an integrated system platform within a Crime-IDO methodology.

5.3.4.5.   *Security Service Providers:*

Outstanding security provider companies are found in the top five private security service proivders of South Africa. They will ensure that standards are created, where necessary, that will comply with the SLA requirements. These companies also provide many supportive and value added services and sureties for example; riot control; CPO protection; internal training schools; risk analyses; investigations; helicopter fleet; etc. Many of these functions are at a higher level than what even the SAPS can provide. The respondents recommended that the client firstly interviews all the prospecting bidders at their home base and does not go for the cheapest provider as this is a recipe for disaster. It is also important to ensure that the security management does support the potential service provider and that they will strive to ensure best practises via a clear performance measurement system. Management should not be compelled to tender for a new service provider every three years, if the present service provider understands what is expected and if they deliver as expected - then continuity should be kept.

5.3.4.6 Internal knowledge base:

The respondents reported that they had lost knowledge, experience and capacity, which they had been investing in for many years, after such services had been outsourced. Outsourcing lower level security personnel responsibilities is a recommendation, but middle and higher management personnel should be permanently employed for authority and security reasons. Internal personnel must be trained continuously to create a confident and valuable knowledge based team.

5.3.5 Measurements to combat the copper theft phenomenon in Gauteng

*5.3.5.1 Technology***:**

It was clearly stated that technology in the copper cable theft environment could only support and not lead security methodologies, as there were just too many unforeseen variables impacting. Technology should focus on enhancing real time monitoring and reacting, based on early warning networks and profiling, to counter any existing threat, whenever or wherever, it may occur. Technology should be utilised as force multipliers and to make reactions quicker than what the copper cable thieves can plan and operate in. This recommendation implies control centres linked and uploaded with real time information (digital and visual) which will be collated, assimilated and profiled for pattern analyses and pro-active activities that can be directly utilised for early warning and detailed planning and proper reactive operations.

Technology must be regarded as an ever changing medium, thus maintenance and upgrading should continuously be budgeted for, if not, it will become obsolete and redundant.

5.3.5.2 Crime Prevention Through Environmental Design:

Copper cable theft and related criminal acts are crimes because of deviant human behaviour. The criminological CPTED methodology is recommended as the design template with which to explain crime opportunities and to provide crime prevention methodologies to combat copper cable theft crimes through

the design of a totally integrated counter copper theft strategy. All the recommendations made in this research can be accommodated in the first and second generation CPTED framework, with the goal of changing or removing opportunities to do crime, or more specifically, to make copper cable theft not such a viable option.

5.3.5.3   Crime IDO:

Where theft occurrence is grave or a pattern of reoccurrence continuously re-emerges, specialised intelligence and investigative resources should be implemented for surveillance and monitoring, that apply high-tech equipment and employ professional personnel. This recommended CRIME-IDO solution is focused on derailing the thief before he can commit a crime and if he does to arrest him as soon as possible. This implies the direct involvement of exponents to do with investigations, intelligence networks, informant handlers and crime analyses with arrests and prosecutions out flowing. This security recommendation, preferred by all respondents, was found to be a realistic capacity that could totally eradicate copper cable theft. The respondents recommended that a security strategy had to be implemented, which would incorporate such a crime intelligence driven concept (CRIME-IDO) within the total operating environment of the copper cable theft phenomenon.

5.4 FUTURE RESEARCH RECOMMENDATIONS

This research exposed the copper cable theft phenomenon. The requirements to design a proper strategy with clear tactical guidelines to mitigate copper theft were shown, the findings of this study offered insight in terms of crime prevention, the science of security and the security management needed to create a copper theft free environment. A successful crime preventative plan to protect, prepare and prevent copper theft from impacting on an organisation could be designed with the knowledge uncovered in this thesis.

The following areas both small and large, where more insight and clarity are needed were highlighted in this research:

1. Urgent research is necessary regarding the status of copper cable theft within the municipality. A national copper theft and copper loss picture of all copper users is needed, to show the real consequential impact thereof, in South Africa.

2. The research should also incorporate the criminal perspective. A qualitative research on copper cable offenders is proposed, to fully comprehend the cause of this disease. The status and the role of illegal immigrants should especially be looked at.

3. Research into the reason for vandalising essential infrastructures is especially important, so that preventative programmes can be established for high risk environments because commodities are going to become even more valuable in the future. It is not just about copper cable theft and the theft of all other non-ferrous metals, but also water and its systems must be protected from mindless vandalising and lawlessness.

4. A risk factor that must be researched is the extent and impact of unqualified and untrained security officers, police officials and other criminal justice system role players; people who are expected to have the knowledge and experience to guide corporate enterprises and even governments, to better understand and to counter current and future crime onslaughts.

5. In the absence of a recognised security theory and a supportive crime prevention methodology in combating copper cable theft, a theoretical environment for opinions and solutions should be created. This aspect needs to be researched and rectified. This thesis identified CPTED as becoming a potential crime prevention model for value added security services and to function as the basis for all security related planning. What is needed is a measuring standard or model for security and CPTED may be the answer. The role of how security can become a valuable asset to businesses should be researched, especially when

uncovering and mitigating the risk, threat and vulnerability in a qualified function, and the design of an early warning capacity, which is embedded in crime prevention. The CTPED theory and the Crime-IDO models offer excellent research opportunities to this extent.

6. Furthermore, research on the impact of the Second-Hand Goods Act (Act 6 of 2009) needs to be conducted in South Africa, especially to measure its successes or failures in preventing copper cable theft.

7. The need for collaboration and a unified structure within which to combat copper cable theft should also be researched.

8. The drive for technology to become a stand-alone crime prevention capacity should be researched closely.

9. The role of the SAPS in complying with crime prevention requirements of copper cable theft by both business and citizens needs very urgent attention.

10. Research should be done in parliamentary involvement to get crime prevention off the ground.

11. Throughout this research it has became clear that only one side of the problem has been investigated. The metal recycling industry and more specifically, the scrap yards are the other side of the problem. They are accused of being the major reason for copper cable theft, therefore, their experiences, opinions and participation should be core to any solution for a strategy to mitigate copper cable theft.

5.5 CONCLUSION

The end result of this research indicates that copper cable theft crimes seem to be out of control, and costing the country and its citizens dearly. Copper cable theft is a dynamic phenomenon, this research was not just about capturing

data; it was also about witnessing a reality. No other such research implying that the deductions and assumptions made about copper cable theft in Gauteng are original, has been conducted to compare the findings with. Themes for further research, especially the municipality environments, are recommended.

This research succeeded in opening vistas to understand; the extent and impact copper cable theft crimes have in Gauteng and on the rest of South Africa, the nature of the offender's environment, their operational methodologies, and what is being done by the defenders to try and stop these activities.

An overall consensus exits that copper cable theft can be successfully mitigated if all the copper victims collaborate by sharing resources and intelligence. The requirement to make this collaboration successful is; leadership that is knowledgeable and sustainable, which can facilitate and manage the collaboration of all role players and that will ensure the implementation of the strategy and tactics mentioned in Annexure A.

The final words to frame this research will be left to the last copper theft victim before this research had been completed: 'We are massively frustrated to once again fall victim to this sort of crime. The problem of cable theft in South Africa is far bigger than just Gauteng, it is a national scourge tantamount to economic sabotage,' spoken by Kelebogile Machaka, spokeswoman for the Bombela Concession Company, which operates the Gautrain (Seale & Cox 2013:1).

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This Table illustrates the essential findings of the research within its main theme format. Each theme finding is also supported with parallel recommendations.

1. IMPACT AND EXTENT OF COPPER CABLE THEFT	
Essential Finding	**Recommendation**
• Extent and impact of copper cable theft is crippling. • Consequential cost to South Africa varies between ZAR7bn and ZAR16bn. • Seriousness does not seem to be recognised. • Current measures not suitable. • Victims wait to be rescued. • Requires qualified and experienced government intervention and guidance. • Capacity to fix this problem as identified seems to exist externally.	• Dedicated Intelligence and analyst forum to be formed. • Accredited leader to be appointed. • Go out on a national tender for a Request for Proposal (RFP) to mitigate copper cable threat. • Appoint a qualified and accredited managing capacity that will report with transparency.
2. NATURE AND MODUS OPERANDI OF COPPER CABLE THEFT	
Essential Finding	**Recommendation**
• The nature of copper cable thieves is multi-faceted. Subsistence criminals up to organised criminals operate in various configurations. • The total criminal behaviour spectrum is involved. • Criminal activities have terrorist and saboteur profiles. • Only level of opportunity depicts approach and scale. • Gauteng consists of the master minds behind copper crime.	• Combating copper theft should be left to security and criminology experts. • A pro-active and early-warning mindset and methodology for identifying patterns and profiles must be cultivated. • A multi-faceted CRIME-IDO approach is a proven success. • Utilise CPTED, as a model guide to describe and instruct relevant crime prevention methods against various opportunity crimes.
3. MEASUREMENTS TO COMBAT COPPER CABLE THEFT	
Essential Finding	**Recommendation**
• Counter measurements utilised are random, area too big, not enough communications, transport and personnel. Meaningless drop in the ocean. • Current security is not based on measurable and required deliverables. • Outdated physical guarding methods are constantly applied.	• The professional Integration of human + technology according to the CPTED and CRIME-IDO methodologies. • See technology as an integrated force multiplier and not as a total solution. • Gather knowledgeable CRIME-IDO exponents for consultation and coaching. • Never place CRIME-IDO concepts in

• Available technology not integrated. • A CRIME-IDO capacity is required. • Low knowledge and low experience levels are not conducive to successfully run a full CRIME-IDO internally. • A constant hope for a stand-alone technology solution exists. A miracle cure? • A reactive and not a pro-active mindset reign.	the hands of non security specialists.

4. COLLABORATION	
Essential Finding	**Recommendation**
• Collaboration is absent between victims. • Leadership is nonexistent. • Too much duplication occurs. • Everyone for himself. • BACSA has failed to remain the facilitating body between copper cable theft victims; the SAPS can't currently fulfil this position successfully.	• Identify an accredited and knowledgeable leader to facilitate. • Appoint the best person through interview and tender process. • Clear deliverables/KPI`s must be agreed upon. • Implement a central statistical hub from where all copper crimes can be reported and analyses for profiles and patterns. • Have the central statistics centre also man a Crime-Line for whistle-blowing.

5. SAPS	
Essential Finding	**Recommendation**
• SAPS are not as involved as expected. • SAPS are regarded as not having the capacity to deliver on promises. • SAPS do not provide leadership as handed over to them by the BACSA. • SAPS members are untrained in copper theft issues. • SAPS members are suspected of being involved in copper theft. • SAPS senior command is willing to be involved, however, the under study is not committed or qualified. • High turnover in SAPS members make an investment in the SAPS capacity unattainable. • SAPS disbanded the dedicated copper theft unit.	• Understand SAPS limits, create alternatives. • Don't budget on the SAPS getting it right soon. • Copper theft victims should accredit and certify internal personnel to act as peace officers. • Employ contractors who have the capacity to act as peace officers. • Find leadership through collaboration and implement a Crime-IDO capacity for all role players. • Coach and train the SAPS when and where needed.

6. SCRAP METAL ROLE PLAYERS	
Essential Finding	**Recommendation**
• The scrap metal industry is regarded as the causal crime factor. • Little to no integrity is expected from scrap dealers. • They are powerful and affluent role-players who buy their way out of trouble. • Hope the Second-Hand Goods Act (no 6 of 2009) to be implemented will regulate the industry. • Bucket shops are in general regarded as an extension of larger scrap yard dealers and are utilised to wash illegal copper.	• The SAPS must focus primarily on this role player. • Control the scrap market and copper theft will be under control. • Don't leave the patrolling for compliance of scrap metal in the hands of 'self regulators' like the MBA. • General recommendation is to have only one authorised recycler to deal with copper, preferably State run where 2nd hand copper has no value. Basically to nationalise second hand copper not belonging to the original owner. • Immediately close or restrict bucket shop operations from selling copper. • Implement a biometrics capacity and a standard software programme to ensure information is uploaded at all scrap metal merchants.

7. LEGAL FRAMEWORD DEALING WITH COPPER CRIMES	
Essential Finding	**Recommendation**
• The whole CJS is regarded as being dysfunctional and open to bribery. • Prosecutors, Magistrates and Judges are mostly ill-informed on the phenomenon of copper theft. • Some stakeholders have dedicated professional's training the NPA officials and even specialist witnesses. • Some role players have specialist investigators who carry dockets on behalf of inept SAPS members. • The Second-Hand Goods Act (no 6 of 2009) is expected to be a fresh approach only achievable through training and collaboration.	• Compulsory training of all CJS officials dealing with this phenomenon on copper theft. • Training and utilisation of specialist witnesses. • A dedicated copper crime code must be implemented. • A dedicated centre of excellence in combating copper theft should be brought to life which is transparent and can measure all copper theft cases.

8. POLITICAL WILL AND SUPPORT	
Essential Finding	**Recommendation**
• The copper theft phenomenon is discussed on parliamentary level. • Political support is regarded as only being lip service. • Nothing positive has emerged from political involvement. • Copper theft is not sensational enough for politicians. • Copper theft is too big a problem and is steered away from or is a matter of passing the buck. • Political leaders have not been successful in addressing the crime culture in South Africa.	• A parliamentary committee accountable just for copper theft in SA should be brought to life. • Each regional province should have the same capacity and methodology. • Accountable and qualified leadership must be provided. • Parastatals should be supported and measured to perform within targets. • A National CPTED and Crime-IDO capacity should be propagated and implemented.
9. INTERNAL ORGANIZATIONAL CHALLENGES IN COMBATING COPPER THEFT	
Essential Finding	**Recommendation**
• The internal operational security capacity of stakeholders is not knowledgeable and/or capable of utilising a broad integrated approach in combating copper theft, they only understand guarding. • Security is blamed for losses; however, security requirements are scoffed at. • Security is not regarded as a business process partner, nor is it run to become a value added asset, or a core business.	• Security must be regarded as adding value to business. • Security must continuously show its value to business and strive to become indispensable. • Security must not be operationally managed by non security functionaries, especially if they are primary HR, IT or Finance inclined. • Security must state and justify its requirements through scientific models and processes, e.g. CPTED and Crime-IDO's.
10. RISK APETITE	
Essential Finding	**Recommendation**
• The bigger threat of copper theft gets lost in the 'unknown' appetite for risk in business. • The bottom-line prescribes. • Consequential losses, not impacting on the organisation, are discarded; it is not their problem.	• A clear security strategy must be developed. • Risk appetite and boundaries must be clearly shown with potential implications clearly mentioned. • Clear KPI's must be stated for security performance within the abovementioned parameters. • Appointment of an accredited risk consultant to facilitate such process.

11. COSTS OF MITIGATING COPPER THEFT.	
Essential Finding	**Recommendation**
• Security is grudge expenditure. • Security is under resourced. • Security is continually expected to achieve more with less; it has become unrealistic and even ridiculous. • Security operates on the edge of collapsing, constantly balancing limitations v/s threat. The Nett result is a dramatic crime increase. Clearly penny wise and pound foolish.	• Dedicated security management must oversee security budget. • Get the message out to the right executive on the right level; make it become his problem to solve. • Pass on the clear risk, if it is not compliant to the decision maker have it, and the accepted implications, on record. • CPTED and Crime-IDO will create a saving through proper controls.

12. TRAINING AND SPECIALIZATION.	
Essential Finding	**Recommendation**
Copper cable theft training and security specialisation in high demand for: • For the NPA, SAPS, Courts and Scrap metal environments. • Operational security managers.	• Compulsory copper theft specific training must be designed and promulgated for all role players in the Criminal Justice System, with an e-learning capacity to maintain such levels. • For security managers, as a minimum requirement, it should be compulsory to be certified by ASIS in completing the CPP and PSP certifications or similar.

13. MEASURE AND AUDIT.	
Essential Finding	**Recommendation**
• Capacity to show success and failure through a transparent system and quality standard is mostly absent. • ROI in the security environment is a strange concept; security is regarded as an insurance type cost element. • The continuous measurement and audit of security KPI's/deliveries is not witnessed. • Best practise and customer satisfaction are not formally measured and reported on.	Make security a value add to business through: • Continuous standard measurement. • Reporting on KPI's as deliverables. Show clearly problems and challenges and what support is needed. • Utilise accredited standard bodies, ASIS/ISO. • Stakeholders must define customer satisfaction, and then empower security to deliver through a professional and measurable approach.

14. INTEGRATED SURVEILLANCE AND MONITOR CAPACITY.

Essential Finding	Recommendation
• Offsite monitoring of all assets is an ambition of all role players. • The integration of surveillance within the copper theft mitigation processes is not clear. • Surveillance is mostly seen as a tool which will increase reactive activity. • A control-centre capacity is not seen as part of an early warning capacity with direct control over operations, a control centre is regarded more as a monitoring, communications and recording capacity. • A dedicated surveillance model that is adaptable to threat change is not witnessed. • Control centres and surveillance capacity is mostly designed by non security specialists, mostly IT designers.	Integrated surveillance should involve: • Designed for best practise by a security specialist. • Clear standard, scope and mandate, per surveillance unit, must be known. • Continuous reporting on serviceability and compliance is a prerequisite. . • Dashboard and GIS integration must be functional and simple. • Dedicated surveillance specialists with clear standards to manage and to operate the surveillance capacity. (Not guards!!!) • An artificial intelligence engine / dashboard that can continuously measured KPI's for compliance. • Incorporate in the control-centre the emergency and crisis management team, a type of 'war-room'.

15. STRATEGY

Essential Finding	Recommendation
• A specific strategy to combat copper theft was not found. • Copper theft is regarded as just another theft in the general security strategy. • A phased security plan to combat copper theft and to eradicate this phenomenon progressively is not found. • In some instances the concept of' 'strategy' was confused with 'confidential or secret' some did not want to discuss their strategies, if it existed at all. • Proper corporate governance requires such a strategy. The clear acceptance of accountability is not generally found.	• A strategy with a step by step roadmap or plan to achieve a certain goal, with a wish list of requirements, which must be accepted by the executive from where it becomes policy; standards also need to be promulgated. • Security must have such a plan. The plan must provide specific core areas, with guidance information to establish and to implement CPTED and Crime-IDO. • All plans must be tested by the following controls: ✓ Is there a clear programme and scope supported with clear deliverables? ✓ Is there clear management and supervision? ✓ Are there clear internal controls? ✓ Are there clear instructions? ✓ Are there clear standards? • A strategy and its controls must be presented on demand with clear

	parameters regarding progress and status; it is not a 'secret' document. • A security manager who cannot provide such a basic requirement must be removed and/or retrained in basic security management.
16. SERVICE PROVIDERS	
Essential Finding	**Recommendation**
• Security providers are the object of much negativity mostly because of non compliance. • Security providers are regarded as being opportunists with no real care or reason to eradicate crime. • Security providers are seen as being a necessary evil, and involved, in one way or another, in many copper theft cases. • Security providers are managed with strong arm penalty tactics and they are not retained for more than one period of service (3 Years). • It was also found that many security providers know more about security than their clients and the law enforcement partners. • The stakeholders can't control such security providers and want them to be replaced regularly. • Security providers eventually manage all aspects of security in an organisation except the top security management environment. • Stakeholders eventually will outsource the risk control function in totality. • Some security service providers were continuously praised for their role in copper theft mitigation.	Security service providers most possibly have the most experience and most knowledgeable security management structures within South Africa. Select the best. • Appoint a security provider with a clear RFP/Q process, this process should be in place before a bidders list is finalised. Pick and justify the best, don't let procurement dictate/bully as they are not the specialists. • The ensuing SLA should clearly state performance parameters and KPI's which must be delivered. • A security provider is as good as the SLA agreed upon. If he can't perform he must go. • Ensure that the service provider has the right profile and capacity to deliver. Even if it implies a single justification. • Refrain from cheap fly by night organisations and politically connected pressures. • Don't change a service provider if he can do the job, extend the contract period rather and work on efficiencies. • Don't outsource, if the capacity to be crime preventative resides within the organisation. However, the capacity must be qualified and experienced.

17. MANPOWER REQUIREMENTS	
Essential Finding	**Recommendation**
• Security is a specialist function, from operational to management level, mostly run by non security specialists on all levels. • It is found in many instances that security operational personnel are to fill the BEE requirements and management to justify some political contacts. • As security has no place to hide, it quickly shows who can perform and who can't. Especially since headcounts are reduced and managers need to do more and to work more clever. • What is found is that the wrong people are now also tired and disgruntled. The implication is that it is unknown if there is a genuine shortage or just a competency problem.	• Ensure the right man for the job, be specific in recruitment. • If security is at risk because of the wrong manpower it must be put on record for action or acceptance. • Require security managers to obtain the ASIS CPP/PSP within 24 months of appointment, as a suspension clause to their employment contracts, which they must keep current.
18. COMMAND AND CONTROL	
Essential Finding	**Recommendation**
Security managers were found to have a mixed capacity regarding their command and reporting level. Most felt they could make it work regardless. However, two senior respondents felt close to resigning as their top management was totally clueless regarding security and their line managers were appointed without any experience. Command and control clearly is not effective, or even possible.	• To ensure the right message goes up and down the command line requires that such command and control responsibilities and accountabilities must be clearly defined and placed on record. • Keep all orders and discussions on record and then use non performance, supported by records, to set non compliance security right. • The Security function and command line must be headed by a knowledgeable and experienced security specialist, e.g. a CSO as per the ASIS standard.

19. RISK ANALYSIS	
Essential Finding	**Recommendation**
• This research found that the terminology and concept of 'risk analyses' is mostly misunderstood and a proper risk analyses template for copper theft does not exist. • A risk analysis is mostly understood to be a document completed once per year to show the threat to the organisation at a high level. • A risk analyses did not consist of a process to uncover the total security function, capacity, applications and requirements and the risks shown.	• Complete a risk analysis to support the security strategy and vice versa. • Base a security analysis on an accredited template. • A risk analyses should consist of: ✓ a capacity survey, ✓ security assessment, ✓ offender factors, ✓ quality controls, ✓ vulnerability matrix, ✓ risk matrix, ✓ security design, ✓ implementation plan and ✓ quality measurement • After a risk analysis has been completed a security manager should be able to formulate a security model and a theory to base a strategy on. This will further progressively help with compiling a security manual. • A security analysis should not be a problem for a qualified security specialist.
CRIMINOLOGICAL MODEL AND THEORY	
Essential Finding	**Recommendation**
• In no instance could this research find a security model or a specific theory on which security is founded and from where copper theft crimes is researched and planned. • Security is planned from the reference frameworks of ex-police and ex-soldiers • The latest science of CPTED and criminology in general was not acknowledged, or understood. • The fixation on guarding and the inability to combat copper theft successfully was made clear by the abovementioned finding.	• Utilise CPTED as a crime prevention model to counter opportunity crimes. • Study opportunity crimes. • Study space based security solutions. • Study criminal behaviour. • Study socio ecology and crime relations. • Study CPTED as a total solution capacity to crime, the 'all in one' theory for crime prevention exponents. • Test current security measurements and strategies and risks analysis with the abovementioned. • Implement Crime-IDO through the CPTED framework.

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2011-02-18

TO WHOM IT MAY CONCERN

This is to confirm that Mr Lyon Pretorius (4572297) is a registered student for the Degree Magister Artium at the Department of Criminology and Security Science, UNISA.

Mr Pretorius is researching the phenomenon of non-ferrous metal related crime (*A CRIMINOLOGICAL ANALYSES OF CRIME PREVENTION IN THE NON FERROUS METAL ENVIRONMENT OF GAUTENG*).

It will be appreciated if you will assist Mr Pretorius in this regard.

Sincerely yours

PROFESSOR J H PRINSLOO
CHAIR OF DEPARTMENT

Informed consent shared and agreed upon by the respondents of this research.

A CRIMINOLOGICAL ANALYSIS OF COPPER THEFT

My name is Lyon Pretorius and I am conducting research for my MA degree in Criminology at the University of South Africa. I would appreciate it if you would participate in my study on the risk factors that have lead to Copper theft and to a better understanding of the Copper theft phenomenon. My study aims to identify these risk factors so that some understanding of such behaviour can be gained and possibly prevented.

Voluntary participation

I would like your permission to be interviewed by me during a session that will take roughly an hour. You can withdraw from the study at any point by telling me that you no longer wish to participate. Your participation in the research will have no effect on your participation in the programme and there will be no consequences if you choose not to participate. No one in the programme has to know if you choose to participate, or what you answer in the interview. The interview is confidential and your name will not be written on anything or used in the final report writing. Only my supervisor, Prof. J. Prinsloo and I will have access to your responses. Your responses will, if permitted, be recorded in written notes and or recorded on audiotape. The recordings, dictations and the interview schedule will be stored for archiving purposes only.

Risks

There are no direct risks in participating in this study.

Benefits

There are not any perceivable benefits to you. However, your responses can help inform us about possible risk factors and, therefore, help us mitigate

copper theft in the future. Such information may also have an influence on addressing current mitigation programmes so that the programmes can be enhanced in future.

Confidentiality

As already stated, all information will be kept confidential and only those involved in the research will have access to it. Any information (e.g. structured interview schedule) relevant to you will have a number on it and not your name. On completion of the research, all audiotapes and documentation relating to your participation will be stored and then destroyed after the University of South Africa's mandatory storage period.

Sharing of information

The information gathered in this research will be documented in the form of a dissertation and in scientific articles, so that other interested parties may learn from the research.

Right to refuse

You have the right to refuse or to participate in this study.

Who to contact

You may ask any question that you may have at any stage of the research. Please contact Lyon Pretorius, (wlyonpretorius @gmail.com or 082 525 3662) should you want to enquire about the research project. You may also contact my supervisor Prof. Johan Prinsloo (prinsjh@unisa.co.za or 012 429 6003 / 6574) in this regard. Please note that the Ethics Committee of the University of South Africa, that must ensure that all participants are protected from harm, has approved this research project.

Annexure D

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DIE AFDELINGSKOMMISSARIS
THE DIVISIONAL COMMISSIONER

VISIBLE POLICING
SIGBARE POLISIERING

PRETORIA
0001

2011-02-23

All Provincial Commissioners
SOUTH AFRICAN POLICE SERVICE

STRUCTURING: PROVINCIAL NON-FERROUS METALS CRIME COMBATTING COMMITTEE (NFMCCC)

1.   **INTRODUCTION**

1.1   The theft of non-ferrous metals in South Africa has become a serious problem that had a detrimental effect on a variety of role players throughout the country in recent years.

1.2   The problem with regard to the theft of specifically copper and aluminium has existed for many years and since 1993, it has escalated to such an extent that losses now run into millions of rands annually. Although the incidents and the related costs decreased between 2001 and 2004, the occurrence of this crime increased sharply in 2005 to 2009. This can be attributed to the dramatic increase in the copper and aluminium prices as a result of the growth in international demand for the materials, among other factors.

1.3   The victims do not only suffer direct financial losses as a result of having to replace the stolen material, but also other consequential, associated or hidden costs, such as -

         • impact on the image of the organization;
         • impact on service delivery;
         • impact on employee morale;
         • loss of revenue or income;
         • labour costs to replace and repair;
         • overtime costs for staff;
         • cost of equipment and vehicles;
         • security costs to protect and safeguard assets and customers; and
         • cost of electronic equipment, alarms and monitoring.

2. BACKGROUND

2.1   In an effort to jointly address and combat the theft of non-ferrous metals, the Non-Ferrous Theft Combating Committee (NFTCC) was formed in 1993.

2.2   All major role-players, as listed below, are represented on the NFTCC:

- South African Police Service;
- ESKOM;
- TELKOM;
- TRANSNET (including SPOORNET and METRORAIL);
- Chamber of Mines representing several mine groups;
- Recycling industry;
- Manufacturing industry;
- City Power Johannesburg, several metros and municipalities;
- Department of Justice (including the National Prosecuting Authority and Directorate of Special Operations);
- Department of Trade and Industry;
- Customs and Excise;
- SARS; and
- Business Against Crime.

2.3   The structure consists of a national committee with the objective of planning national strategies to address the theft of non-ferrous metals. A total of 22 provincial/regional committees that initiate and coordinate joint ventures and operational activities between the various role players, were also formed.

2.4   As a result of the nature and large variety of services provided and products produced by the different role players, strategies to address incidents of theft differ in each organisation. The NFTCC is therefore required to identify strategies that will benefit all its members.

2.5   At the time of the establishment of the NFTCC in 1993, the police unit established to police non-ferrous metals, was the Transit Theft Unit that became a section of Organised Crime. The National Commander: Transit Theft Unit, represented the police on this committee.

2.6   The purpose of the Transit Theft Unit was to prevent intransit hijacking of cargo before reaching its destination. The Transit Theft Unit's main aim was not to escort trucks, but rather to investigate and arrest syndicates that functioned in this field. Later, the mandate of this unit was broadened to also include the investigation of syndicates/perpetrators of the theft of non-ferrous metals in general.

2.7   The following crime generators has been identified as contributing factors:

- Socio-economic problems - increasing numbers of unemployed people;
- Increasing numbers of illegal immigrants becoming involved in theft;
- Involvement of organised groups/syndicates in these thefts;

- Increasing demand for copper and aluminium locally and internationally;
- Insufficient control/legislation regarding processing, sale, import or export of non-ferrous metals;
- Low risk involved in accessing some of the networks (low voltage); and
- Availability of the market for the sale of stolen material.

2.8   Effective policing of the scrap metal market has been a challenge because of insufficient and outdated legislation, however the Second-Hand Goods Act 2009 (Act No 6 of 2009), specifically designed to regulate the trading of scrap metal, has been promulgated and still has to be operationalized.

2.9   From 1993 to 2008, the NFTCC was chaired by the private sector. In 2008, a decision by the then Deputy Minister for Safety and Security was made that the South African Police Service should take over the chairmanship of the NFTCC because of its direct link with the prevention of crime and that a high-ranking police delegate should chair the NFTCC. Emanating from this decision, the chairmanship was handed to Asst Comm Lebeya from the National Organised Crime component.

2.10   The name of the NFTCC was changed to Non-Ferrous Metals Crime Combating Committee (NFMCCC) in late 2008 and chairmanship was transferred from Asst Comm Lebeya to the Head: Firearms, Liquor and Second-Hand Goods Control, Asst Comm Nkomo.

3.   **NFMCCC STRATEGY**

3.1   A mandate (set out below) was developed for the NFMCCC to actively address the theft of non-ferrous metals:

- Establishing and maintaining a NFMCCC to address the theft and related crimes pertaining to non-ferrous metals;
- Implementing a joint venture between the relevant stakeholders to effectively address crime pertaining to non-ferrous metals on national and provincial level;
- Coordinating integrated crime combating operations that focus on the suppliers/dealers and end-users;
- Monitoring the import and export of non-ferrous metals;
- Launching and implementing a non-ferrous metal anti-crime communication plan and strategy, including educational awareness campaigns;
- Monitoring investigations pertaining to non-ferrous metal-related crimes;
- Establishing governance to effectively deal with non-ferrous metals in SAPS 13 stores; and
- Establishing mechanisms (training) for the effective identification of non-ferrous metals by law enforcement officers.

3.2   The NFMCCC identified three distinct areas to address the theft of non-ferrous metals, namely -

3.1.1   perpetrators: thieves, organised groups and gangs that perpetrate theft

3.1.2   product - mostly copper and aluminium in different forms:

- Overhead lines, underground cables, copper earthing (telecoms, transport and electricity):

- Electrical Substations;
- Signal cables;
- Non-ferrous metal in railway carriages (doors, window frames, basins, bearings); and
- Other (aluminium irrigation equipment etc).

3.1.3   Scrap Metal Market

Although this figure varies monthly, there are currently approximately 2 969 registered scrap metal dealers in the country. As theft constitutes a criminal offence, most strategies (proactive and reactive) are aimed at supporting the Criminal Justice System to facilitate the prosecution process. This includes -
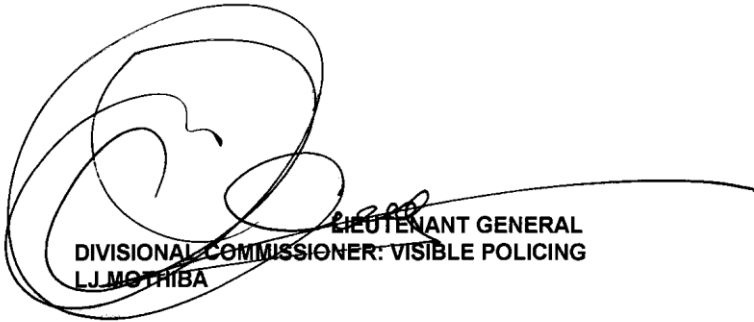
- to be able to effectively and efficiently police the scrap market;
- that the material of most of the companies has been marked and can be identified as property of any of the organisations concerned;
- that most networks are fitted with specially-developed alarms;
- that the SAPS, supported by the members of the NFMCCC, conduct regular proactive operations involving specific identified scrap merchants; and
- the launching of several awareness campaigns, as well as obtaining assistance from the general public to address the theft problem.

4.   **STRUCTURING: NFMCCC**

4.1   Based on the above strategy, it has been decided that in order to vigorously address non-ferrous metal-related crime in South Africa, it is of the utmost importance that the South African Police Service move from a reactive to a proactive policing methodology.

4.2   In order to achieve the above, the NFMCCC function was transferred from the Division: Detective Services, to the Division: Visible Policing.

4.3   All provinces are requested to re-structure their NFMCCC under the chairmanship of the Provincial Head: Visible Policing (Brigadier level or higher).

4.4   NFMCCC meetings should be scheduled with all relevant role players on a monthly basis.

4.5   The Detectives will still form an integral part of the NFMCCC within the various levels of the South African Police Service, in order to ensure continuity to effectively address investigations.

4.6   Information on organised crime generated from the NFMCCC must be channelled to the Organised Crime Secretariat.

5. Your co-operation in ensuring that non-ferrous metal theft in South Africa is receiving the necessary attention it deserves, is appreciated

LIEUTENANT GENERAL
DIVISIONAL COMMISSIONER: VISIBLE POLICING
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11 June 2013

I, Catherine Coetzee, am a member of SATI; membership No. 1002211 and also a member of The Professional Editors group (PEG).

In 2009 I successfully passed, with distinction, the certificate Course: *Programme on Editing Principles and Practices* presented by the University of Pretoria.

I have edited the dissertation on *Criminological analysis of copper cable theft in Gauteng*,' submitted by William Lyon Pretorius, Student number 4572297 in accordance with the requirements for the MA degree in Criminology at UNISA.

The detailed edit includes:
1. Assistance with overall presentation; layout, organization of components, rearranging material and rewriting certain components of the text in Plain English.
2. Detailed editing for sense to make sure the meaning of the author is clear. Correct use of punctuation, correct language and grammar usage, and correct spelling.
3. Checking for consistency especially with numbering system, use of quotation marks and consistency of references cited in the text and in the Reference List.

However, the final responsibility for the correctness of facts and the references referred lies with the student; Mr Lyon Pretorius.

Yours faithfully,

Catherine Coetzee